RESULTS

OF THE

MAGNETICAL AND METEOROLOGICAL OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

IN THE YEAR

1903:

UNDER THE DIRECTION OF

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ASTRONOMER ROYAL.

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ROYAL OBSERVATORY, GREENWICH.

RESULTS

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1903.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,

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INTRODUCTION.

§ 1. *Personal Establishment and Arrangements.*

During the year 1903 the personal establishment in the Magnetical and Meteorological Department of the Royal Observatory consisted of William Carpenter Nash, Superintendent, aided by one Established Computer, David J. R. Edney, and four Computers. The Computers employed during the year were : — Albert Edward Showell, Wilfred C. Parkinson, William Wood Burkett, Henry George Scott Barrett, and Thomas G. Staples.

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

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

The 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 20 feet south of the new Altazimuth Pavilion. On its east stands the New Library (now used as a store-room), 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, were formerly 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 were 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, M^{c}Cabe No. 649, for general use.

Until the year 1863 the horizontal and vertical force magnets were also located in the Upper Magnet Room, the 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 beneath the position formerly occupied by the upper declination magnet; 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 on the north side of the central pier. Another mean solar clock for general use 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 5⅓ 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. Another gas stove provided with the object of maintaining a higher temperature during the winter, and so rendering the Basement temperature more uniform throughout the year, is placed near 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.

A platform erected above the roof of the Magnet House is used for the observation of meteors. A rain gauge is 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.

To the south of the Magnet House, in what is known as the Magnet Ground, is an open shed, on the west side of the earth thermometers, 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. About 20 feet south of the southern arm of the Magnet House are placed the earth thermometers, the upper portions of which, projecting above the ground, are protected by a small wooden hut, and at about the same distance south-east of the southern arm of the Magnet House is situated a Stevenson screen containing dry-bulb, wet-bulb, and maximum and minimum thermometers, and a few feet further east there are two rain gauges.

The Magnet Ground is bounded on its western side by a range of seven rooms, known as the Magnetic Offices.

In the South Ground stands the new Observatory Building erected in the years 1891 to 1898, and on the north side of the Magnetical Observatory stands the new Altazimuth Pavilion erected in 1894 to 1895. In both of these buildings considerable masses of iron have been introduced.

The Magnetic Pavilion, in an enclosure in Greenwich Park, at a distance of about 350 yards from the Observatory, on the East side, was completed at the end of 1898 September, and the instruments for absolute determinations of magnetic declination, dip and horizontal force are installed there. The greatest care was taken to exclude all iron in building the Magnetic Pavilion, and the site was selected so that there should be no suspicion of magnetic disturbance from iron in the neighbourhood. The revolving stand carrying the thermometers used for ordinary eye observations, the thermometers for solar and terrestrial radiation, and the standard rain gauge, were moved to an open position in the Magnetic Pavilion enclosure at the beginning of 1899, and a Stevenson screen was added on 1900 March 31.

The Anemometers are fixed above the roof of the Octagon Room (the ancient part of the Observatory):—Osler's, for continuous record of direction and pressure of wind, and amount of rain, above the north-western turret, and Robinson's for continuous record of velocity, above the small wooden building on the southern side of the roof of the Octagon Room. Since 1896 February 6 the sunshine instrument has also been mounted on the building which carries the Robinson Anemometer.

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 Introductions to the Magnetical and Meteorological Observations for preceding 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* 1903.

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, 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.*

DECLINATION MAGNET FOR ABSOLUTE DETERMINATIONS. — For determination of magnetic declination in the Magnetic Pavilion, the hollow cylindrical magnet, Elliot No. 75, has been mounted in conjunction with the theodolite formerly used with the upper declination magnet in the Observatory, the aperture of the viewing telescope being reduced to that of the magnet collimator (0·3 inch) and a low-power eye-piece being provided. Since 1899 January 1 regular observations of declination have been made in the Magnetic Pavilion (alternating during 1899 with determinations with the upper declination magnet in the Magnet House) to determine the correction required to the results found at the latter site, representing the effect of the iron in the Observatory Buildings. This correction was found to be - 10′·8. The upper declination magnet, formerly employed until the end of the year 1898 for the determination of absolute declination, was finally dismounted at the end of the year 1900.

The theodolite, by which the position of the declination magnet is observed, is by Troughton and Simms. It is planted about 2 feet south 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 capping stone cemented to the concrete pier which rises from the ground. 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 level is 1″·15. By opening the North door of the Magnetic Pavilion observation of circumpolar stars can be made for determination of the reading of the horizontal circle of the theodolite corresponding to the astronomical meridian.

The inequality of the pivots of the axis of the theodolite telescope was determined on 1898 November 25 and 1898 December 5, and the correction was found to be -6^{div}·0, which is equivalent to −6″·9.

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

The adopted reading for the line of collimation of the theodolite telescope throughout the year was 100^{r}·280.

No correction was found for effect of the plane glass in front of the box of the declination magnet.

The error of collimation of the magnet collimator is found by observing the position of the magnet, first with the collimator in the usual position with its scale direct, then with the collimator with its scale reversed, repeating the observations several times. This value was found from fifteen determinations during the year to be 3′. 25″·4.

The effect of torsion of the silk suspending thread is eliminated by turning the torsion-circle until the brass torsion weight inserted in place of the magnet, rests in the plane of the magnetic meridian. The weight is inserted usually about once a week, 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 thread. 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 suspension thread 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 thread to the couple due to the earth's horizontal magnetic force. This ratio was found from the mean of four determinations to be $\frac{1}{859}$. The thread broke on July 8, and the ratio for the new one was found from the mean of six determinations to be $\frac{1}{1112}$.

The reading of the azimuthal circle of the theodolite corresponding to the astronomical meridian is determined about twice in each month by observations of Polaris.

In regard to the manner of making observations with the declination magnet:—The observer, on looking into the theodolite telescope, sees the image of the scale of the magnet collimator vibrating alternately right and left. At the pre-arranged time of observation, by means of the tangent screw, the vertical wire carried by the telescope-micrometer is made to bisect the central division of the scale: repeating the operation if found necessary. The verniers of the theodolite-circle are then read. The mean circle-reading being adopted, and corrected for collimation of the magnet, 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 north 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 declination magnet are usually 9^h, 12^h (noon), 15^h, and 21^h of Greenwich civil time, reckoning from midnight.

LOWER DECLINATION MAGNET.—The lower declination magnet suspended in the Magnet Basement is used simply for the purpose of obtaining photographic register of the variations of magnetic declination. It is by Troughton and Simms, and is 2 feet long, 1½ inches broad, and ¼ inch thick.

The magnet is suspended by a skein of silk passing over two brass suspension pulleys carried by a small pier built on crossed slates resting on brick piers rising from the ground. The length of free suspending skein is about 6 feet. The position of the azimuthal plane in which the brass 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.

The magnet is enclosed in a double rectangular wooden box (one box within another), covered externally and internally with gilt paper, placed upon the pier; and 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 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 $0^{\text{in.}}3$ long and $0^{\text{in.}}01$ 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, 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 two 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 *xxix*) are measured.

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 lower declination magnet, is 2 feet long, 1½ inches broad, and about ¼ 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}·14; at the lower pulleys the distance between the branches is 0^{in}·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 externally and internally with gilt paper. 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 tranverse 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 suspension skein now in use was mounted on 1900 July 9.

On 1902 December 31 the following observations were made for determination of the angle of torsion:—

1902. 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
Dec. 31	146 30	52·17	7·34	21·02	231	54·08	8·11	20·70
	147 30	59·51	8·41	20·84	232	62·19	7·37	20·86
	148 30	67·92		20·72	233	69·56		21·00

From these observations it appeared that the times of vibration and scale-readings were sensibly the same when the torsion-circle read 147°.38′, marked end west, and 231°.48′, marked end east, the difference being 84°.10′. Half this difference, or 42°.5′, is therefore the angle of torsion when the magnet is transverse to the meridian.

The value adopted in the reduction of the observations throughout the year was 42°.2′ being a mean of the determinations made on 1902 December 31 and 1904 January 1.

The adopted reading of torsion-circle, for transverse position of the magnet, the marked end being west, was 146° 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}·85 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. The change of horizontal force corresponding to change of one division of scale-reading was thus found to be 0·0023751; and this value has been used 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 30^m, 12^h 30^m, 15^h 30^m, and 20^h 30^m of Greenwich civil time (reckoning from midnight).

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 $-0^\circ{\cdot}3$ 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 since 1882 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 *xi* and *xii*), 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°.2′, the movement of the spot of light on the cylinder for a change of 0·01 of horizontal force is found to be 2·466 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 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 *xxix*) 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 would thus be ·00021 at 60°, ·00023 at 65°, and ·00025 at 70°.

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, 8 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 central brick pier, 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 4 inches in the northern part of the iron frame, in which the concave mirror used for the photographic register is planted. Two steel 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 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.

A copper "damper," to reduce vibratory disturbances from electric railways or other sources, was applied to the magnet. After some preliminary trials this was made in the form of a flattened ring of round bar copper, half an inch in diameter, closely encircling the magnet and carried over its axis of vibration, and it was mounted on 1902 April 16. It was found that its effect was to reduce the amplitude of oscillation after every complete or double vibration (taking 36 seconds) in the ratio of 10 to 4·3, which is nearly the same as that of the damper for the declination magnet. It was dismounted on 1902 August 13, and since then it has not been found to be required.

The time of vibration of the magnet in the vertical plane is observed usually about once in each week. From 61 observations made during the course of the year this was found to be $17^{\mathrm{s}}\cdot753$.

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 1902 December 30 gave for the time of vibration of the magnet in the horizontal plane $17^{\mathrm{s}}\cdot109$. This value has been used throughout for the year 1903.

The length of the normal to the fixed vertical scale that meets the face of the plane mirror is 186·07 inches, and $30^{\mathrm{div}}\cdot85$ 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 $52\frac{3}{4}°$. Therefore, dividing the result just obtained, $3'.35''\cdot6$, by sin $52\frac{3}{4}°$, 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 × $\left(\frac{T'}{T}\right)^2$ × 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 $T' = 17^{s}\cdot109$, $T = 17^{s}\cdot753$, and dip = $67°.0'.51''$, the change of vertical force corresponding to change of one division of scale-reading was found to be 0·0005174, and this value has been used throughout the year 1903 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 $-0°\cdot3$ 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 *xxi*), the movement of the spot of light on the cylinder for a change of 0·01 of vertical force is thus found to be 5·087 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 *xxix*) 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 *xviii*), 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 0·000200 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 Magnetic Pavilion 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 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, 9¾ 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.

Artificial light has not been employed for some years 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 in 1903 are of the ordinary construction; they are the 3-inch needles, D_1 and D_2.

DEFLEXION INSTRUMENT.—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 Magnetic Pavilion 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 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 $\dfrac{H}{F} = \dfrac{\theta}{90^\circ - \theta}$, 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 $\dfrac{m}{X}$ 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 a 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 15·432349 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.

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 2½ 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 7½ 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 in former years registers on a large scale, for determination of the small diurnal inequality in earth currents, were obtained by removing the shunts, but no discussion of these registers has 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 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 Wharf) 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 four days in the year 1903 which are classed as days of great disturbance, viz., October 12–13, 31; November 1 and December 13. Other days of lesser disturbance are April 5–6; June 29–30; August 21–22, 22–23; September 19–20, 20–21; October 13–14; December 30–31. When two days are mentioned, it is to be understood that the reference is usually to one set of photographic sheets extending from noon to noon, and including the last half and the first half respectively of two consecutive civil days.

Through each photographic trace, including those on days of lesser disturbance, a pencil line was drawn, representing the general form of the curve without its petty irregularities. The ordinates of these pencil curves were then measured, with the proper pasteboard scales, at every hour, 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, in the formation of these Tables are October 12, 13, 31, November 1 and December 13. From other causes there is omitted in Tables III. to VI. for horizontal force, and in Tables VII. to X. for vertical force, December 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 additional stove placed in the western arm of the Basement, 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 *xix*), 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 *xxii*). 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, *u* in Table III. on September 7, which should be taken as 1028 for comparison with the following value, 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

$$\text{H.F. in metrical measure} \times \sin 1' = 1{\cdot}8504 \times \sin 1' = 0{\cdot}0005383.$$

For variation of horizontal force, the factor is

$$\text{H.F. in metrical measure} = 1{\cdot}8504,$$

and for variation of vertical force

$$\begin{aligned}\text{V.F. in metrical measure} &= \text{H.F. in metrical measure} \times \tan \text{dip}, \\ &= 1{\cdot}8504 \times \tan 67^\circ.0'.51'' = 4{\cdot}3623.\end{aligned}$$

The measures as referred to the millimètre-milligramme-second system are readily 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 *xxix*), 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, as given in Tables II., V., and IX., 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.

$$
\begin{aligned}
m &= \frac{1}{24}(0+1+2 \;.\;.\;.\;.\;.\;.\; 22+23). \\
12\,a_1 &= 0-12+\{(1+23)-(11+13)\}\cos 15^\circ+\{(2+22)-(10+14)\}\cos 30^\circ \\
&\quad +\{(3+21)-(9+15)\}\cos 45^\circ+\{(4+20)-(8+16)\}\cos 60^\circ \\
&\quad +\{(5+19)-(7+17)\}\cos 75^\circ. \\
12\,b_1 &= 6-18+\{(5+7)-(17+19)\}\sin 75^\circ+\{(4+8)-(16+20)\}\sin 60^\circ \\
&\quad +\{(3+9)-(15+21)\}\sin 45^\circ+\{(2+10)-(14+22)\}\sin 30^\circ \\
&\quad +\{(1+11)-(13+23)\}\sin 15^\circ. \\
12\,a_2 &= (0+12)-(6+18)+\{(1+11+13+23)-(5+7+17+19)\}\cos 30^\circ \\
&\quad +\{(2+10+14+22)-(4+8+16+20)\}\cos 60^\circ. \\
12\,b_2 &= (3+15)-(9+21)+\{(2+4+14+16)-(8+10+20+22)\}\sin 60^\circ \\
&\quad +\{(1+5+13+17)-(7+11+19+23)\}\sin 30^\circ. \\
12\,a_3 &= (0+8+16)-(4+12+20)+\{(1+7+9+15+17+23)-(3+5+11+13+19+21)\}\cos 45^\circ. \\
12\,b_3 &= (2+10+18)-(6+14+22)+\{(1+3+9+11+17+19)-(5+7+13+15+21+23)\}\sin 45^\circ. \\
12\,a_4 &= (0+6+12+18)-(3+9+15+21) \\
&\quad +\{(1+5+7+11+13+17+19+23)-(2+4+8+10+14+16+20+22)\}\cos 60^\circ. \\
12\,b_4 &= \{(1+2+7+8+13+14+19+20)-(4+5+10+11+16+17+22+23)\}\sin 60^\circ.
\end{aligned}
$$

The values of the coefficient 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 :—

1903.	a_5.	b_5.
Declination	−0·06	+0·03
Horizontal Force	+0·3	−1·0
Vertical Force	+1·1	−0·5

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 1903.	Declination.	Horizontal Force.	Vertical Force.
Sums of Squares of Observed Values (Table XII.)	233′·48	285298·2	14808·6
Sums of Squares of Residuals after the introduction of *m*	92·34	47154·6	2020·5
,, ,, a_1 and b_1	38·89	11376·4	1468·4
,, ,, a_2 and b_2	7·65	2709·8	318·1
,, ,, a_3 and b_3	0·87	584·2	55·0
,, ,, a_4 and b_4	0·09	33·6	19·3
,, ,, a_5 and b_5	0·04	19·8	2·3

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 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 instrument employed. The observed result in each month has been also given as reduced to the mean value for the month, by application of the difference between the horizontal force ordinate at the time of observation and the mean value for the month, as obtained from the photographic register.

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 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 disturbance mentioned on page *xxix.*

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 1903, 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 (xxxii).

An additional plate (VI.) 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 *xxx*, will show the effect produced. Briefly, an increase of about 4½° 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	2·466	62·65	5·087	129·20
On the Plates -	2·580	65·53	1·356	34·45	2·798	71·06

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 *xxxvi.*)

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 [adopted dip = 67°.0′.51″]
= Horizontal Force × 2·3575 ;

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	2·47	62·6	2·16	54·8
On the Plates -	1·47	37·4	1·36	34·5	1·19	30·1

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 1903 = 4·0132
Millimètre-milligramme-second, or Metric unit, „ „ „ = 1·8504
Centimètre-gramme-second, or C.G.S. unit, „ „ „ = 0·18504

Dividing, therefore, the scale values last given by 4·0132, 1·8504, and 0·18504 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 -	0·67	17·0	0·37	9·3	0·61	15·6	0·34	8·6	0·54	13·7	0·30	7·5
Metric -	1·45	36·8	0·80	20·2	1·33	33·9	0·73	18·6	1·17	29·6	0·64	16·3
C.G.S. -	14·5	368	8·0	202	13·3	339	7·3	186	11·7	296	6·4	163

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 $9^h\ 30^m$, $12^h\ 30^m$, and $20^h\ 30^m$ Greenwich civil time, and at somewhat different times on Sundays.

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 Mr. Whipple, showed that the difference between the two barometers (after applying to the Greenwich barometer-readings the correction $-0^{\text{in}}\cdot006$) did not exceed $0^{\text{in}}\cdot001$. (*Proceedings of the Royal Society*, vol. xxvii. page 76.)

The height of the barometer cistern above the mean level of the sea is 159 feet, being $5^{\text{ft.}}$ $2^{\text{in.}}$ above Mr. Lloyd's reference mark in Bradley's Transit room adjoining the present Transit-circle 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 aluminium, having a small horizontal slit, whose distance from the fulcrum is about eight times that of the point of connexion with the float, and whose vertical movement is therefore about four times that of the ordinary barometric column. The light of a gas lamp, passing through this slit and falling on a cylindrical lens, forms a spot of light on the paper. The barometer can, by screw action, be raised or lowered so as to keep the photographic trace in a convenient part of the sheet. A base line is traced on the sheet, and the record is interrupted at each hour by the clock, and occasionally by the observer, in the same way as for the magnetic registers. The length of the time scale is also the same.

The barometric scale is determined by experimentally comparing the measured movement on the paper with the observed movement of the standard barometer; one inch of barometric movement is thus found = $4^{\text{in}}\cdot16$ on the paper. Ordinates measured for the times of observation of the standard barometer, combined with the corrected readings of the standard barometer, give apparent values of the base line, from which mean values for each day are formed; these are written on the sheets and new base lines drawn, from which the hourly ordinates (see page *li*) are measured as for the magnetic registers. As the diurnal change of temperature in the Basement is very small, no appreciable differential effect is produced on the photographic register by the expansion of the column of mercury.

DRY AND WET BULB THERMOMETERS.—The Standard dry and wet bulb thermometers and maximum and minimum self-registering thermometers, both dry and wet, are mounted on a revolving frame planned by Sir G. B. Airy. A vertical axis, fixed in the ground, 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.

On 1899 January 4 the thermometer stand was moved to the Magnetic Pavilion enclosure, where the thermometers are set up in an open position, about 40 feet south-west of the building.

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

The dry bulb and wet bulb thermometers used throughout the year were Negretti and Zambra, Nos. 45354 and 45356 respectively. The correction $-0^{\circ}\cdot3$ has been applied to the readings of both these thermometers.

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 Negretti and Zambra, No. 83760, for maximum temperature of the air, a correction of $-0^{\circ}\cdot1$ has been applied; to those of Negretti and Zambra, No. 38338, for minimum temperature of the air, a correction of $+0^{\circ}\cdot2$ has been applied; and to those of Negretti and Zambra, No. 102104, for maximum temperature of evaporation, a correction of $+0^{\circ}\cdot1$ has been applied. To the readings of Negretti and Zambra, No. 98508, for minimum temperature of evaporation, a correction of $+0^{\circ}\cdot2$ has been applied whenever they exceeded 59°.

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 the year 1887, four thermometers—a dry-bulb, and a wet-bulb with maximum and minimum thermometers for air temperature—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 in the Magnet ground 20 feet east-north-east of the photographic 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 $-0^{\circ}\cdot1$ has been applied. The wet-bulb is Hicks No. 268525, to the readings of which a correction of $+0^{\circ}\cdot1$ has been applied. The maximum thermometer is Negretti and Zambra, No. 85059, which required no correction. To the readings of the minimum thermometer, Negretti and Zambra, No. 68873, a correction of $+0^{\circ}\cdot3$ has been applied. 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. The thermometer for eye-observation of the temperature of the air used in the year 1903 was Hicks, No. 268524, which required no correction. Negretti and Zambra, No. 37467, is a self-registering maximum thermometer, to the readings of which a correction of −0°·5 has been applied. No. 342663, by Hicks, is a self-registering minimum thermometer, to the readings of which corrections have been applied as follow: 20° to 33° − 0°·1, 33° to 40° 0°·0, 40° to 46° + 0°·1, 46° to 53° + 0°·2, 53° to 58° + 0°·3, 58° to 62° + 0°·4, and above 62° + 0°·5. The bulbs of all these thermometers are 4 feet above the platform, and about 20 feet above the ground. The eye-observation of the thermometer for temperature of the air is omitted on Sundays and a few other days.

On 1900 March 31, an additional Stevenson screen, similar to the screen already mounted in the Magnet ground, was erected in the Magnetic Pavilion enclosure, 15 feet north-east of the open stand. The dry and wet-bulb thermometers mounted in this screen are Negretti and Zambra, Nos. 94713 and 94714, which required no correction to their readings. To the readings of the maximum thermometer, Negretti and Zambra, No. 85066, no correction is required, and to those of the minimum thermometer, Negretti and Zambra, No. 85080, a correction of + 0°·2 has been applied.

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. On 1899 May 16 and 17, the shed was shifted 15 feet westwards. 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 11½ inches high and 14¼ 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 ½ 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 Magnetic Pavilion enclosure, in an open position about 50 feet south-west of the building. The thermometer for solar radiation is a self-registering mercurial maximum thermometer on Negretti and Zambra's principle, with its bulb blackened, and the thermometer enclosed in a glass sphere from which the air has been exhausted. The thermometer employed throughout the year was Negretti and Zambra, No. 99989. 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 and freely exposed to the sky; 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 about 20 feet south of the Magnet House.

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, 36°·9 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 1 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 1⅓ 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 1⅓ 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—few pressures greater than 30 lbs. have 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 ordinarily the same as that of the magnetic registers, but by means of a special gearing applied to the clock by Mr. Kullberg in 1894 the table carrying the record can either be driven at the usual rate, or 24 times as fast, in order to give a largely increased time scale for the register of wind pressure during gales, the ordinary sheet thus giving a register for 1 hour instead of 24.

ROBINSON'S ANEMOMETER.—This instrument, made by Mr. Browning, is constructed on the principle described by 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 1 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 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 1 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 3¾ 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 1902 eight rain gauges were employed, placed at different elevations above the ground, complete information in regard to which will be found at page (cx) 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 8-inch circular gauges, placed respectively on the roof of the Octagon Room, over the roof of the Magnetic Observatory, and on the roof of the Photographic Thermometer Shed. All are read daily at 9^h Greenwich civil time.

Gauge No. 6 is an 8-inch circular gauge placed on the ground in the Magnetic Pavilion enclosure, about 10 feet north-west of the thermometer stand, and gauges Nos. 7 and 8, also 8-inch circular gauges, are placed on the ground south-east of the Magnetic Observatory; No. 6 is the Standard 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. 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 Lord Kelvin'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.

Lord Kelvin'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 6 feet into the atmosphere, the nozzle (about 10 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.

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 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. Until 1896 February 5 the instrument was placed on a table upon the platform above the Magnetic Observatory, about 21 feet above the ground, and 176 feet above mean sea level. On account of the extension of the buildings in the south ground, it was found necessary on 1896 February 6 to remove the sunshine recorder from the roof of the Magnetic Observatory to a commanding position on the stage carrying the Robinson anemometer, on the roof of the Octagon Room, about 50 feet above the ground. A clear view of the sun is obtained in this position from sunrise to sunset, but some inconvenience is caused by the smoke from neighbouring chimneys. Very little record is obtained near to sunrise at any part of the year.

It was pointed out by Mr. Marriott, Secretary of the Royal Meteorological Society, towards the end of 1896, that the record by the Campbell-Stokes instrument exhibited a notable falling off. This, though not very marked till 1896, had certainly begun in 1894, and it was found to be due to opacity in the glass globe, which appears to have deteriorated. On 1897 January 1 a globe of clearer glass, presented to the Royal Observatory in 1881 by the late Mr. Campbell, was substituted for the defective globe.

The deterioration of the old ball is fully discussed by Mr. Curtis in the *Quarterly Journal of the Royal Meteorological Society*, vol. xxiv.

OZONOMETER.—This apparatus is fixed on 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 footnotes.

§ 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 *xxix*), 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 (lxiii) and (lxiv)) have been calculated from the corresponding mean hourly values of air and evaporation temperatures (pages (lxii) and (lxiii)).

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

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 footnotes on the right-hand pages (xxxiii) to (lv), and in the abstract table, page (lix), 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 footnotes, 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 in the Observatory Grounds, on the roof of the Magnet House, and in another Stevenson screen in the Magnetic Pavilion Enclosure; readings 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 (lix) and (lxi), do not in some cases agree with the monthly means given in the daily results, pages (xxxiv) to (lvi), and in the table on page (lxi), in consequence of occasional interruption of the photographic register, at which times daily values to complete the daily results could be supplied from the eye observations, as mentioned in the footnotes; but hourly values, for the diurnal inequality tables, could not be so supplied. In such cases, however, the means given with these tables are the proper means to be used in connexion with the numbers standing immediately above them, for formation of the actual diurnal inequality.

The table, "Abstract of the Changes of the Direction of the Wind," as derived from Osler's Anemometer, page (xcvii), exhibits every change of direction of the wind occurring throughout the year, whenever such change amounted to two nautical points or 22½°. 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 11¼°. From the numbers given in this table the monthly and yearly excess of motion, page (civ), 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 $0^{in}\cdot020$, the other including only days on which no rainfall was recorded, the values of daily rainfall given in column 16 of the "Daily Results of the Meteorological Observations" being adopted in selecting the days. These additional tables are given on pages (cviii) and (cix) 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 1903 were Mr. Showell, Mr. Parkinson and Mr. Burkett. Their observations are distinguished by the initials S, P, and B, respectively.

W. H. M CHRISTIE.

ROYAL OBSERVATORY, GREENWICH,
1904, October 20.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

MAGNETICAL OBSERVATIONS

(EXCLUDING THE DAYS OF GREAT MAGNETIC DISTURBANCE),

1903.

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

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

1903.

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

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

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

1903.

Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Midn.	0′·3	0′·9	1′·6	2′·5	3′·0	3′·9	3′·4	2′·7	1′·3	0′·6	0′·3	0′·3
1h	0·6	1·2	1·8	2·5	3·0	3·9	3·2	2·7	1·5	1·1	1·0	0·6
2	1·0	1·4	2·1	2·5	2·8	3·9	2·7	2·8	1·3	1·4	1·5	0·8
3	1·3	1·6	1·9	2·6	2·6	3·3	2·6	2·8	1·1	1·6	1·8	1·2
4	1·3	1·5	1·8	2·5	2·2	2·2	2·1	2·1	1·0	1·6	2·0	1·5
5	1·2	1·5	1·6	2·3	1·5	1·0	1·0	1·3	0·9	1·5	2·2	1·6
6	1·1	1·3	1·5	1·9	0·8	0·2	0·0	0·4	0·5	1·3	2·2	1·7
7	0·9	0·9	1·1	0·9	0·1	0·0	0·0	0·0	0·0	0·9	2·1	1·6
8	0·5	0·3	0·0	0·0	0·0	0·3	0·4	0·3	0·2	0·0	1·6	1·5
9	0·5	0·0	0·1	0·2	0·8	1·6	1·5	2·1	1·4	0·0	1·6	1·3
10	1·4	0·8	1·6	2·0	3·1	4·3	3·7	4·8	3·8	1·7	2·4	2·0
11	2·3	2·7	3·9	4·6	5·9	7·1	6·4	7·1	6·5	4·3	4·2	2·9
Noon.	3·2	3·9	6·0	7·3	8·1	9·1	8·2	9·1	8·1	6·5	5·7	3·6
13h	3·9	4·8	7·0	9·0	9·0	9·8	8·9	9·8	8·0	7·0	5·9	3·7
14	3·7	4·8	6·7	8·6	8·6	9·7	9·0	9·0	6·9	6·7	5·2	3·5
15	2·8	3·7	5·5	7·3	7·4	8·7	8·0	7·4	4·9	5·1	4·3	3·0
16	2·2	2·4	4·1	6·0	6·0	7·1	6·5	5·5	3·2	3·6	3·6	2·7
17	1·7	1·9	3·0	4·9	4·8	5·8	5·2	4·1	2·1	2·5	3·1	2·0
18	1·3	1·6	2·7	4·1	3·9	4·8	4·3	3·3	1·8	1·7	2·6	1·7
19	0·9	1·4	2·5	3·4	3·5	4·7	4·1	3·2	2·0	1·1	1·9	1·2
20	0·6	1·1	2·1	3·3	3·2	4·2	4·0	3·2	1·6	0·6	1·2	0·4
21	0·3	0·9	2·0	3·1	3·1	4·1	3·7	3·0	1·2	0·4	0·6	0·0
22	0·1	0·8	1·8	2·7	3·0	4·0	3·5	2·9	0·8	0·1	0·2	0·0
23	0·0	0·7	1·6	2·4	2·8	3·8	3·4	2·7	0·8	0·2	0·0	0·2
Means	1′·38	1′·75	2′·67	3′·61	3′·72	4′·48	3′·99	3′·85	2′·54	2′·15	2′·38	1′·62

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.)*

1903.

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	260	808	175	752	214	815	231	830	240	839	337	931	177	778	205	811	192	815	059	648	...	...	810	354
2	276	865	171	760	187	788	274	839	221	822	291	873	188	801	257	856	122	767	000	584	668	231	751	272
3	265	873	178	777	204	791	232	804	242	870	188	751	163	776	232	838	082	702	018	607	686	256	737	260
4	244	852	212	820	204	810	263	857	295	884	160	735	173	767	255	849	145	746	053	628	705	268	718	271
5	247	851	259	843	233	853	240	808	242	846	160	756	217	816	159	746	085	698	054	631	714	282	679	227
6	265	866	243	811	235	815	057	656	238	834	174	768	184	766	160	730	049	624	030	612	658	264	695	243
7	240	836	186	811	182	778	072	649	199	819	185	762	137	707	169	739	028	603	049	638	679	292	689	261
8	227	831	170	778	148	752	115	683	210	799	220	790	186	754	194	781	995	575	089	669	704	267	756	319
9	249	836	220	826	161	753	087	671	240	820	240	817	221	829	208	814	012	587	063	616	770	330	740	336
10	266	855	285	877	169	770	131	687	191	807	255	844	267	887	201	800	979	535	997	567	714	279	720	324
11	331	859	240	844	136	759	105	711	252	827	359	922	212	862	211	810	944	507	023	588	713	319	769	349
12	237	790	283	867	195	794	098	666	199	776	233	793	194	841	157	761	862	461	...	...	723	319	846	388
13	273	798	243	835	143	751	061	617	204	815	119	708	225	817	218	814	930	498	...	...	720	333	...	...
14	379	802	252	824	170	788	061	624	240	836	161	717	195	794	189	797	921	513	849	409	742	334	600	208
15	325	773	232	828	194	790	084	661	257	851	165	721	195	787	145	744	906	502	897	474	758	318	731	315
16	208	720	233	815	176	787	072	635	247	841	183	748	294	886	145	725	926	520	873	431	725	269	812	356
17	154	722	173	741	210	823	095	651	304	886	197	760	300	892	152	746	972	544	905	447	735	288	798	344
18	162	761	151	711	284	854	103	663	277	871	181	749	324	920	198	792	007	570	907	451	771	313	785	345
19	197	791	148	756	213	821	108	678	247	839	172	730	297	891	197	784	947	534	920	478	693	237	833	379
20	249	812	179	809	237	843	122	711	254	848	176	722	290	882	244	816	951	540	965	521	759	310	758	326
21	216	805	263	874	233	837	148	723	257	858	156	740	234	838	266	836	962	563	939	509	816	367	760	344
22	242	831	254	882	236	852	145	727	288	887	129	716	323	934	112	675	988	589	916	476	736	306	794	386
23	214	777	214	820	219	825	195	760	288	889	155	732	358	971	135	691	015	614	903	466	778	348	817	392
24	173	777	212	796	243	832	136	716	249	817	149	743	320	912	158	716	039	643	877	447	783	370	811	374
25	215	799	151	776	265	883	093	682	198	785	146	745	315	909	200	753	027	643	915	526	764	332	836	392
26	212	832	140	763	313	881	156	748	178	779	157	753	245	849	113	666	054	641	858	450	772	330	842	419
27	227	835	211	800	308	868	132	743	226	801	203	823	278	865	170	750	093	677	898	473	840	388	805	375
28	207	811	207	813	283	872	107	737	296	916	251	888	325	907	176	763	101	702	904	491	917	456	817	368
29	204	815			256	821	197	803	353	954	183	813	262	854	187	795	079	692	890	482	855	394	828	347
30	227	795			251	835	229	830	398	994	163	771	253	825	194	790	092	693	880	467	825	355	705	194
31	172	778			254	814			351	945			248	816	180	781			...	...			...	...

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.

1903.

Day of Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	65°·6	66°·8	67°·8	67°·7	67°·7	67°·5	67°·8	68°·0	68°·7	67°·3	° ...	65°·4
2	67·3	67·3	67·8	66·3	67·8	67·0	68·3	67·7	69·6	67·1	66·2	64·4
3	68·1	67·7	67·2	66·6	68·9	66·2	68·3	68·0	68·6	67·3	66·5	64·5
4	68·1	68·1	68·0	67·5	67·3	66·7	67·5	67·5	67·8	66·7	66·2	65·8
5	67·9	67·1	68·6	66·4	67·9	67·6	67·7	67·2	68·3	66·8	66·4	65·6
6	67·8	66·4	66·9	67·7	67·6	67·5	67·0	66·5	66·7	67·0	68·0	65·6
7	67·6	68·8	67·6	66·8	68·6	66·8	66·5	66·5	66·7	67·3	68·3	66·6
8	67·9	68·1	67·9	66·4	67·3	66·5	66·4	67·2	66·9	66·9	66·2	66·2
9	67·2	68·0	67·4	67·1	66·9	66·8	68·1	68·0	66·7	65·8	66·1	67·6
10	67·3	67·4	67·8	65·9	68·4	67·3	68·6	67·7	65·9	66·5	66·3	67·9
11	64·7	67·9	68·7	68·0	66·7	66·2	69·8	67·7	66·2	66·3	68·0	66·9
12	65·8	67·1	67·7	66·4	66·8	66·1	69·7	67·9	67·7	...	67·6	65·3
13	64·6	67·4	68·1	65·9	68·2	67·3	67·4	67·6	66·4	...	68 3	...
14	59·9	66·6	68·5	66·2	67·6	65·9	67·7	68·1	67·4	66·1	67·4	68·1
15	61·1	67·6	67·6	66·8	67·5	65·9	67·4	67·7	67·6	66·8	66·1	67·1
16	64·0	67·0	68·2	66·2	67·5	66·3	67·4	66·9	67·5	66·0	65·4	65·4
17	66·4	66·4	68·3	65·9	67·0	66·2	67·4	67·5	66·6	65·3	65·8	65·5
18	67·7	66·1	66·5	66·1	67·5	66·4	67·6	67·5	66·2	65·4	65·3	66·1
19	67·5	68·1	68·1	66·5	67·4	66·0	67·5	67·2	67·2	66·0	65·4	65·5
20	66·2	69·0	68·0	67·3	67·5	65·5	67·4	66·6	67·3	65·9	65·7	66·4
21	67·3	68·2	67·9	66·7	67·8	67·1	67·9	66·5	67·8	66·5	65·7	67·1
22	67·3	68·9	68·4	67·0	67·7	67·2	68·2	66·2	67·8	66·1	66·5	67·4
23	66·2	68·0	68·0	66·3	67·8	66·8	68·3	65·9	67·7	66·2	66·5	66·7
24	67·9	67·1	67·3	66·9	66·4	67·5	67·4	66·0	67·9	66·5	67·2	66·2
25	67·1	68·8	68·5	67·3	67·2	67·7	67·5	65·8	68·4	68·2	66·4	65·9
26	68·6	68·7	66·4	67·4	67·8	67·6	67·9	65·8	67·2	67·4	66·0	66·8
27	68·1	67·3	66·1	68·2	66·7	68·6	67·2	66·9	67·1	66·7	65·6	66·5
28	67·9	68·0	67·3	69·0	68·6	69·3	67·0	67·2	67·8	67·2	65·2	65·7
29	68·2		66·3	68·0	67·8	69·0	67·4	68·1	68·3	67·4	65·2	64·3
30	66·4		67·1	67·8	67·6	68·1	66·6	67·6	67·8	67·2	64·8	63·0
31	68·0		66·1		67·5		66·4	67·8		...		...
Means	66°·64	67°·64	67°·62	66°·94	67°·58	67°·02	67°·65	67°·19	67°·46	66°·64	66°·36	66°·05

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.*)

1903.

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.	34	55	64	83	94	106	167	181	155	158	178	188	168	180	202	214	165	182	136	151	74	95	22	46
1^h	38	57	68	85	93	103	159	173	146	151	168	178	164	176	195	207	159	174	126	141	70	89	26	46
2	39	56	72	89	90	97	157	169	143	148	165	175	151	160	190	199	155	170	128	140	69	85	30	47
3	49	61	78	90	93	98	156	168	136	141	162	169	144	153	179	188	153	165	131	141	76	90	42	57
4	58	67	87	99	100	105	158	167	130	133	154	161	141	148	172	179	147	157	134	144	84	96	53	65
5	67	74	93	100	109	111	157	164	120	123	136	141	139	146	160	164	140	148	140	147	97	106	63	73
6	79	84	102	107	114	114	158	163	107	110	103	106	104	108	134	136	124	132	142	147	103	110	69	77
7	81	86	104	109	106	106	147	152	84	84	72	75	64	66	94	96	94	99	130	135	92	96	65	70
8	63	68	86	91	85	87	109	111	52	52	35	35	29	31	41	41	54	57	94	99	75	79	56	61
9	30	32	45	48	45	47	58	58	16	16	0	0	3	3	0	0	13	13	40	43	38	42	37	42
10	3	5	10	13	12	14	18	18	0	0	6	4	0	0	10	10	0	0	0	3	5	7	7	10
11	0	0	0	0	0	0	0	0	20	20	27	27	19	19	45	45	29	32	0	0	0	0	0	0
Noon.	9	9	6	6	8	8	4	6	54	52	61	64	61	63	110	112	68	73	33	33	5	5	3	1
13^h	35	35	33	33	39	39	59	61	77	75	99	102	103	105	137	139	119	124	76	76	32	32	15	15
14	60	60	65	68	63	63	99	104	110	108	135	140	150	154	150	154	140	148	96	101	49	51	16	21
15	60	65	74	79	76	78	133	138	142	140	165	172	182	186	175	182	150	158	96	101	57	61	9	17
16	53	60	78	83	85	87	148	153	164	162	185	192	190	194	186	193	145	155	91	98	66	73	7	17
17	47	59	77	84	90	92	164	169	189	187	200	207	197	204	192	201	152	162	95	105	75	87	15	27
18	43	57	82	89	102	102	172	177	202	200	204	211	203	210	216	225	166	176	117	129	85	99	22	37
19	39	58	93	103	113	113	183	188	215	211	223	230	216	223	227	239	179	191	132	144	86	102	25	42
20	35	56	85	95	113	113	191	193	210	206	217	224	210	217	225	237	191	203	130	142	90	109	22	42
21	35	56	81	93	109	111	184	189	200	196	199	206	199	208	225	237	193	208	133	148	83	104	19	39
22	34	55	67	82	105	110	176	183	185	181	195	202	187	196	212	224	186	201	140	155	74	95	22	42
23	33	54	62	81	99	109	172	181	172	172	176	186	173	182	208	222	172	187	147	162	74	95	24	44
Means corrected for Temperature.	52·9		75·4		83·9		136·1		126·1		141·5		138·8		160·2		138·1		111·9		75·3		39·1	

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

1903.

Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midnight.	67°·1	68°·1	68°·0	67°·3	67°·7	67°·2	67°·9	67°·4	67°·8	66°·9	66°·8	66°·6	67°·40
1^h	67·0	68·0	67·9	67·3	67·8	67·2	67·9	67·4	67·7	66·9	66·7	66·4	67·35
2	66·9	68·0	67·8	67·2	67·8	67·2	67·8	67·3	67·7	66·8	66·6	66·3	67·28
3	66·7	67·8	67·7	67·2	67·8	67·1	67·8	67·3	67·6	66·7	66·5	66·2	67·20
4	66·6	67·8	67·7	67·1	67·7	67·1	67·7	67·2	67·5	66·7	66·4	66·1	67·13
5	66·5	67·6	67·6	67·0	67·7	67·0	67·7	67·1	67·4	66·6	66·3	66·0	67·04
6	66·4	67·5	67·5	66·9	67·7	66·9	67·6	67·0	67·4	66·5	66·2	65·9	66·96
7	66·4	67·5	67·5	66·9	67·6	66·9	67·5	67·0	67·3	66·5	66·1	65·8	66·92
8	66·4	67·5	67·6	66·8	67·6	66·8	67·5	66·9	67·2	66·5	66·1	65·8	66·89
9	66·3	67·4	67·6	66·7	67·6	66·8	67·4	66·9	67·1	66·4	66·1	65·8	66·84
10	66·3	67·4	67·6	66·7	67·6	66·7	67·4	66·9	67·1	66·4	66·0	65·7	66·82
11	66·2	67·3	67·5	66·7	67·6	66·8	67·4	66·9	67·2	66·3	65·9	65·6	66·78
Noon.	66·2	67·3	67·5	66·8	67·5	66·9	67·5	67·0	67·3	66·3	65·9	65·5	66·81
13^h	66·2	67·3	67·5	66·8	67·5	66·9	67·5	67·0	67·3	66·3	65·9	65·6	66·82
14	66·2	67·4	67·5	66·9	67·5	67·0	67·6	67·1	67·4	66·5	66·0	65·8	66·91
15	66·4	67·5	67·6	66·9	67·5	67·1	67·6	67·2	67·4	66·5	66·1	65·9	66·98
16	66·5	67·5	67·6	66·9	67·5	67·1	67·6	67·2	67·5	66·6	66·2	66·0	67·02
17	66·7	67·6	67·6	66·9	67·5	67·1	67·7	67·3	67·5	66·7	66·4	66·1	67·09
18	66·8	67·6	67·5	66·9	67·5	67·1	67·7	67·3	67·5	66·8	66·5	66·2	67·12
19	67·0	67·7	67·5	66·9	67·4	67·1	67·7	67·4	67·6	66·8	66·6	66·3	67·17
20	67·1	67·7	67·5	66·8	67·4	67·1	67·7	67·4	67·6	66·8	66·7	66·4	67·18
21	67·1	67·8	67·6	66·9	67·4	67·1	67·8	67·4	67·7	66·9	66·8	66·4	67·24
22	67·1	67·9	67·7	67·0	67·4	67·1	67·8	67·4	67·7	66·9	66·8	66·4	67·27
23	67·1	68·1	67·9	67·1	67·6	67·2	67·8	67·5	67·7	66·9	66·8	66·4	67·34

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.)*

1903.

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	478	770	463	710	440	679	425	662	368	618	452	720	496	758	533	774	530	759	520	757	...	...	305	588
2	478	740	457	707	439	684	408	679	371	625	444	717	488	738	525	785	561	768	518	763	480	755	296	603
3	518	751	451	703	431	689	392	658	385	616	430	709	510	764	530	777	563	798	511	756	481	745	286	606
4	514	751	449	699	433	670	410	657	372	626	430	698	487	739	525	783	544	796	502	760	462	735	321	600
5	530	775	448	702	448	683	398	662	370	613	437	682	494	746	524	790	547	788	499	753	440	713	314	606
6	528	769	439	701	402	666	435	676	408	666	442	689	468	732	525	806	533	810	498	750	489	722	291	587
7	534	784	480	717	419	666	444	723	422	655	438	698	446	723	510	793	519	802	489	736	469	702	296	573
8	534	773	484	715	424	669	420	695	423	668	425	687	437	716	515	771	505	767	483	741	432	690	300	573
9	527	774	492	729	403	653	418	678	410	674	405	665	465	710	518	768	514	776	472	749	414	678	320	561
10	531	772	486	740	415	656	408	683	424	665	425	675	498	735	524	784	494	767	452	714	417	681	337	591
11	475	773	487	732	424	648	427	668	400	671	412	685	537	753	512	772	475	748	439	705	440	675	320	593
12	478	757	471	733	409	650	396	667	385	643	416	689	559	777	511	765	491	726	...	...	445	695	278	578
13	449	760	483	728	412	657	379	660	410	649	439	693	525	796	499	759	460	726	...	...	457	692	...	...
14	328	736	459	717	420	653	372	649	405	655	427	706	494	750	510	751	452	695	447	718	443	695	406	653
15	337	693	470	709	404	666	391	657	399	649	428	713	481	739	528	786	451	690	464	726	412	693	357	621
16	386	695	465	719	397	638	365	646	409	652	420	699	487	751	500	775	431	674	447	720	391	680	315	613
17	430	684	454	729	412	649	343	630	393	659	403	686	476	742	499	759	402	664	419	700	388	667	309	605
18	470	703	420	693	375	641	340	617	395	645	410	685	485	747	504	768	385	664	410	687	361	655	322	601
19	475	718	460	695	396	633	345	618	378	630	424	709	497	761	496	756	406	662	399	682	341	630	305	582
20	442	715	472	681	409	648	353	605	359	613	391	685	502	760	492	754	406	651	397	663	366	651	325	589
21	462	714	470	701	402	652	332	607	344	581	413	669	514	757	482	748	440	687	413	677	346	629	329	583
22	454	708	466	697	408	641	323	596	367	606	416	661	521	760	473	744	455	694	405	671	377	648	337	578
23	449	724	473	723	425	668	300	587	374	615	394	646	531	774	503	774	459	706	392	665	382	650	330	590
24	470	715	431	699	403	665	315	581	355	626	420	663	503	774	487	753	475	718	389	660	388	631	312	587
25	480	725	478	721	424	659	338	588	364	620	436	681	514	766	489	766	490	723	400	633	383	651	303	574
26	504	733	473	712	407	682	348	593	373	614	452	702	539	795	488	761	483	739	414	674	347	628	313	571
27	487	726	446	689	405	680	358	595	370	628	476	707	534	805	483	741	475	733	388	661	327	608	301	567
28	505	746	451	690	425	681	391	611	401	627	495	717	514	791	502	749	473	719	402	660	319	606	287	576
29	500	737			413	692	374	626	405	650	535	774	521	787	513	752	506	722	410	657	318	616	248	563
30	475	750			416	678	370	620	423	681	494	748	521	789	511	761	520	751	416	672	303	605	211	571
31	488	721			391	653			420	688			521	798	518	774			...	...			...	...

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.

1903.

Day of Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	65°·4	67°·5	67°·9	68°·0	67°·4	66°·5	66°·8	67°·8	68°·4	68°·0	° ...	65°·8
2	66·8	67·4	67·6	66·4	67·2	66·3	67·4	66·9	69·4	67·6	66·2	64·7
3	68·2	67·3	67·0	66·6	68·3	66·0	67·2	67·5	68·1	67·6	66·7	64·1
4	68·0	67·4	68·0	67·5	67·2	66·5	67·3	67·0	67·3	67·0	66·3	66·0
5	67·6	67·2	68·1	66·7	67·7	67·6	67·3	66·6	67·8	67·2	66·3	65·4
6	67·8	66·8	66·7	67·8	67·0	67·5	66·7	65·9	66·1	67·3	68·2	65·2
7	67·4	68·0	67·5	66·0	68·2	66·9	66·1	65·8	65·8	67·5	68·2	66·1
8	67·9	68·3	67·6	66·2	67·6	66·8	66·0	67·1	66·8	67·0	67·0	66·3
9	67·5	68·0	67·4	66·9	66·7	66·9	67·6	67·4	66·8	66·1	66·7	67·8
10	67·8	67·2	67·8	66·2	67·8	67·4	68·0	66·9	66·3	66·8	66·7	67·2
11	65·1	67·6	68·6	67·8	66·4	66·3	69·0	66·9	66·3	66·6	68·1	66·3
12	66·0	66·8	67·8	66·4	67·0	66·3	68·9	67·2	68·1	...	67·4	65·0
13	64·5	67·6	67·6	65·9	67·9	67·2	66·4	66·9	66·6	...	68·1	...
14	59·9	67·0	68·2	66·1	67·4	66·0	67·1	67·8	67·7	66·4	67·3	67·5
15	62·4	67·9	66·8	66·6	67·4	65·7	67·0	67·0	67·9	66·8	65·9	66·7
16	64·6	67·2	67·8	65·9	67·7	66·0	66·7	66·2	67·7	66·3	65·5	65·1
17	67·2	66·2	68·0	65·6	66·6	65·8	66·6	66·9	66·8	65·9	66·0	65·2
18	68·2	66·3	66·6	66·1	67·4	66·2	66·8	66·7	66·0	66·1	65·3	66·0
19	67·7	68·1	68·0	66·3	67·3	65·7	66·7	66·9	67·1	65·8	65·5	66·1
20	66·3	69·3	67·9	67·3	67·2	65·3	67·0	66·8	67·6	66·6	65·7	66·7
21	67·3	68·3	67·4	66·2	68·0	67·1	67·7	66·6	67·5	66·7	65·8	67·2
22	67·2	68·3	68·2	66·3	67·9	67·6	67·9	66·4	67·9	66·6	66·4	67·8
23	66·2	67·4	67·7	65·6	67·8	67·3	67·7	66·4	67·5	66·3	66·5	66·9
24	67·6	66·5	66·8	66·6	66·4	67·7	66·4	66·6	67·7	66·4	67·7	66·2
25	67·6	67·7	68·1	67·4	67·1	67·6	67·3	66·1	68·2	68·2	66·5	66·4
26	68·4	67·9	66·2	67·6	67·8	67·4	67·1	66·3	67·1	66·9	65·9	67·0
27	67·9	67·7	66·2	68·0	67·0	68·3	66·4	67·0	67·0	66·3	65·9	66·6
28	67·8	67·9	67·1	68·8	68·5	68·7	66·1	67·5	67·5	67·0	65·6	65·5
29	68·0		66·0	67·3	67·6	67·9	66·6	67·9	69·0	67·5	65·1	64·3
30	66·2		66·8	67·4	67·0	67·2	66·5	67·4	68·3	67·1	64·9	62·2
31	68·2		66·8		66·5		66·1	67·1		...		...
Means	66°·73	67°·53	67°·43	66°·78	67°·39	66°·86	67°·05	66°·89	67°·41	66°·84	66°·46	65°·98

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.*)

1903.

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.	14	0	30	13	54	39	59	51	57	52	50	42	42	34	33	25	29	18	24	14	14	2	24	5
1h	10	0	28	11	52	39	58	50	55	50	47	41	39	31	29	21	24	13	21	11	10	0	20	4
2	9	1	24	9	50	39	55	49	52	47	44	38	36	30	26	20	23	14	19	11	9	3	15	3
3	7	3	23	10	49	40	52	46	52	47	41	37	38	34	27	23	25	18	20	14	8	4	12	2
4	5	3	21	12	46	39	48	44	55	52	44	40	41	37	27	25	26	22	19	15	9	10	11	5
5	4	6	19	12	44	40	47	45	57	54	47	45	43	41	30	28	28	26	19	17	10	13	10	6
6	3	8	14	10	43	41	50	50	56	53	47	47	40	40	33	33	29	29	19	17	9	14	7	5
7	2	7	14	12	44	42	51	53	54	54	43	43	39	39	35	37	31	31	21	21	10	17	6	6
8	3	10	15	13	42	40	46	50	48	48	38	40	34	36	28	30	26	28	23	25	13	22	5	5
9	5	12	16	14	34	32	32	36	33	33	30	34	25	29	17	21	17	21	21	23	13	22	4	6
10	3	10	6	6	21	21	20	24	18	18	16	20	11	15	7	11	6	10	10	12	6	17	0	2
11	2	11	0	0	9	9	6	8	3	5	0	2	2	4	0	2	0	2	0	2	0	11	0	5
Noon.	0	9	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	11	0	2
13h	2	9	3	3	11	11	12	12	11	11	21	19	12	12	13	11	10	8	7	7	8	17	4	4
14	9	14	14	12	26	24	33	31	26	28	35	31	30	28	30	26	25	21	22	20	16	21	11	7
15	11	13	21	17	40	38	46	44	41	43	45	39	43	41	43	37	38	34	32	28	21	24	14	6
16	11	11	26	22	49	47	52	50	52	54	55	49	50	46	50	44	45	38	35	29	23	24	19	9
17	13	9	22	15	51	47	57	55	62	64	65	59	58	54	55	47	46	39	37	31	25	21	22	10
18	18	10	24	17	47	43	61	59	65	67	68	62	58	54	53	45	45	38	38	30	26	18	22	10
19	17	5	25	16	48	44	58	58	65	69	69	63	57	51	50	42	43	34	35	25	25	15	21	7
20	16	4	24	13	47	40	54	54	62	66	65	61	53	47	45	37	42	33	34	24	23	11	21	5
21	15	1	23	12	47	40	54	54	57	61	59	55	49	43	44	34	37	26	31	19	21	7	19	3
22	14	0	24	9	50	39	54	52	56	60	56	50	45	39	41	31	33	22	29	17	17	5	18	2
23	15	1	28	11	52	39	56	50	57	57	53	47	44	38	37	29	30	19	26	14	13	1	16	0
Means corrected for Temperature.	6·5		11·3		34·7		42·7		45·5		40·2		34·3		27·5		22·7		17·7		12·9		5·0	

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

1903.

Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midnight.	67°·3	68°·0	67°·9	67°·1	67°·6	67°·1	67°·3	67°·1	67°·7	67°·1	67°·0	66°·5	67°·31
1h	67·1	68·0	67·8	67·1	67·6	67·0	67·3	67·1	67·7	67·1	66·9	66·4	67·26
2	67·0	67·9	67·7	67·0	67·6	67·0	67·2	67·0	67·6	67·0	66·7	66·2	67·16
3	66·8	67·8	67·6	67·0	67·6	66·9	67·1	66·9	67·5	66·9	66·6	66·1	67·07
4	66·7	67·6	67·5	66·9	67·5	66·9	67·1	66·8	67·4	66·8	66·4	65·9	66·96
5	66·5	67·5	67·4	66·8	67·5	66·8	67·0	66·8	67·3	66·7	66·3	65·8	66·87
6	66·4	67·4	67·3	66·7	67·5	66·7	66·9	66·7	67·2	66·7	66·2	65·7	66·78
7	66·4	67·3	67·3	66·6	67·4	66·7	66·9	66·6	67·2	66·6	66·1	65·6	66·72
8	66·3	67·3	67·3	66·5	67·4	66·6	66·8	66·6	67·1	66·5	66·0	65·6	66·67
9	66·3	67·3	67·3	66·5	67·4	66·5	66·7	66·5	67·0	66·5	66·0	65·5	66·63
10	66·3	67·2	67·2	66·5	67·4	66·5	66·7	66·5	67·0	66·5	65·9	65·5	66·60
11	66·2	67·2	67·2	66·6	67·3	66·6	66·8	66·5	67·1	66·5	65·9	65·4	66·62
Noon.	66·2	67·1	67·2	66·7	67·4	66·8	66·9	66·7	67·2	66·6	65·9	65·5	66·68
13h	66·3	67·2	67·2	66·7	67·4	66·8	66·9	66·8	67·3	66·6	66·0	65·6	66·73
14	66·4	67·3	67·3	66·8	67·3	66·9	67·0	66·9	67·4	66·7	66·2	65·8	66·83
15	66·5	67·4	67·3	66·8	67·3	67·0	67·0	67·0	67·4	66·8	66·3	66·0	66·90
16	66·6	67·4	67·3	66·8	67·3	67·0	67·1	67·0	67·5	66·9	66·4	66·1	66·95
17	66·8	67·5	67·4	66·8	67·3	67·0	67·1	67·1	67·5	66·9	66·6	66·2	67·02
18	67·0	67·5	67·4	66·8	67·3	67·0	67·1	67·1	67·5	67·0	66·8	66·2	67·06
19	67·2	67·6	67·4	66·7	67·2	67·0	67·2	67·1	67·6	67·1	66·9	66·3	67·11
20	67·2	67·7	67·5	66·7	67·2	66·9	67·2	67·1	67·6	67·1	67·0	66·4	67·13
21	67·3	67·7	67·5	66·7	67·2	66·9	67·2	67·2	67·7	67·2	67·1	66·4	67·17
22	67·3	67·9	67·7	66·8	67·2	67·0	67·2	67·2	67·7	67·2	67·0	66·4	67·22
23	67·3	68·0	67·8	67·0	67·4	67·0	67·2	67·1	67·7	67·2	67·0	66·4	67·26

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, 1903.	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 16° and expressed as Westerly Force	HORIZONTAL FORCE (diminished by a Constant)	VERTICAL FORCE (diminished by a Constant)
				in terms of GAUSS'S METRICAL UNIT.		
January	16° 21′·7	811	739	1168	1501	3224
February	16. 21·6	807	710	1163	1493	3097
March	16. 21·3	815	663	1146	1508	2892
April	16. 20·4	719	640	1098	1330	2792
May	16. 18·9	850	640	1017	1573	2792
June	16. 18·9	777	695	1017	1438	3032
July	16. 18·5	843	759	996	1560	3311
August	16. 17·9	773	767	963	1430	3346
September	16. 17·7	610	731	953	1129	3189
October	16. 17·4	528	704	937	977	3071
November	16. 17·1	315	670	920	583	2923
December	16. 17·7	326	589	953	603	2569
Means	16. 19·1	......	......	1028	......	......
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 the whole Horizontal Force (applicable to columns 4 and 5) are 1·8504 and 0·18504 respectively for the year, and of whole Vertical Force (applicable to column 6) are 4·3623 and 0·43623 respectively for the year.

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 1903.

(*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.	1·31	129·6	22·6	70·5	239·8	98·6
1h	1·50	124·7	20·6	80·7	230·7	89·9
2	1·60	120·9	20·0	86·1	223·7	87·2
3	1·61	119·8	21·2	86·7	221·7	92·5
4	1·40	119·7	23·3	75·4	221·5	101·6
5	1·05	117·8	25·7	56·5	218·0	112·1
6	0·66	109·2	26·9	35·5	202·1	117·3
7	0·29	90·8	28·2	15·6	168·0	123·0
8	0·00	60·7	26·9	0·0	112·3	117·3
9	0·51	21·7	21·6	27·5	40·2	94·2
10	2·21	0·0	11·8	119·0	0·0	51·5
11	4·40	4·9	3·1	236·8	9·1	13·5
Noon.	6·15	29·0	0·0	331·0	53·7	0·0
13h	6·81	62·7	8·3	366·6	116·0	36·2
14	6·45	90·7	19·9	347·2	167·8	86·8
15	5·26	107·7	28·3	283·1	199·3	123·5
16	3·99	115·3	33·3	214·8	213·4	145·3
17	3·00	125·0	35·6	161·5	231·3	155·3
18	2·40	135·7	35·7	129·2	251·1	155·7
19	2·07	146·7	33·8	111·4	271·5	147·4
20	1·71	146·1	30·9	92·0	270·3	134·8
21	1·45	142·6	27·6	78·0	263·9	120·4
22	1·24	136·8	25·2	66·7	253·1	109·9
23	1·13	132·6	23·5	60·8	245·4	102·5
Means . . .	2·42	99·6	23·1	130·5	184·3	100·7
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 the whole Horizontal Force (applicable to columns 4 and 5) are 1·8504 and 0·18504 respectively, and of whole Vertical Force (applicable to column 6) are 4·3623 and 0·43623 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.)

1903.

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	3·9	50	7·0	187	7·0	97	10·1	239	7·8	140	21·4	289	7·5	245	9·3	297	12·9	187	12·0	210	...	...	7·0	147
2	2·8	140	4·9	155	5·9	163	10·4	165	7·8	235	8·2	369	7·2	244	10·4	194	11·0	229	13·3	217	8·6	247	8·2	168
3	2·8	85	5·3	163	6·0	102	8·5	220	9·0	189	8·6	208	6·9	237	6·7	208	7·8	245	8·7	215	11·5	203	4·4	172
4	4·0	72	4·8	128	5·9	179	9·0	189	9·2	252	8·7	320	8·2	251	11·1	269	9·0	297	8·2	202	15·3	187	7·5	247
5	5·0	113	4·5	89	6·5	115	9·6	260	15·1	236	8·0	297	7·9	280	11·8	309	12·3	184	15·9	162	11·2	137	8·0	263
6	4·2	62	4·3	154	5·0	88	14·3	822	9·5	255	8·7	272	10·5	312	11·4	274	8·8	273	11·0	255	8·2	141	10·4	125
7	3·1	117	7·1	144	8·6	120	7·9	185	9·7	227	7·8	157	8·4	209	8·3	286	13·9	290	10·9	293	8·2	104	10·2	192
8	3·9	96	9·4	207	7·8	155	8·6	342	9·3	282	12·9	257	10·2	307	9·6	350	13·1	285	11·7	234	9·4	186	4·6	177
9	3·7	105	4·7	101	5·3	157	11·2	360	12·5	239	11·5	272	11·3	374	12·6	262	8·7	220	8·5	217	7·6	207	5·0	121
10	4·8	107	6·0	195	6·6	128	10·9	265	9·5	193	9·8	268	12·6	400	12·6	320	9·2	278	7·5	192	12·3	363	5·0	114
11	3·4	114	6·9	160	7·9	149	9·3	237	9·0	228	12·1	158	9·2	332	16·7	337	9·2	256	12·1	171	6·1	203	3·0	158
12	4·4	132	6·2	177	9·0	110	9·0	222	7·9	190	13·1	277	11·8	305	11·9	324	12·3	340	...	...	6·4	266	3·2	122
13	4·6	12	8·4	241	7·5	235	10·4	210	9·3	266	14·1	313	9·0	228	12·4	337	7·8	257	...	...	4·3	217	...	...
14	3·5	107	7·1	147	8·2	202	8·4	200	11·7	226	7·4	265	12·6	305	14·9	362	7·0	267	14·1	275	5·4	177	6·3	269
15	3·6	103	6·6	180	7·7	90	12·4	300	7·2	200	10·5	227	9·3	293	10·6	225	8·2	214	7·0	183	5·0	159	4·5	128
16	5·1	161	5·5	163	8·2	165	9·5	265	8·7	350	15·9	419	10·0	322	8·5	250	7·1	162	6·1	170	8·1	207	2·8	46
17	3·9	98	6·1	112	7·3	173	9·3	180	10·0	280	13·5	332	12·0	210	7·2	289	6·6	204	8·9	197	9·1	94	2·9	109
18	3·3	96	4·3	124	8·2	169	11·5	253	9·0	250	9·8	317	12·4	230	8·5	197	5·4	123	9·0	210	10·6	304	2·4	36
19	5·8	79	5·6	159	6·8	125	7·2	80	9·5	262	10·7	284	12·0	370	7·4	119	16·5	273	8·9	364	9·6	189	5·2	75
20	2·9	145	5·0	149	7·6	146	7·4	187	4·1	182	8·9	265	9·6	177	9·1	214	13·2	327	7·7	167	8·2	131	10·8	303
21	5·6	131	5·6	68	7·9	199	9·2	230	11·8	305	8·6	272	9·2	174	16·1	312	8·7	119	5·9	130	9·8	193	6·1	150
22	4·4	156	4·9	118	7·9	207	9·6	295	9·4	267	10·6	298	11·3	237	18·5	419	9·7	245	9·8	163	12·3	217	3·5	58
23	5·9	172	2·8	95	7·4	145	8·8	122	9·6	217	10·7	332	11·6	140	9·8	432	11·5	424	7·4	185	6·0	226	3·0	107
24	4·1	63	5·0	26	6·6	169	8·9	182	7·6	171	12·7	339	8·4	214	9·7	322	9·2	308	7·1	159	5·6	140	3·3	90
25	4·0	112	4·3	207	7·7	184	9·5	289	14·3	293	10·7	252	10·6	304	11·1	350	7·3	180	8·2	294	3·4	149	2·5	39
26	15·2	166	5·0	171	8·0	134	11·4	258	10·8	261	12·4	319	12·7	407	11·0	568	8·2	177	11·1	237	4·2	122	1·4	75
27	15·4	88	3·3	55	8·1	130	10·4	183	11·1	334	10·6	205	13·0	382	7·2	227	8·7	282	11·6	175	3·1	174	3·8	98
28	4·7	139	4·4	135	8·7	135	11·2	253	9·0	304	13·0	323	9·8	312	8·5	282	7·6	315	7·9	133	4·0	140	2·6	54
29	4·5	92			10·9	233	7·6	270	10·5	343	11·6	259	8·0	212	7·7	187	10·3	321	10·7	205	6·0	106	3·5	81
30	5·8	152			9·5	252	9·1	292	13·9	235	10·2	380	8·6	190	12·3	162	7·0	185	9·1	228	6·6	122	5·9	545
31	5·5	133			10·0	228			11·2	250			8·4	340	8·2	172			...	...			18·2	...
Means	5·0	110	5·5	143	7·6	158	9·7	252	9·8	247	11·1	285	10·0	276	10·7	286	9·6	249	9·7	209	7·8	183	5·5	147

The mean of the twelve monthly values is, for Declination 8′·50, and for Horizontal Force 212·1.

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, 1903.	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	3′·9	86	14	20′·5	365	95
February	4·8	109	22	24·3	574	85
March	7·0	114	47	35·4	675	219
April	9·0	193	59	45·8	1190	287
May	9·0	211	69	47·8	1242	357
June	9·8	230	63	53·1	1443	284
July	9·0	223	54	49·4	1430	253
August	9·8	239	47	51·7	1418	235
September	8·1	208	39	46·9	1151	214
October	7·0	162	31	40·9	919	160
November	5·9	110	24	31·2	666	154
December	3·7	77	10	21·0	414	45
Means	7′·25	163·5	39·9	39′·00	957·2	199·0

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, 1903.	m	a_1	b_1	a_2	b_2	a_3	b_3	a_4	b_4
				DECLINATION WEST.					
January	1′·38	− 1′·12	− 0′·29	+ 0′·31	+ 0′·82	− 0′·37	− 0′·21	+ 0′·11	+ 0′·14
February	1·75	− 1·02	− 0·57	+ 0·53	+ 1·03	− 0·51	− 0·48	+ 0·21	+ 0·26
March	2·67	− 1·40	− 1·23	+ 0·90	+ 1·29	− 0·69	− 0·63	+ 0·29	+ 0·28
April	3·61	− 1·61	− 1·91	+ 0·99	+ 1·70	− 0·78	− 0·78	+ 0·32	+ 0·20
May	3·72	− 1·75	− 2·02	+ 1·57	+ 1·50	− 0·77	− 0·41	+ 0·23	+ 0·06
June	4·48	− 1·83	− 2·53	+ 1·95	+ 1·46	− 0·72	− 0·13	+ 0·04	+ 0·09
July	3·99	− 1·79	− 2·36	+ 1·69	+ 1·26	− 0·65	− 0·27	+ 0·02	+ 0·04
August	3·85	− 2·27	− 1·74	+ 2·01	+ 1·22	− 0·97	− 0·25	+ 0·03	+ 0·04
September	2·54	− 2·42	− 0·96	+ 1·73	+ 0·85	− 1·03	− 0·18	+ 0·38	+ 0·17
October	2·15	− 2 05	− 0·74	+ 0·99	+ 1·54	− 0·73	− 0·54	+ 0·37	+ 0·24
November	2·38	− 1·92	− 0·34	+ 0·27	+ 0·99	− 0·55	− 0·18	+ 0·32	+ 0·20
December	1·62	− 1·38	− 0·07	+ 0·12	+ 0·66	− 0·20	− 0·11	+ 0·21	+ 0·03
For the Year	2·42	− 1·71	− 1·23	+ 1·09	+ 1·19	− 0·67	− 0·35	+ 0·21	+ 0·15
				HORIZONTAL FORCE.					
January	52·9	+ 14·0	+ 2·5	− 19·0	+ 8·5	+ 8·3	− 12·8	− 0·9	+ 7·4
February	75·4	+ 28·0	− 0·5	− 28·0	+ 6·9	+ 8·7	− 10·5	− 3·1	+ 9·4
March	83·9	+ 38·9	− 4·8	− 25·3	+ 4·2	+ 8·2	− 12·1	− 0·5	+ 6·7
April	136·1	+ 68·9	− 21·0	− 37·6	+ 13·2	+ 12·5	− 14·8	− 2·6	+ 8·4
May	126·1	+ 60·4	− 54·1	− 26·7	+ 15·9	− 2·5	− 8·0	+ 3·6	+ 4·1
June	141·5	+ 66·5	− 63·3	− 20·8	+ 30·5	− 6·2	− 9·0	+ 2·4	+ 2·8
July	138·8	+ 61·3	− 66·5	− 20·9	+ 31·8	− 4·1	− 14·1	+ 1·8	+ 3·1
August	160·2	+ 71·1	− 60·1	− 11·8	+ 31·0	− 12·8	− 16·1	+ 9·8	+ 5·3
September	138·1	+ 61·4	− 43·4	− 12·6	+ 24·8	− 7·7	− 22·3	+ 2·7	+ 8·9
October	111·9	+ 55·2	− 6·3	− 22·1	+ 11·5	+ 4·2	− 22·4	+ 3·4	+ 11·9
November	75·3	+ 36·6	− 3·6	− 26·7	+ 2·4	+ 5·2	− 10·4	+ 1·5	+ 6·1
December	39·1	+ 17·8	+ 16·1	− 16·0	− 0·7	+ 2·5	− 6·4	+ 1·0	+ 4·8
For the Year	99·6	+ 48·3	− 25·4	− 22·3	+ 15·0	+ 1·4	− 13·2	+ 1·6	+ 6·6
				VERTICAL FORCE.					
January	6·5	− 5·9	− 0·4	− 1·3	+ 0·6	+ 0·8	+ 0·1	− 0·4	− 0·1
February	11·3	+ 1·5	− 2·5	− 4·2	+ 1·2	+ 3·3	0·0	− 1·6	+ 0·1
March	34·7	+ 10·4	− 2·0	− 10·9	+ 1·3	+ 7·0	0·0	− 3·0	− 0·1
April	42·7	+ 15·0	− 4·1	− 13·2	− 0·7	+ 8·2	− 0·4	− 2·6	+ 2·1
May	45·5	+ 18·7	− 7·3	− 17·0	− 1·4	+ 6·2	− 1·5	− 1·4	+ 0·6
June	40·2	+ 13·3	− 9·0	− 15·0	− 1·6	+ 5·0	− 1·4	− 1·6	+ 1·7
July	34·3	+ 9·4	− 7·1	− 14·5	+ 0·8	+ 5·4	− 1·3	− 1·9	0·0
August	27·5	+ 5·2	− 7·8	− 13·0	+ 0·7	+ 6·1	− 2·3	− 1·3	+ 0·5
September	22·7	+ 2·3	− 5·8	− 12·7	+ 0·6	+ 5·0	− 1·8	− 1·8	+ 0·3
October	17·7	+ 0·3	− 4·8	− 8·5	− 0·1	+ 5·0	− 0·1	− 3·0	+ 0·5
November	12·9	− 8·4	− 1·7	− 5·1	+ 0·4	+ 2·4	− 0·5	− 1·7	+ 0·3
December	5·0	− 1·1	− 1·2	− 2·2	+ 0·9	+ 0·9	+ 0·6	+ 0·6	+ 0·1
For the Year	23·1	+ 5·1	− 4·5	− 9·8	+ 0·2	+ 4·6	− 0·7	− 1·6	+ 0·5

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, 1903.	m	c_1	α	α'	c_2	β	β'	c_3	γ	γ'	c_4	δ	δ'
						DECLINATION WEST.							
January	1′·38	1′·16	255° 45′	258° 3′	0′·87	20° 47′	25° 23′	0′·43	241° 14′	248° 8′	0′·18	39° 17′	48° 29′
February	1·75	1·17	240. 39	244. 9	1·16	27. 7	34. 7	0·70	226. 45	237. 15	0·33	38. 42	52. 42
March	2·67	1·86	228. 38	230. 52	1·57	34. 57	39. 25	0·94	227. 40	234. 22	0·40	45. 35	54. 31
April	3·61	2·49	220. 6	220. 12	1·96	30. 14	30. 26	1·11	225. 0	225. 18	0·38	57. 31	57. 55
May	3·72	2·68	220. 57	220. 5	2·17	46. 13	44. 29	0·87	241. 55	239. 19	0·24	74. 10	70. 42
June	4·48	3·13	215. 49	215. 52	2·43	53. 12	53. 18	0·73	259. 22	259. 31	0·10	25. 41	25. 53
July	3·99	2·97	217. 11	218. 32	2·11	53. 18	56. 0	0·70	247. 41	251. 44	0·04	30. 10	35. 34
August	3·85	2·86	232. 33	233. 33	2·35	58. 46	60. 46	1·01	255. 48	258. 48	0·05	39. 9	43. 9
September	2·54	2·61	248. 17	247. 7	1·92	63. 47	61. 27	1·05	260. 8	256. 38	0·42	65. 40	61. 0
October	2·15	2·18	250. 10	246. 43	1·83	32. 38	25. 44	0·91	233. 40	223. 19	0·44	57. 16	43. 28
November	2·38	1·95	259. 53	256. 10	1·03	15. 7	7. 41	0·58	251. 50	240. 41	0·38	58. 43	43. 51
December	1·62	1·38	266. 55	265. 47	0·67	10. 34	8. 18	0·22	240. 12	236. 48	0·21	82. 2	77. 30
For the Year	2·42	2·11	234. 18	234. 18	1·61	42. 19	42. 19	0·75	242. 20	242. 20	0·25	55. 18	55. 18
						HORIZONTAL FORCE.							
January	52·9	14·2	79° 53′	82° 11′	20·8	294° 14′	298° 50′	15·3	147° 1′	153° 55′	7·4	352° 54′	2° 6′
February	75·4	28·0	90. 59	94. 29	28·8	283. 51	290. 51	13·6	140. 23	150. 53	9·9	341. 35	355. 35
March	83·9	39·2	96. 58	99. 12	25·7	279. 28	283. 56	14·6	145. 53	152. 35	6·7	356. 5	365. 1
April	136·1	72·0	106. 56	107. 2	39·9	289. 19	289. 31	19·4	139. 41	139. 59	8·8	342. 51	343. 15
May	126·1	81·1	131. 54	131. 2	31·0	300. 46	299. 2	8·4	197. 29	194. 53	5·5	41. 22	37. 54
June	141·5	91·8	133. 35	133. 38	36·9	325. 45	325. 51	10·9	214. 29	214. 38	3·7	40. 8	40. 20
July	138·8	90·4	137. 20	138. 41	38·1	326. 42	329. 28	14·7	196. 12	200. 15	3·6	30. 2	35. 26
August	160·2	93·1	130. 11	131. 11	33·2	339. 8	341. 8	20·6	218. 29	221. 29	11·2	61. 29	65. 29
September	138·1	75·2	125. 14	124. 4	27·8	333. 4	330. 44	23·5	199. 0	195. 30	9·3	16. 35	11. 55
October	111·9	55·6	96. 28	93. 1	24·9	297. 24	290. 30	22·8	169. 17	158. 56	12·3	16. 6	2. 18
November	75·3	36·8	95. 32	91. 49	26·8	275. 5	267. 39	11·6	153. 19	142. 10	6·2	13. 54	359. 2
December	39·1	24·0	47. 45	46. 37	16·0	267. 23	265. 7	6·9	158. 40	155. 16	4·9	11. 51	7. 19
For the Year	99·6	54·6	117. 44	117. 44	26·9	303. 56	303. 56	13·3	174. 5	174. 5	6·8	13. 40	13. 40
						VERTICAL FORCE.							
January	6·5	5·9	265° 47′	268° 5′	1·4	294° 56′	299° 32′	0·8	83° 40′	90° 34′	0·4	258° 41′	267° 53′
February	11·3	2·9	148. 27	151. 57	4·3	285. 45	292. 45	3·3	90. 26	100. 56	1·6	275. 7	289. 7
March	34·7	10·6	100. 45	102. 59	11·0	276. 38	281. 6	7·0	90. 12	96. 54	3·0	267. 18	276. 14
April	42·7	15·5	105. 23	105. 29	13·2	266. 51	267. 3	8·3	92. 36	92. 54	3·4	308. 33	308. 57
May	45·5	20·1	111. 15	110. 23	17·0	265. 22	263. 38	6·3	103. 16	100. 40	1·5	295. 18	291. 50
June	40·2	16·0	123. 58	124. 1	15·1	263. 43	263. 49	5·2	105. 27	105. 36	2·3	317. 35	317. 47
July	34·3	11·8	126. 56	128. 17	14·5	273. 8	275. 50	5·6	103. 37	107. 40	1·9	270. 0	275. 24
August	27·5	9·4	146. 26	147. 26	13·0	273. 12	275. 12	6·5	111. 2	114. 2	1·4	291. 29	295. 29
September	22·7	6·3	158. 26	157. 16	12·7	272. 32	270. 12	5·3	110. 19	106. 49	1·9	279. 2	274. 22
October	17·7	4·8	176. 50	173. 23	8·5	269. 40	262. 46	5·0	90. 57	80. 36	3·0	279. 45	265. 57
November	12·9	8·6	258. 24	254. 41	5·1	274. 44	267. 18	2·4	102. 11	91. 2	1·8	279. 28	264. 36
December	5·0	1·6	221. 29	220. 21	2·4	291. 41	289. 25	1·1	54. 50	51. 26	0·6	76. 21	71. 49
For the Year	23·1	6·8	131. 28	131. 28	9·8	271. 15	271. 15	4·7	98. 44	98. 44	1·7	287. 18	287. 18

TABLE XVII.—RESULTS of OBSERVATIONS of MAGNETIC DIP made in the MAGNETIC PAVILION in the YEAR 1903.

Greenwich Civil Time, 1903.		3-inch Needle.	Magnetic Dip.	Observer.
	d h		° ′ ″	
Jan.	3. 13	D_1	67. 1. 44	N
	6. 15	D_2	67. 1. 56	N
	6. 16	D_1	67. 2. 37	N
	7. 10	D_2	67. 1. 58	N
	15. 15	D_1	67. 2. 25	E
	16. 15	D_2	67. 1. 29	N
	20. 15	D_1	67. 2. 11	E
	22. 15	D_2	67. 1. 56	E
	22. 15	D_1	67. 2. 3	E
	26. 10	D_2	67. 4. 0	N
	27. 15	D_1	67. 2. 0	E
	28. 15	D_2	67. 2. 36	E
Feb.	2. 10	D_2	67. 1. 35	N
	5. 13	D_1	67. 2. 13	N
	7. 12	D_2	67. 1. 47	N
	7. 13	D_1	67. 1. 43	N
	13. 15	D_1	67. 2. 19	N
	14. 14	D_2	67. 1. 50	N
	18. 12	D_1	67. 2. 25	E
	20. 12	D_2	67. 2. 13	E
	24. 12	D_1	67. 1. 50	E
	24. 14	D_2	67. 2. 2	E
	27. 15	D_1	67. 2. 7	E
	27. 15	D_2	67. 2. 6	E
Mar.	5. 11	D_1	67. 2. 50	N
	5. 13	D_2	67. 1. 14	N
	11. 12	D_1	67. 1. 25	E
	13. 12	D_2	67. 2. 9	E
	16. 15	D_1	67. 1. 34	E
	20. 12	D_2	67. 2. 50	E
	20. 12	D_1	67. 1. 43	E
	24. 15	D_2	67. 1. 47	N
	24. 16	D_1	67. 3. 30	N
	28. 13	D_2	67. 3. 20	N
Apr.	3. 16	D_2	67. 2. 22	N
	7. 16	D_1	67. 1. 15	N
	8. 16	D_2	67. 1. 16	N
	11. 13	D_1	67. 2. 18	N
	15. 16	D_2	67. 1. 51	N
	16. 16	D_1	67. 1. 45	N
	17. 12	D_2	67. 1. 47	E
	20. 12	D_1	67. 2. 21	E
	22. 12	D_2	67. 1. 47	E
	28. 12	D_1	67. 1. 59	E
	29. 12	D_1	67. 2. 9	E
	29. 13	D_2	67. 1. 49	E

Greenwich Civil Time, 1903.		3-inch Needle.	Magnetic Dip.	Observer.
	d h		° ′ ″	
May	4. 16	D_1	67. 2. 44	N
	5. 15	D_2	67. 1. 28	N
	5. 16	D_1	67. 1. 23	N
	13. 16	D_2	67. 1. 40	N
	15. 16	D_1	67. 1. 23	N
	16. 13	D_2	67. 1. 28	N
	20. 12	D_1	67. 2. 6	E
	25. 15	D_2	67. 0. 48	E
	25. 15	D_1	67. 0. 54	E
	28. 15	D_2	67. 1. 32	E
June	4. 16	D_2	67. 0. 45	N
	8. 14	D_1	67. 0. 28	N
	17. 15	D_2	67. 1. 31	N
	17. 16	D_1	67. 0. 47	N
	22. 12	D_2	67. 0. 42	E
	22. 16	D_1	67. 1. 3	E
	24. 12	D_2	67. 1. 33	E
	25. 12	D_1	67. 0. 24	E
	30. 16	D_2	67. 0. 36	N
July	2. 15	D_1	67. 0. 5	N
	2. 16	D_2	67. 0. 23	N
	7. 15	D_1	66. 59. 48	N
	16. 15	D_1	67. 0. 19	N
	16. 16	D_2	67. 0. 26	N
	17. 11	D_2	67. 0. 54	N
	20. 12	D_1	67. 0. 3	E
	20. 15	D_2	67. 0. 16	E
	22. 12	D_1	66. 59. 30	E
	27. 12	D_2	67. 0. 30	E
	28. 12	D_1	66. 59. 45	E
	30. 12	D_2	67. 0. 39	E
Aug.	5. 12	D_1	67. 0. 17	E
	5. 12	D_2	67. 0. 36	E
	10. 16	D_1	66. 59. 32	N
	12. 16	D_2	67. 1. 27	N
	14. 15	D_1	67. 0. 25	N
	14. 16	D_2	67. 1. 39	N
	20. 15	D_1	66. 59. 44	N
	20. 15	D_2	67. 2. 15	N
	22. 13	D_1	67. 0. 48	N
	27. 16	D_2	67. 0. 51	N
	31. 16	D_1	67. 1. 1	N

Greenwich Civil Time, 1903.		3-inch Needle.	Magnetic Dip.	Observer.
	d h		° ′ ″	
Sept.	2. 16	D_2	67. 0. 8	N
	7. 15	D_1	66. 59. 39	N
	9. 15	D_2	66. 59. 44	N
	9. 16	D_1	67. 0. 16	N
	12. 11	D_1	66. 59. 16	N
	15. 16	D_2	66. 59. 1	N
	17. 15	D_1	66. 58. 45	E
	18. 15	D_2	67. 0. 27	E
	21. 15	D_1	66. 58. 50	E
	22. 12	D_2	67. 0. 11	E
	28. 15	D_1	66. 58. 37	E
	28. 15	D_2	67. 1. 6	E
Oct.	1. 15	D_1	66. 59. 4	N
	1. 16	D_2	67. 0. 21	N
	8. 16	D_2	66. 58. 19	N
	15. 16	D_1	66. 58. 24	N
	16. 14	D_1	66. 58. 1	N
	16. 15	D_2	66. 59. 36	N
	19. 15	D_1	66. 59. 44	E
	21. 15	D_2	67. 0. 30	E
	23. 15	D_1	66. 58. 58	E
	27. 15	D_2	67. 1. 55	E
	30. 12	D_1	66. 58. 49	E
	30. 15	D_2	67. 1. 21	E
Nov.	4. 15	D_1	66. 59. 10	N
	5. 15	D_2	66. 59. 39	N
	5. 16	D_1	66. 59. 33	N
	13. 15	D_2	67. 1. 26	N
	13. 16	D_1	66. 58. 30	N
	14. 13	D_2	67. 0. 15	N
	18. 12	D_1	66. 59. 20	E
	19. 12	D_2	66. 59. 51	E
	24. 12	D_1	66. 58. 38	E
	27. 12	D_2	66. 59. 4	E
Dec.	4. 15	D_2	66. 59. 11	N
	4. 16	D_1	66. 59. 25	N
	9. 15	D_2	66. 57. 56	N
	11. 16	D_1	67. 0. 53	N
	17. 12	D_2	66. 58. 43	E
	21. 14	D_1	66. 59. 56	N
	28. 15	D_2	66. 58. 11	E
	29. 15	D_1	66. 59. 16	E

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

TABLE XVIII.—MONTHLY and YEARLY MEANS of MAGNETIC DIP in the YEAR 1903.

Monthly Means of Magnetic Dip.

Month, 1903.	D_1, 3-inch Needle.	Number of Observations.	D_2, 3-inch Needle.	Number of Observations.
January	67° 2′ 10″	6	67° 2′ 19″	6
February	67. 2. 6	6	67. 1. 56	6
March	67. 2. 12	5	67. 2. 16	5
April	67. 1. 58	6	67. 1. 49	6
May	67. 1. 42	5	67. 1. 23	5
June	67. 0. 41	4	67. 1. 1	5
July	66. 59. 55	6	67. 0. 31	6
August	67. 0. 18	6	67. 1. 22	5
September	66. 59. 14	6	67. 0. 6	6
October	66. 58. 50	6	67. 0. 20	6
November	66. 59. 2	5	67. 0. 3	5
December	66. 59. 52	4	66. 58. 30	4
Means	67. 0. 41	Sum 65	67. 1. 1	Sum 65
Mean Annual Dip	67° 0′ 51″			

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

TABLE XIX.—DETERMINATIONS of the ABSOLUTE VALUE of HORIZONTAL MAGNETIC FORCE in the YEAR 1903.

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

Greenwich Civil Time, 1903.	Distances from 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 9. 15	1·0	53·4	9. 41. 3	5·790	100	52·9	N
	1·3		4. 23. 47	5·790	100	53·9	
January 23. 14	1·0	50·0	9. 41. 9	5·790	100	50·1	E
	1·3		4. 24. 0	5·793	100	51·2	
February 10. 16	1·0	58·5	9. 40. 31	5·798	100	58·1	N
	1·3		4. 23. 32	5·795	100	59·2	
February 20. 15	1·0	62·2	9. 39. 46	5·796	100	61·1	E
	1·3		4. 23. 20	...	...	63·4	
March 11. 15	1·0	56·6	9. 40. 27	5·796	100	57·4	E
	1·3		4. 23. 28	5·795	100	59·4	
March 23. 16	1·0	61·0	9. 40. 6	5·798	100	60·3	N
	1·3		4. 23. 30	5·800	100	61·1	
April 8. 15	1·0	53·1	9. 41. 37	5·796	100	51·7	N
	1·3		4. 24. 10	5·795	100	54·1	
April 22. 15	1·0	52·0	9. 41. 11	5·792	100	52·6	E
	1·3		4. 23. 50	5·790	100	53·5	
May 8. 16	1·0	52·7	9. 41. 1	5·795	100	51·8	N
	1·3		4. 23. 53	5·792	100	53·6	
May 20. 15	1·0	60·0	9. 40. 16	5·795	100	60·8	E
	1·3		4. 23. 23	5·792	100	61·9	
June 12. 16	1·0	58·2	9. 39. 55	5·791	100	58·2	N
	1·3		4. 23. 22	5·794	100	58·4	
June 22. 15	1·3	63·3	9. 39. 22	5·795	100	65·2	E
	1·3		4. 22. 49	5·795	100	67·6	
July 10. 16	1·0	81·6	9. 36. 47	5·796	100	80·3	N
	1·3		4. 21. 49	5·799	100	82·6	
July 24. 15	1·0	65·3	9. 38. 32	5·794	100	66·5	E
	1·3		4. 22. 52	5·798	100	68·7	
August 11. 16	1·0	64·0	9. 39. 27	5·797	100	63·4	N
	1·3		4. 23. 10	5·793	100	64·1	
August 21. 16	1·0	67·4	9. 38. 50	5·793	100	66·4	N
	1·3		4. 22. 53	5·796	100	68·3	
September 10. 16	1·0	58·0	9. 40. 34	5·790	100	58·1	N
	1·3		4. 23. 38	5·793	100	58·0	
September 22. 15	1·0	60·8	9. 40. 27	5·800	100	60·3	E
	1·3		4. 23. 29	5·799	100	61·3	
October 9. 16	1·0	58·1	9. 40. 16	5·799	100	58·3	N
	1·3		4. 23. 31	5·799	100	58·1	
October 22. 15	1·0	55·3	9. 40. 5	5·797	100	56·1	E
	1·3		4. 23. 38	5·801	100	57·0	
November 10. 16	1·0	53·8	9. 42. 36	5·807	100	53·1	N
	1·3		4. 24. 18	5·803	100	54·1	
November 24. 14	1·0	53·9	9. 41. 20	5·800	100	54·1	E
	1·3		4. 24. 2	5·803	100	54·9	
December 14. 15	1·0	52·3	9. 41. 34	5·801	100	52·2	N
	1·3		4. 24. 7	5·802	100	52·9	

The deflecting magnet is placed on the east side of the suspended magnet, with its marked pole alternately east and west, and on the west side with its marked pole also alternately east and west: the deflexion given in the table above is the mean of four deflexions observed in these positions of the magnets.

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

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

TABLE XIX.—*continued*—COMPUTATION of the VALUES of HORIZONTAL FORCE in ABSOLUTE MEASURE.

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

Greenwich Civil Time, 1903.	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.	Reduced to Mean of Month.
d h						s					
Jan. 9. 15	0·08436	0·08445	− 0·00265	−0·00318	8·92745	5·7934	0·13501	0·3398	4·0159	1·8517	1·5808
Jan. 23. 14	0·08432	0·08447	− 0·00429		8·92742	5·7955	0·13466	0·3397	4·0144	1·8510	1·8519
Feb. 10. 16	0·08435	0·08444	− 0·00265		8·92743	5·7971	0·13447	0·3396	4·0135	1·8505	1·8481
Feb. 20. 15	0·08430	0·08443	− 0·00384		8·92727	5·7955	0·13473	0·3396	4·0154	1·8514	1·8514
Mar. 11. 15	0·08432	0·08439	− 0·00220		8·92722	5·7966	0·13455	0·3395	4·0148	1·8511	1·8519
Mar. 23. 16	0·08433	0·08447	− 0·00400		8·92745	5·7998	0·13408	0·3394	4·0115	1·8497	1·8492
April 8. 15	0·08444	0·08457	− 0·00378		8·92796	5·8006	0·13393	0·3396	4·0085	1·8482	1·8493
April 22. 15	0·08436	0·08444	− 0·00254		8·92745	5·7954	0·13470	0·3397	4·0144	1·8510	1·8511
May 8. 16	0·08434	0·08447	− 0 00372		8·92748	5·7980	0·13431	0·3395	4·0125	1·8501	1·8508
May 20. 15	0·08434	0·08442	− 0·00226		8·92734	5·7942	0·13492	0·3397	4·0160	1·8517	1·8518
June 12. 16	0·08426	0·08438	− 0·00350		8·92705	5·7954	0·13473	0·3395	4·0164	1·8519	1·8506
June 22. 15	0·08426	0·08428	− 0·00073		8·92678	5·7938	0·13502	0·3395	4·0190	1·8531	1·8525
July 10. 16	0·08416	0·08424	− 0·00220		8·92643	5·7902	0·13565	0·3397	4·0236	1·8552	1·8514
July 24. 15	0·08417	0·08433	− 0·00474		8·92667	5·7936	0·13505	0·3395	4·0197	1·8534	1·8515
Aug. 11. 16	0·08428	0·08441	− 0·00367		8·92715	5·7948	0·13485	0·3396	4·0165	1·8520	1·8507
Aug. 21. 16	0·08424	0·08437	− 0·00361		8·92695	5·7926	0·13520	0·3397	4·0190	1·8531	1·8516
Sept. 10. 16	0·08435	0·08447	− 0·00333		8·92750	5·7938	0·13498	0·3398	4·0155	1·8515	1·8521
Sept. 22. 15	0·08438	0·08446	− 0·00237		8·92755	5·7988	0·13423	0·3395	4·0118	1·8498	1·8509
Oct. 9. 16	0·08431	0·08443	− 0·00350		8·92730	5·7996	0·13410	0·3394	4·0124	1·8500	1·8478
Oct. 22. 15	0·08424	0·08443	− 0·00530		8·92711	5·7994	0·13412	0·3393	4·0133	1·8505	1·8516
Nov. 10. 16	0·08459	0·08462	− 0·00096		8·92848	5·8066	0·13302	0·3394	4·0019	1·8452	1·8459
Nov. 24. 14	0·08441	0·08454	− 0·00378		8·92780	5·8027	0·13360	0·3394	4·0077	1·8479	1·8471
Dec. 14. 15	0·08442	0·08454	− 0·00355		8·92783	5·8040	0·13340	0·3393	4·0066	1·8474	1·8485
Means ...	...	...	...	...	...	...	...	...	4·0144	1·8508	1·8504

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.

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 7, 9, 15, 17, 25, February 2, 4, 14, 24, 27, March 3, 15, 17, 18, 26, April 11, 13, 14, 20, 24, May 10, 11, 12, 18, 26, June 8, 9, 12, 13, 27, July 3, 7, 9, 22, 24, August 3, 7, 17, 19, 29, September 3, 15, 16, 17, 26, October 9, 10, 16, 21, 24, November 6, 9, 14, 15, 25, December 11, 12, 18, 24, 25.

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 1·8504 and 4·3623 respectively for the year.

Table XX.—Monthly Mean Diurnal Inequality of Magnetic Declination West.

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

1903.

Hour, Greenwich Civil Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	For the Year.
Midnight.	0′·2	0′·9	1′·7	2′·8	4′·3	4′·7	3′·0	3′·2	2′·5	0′·7	0′·9	0′·1	1′·91
1h	0·7	1·0	1·7	2·9	4·3	4·5	2·8	2·9	2·2	1·3	1·5	0·4	2·02
2	0·7	1·4	2·0	3·0	4·0	4·6	2·9	3·0	1·8	1·7	1·7	0·7	2·12
3	0·8	1·8	2·1	3·0	3·5	4·3	2·6	2·4	1·7	2·2	1·8	0·7	2·07
4	1·0	1·6	1·9	2·7	3·0	3·4	2·0	2·1	1·7	2·3	1·7	0·6	1·83
5	0·8	1·5	1·9	2·7	2·1	2·0	0·6	1·1	1·5	2·3	1·7	0·6	1·40
6	0·6	1·2	1·7	2·2	12	0·6	0·0	0·6	0·8	2·3	1·2	0·4	0·90
7	0·3	0·8	1·2	1·4	0·1	0·0	0·2	0·3	0·0	1·6	0·9	0·3	0·42
8	0·0	0·2	0·1	0·0	0·0	0·4	0·5	0·0	0·0	0·4	0 2	0·2	0·00
9	0·2	0·0	0·0	0·0	1·6	2·1	1·5	1·0	1·1	0·0	0·1	0·1	0·47
10	1·3	0·8	1·4	1·6	4·5	5·6	3·8	3·1	3·4	1·5	1·1	0·9	2·25
11	1·9	1·2	3·8	4·1	7·1	8·9	6·2	5·2	5·7	4·1	3·0	1·8	4·25
Noon.	2·7	3·5	5·8	6·4	8·8	11·4	8·4	6·9	7·2	6·2	4·5	2·3	6·01
13h	3·2	4·5	6·9	8·5	9·0	12·0	8·0	7·2	7·4	6·8	5·3	2·4	6·60
14	2·9	4·6	6·6	8·5	8·2	11·2	8·0	6·8	6·5	6·4	4·4	2·2	6·19
15	2·1	3·5	5·2	7·4	7·0	9·8	6·8	5·3	4·7	4·9	3·8	1·9	5·03
16	1·5	2·4	3·8	6·3	5·9	8·0	5·3	3·9	3·4	3·8	3·5	1·7	3·95
17	0·9	2·0	2·8	5·2	4·7	6·4	4·0	3·1	2·7	2·9	2·7	1·3	3·06
18	0·7	1·8	2·4	4·1	4·2	5·6	3·6	3·1	2·6	2·4	2·4	0·9	2·65
19	0·5	1·5	2·5	3·3	4·3	5·2	3·6	3·5	2·8	2·2	1·9	0·6	2·49
20	0·3	1·2	2·6	3·2	4·4	5·3	3·6	3·6	2·7	2·3	1·5	0·4	2·42
21	0·1	0·8	2·5	3·2	4·5	5·2	3·1	3·5	2·6	2·0	1·1	0·2	2·23
22	0·1	0·6	2·2	2·9	4·6	5·1	3·5	3·4	2·6	2·0	0·7	0·0	2·14
23	0·0	0·5	1·9	2·8	4·2	5·1	3·4	3·5	2·5	1·9	0·3	0·0	2·00
24	0·0	1·1	2·1	2·7	4·2	5·1	3·7	3·6	2·5	2·0	0·0	0·3	2·11
Means 0h–23h	0′·98	1′·64	2′·70	3′·68	4′·40	5′·47	3′·64	3′·28	2′·92	2′·68	2′·00	0′·86	2′·68
Means 1h–24h	0′·97	1′·65	2′·71	3′·67	4′·39	5′·49	3′·67	3′·30	2′·92	2′·73	1′·96	0′·87	2′·69

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.*)

1903.

Hour, Greenwich Civil Time.	January.		February.		March.		April.		May.		June.		July.		August.		September.		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.	65	120	69	128	97	179	176	326	147	272	158	292	158	292	158	292	170	315	153	283	132	244	45	83	116·7	215·8
1^h	65	120	67	124	97	179	168	311	150	278	160	296	150	278	144	266	158	292	131	242	127	235	43	80	111·1	205·4
2	66	122	71	131	106	196	174	322	144	266	160	296	152	281	142	263	138	255	121	224	119	220	46	85	109·3	202·1
3	64	118	80	148	103	191	172	318	136	252	152	281	147	272	134	248	133	246	127	235	123	228	55	102	108·2	200·2
4	67	124	88	163	110	204	172	318	132	244	140	259	131	242	129	239	124	229	126	233	131	242	65	120	107·3	198·4
5	74	137	93	172	108	200	175	324	112	207	130	241	131	242	123	228	122	226	123	228	144	266	67	124	106·2	196·5
6	88	163	98	181	111	205	181	335	94	174	102	189	92	170	99	183	116	215	139	257	158	292	75	139	102·2	188·9
7	86	159	98	181	105	194	174	322	58	107	68	126	50	93	65	120	75	139	121	224	145	268	75	139	82·7	153·0
8	62	115	91	168	82	152	140	259	24	44	22	41	26	48	16	30	43	80	93	172	115	213	61	113	54·0	99·9
9	40	74	45	83	36	67	98	181	0	0	0	0	6	11	0	0	6	11	39	72	81	150	30	56	21·1	39·1
10	16	30	12	22	8	15	36	67	0	0	10	19	0	0	10	19	0	0	6	11	29	54	0	0	0·0	0·0
11	0	0	0	0	0	0	0	0	28	52	24	44	22	41	33	61	36	67	0	0	0	0	3	6	1·6	2·9
Noon.	1	2	8	15	3	6	2	4	46	85	44	81	54	100	83	154	95	176	22	41	22	41	13	24	22·2	41·1
13^h	28	52	26	48	25	46	51	94	70	130	96	178	112	207	113	209	127	235	60	111	50	93	31	57	55·1	102·0
14	64	118	62	115	49	91	109	202	96	178	137	254	145	268	136	252	141	261	81	150	69	128	53	98	84·6	156·5
15	79	146	64	118	65	120	147	272	132	244	165	305	171	316	154	285	145	268	97	179	89	165	62	115	103·6	191·4
16	69	128	61	113	67	124	166	307	150	278	195	361	173	320	156	289	135	250	98	181	93	172	59	109	107·9	199·6
17	70	130	69	128	69	128	182	337	180	333	201	372	191	353	160	296	154	285	111	205	104	192	73	135	119·7	221·5
18	75	139	78	144	75	139	182	337	196	363	209	387	197	365	182	337	174	322	137	254	123	228	82	152	131·9	244·2
19	68	126	88	163	86	159	185	342	201	372	206	381	203	376	202	374	192	355	141	261	129	239	84	155	138·2	255·6
20	63	117	91	168	98	181	190	352	195	361	212	392	208	385	198	366	192	355	133	246	132	244	79	146	138·6	256·4
21	66	122	85	157	88	163	182	337	183	339	204	377	200	370	201	372	196	363	145	268	142	263	77	142	136·8	253·0
22	48	89	72	133	94	174	180	333	173	320	196	363	200	370	185	342	184	340	145	268	146	270	73	135	130·7	241·7
23	47	87	73	135	94	174	185	342	163	302	182	337	194	359	187	346	178	329	143	265	153	283	75	139	128·9	238·5
24	48	89	85	157	92	170	192	355	152	281	171	316	204	377	182	337	172	318	133	246	147	272	83	154	127·8	236·3
Means 0^h–23^h	57·1	105·8	66·2	122·4	74·0	137·0	142·8	264·2	117·1	216·7	132·2	244·7	129·7	240·0	125·4	232·1	126·4	233·9	103·8	192·1	106·5	197·1	55·2	102·3	92·4	171·0
1^h–24^h	56·4	104·5	66·9	123·6	73·8	136·6	143·5	265·5	117·3	217·1	132·8	245·7	131·6	243·5	126·4	234·0	126·5	234·0	103·0	190·5	107·1	198·2	56·8	105·2	92·9	171·8

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.*)

1903.

Hour, Greenwich Civil Time.	January.		February.		March.		April.		May.		June.		July.		August.		September.		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.	0	0	11	48	29	127	50	218	66	288	44	192	46	201	32	140	33	144	21	92	20	87	12	52	26·3	114·9
1^h	0	0	11	48	33	144	50	218	66	288	48	209	44	192	32	140	31	135	21	92	20	87	10	44	26·5	115·6
2	0	0	11	48	35	153	48	209	66	288	48	209	44	192	30	131	31	135	23	100	24	105	16	70	27·3	119·2
3	5	22	13	57	39	170	48	209	66	288	48	209	46	201	28	122	31	135	25	109	26	113	14	61	28·4	123·8
4	11	48	15	65	40	174	48	209	68	297	50	218	50	218	32	140	33	144	30	131	26	113	16	70	30·9	134·8
5	11	48	16	70	40	174	48	209	70	305	52	227	52	227	34	148	37	161	32	140	30	131	20	87	32·8	143·1
6	11	48	14	61	42	183	52	227	76	332	56	244	50	218	38	166	42	183	32	140	30	131	22	96	34·7	151·6
7	9	39	12	52	42	183	57	249	70	305	48	209	50	218	40	174	40	174	38	166	34	148	20	87	34·3	149·5
8	15	65	14	61	40	174	51	222	60	262	42	183	46	201	36	157	40	174	38	166	36	157	20	87	32·5	141·6
9	17	74	12	52	30	131	37	161	42	183	36	157	34	148	24	105	34	148	34	148	41	179	19	83	26·0	113·2
10	17	74	10	44	12	52	27	118	20	87	24	105	18	79	10	44	16	70	22	96	27	118	15	65	14·2	61·8
11	17	74	2	9	0	0	13	57	4	17	6	26	0	0	0	0	4	17	10	44	23	100	13	57	3·7	15·9
Noon.	11	48	3	13	3	13	2	9	0	0	0	0	2	9	0	0	0	0	0	0	21	92	6	26	0·0	0·0
13^h	11	48	0	0	11	48	0	0	16	70	10	44	16	70	14	61	2	9	6	26	27	188	10	44	6·3	27·3
14	19	83	12	52	27	118	20	87	36	157	24	105	32	140	24	105	14	61	20	87	30	131	4	17	17·8	77·8
15	17	74	18	79	36	157	32	140	54	236	34	148	44	192	28	122	22	96	24	105	28	122	0	0	24·1	105·1
16	21	92	18	79	40	174	44	192	60	262	38	166	48	209	30	131	28	122	23	100	30	131	6	26	28·2	122·8
17	18	79	12	52	40	174	48	209	68	297	46	201	52	227	30	131	25	109	23	100	28	122	6	26	29·0	126·4
18	18	79	12	52	36	157	54	236	66	288	48	209	54	236	26	113	25	109	25	109	26	113	6	26	29·0	126·4
19	14	61	14	61	34	148	48	209	62	270	52	227	54	236	26	113	27	118	17	74	22	96	6	26	27·3	119·1
20	14	61	7	31	30	131	48	209	62	270	46	201	50	218	26	113	29	127	21	92	20	87	6	26	25·9	113·0
21	11	48	5	22	28	122	48	209	58	253	40	174	46	201	26	113	23	100	17	74	16	70	4	17	22·8	99·4
22	9	39	3	13	26	113	46	201	58	253	40	174	44	192	28	122	23	100	15	65	12	52	2	9	21·5	93·6
23	13	57	9	39	25	109	44	192	60	262	42	183	48	209	28	122	23	100	15	65	7	31	4	17	22·5	98·0
24	11	48	11	48	30	131	48	209	60	262	42	183	48	209	26	113	21	92	11	48	0	0	0	0	21·7	94·4
Means 0^h–23^h	12·0	52·5	10·6	46·2	29·9	130·4	40·1	175·0	53·1	231·6	38·4	167·5	40·4	176·4	25·9	113·0	25·5	111·3	22·2	96·7	25·2	109·8	10·7	46·6	23·8	103·9
1^h–24^h	12·5	54·5	10·6	46·2	30·0	130·5	40·0	174·6	52·8	230·5	38·3	167·1	40·5	176·7	25·7	111·9	25·0	109·1	21·7	94·9	24·3	106·1	10·2	44·5	23·6	103·1

ROYAL OBSERVATORY, GREENWICH.

MAGNETIC DISTURBANCES

AND

EARTH CURRENTS.

1903.

MAGNETIC DISTURBANCES in DECLINATION, HORIZONTAL FORCE, and VERTICAL FORCE, recorded at the ROYAL OBSERVATORY, GREENWICH, in the Year 1903.

The following notes give a brief description of all magnetic movements (superposed on the ordinary diurnal movement) exceeding 3′ in Declination, 0·0010 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).

1903.

January 4^{d} 2^{h} to 3^{h} Wave in Dec. ($+ 2\frac{1}{2}'$). 5^{h} to 8^{h} Prolonged wave in H.F. (+ ·0010) with superposed fluctuations: small fluctuations in Dec.

5^{d} 2^{h} to 6^{h} Small fluctuations in Dec. and H.F. $8\frac{1}{2}^{h}$ to $10\frac{1}{2}^{h}$ Shallow wave in Dec. (+ 3′). $16\frac{1}{2}^{h}$ to $17\frac{1}{4}^{h}$ Wave in Dec. ($- 2\frac{1}{2}'$).

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

10^{d} $9\frac{3}{4}^{h}$ Increase of H.F. (+ ·0004).

13^{d} 18^{h} to $18\frac{1}{2}^{h}$ Decrease of Dec. (− 3′).

18^{d} $15\frac{3}{4}^{h}$ to $17\frac{1}{2}^{h}$ Prolonged wave in Dec. (+ 3′): in H.F. small.

19^{d} 15^{h} to 17^{h} Serrated wave in H.F. (− ·0010): in Dec. small.

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

23^{d} $19\frac{1}{2}^{h}$ to $21\frac{1}{2}^{h}$ Irregular wave in Dec. (− 3′).

24^{d} $17\frac{3}{4}^{h}$ to $18\frac{1}{2}^{h}$ Wave in Dec. (− 3′) in H.F. small.

26^{d} $18\frac{3}{4}^{h}$ to $20\frac{1}{2}^{h}$ Wave in Dec. (− 6′) in H.F. (− ·0014). 21^{h} to 24^{h} Prolonged irregular wave in Dec. (− 12′). 22^{h} to $23\frac{1}{2}^{h}$ Wave in H.F. (+ ·0024).

27^{d} 0^{h} to 1^{h} Sharp wave in H.F. (+ ·0026) in V.F. small: $0\frac{1}{4}^{h}$ to $2\frac{1}{2}^{h}$ Prolonged irregular wave in Dec. steep at commencement (− 7′).

February 7^{d} 21^{h} Decrease of Dec. (− 2′). $21\frac{1}{2}^{h}$ to 23^{h} Wave in Dec. (− 3′).

8^{d} $2\frac{1}{2}$ to 4^{h} Double wave in Dec. (+ 3′ to − 3′). $2\frac{1}{2}^{h}$ to $3\frac{1}{2}^{h}$ Wave in H.F. (+ ·0012). 5^{h} to 7^{h} Fluctuations in Dec. $8\frac{1}{2}^{h}$ to 9^{h} Decrease of H.F. (− ·0012). $9\frac{1}{4}^{h}$ to $10\frac{1}{4}^{h}$ Wave in H.F. (− ·0010). $11\frac{1}{2}^{h}$ to $12\frac{1}{4}^{h}$ Wave in Dec. (+4′), with superposed fluctuations: small wave in H.F. 13^{h} to 14^{h} Wave in Dec. ($- 2\frac{1}{2}$). $14\frac{1}{2}^{h}$ to $15\frac{1}{2}^{h}$ Wave in H.F. (− ·0014). $14\frac{1}{2}^{h}$ to 16^{h} Small double wave in Dec. (+ 2′ to − 3′). 18^{h} to 20^{h} Sharp double wave in Dec. with superposed fluctuations (+ 5′ to − 10′), followed immediately afterwards by another wave (− 7′). 19^{h} to 20^{h} Double wave in H.F. (− ·0008 to − ·0024).

10^{d} 23^{h} to 11^{d} $0\frac{1}{2}^{h}$ Wave in Dec. (− 5′), double wave in H.F. (+ ·0017 to − ·0010).

12^{d} 18^{h} to 23^{h} Small fluctuations in Dec. and H.F.

13^{d} $0\frac{3}{4}^{h}$ to 2^{h} Small double wave in Dec. (+ 2′ to − 2′): wave in H.F. (+ ·0010).

1903.

February 15^{d} 16^{h} to 18^{h} Wave in Dec. (– 7′) : two successive small waves in H.F. (– ·0008) and (– ·0008).

22^{d} 3^{h} to 5^{h} Prolonged shallow wave in Dec. (– 3′), followed by small fluctuations till 10^{h}. 5^{h} to 6^{h} Small wave in H.F. (+ ·0098).

25^{h} $2\frac{1}{4}^{h}$ Decrease of H.F. (– ·0005). 5^{h} to $6\frac{1}{2}^{h}$ Wave in Dec (+ 3′).

March 1^{d} $18\frac{3}{4}^{h}$ to $19\frac{3}{4}^{h}$ Wave in Dec. (+ 2′) : in H.F. (– ·0008). 1^{d} $22\frac{3}{4}^{h}$ to 2^{d} $1\frac{1}{2}^{h}$ Irregular double wave in Dec. (– 3′ to + 3′)

2^{d} $0\frac{3}{4}^{h}$ to 2^{h} Wave in H.F. (+ ·0010).

4^{d} $21\frac{1}{2}^{h}$ to 22^{h} Sharp wave in H.F. (+ ·0010), followed by fluctuations till 5^{d} 3^{h}.

5^{d} 2^{h} to 3^{h} Wave in Dec. (+ 3′). $3\frac{1}{4}^{h}$ to 4^{h} Small wave in Dec. (+ $2\frac{1}{2}$′). $15\frac{1}{4}^{h}$ to 17^{h} Wave in Dec. (+ 3′). $15\frac{3}{4}^{h}$ to $17\frac{1}{2}^{h}$ Wave in H.F. (– ·0016).

6^{d} 20^{h} to 21^{h} Wave in Dec. (– $2\frac{1}{2}$′)

7^{d} 6^{h} to $8\frac{1}{2}^{h}$ Double wave in H.F. (+ ·0008 to – ·0008). 8^{h} to 9^{h} Wave in Dec. (+ 3′).

8^{d} $0\frac{3}{4}$ to 2^{h} Wave in Dec. (+ 4′) : in H.F. (+ ·0012). 17^{h} to $18\frac{1}{2}^{h}$ Wave in Dec. (– 4′), followed by fluctuations till 22^{h} : double wave in H.F. (– ·0008 to + ·0008). $18\frac{1}{2}^{h}$ to $20\frac{1}{2}^{h}$ Small double wave in H.F. (+ ·0008 to – ·0008). $20\frac{1}{2}^{h}$ to $21\frac{3}{4}^{h}$ Irregular wave in H.F. (– ·0012), followed by small fluctuations till 24^{h}. 23^{h} to 24^{h} Serrated wave in Dec. (– 3′).

9^{d} 1^{h} to $4\frac{1}{4}^{h}$ Prolonged double wave in Dec. (+ 4′ to – 3′). $4\frac{1}{2}^{h}$ to $6\frac{1}{2}^{h}$ Shallow wave in Dec. (– 3′) in H.F. (+ ·0010). 21^{h} to 22^{h} Wave in H.F. (+ .0010).

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

12^{d} 10^{h} Decrease of H.F. (– ·0012) : of Dec. small. 16^{h} to 17^{h} Two successive small waves in H.F. (+ ·0008) and (+ ·0006).

12^{d} 21^{h} to 13^{d} 1^{h} Prolonged irregular wave in Dec. (– 8′). 20^{h} to 22^{h} Three successive small waves in H.F. $22\frac{1}{4}^{h}$ to 23^{h} Sharp wave in H.F. (+ ·0016), followed by small fluctuations till 24^{h}.

13^{d} 2^{h} to $3\frac{1}{2}^{h}$ Wave in Dec. (+ 8′), followed by fluctuations till 5^{h} : in V.F. small. 2^{h} to 5^{h} Two successive waves in H.F. (+ ·0012) and (+ ·0012). $11\frac{3}{4}^{h}$ to 13^{h} Flat-crested wave in H.F. (– ·0010). $12\frac{3}{4}^{h}$ to 14^{h} Wave in Dec. (+ 3′). $15\frac{1}{4}^{h}$ to $15\frac{1}{2}^{h}$ Small sharp wave in H.F. (+ ·0009). $15\frac{1}{2}^{h}$ to 18^{h} Prolonged irregular wave in Dec. with superposed fluctuations (– 6′). $16\frac{1}{4}^{h}$ to $17\frac{1}{2}^{h}$ Double wave in H.F. (– ·0008 to + ·0010).

21^{d} 22^{h} to 23^{h} Wave in H.F. (+ ·0010) : in Dec. small.

22^{d} 13^{h} to $13\frac{1}{2}^{h}$ Slight increase in H.F. and Dec., very slight in V.F. 17^{h} to 20^{h} Small fluctuations in H.F. 21^{h} to 22^{h} Wave in H.F. (– ·0010). 21^{h} to 24^{h} Prolonged serrated wave in Dec. (– 9′).

29^{d} 2^{h} to 3^{h} Wave in Dec. (– 3′) : in H.F. small.

30^{d} 6^{h} to 9^{h} Small sharp fluctuations in Dec. and H.F. 18^{h} to 21^{h} Small fluctuations in H.F. 21^{h} to $21\frac{1}{2}^{h}$ Sharp wave in H.F. (– ·0010).

31^{d} 0^{h} to $1\frac{1}{4}^{h}$ Sharp wave in Dec. (+ 10′) : in H.F. (+ ·0016) : in V.F. (+ ·0004). $20\frac{1}{2}^{h}$ to 22^{h} Wave in Dec. (– 4′) : in H.F. (+ ·0010). 23^{h} to 24^{h} Wave in H.F. (+ ·0012).

April 1^{d} $9\frac{1}{2}^{h}$ to $12\frac{1}{4}^{h}$ Loss of H.F. register.

2^{d} $0\frac{1}{2}^{h}$ to 2^{h} Wave in Dec. (+ 3′) : in H.F. small. 19^{h} to 21^{h} Long shallow wave in H.F. (+ ·0010) : in Dec. small.

3^{d} 1^{h} to 2^{h} Wave in Dec. (+ 3′). 1^{h} to 3^{h} Prolonged wave in H.F. (+ ·0012).

4^{d} 18^{h} to 24^{h} Small sharp fluctuations in H.F.

5^{d} 4^{h} to 7^{h} Prolonged wave in Dec. with superposed fluctuations (+ 5′). 5^{h} to 7^{h} Wave in H.F. with superposed fluctuations (+ ·0014). $11\frac{1}{2}^{h}$ to 12^{h} Sharp wave in H.F. (– ·0012) : in Dec. small. $13\frac{1}{2}^{h}$ to 16^{h} Slow fluctuations in H.F. 16^{h} to 18^{h} Double wave in H.F. (+ ·0010 to – ·0008).

5^{d} 23^{h} to 6^{d} 23^{h} See Plate I.

7^{d} 13^{h} to 21^{h} Sharp fluctuations in H.F. $21\frac{3}{4}^{h}$ to $22\frac{1}{2}^{h}$ Double wave in H.F. (+ ·0012 to – ·0010) : small wave in Dec.

8^{d} 23^{h} to 9^{d} 1^{h} Two successive waves in Dec., the first being serrated (– 11′) and (– 4′) : sharp wave in H.F. with superposed fluctuations (+ ·0056), also small double wave in V.F. (+ ·0003 to – 0003).

1903.

April 9^d 2^h to 4^h Flat-crested wave in Dec. (+ 6′): fluctuations in H.F. $5\frac{1}{4}^h$ to $7\frac{1}{4}^h$ Double wave in H.F. with superposed fluctuations (+ ·0010 to − ·0012). $5\frac{1}{2}^h$ to 8^h Double-crested wave in Dec. with superposed fluctuations (+ 5′). 8^h to $8\frac{1}{4}^h$ Sharp wave in H.F. (− ·0010). 16^h to 21^h Fluctuations in Dec. and H.F. 17^h to $18\frac{1}{2}^h$ Irregular wave in H.F. (+ ·0012). $21\frac{3}{4}^h$ to $22\frac{1}{4}$ Wave in Dec. (− 3′). $21\frac{3}{4}^h$ to $23\frac{3}{4}^h$ Irregular wave in H.F. with superposed fluctuations (+ ·0032). 22^h to $22\frac{1}{2}^h$ Decrease of V.F. (− ·0004).

10^d 8^h to $8\frac{1}{2}^h$ Decrease of H.F. (− ·0010). 10^h to 14^h Wave in H.F. (+ ·0010). 18^h to 19^h Wave in Dec. (− 3′): in H.F. (− ·0010). $20\frac{1}{2}^h$ to $21\frac{1}{4}^h$ Wave in H.F. (− ·0010). 21^h to 22^h Serrated wave in Dec. (+ 3′).

12^d $1\frac{1}{2}^h$ to 3^h Wave in Dec. (+ 3′): in H.F. small.

14^d $22\frac{3}{4}^h$ to $23\frac{1}{4}^h$ Sharp wave in H.F. (+ ·0010): in Dec. small.

15^d 15^h to $15\frac{3}{4}^h$ Wave in H.F. (− ·0010), followed by fluctuations till 23^h. 20^h to 22^h Prolonged wave in Dec. (− 3′).

17^d 17^h to 20^h Double wave in H.F. (+ ·0010 to − ·0014).

18^d $11\frac{1}{2}^h$ to $13\frac{1}{2}^h$ Wave in Dec. (+ 5′). 12^h to $13\frac{1}{4}^h$ Wave in H.F. (− ·0012). $13\frac{1}{2}^h$ to 16^h Prolonged wave in H.F. with superposed fluctuations (+ ·0018). 17^h to 18^h Double wave in H.F. (+ ·0018 to − ·0006). $18\frac{1}{2}^h$ to $19\frac{1}{2}^h$ Wave in Dec. (− 3′). $18\frac{1}{2}^h$ to 20^h Serrated wave in H.F. (+ ·0022). $20\frac{3}{4}^h$ to $21\frac{3}{4}^h$ Wave in H.F. (+ ·0010), followed till $22\frac{1}{2}^h$ by an increase of H.F. (+ ·0014).

19^d $1\frac{3}{4}^h$ to $2\frac{1}{2}^h$ Small double wave in Dec. (+ 2′ to − 2′): sharp wave in H.F. (+ ·0012). $5\frac{1}{2}^h$ to $7\frac{1}{2}^h$ Shallow wave in H.F. (+ ·0010): sharp fluctuations in Dec.

26^d $15\frac{1}{2}^h$ to $16\frac{1}{2}^h$ Wave in H.F. (+ ·0010). 17^h to 24^h Sharp fluctuations in H.F. 21^h to 23^h Serrated wave in Dec. (+ 4′).

27^d $1\frac{3}{4}^h$ to 4^h Double wave in Dec. (− 3′ to + 7′). $2\frac{3}{4}^h$ to 4^h Double wave in H.F. (− ·0008 to + ·0010). $3\frac{1}{2}^h$ to 4^h Decrease of V.F. (− ·0003).

29^d 21^h to 23^h Serrated wave in Dec. (− 3′).

30^d $14\frac{3}{4}^h$ Wave in H.F. (+ ·0010), followed by fluctuations till 18^h. 15^h Short sharp double wave in Dec.

May 2^d 17^h to 20^h Fluctuations in H.F.

4^d 5^h to 7^h Fluctuations in Dec. 15^h to 19^h Small fluctuations in H.F. $20\frac{1}{2}^h$ to 22^h Two successive waves in Dec. (− 3′) and (− 4′). $20\frac{1}{2}^h$ to $21\frac{1}{2}^h$ Double wave in H.F. (− ·0010 to + ·0008). 22^h to 23^h Wave in H.F. (− ·0012).

5^d 0^h to 1^h Double wave in Dec. (− 3′ to + 2′): wave in H.F. (− ·0014). $1\frac{3}{4}^h$ to 4^h Three successive small waves in Dec. (− 3′), (+ 2′), and (− 4′), also two successive waves in H.F. (+ ·0008) and (+ ·0010): small decrease of V.F. $6\frac{1}{4}^h$ to 7^h Wave in Dec. (− 3′): in H.F. small. 8^h to 11^h Small fluctuations in H.F. 17^h to 21^h Small fluctuations in H.F.

6^d 1^h to 6^h Small sharp fluctuations in Dec. and H.F. $6\frac{1}{2}^h$ to $6\frac{3}{4}^h$ Sharp wave in Dec. (− $3\frac{1}{2}$′): in H.F. small, followed by small fluctuations in Dec. and H.F. till 11^h. 15^h to 16^h Serrated wave in H.F. (− ·0014). $20\frac{1}{2}^h$ to 22^h Irregular wave in H.F. (+ ·0012): fluctuations in Dec. (± 2′). 6^d $22\frac{1}{2}^h$ to 7^d $0\frac{1}{4}^h$ Wave in Dec. (+ 6′): serrated wave in H.F. (+ ·0010): wave in V.F. (− ·0003).

7^d 1^h to 3^h Serrated wave in Dec. (+ 6′). $1\frac{1}{2}^h$ to $3\frac{1}{4}^h$ Wave in H.F. (+ ·0010). 2^h to 4^h Wave in V.F. (− ·0003). 18^h to 20^h Wave in Dec. (− 4′). 18^h to 19^h Wave in H.F. with superposed fluctuations (− ·0012).

8^d 16^h to 19^h Small fluctuations in H.F. 20^h to $21\frac{1}{2}^h$ Wave in Dec. (− 3′): in H.F. (+ ·0010). 8^d $23\frac{1}{2}^h$ to 9^d $0\frac{1}{2}^h$ Wave in Dec. (+ 4′).

9^d 17^h to $17\frac{3}{4}^h$ Wave in H.F. (− ·0010).

14^d 0^h to 2^h Sharp fluctuations in Dec. and H.F. 19^h to 23^h Fluctuations in Dec. (± 2′).

15^d 0^h to 6^h Fluctuations in Dec. (± 2′): in H.F. (± ·0008).

16^d 22^h to 17^d $1\frac{1}{2}^h$ Prolonged wave in Dec. with superposed fluctuations (− 7′): double wave in H.F. with superposed fluctuations (+ ·0020 to − ·0010).

17^d 2^h to 4^h Sharp fluctuations in Dec. (± 2′). 2^h to $2\frac{1}{2}^h$ Wave in H.F. (− ·0010). $3\frac{1}{2}^h$ to 5^h Wave in H.F. (− ·0012). $4\frac{1}{2}^h$ to $5\frac{1}{2}^h$ Wave in Dec. (+ 3′).

21^d $13\frac{1}{2}^h$ to 16^h Prolonged wave in H.F. (+ ·0012). $21\frac{3}{4}^h$ to $23\frac{1}{2}^h$ Serrated wave in Dec. (− 4′). $22\frac{3}{4}^h$ to 24^h Wave in H.F. (− ·0010).

22^d 15^h Decrease of H.F. (− ·0006). 22^d $23\frac{1}{2}^h$ to 23^d $0\frac{1}{2}^h$ Wave in H.F. (+ ·0010).

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May 23^{d} 0^{h} to 4^{h} Small fluctuations in Dec. 2^{h} Increase of H.F. (+ ·0006). 3^{h} to $4\frac{1}{2}^{h}$ Serrated wave in H.F. (− ·0016). 5^{h} to 6^{h} Serrated wave in Dec. (− 3′): small wave in H.F. $13\frac{1}{2}^{h}$ to 14^{h} Wave in H.F. (+ ·0010): in Dec. small. 16^{h} to 19^{h} Sharp fluctuations in H.F. (± ·0006). $19\frac{1}{2}^{h}$ to $20\frac{1}{2}^{h}$ Small double wave in H.F. (+ ·0008 to − ·0008). $22\frac{1}{2}^{h}$ to 23^{h} Decrease of H.F. (− ·0012).

24^{d} 20^{h} to 23^{h} Fluctuations in H.F. $20\frac{1}{2}^{h}$ to $22\frac{1}{2}^{h}$ Wave in Dec. (− 3′).

25^{d} 1^{h} to $2\frac{1}{4}^{h}$ Wave in Dec. (+ 5′). $1\frac{1}{2}^{h}$ to 3^{h} Wave in H.F. (+ ·0010). $10\frac{1}{2}^{h}$ to 13^{h} Small fluctuations in H.F. $13\frac{1}{2}^{h}$ to $14\frac{1}{2}^{h}$ Wave in H.F. (− ·0016). $14\frac{3}{4}^{h}$ Decrease of H.F. (− ·0008). 19^{h} to $20\frac{3}{4}^{h}$ Wave in Dec. (− 5′). $19\frac{1}{4}^{h}$ to $19\frac{1}{2}^{h}$ Wave in H.F. (− ·0012).

27^{d} $19\frac{1}{2}^{h}$ to 21^{h} Wave in Dec. (− 3′). 23^{h} to 24^{h} Wave in H.F. (− ·0010). 27^{d} $23\frac{1}{2}^{h}$ to 28^{d} 1^{h} Wave in Dec. (+ 4′).

28^{d} 2^{h} to $3\frac{1}{4}^{h}$ Wave in Dec. (+ 3′): in H.F. small. $9\frac{1}{2}^{h}$ to 16^{h} Loss of Dec., H.F. and V.F. registers.

29^{d} 15^{h} to 20^{h} Small fluctuations in H.F. $20\frac{3}{4}^{h}$ to $22\frac{1}{4}^{h}$ Double-crested wave in Dec. (− 3′). $21\frac{1}{2}^{h}$ to $21\frac{3}{4}^{h}$ Decrease of H.F. (− ·0012).

30^{d} $14\frac{1}{2}^{h}$ to $16\frac{1}{4}^{h}$ Flat-crested wave in H.F. (− ·0010), followed by small fluctuations till 18^{h}. 19^{h} to 20^{h} Wave in Dec. (− 3′): in H.F. small. 23^{h} to 24^{h} Wave in Dec. (− 3′).

June 1^{d} $13\frac{1}{2}^{h}$ to $14\frac{1}{2}^{h}$ Double wave in H.F. (− ·0018 to + ·0010). $14\frac{1}{2}^{h}$ to 16^{h} Double wave in Dec. (+ 2′ to − 3′). 15^{h} to $16\frac{3}{4}^{h}$ Double wave in H.F. with superposed fluctuations (− ·0026 to + ·0012). 17^{h} to 18^{h} Decrease of Dec. (− 7′). 17^{h} to $18\frac{1}{2}^{h}$ Irregular wave in H.F. (− ·0018), followed by sharp fluctuations till 24^{h} (± ·0008).

2^{d} $0\frac{1}{4}^{h}$ to 1^{h} Wave in Dec. (+ 3′), followed till $3\frac{3}{4}^{h}$ by an irregular double wave (+ 6′ to − 7′): shallow wave in V.F. (− ·0003). $0\frac{1}{2}^{h}$ to $1\frac{1}{2}^{h}$ Irregular double wave in H.F. (− ·0008 to + ·0006). 3^{h} to 4^{h} Decrease of H.F. (− ·0020). $4\frac{1}{2}^{h}$ to $6\frac{1}{4}$ Double wave in Dec. (− 2′ to + 3′). $6\frac{1}{2}^{h}$ to 7^{h} Wave in Dec. (− 3′): in H.F. small. $7\frac{1}{4}^{h}$ to $8\frac{1}{2}^{h}$ Double-crested wave in Dec. (− 5′). 9^{h} to 10^{h} Wave in H.F. (− ·0016). $10\frac{3}{4}^{h}$ to $11\frac{1}{4}^{h}$ Wave in H.F. (+ ·0020): in Dec. small. $12\frac{1}{4}^{h}$ to $13\frac{1}{4}^{h}$ Wave in H.F. (− ·0016). $14\frac{1}{4}^{h}$ to $15\frac{1}{4}^{h}$ Wave in H.F. (+ ·0018): in Dec. small. $16\frac{1}{2}^{h}$ to $17\frac{1}{2}^{h}$ Irregular wave in H.F. (+ ·0010). $17\frac{3}{4}^{h}$ to $19\frac{1}{2}^{h}$ Wave in Dec. (− 8′). 18^{h} to 19^{h} Double wave in H.F. (− ·0007 to + ·0018), followed by small fluctuations till 21^{h}. $21\frac{1}{4}^{h}$ to 22^{h} Flat-crested wave in Dec. (− 3′). $21\frac{1}{4}^{h}$ to $22\frac{1}{2}^{h}$ Wave in H.F. with superposed fluctuations (+ ·0018). 2^{d} $23\frac{3}{4}^{h}$ to 3^{d} $0\frac{3}{4}^{h}$ Irregular wave in Dec. (− 4′).

3^{d} 0^{h} to 1^{h} Wave in H.F. (− ·0015). 1^{h} to 3^{h} Double wave in Dec. (− 3′ to + 2′). $1\frac{3}{4}^{h}$ to $2\frac{3}{4}^{h}$ Wave in H.F. (− ·0014). 13^{h} to $13\frac{3}{4}^{h}$ Wave in H.F. (+ ·0010). 14^{h} to $15\frac{1}{4}^{h}$ Flat-crested wave in H.F. (+ ·0010). 16^{h} to 17^{h} Wave in H.F. (+ ·0014). 3^{d} $23\frac{3}{4}^{h}$ to 4^{d} $0\frac{3}{4}^{h}$ Wave in Dec. (+ 3′): serrated wave in H.F. (+ ·0010).

4^{d} 2^{h} to $3\frac{1}{4}^{h}$ Wave in Dec. (+ 4′): in H.F. (− ·0010). $4\frac{1}{2}^{h}$ to $6\frac{1}{2}^{h}$ Prolonged shallow wave in Dec. (+ 3′): in H.F. small. 13^{h} to 21^{h} Fluctuations in H.F. $19\frac{1}{2}^{h}$ to 22^{h} Prolonged irregular wave in Dec. (− 3′). 4^{d} $23\frac{1}{2}^{h}$ to 5^{d} 1^{h} Irregular wave in Dec. (+ 4′).

6^{d} $10\frac{1}{2}^{h}$ to 18^{h} Loss of Dec., H.F. and V.F. registers.

8^{d} 18^{h} to 19^{h} Wave in H.F. (− ·0010).

14^{d} 14^{h} to 16^{h} Small fluctuations in H.F.

15^{d} 14^{h} to $16\frac{1}{4}^{h}$ Prolonged wave in H.F. (+ ·0014).

16^{d} $17\frac{1}{4}^{h}$ to $17\frac{3}{4}^{h}$ Wave in H.F. (− ·0014). 18^{h} to $18\frac{3}{4}^{h}$ Wave in H.F. (+ ·0014). $20\frac{3}{4}^{h}$ to $21\frac{1}{2}^{h}$ Wave in H.F. (− ·0022). 22^{h} Decrease of Dec. (− 8′). 22^{h} to 23^{b} Wave in Dec. (− 4′): in H.F. (− ·0016).

17^{d} 1^{h} to 3^{h} Wave in Dec. (+ 5′), followed by small fluctuations till 9^{h}. 18^{h} to 21^{h} Fluctuations in H.F.

18^{d} 1^{h} to $4\frac{1}{2}^{h}$ Prolonged irregular waves in Dec. (+ 4′) and H.F. (+ ·0010).

19^{d} $12\frac{1}{2}^{h}$ to 17^{h} Strongly marked fluctuations in H.F. 15^{h} to 16^{h} Decrease of Dec. (− 6′). $19\frac{1}{2}^{h}$ to $21\frac{1}{2}^{h}$ Double-crested wave in Dec. (− 3′). $21\frac{1}{2}^{h}$ to $22\frac{1}{2}^{h}$ Wave in H.F. (+ ·0014).

19^{d} $22\frac{1}{2}^{h}$ to 20^{d} 2^{h} Prolonged shallow wave in Dec. (− 4′).

20^{d} 16^{h} to 18^{h} Wave in H.F. (− ·0010), followed by small fluctuations till 22^{h}.

21^{d} 13^{h} to $14\frac{1}{2}^{h}$ Wave in H.F. (− ·0010), followed by sharp fluctuations till 21^{h} (± ·0006). $21\frac{3}{4}^{h}$ to $22\frac{3}{4}^{h}$ Double wave in Dec. (− 3′ to + 3′): wave in H.F. (+ ·0012).

22^{d} 0^{h} to $2\frac{1}{2}^{h}$ Double wave in Dec. (− 2′ to + 3′): in H.F. (− ·0008 to + ·0014). $14\frac{1}{2}^{h}$ to 16^{h} Wave in H.F. (− ·0014), followed by sharp fluctuations till 20^{h}. $22\frac{3}{4}^{h}$ to $23\frac{1}{2}^{h}$ Wave in Dec. (+ 3′).

23^{d} $1\frac{1}{2}^{h}$ to 3^{h} Wave in Dec. (+ 3′). 13^{h} to 18^{h} Sharp fluctuations in H.F. 16^{h} to 17^{h} Decrease of Dec. (− 5′). 19^{h} to 23^{h} Fluctuations in Dec. 19^{h} to 20^{h} Wave in H.F. (+ ·0012). $20\frac{3}{4}^{h}$ to 21^{h} Decrease of H.F. (− ·0012).

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24^{d} 2^{h} to 5^{h} Prolonged wave in Dec. (+ 5′) in H.F. (+ ·0010).

25^{d} 2^{h} to 3^{h} Wave in Dec. (+ 3′). $14\frac{1}{2}^{h}$ Decrease of H.F. (– ·0006) : of Dec. very small : increase of V.F. (+ ·0003).

28^{d} $8\frac{1}{2}^{h}$ to 9^{h} Wave in Dec. (– 3′). 15^{h} to 16^{h} Wave in H.F. (– ·0012). $16\frac{1}{2}^{h}$ Sharp decrease of H.F. (– ·0022), followed by small fluctuations till 18^{h}. $18\frac{1}{2}^{h}$ to $19\frac{3}{4}^{h}$ Double wave in H.F. (– ·0014 to + ·0010). $19\frac{1}{4}^{h}$ to 22^{h} Prolonged wave in Dec. (– 7′). 23^{h} to 24^{h} Wave in H.F. (+ ·0010).

29^{d} $5\frac{1}{2}^{h}$ to 7^{h} Serrated wave in Dec. (+ 3′).

29^{d} 12^{h} to 30^{d} 12^{h} See Plate I.

30^{d} 13^{h} to 21^{h} Fluctuations in H.F. 17^{h} to 19^{h} Irregular wave in Dec. (– 4′). $21\frac{3}{4}^{h}$ to $22\frac{3}{4}^{h}$ Wave in Dec. (+ 6′) : in H.F. (+ ·0016) : in V.F. (– ·0003).

July

1^{d} $2\frac{1}{2}^{h}$ to $3\frac{1}{2}^{h}$ Wave in Dec. (+ 4′). 13^{h} to 18^{h} Rapid small fluctuations in H.F. superposed on small waves.

2^{d} $2\frac{1}{2}^{h}$ to 4^{h} Wave in Dec. (+ 3′) : in H.F. (– ·0010).

5^{d} 20^{h} to 21^{h} Wave in H.F. (– ·0010). 22^{h} to $23\frac{1}{2}^{h}$ Two successive waves in H.F. (+ ·0010) and (+ ·0020). $22\frac{1}{4}^{h}$ to 23^{h} Wave in Dec. (– 3′).

6^{d} 1^{h} to 2^{h} Irregular wave in H.F. (– ·0014). $3\frac{1}{2}^{h}$ to $5\frac{1}{2}^{h}$ Wave in Dec. (+ 5′). 15^{h} to 16^{h} Wave in H.F. (– ·0016).

10^{d} 0^{h} to $1\frac{1}{2}^{h}$ Double wave in Dec. (+ 4′ to – 3′) : in H.F. (+ ·0008 to – ·0012) : decrease in V.F. (– ·0003). 4^{h} to 5^{h} Wave in Dec. (– 3′). 14^{h} to 20^{h} Small fluctuations in Dec. and H.F.

11^{d} $3\frac{1}{2}^{h}$ to $4\frac{1}{2}^{h}$ Wave in H.F. (– ·0014). $3\frac{3}{4}^{h}$ to $4\frac{3}{4}^{h}$ Wave in Dec. (+ 7′). 5^{h} to 7^{h} Wave in Dec. (+ 4′) : in H.F. (– ·0010). $14\frac{1}{2}^{h}$ to 16^{h} Two successive waves in H.F. (– ·0008) and (– ·0010). 22^{h} to 23^{h} Wave in Dec. (+ 3′).

12^{d} 1^{h} to $1\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010) : in Dec. small. 15^{h} to 16^{h} Wave in H.F. (+ ·0012).

13^{d} $8\frac{1}{4}^{h}$ Increase of Dec. (+ 3′).

14^{d} 0^{h} to $0\frac{3}{4}^{h}$ Wave in H.F. (+ ·0010) : in Dec. small. 22^{h} to $23\frac{1}{2}^{h}$ Wave in Dec. (– 3′) : in H.F. (+ ·0014).

15^{d} $9\frac{1}{2}^{h}$ to $11\frac{1}{2}^{h}$ Loss of Dec., H.F. and V.F. registers.

16^{d} 16^{h} to 21^{h} Fluctuations in H.F. (± ·0010).

17^{d} 0^{h} to 1^{h} Wave in Dec. (+ 6′) : in H.F. (+ ·0012) : decrease of V.F. (– ·0003). $3\frac{1}{2}^{h}$ to 5^{h} Wave in Dec. (+ 4′) : in H.F. small. 13^{h} to 18^{h} Fluctuations in H.F. $18\frac{1}{2}^{h}$ to $20\frac{1}{2}^{h}$ Loss of V.F. register.

18^{d} $4\frac{1}{2}^{h}$ to $6\frac{1}{2}^{h}$ Irregular wave in Dec. (– 3′). 14^{h} to 15^{h} Wave in H.F. (+ ·0010), followed by fluctuations till 22^{h}. 23^{h} to 24^{h} Wave in H.F. (+ ·0012) : in Dec. small.

19^{d} 5^{h} to 7^{h} Wave in H.F. (+ ·0010). 6^{h} to 8^{h} Wave in Dec. (– 3′). $12\frac{1}{4}^{h}$ to $13\frac{1}{4}^{h}$ Wave in H.F. (– :0010) : 15^{h} to $15\frac{1}{2}^{h}$ Wave in H.F. (– ·0010) : in Dec. small. $16\frac{1}{2}^{h}$ to 18^{h} Wave in Dec. (– 3′) : double wave in H.F. (– ·0014 to + ·0015).

25^{d} $16\frac{1}{2}^{h}$ to $17\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010). $17\frac{3}{4}^{h}$ to $19\frac{1}{2}$ Irregular double wave in H.F. (– ·0010 to + ·0010). $20\frac{3}{4}^{h}$ to $21\frac{1}{4}^{h}$ Wave in H.F. (+ ·0014). 22^{h} to 24^{h} Wave in Dec. (– 8′) : in H.F. (– ·0012).

26^{d} $0\frac{1}{2}^{h}$ to 5^{h} Fluctuations in Dec. and H.F. 6^{h} to 8^{h} Wave in Dec. (+ 7′). 6^{h} to $7\frac{1}{2}^{h}$ Wave in H.F. (– ·0020). 9^{h} to 12^{h} Fluctuations in Dec. and H.F. $12\frac{1}{2}^{h}$ to 15^{h} Prolonged double wave in H.F. (– ·0020 to + ·0008). $16\frac{1}{4}^{h}$ to $18\frac{1}{2}^{h}$ Double wave in H.F. (+ ·0017 to – ·0013). $16\frac{1}{2}^{h}$ to $17\frac{1}{2}^{h}$ Wave in Dec. (+ 3′). $20\frac{1}{2}^{h}$ to 22^{h} Wave in Dec. (– 5′) : in H.F. (+ ·0010).

27^{d} 1^{h} to $1\frac{3}{4}^{h}$ Wave in Dec. (+ 4′). 14^{h} to $15\frac{1}{4}^{h}$ Wave in H.F. (– ·0020). 16^{h} to $16\frac{1}{2}^{h}$ Wave in H.F. (+ ·0012). $17\frac{1}{2}^{h}$ to $18\frac{1}{4}^{h}$ Wave in H.F. (– ·0010), followed by fluctuations till 22^{h}. $22\frac{1}{2}^{h}$ to $23\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010).

28^{d} $0\frac{1}{2}^{h}$ to $1\frac{1}{4}^{h}$ Wave in Dec. (+ 3′) : in H.F. small. $2\frac{1}{2}^{h}$ to $4\frac{1}{2}^{h}$ Irregular wave in Dec. (+ 8′). 3^{h} to $4\frac{1}{2}^{h}$ Double wave in H.F. (– ·0010 to + ·0010). $5\frac{1}{2}^{h}$ to 7^{h} Wave in H.F. (+ ·0014), followed by sharp fluctuations till 12^{h}. $7\frac{1}{2}^{h}$ to $8\frac{1}{2}^{h}$ Flat-crested wave in Dec. (+ 4′), followed by fluctuations till 11^{h}. $16\frac{1}{2}^{h}$ to 17^{h} Serrated wave in H.F. (+ ·0010). 22^{h} to 23^{h} Double-crested wave in Dec. (– 3′) : double wave in H.F. (+ ·0010 to – ·0008).

29^{d} $22\frac{1}{2}^{h}$ to 24^{h} Wave in Dec. (+ 4′) : increase of H.F. (+ ·0006).

31^{d} $13\frac{1}{4}^{h}$ to $15\frac{1}{2}^{h}$ Sharp fluctuations in H.F. $16\frac{1}{2}^{h}$ to 19^{h} Two successive waves in H.F. (+ ·0014) and (+ ·0018). $17\frac{1}{2}^{h}$ to $19\frac{1}{2}^{h}$ Prolonged wave in Dec. (– 4′).

August

1^{d} 0^{h} to 1^{h} Wave in H.F. (+ ·0016) : in Dec. small. 14^{h} to $15\frac{1}{2}^{h}$ Wave in H.F. (– ·0010). $22\frac{1}{4}^{h}$ to $22\frac{1}{2}^{h}$ Wave in H.F. (+ 0010) : in Dec. small.

2^{d} 8^{h} to 10^{h} Fluctuations in Dec. and H.F. $11\frac{1}{2}^{h}$ to $12\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010).

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August 4^d 12½^h to 13^h Sharp fluctuations in H.F. 15½^h to 16¼^h Wave in H.F. (+ ·0012), followed by small fluctuations till 23^h. 21^h to 23½^h Shallow wave in Dec. (+ 3′).

5^d 1^h to 2½^h Irregular double wave in Dec. (− 3′ to + 3′): wave in H.F. (− ·0010) 3^h to 5½^h Double wave in Dec. (+ 4′ to − 3′): in H.F. (− ·0010 to + ·0010). 4^h to 6^h Wave in V.F. (− ·0003).

6^u 17½^h Increase of H.F. (+ ·0012).

8^d 1^h to 3^h Wave in H.F. (− ·0010): in Dec. small. 12^h to 22^h Fluctuations in Dec. (± ·0008). 22¾^h to 24^h Wave in H.F. (+ ·0010): in Dec. small.

9^d 12¾^h to 15¼^h Double wave in H.F. (− ·0010 to + ·0014): followed till 16^h by another wave (+ ·0012). 14¼^h to 15¼^h Wave in Dec. (+ 3′). 16¾^h to 17¼^h Wave in H.F. (− ·0010). 20½^h to 22½^h Wave in Dec. (− 3′).

10^d 13^h to 13¾^h Wave in H.F. (+ ·0010): in Dec. small.

11^d 0^h to 3^h Small fluctuations in H.F. 2^h to 10^h Fluctuations in Dec. 6½^h to 7½^h Wave in H.F (+ ·0010). 8½^h to 9½^h Wave in H.F. (− ·0010), followed by fluctuations till 11^h. 12½^h to 15^h Double-crested wave in H.F. with superposed fluctuations (+ ·0030 to − ·0024), followed by very sharp fluctuations. 13^h to 15^h Irregular wave in Dec. (+ 5′). 15½^h to 16^h Small sharp wave in H.F. (+ ·0014). 17^h to 18½^h Three successive waves in H.F. (− ·0024), (− ·0014) and (− ·0008). 18^h to 19½^h Wave in Dec. with superposed fluctuations (− 7′). 22^h to 24^h Double-crested wave in Dec. (− 5′). 22½^h to 24^h Double wave in H.F. (− ·0010 to + ·0010).

12^d 3^h to 5^h Wave in Dec. (+ 5′). 3^h to 4^h Wave in H.F. (− ·0012). 7½^h to 8½^h Wave in Dec. (− 3′).

13^d 2¼^h to 5½^h Irregular wave in Dec. (+ 8′): fluctuations in H.F. 10^h to 11^h Wave in H.F. (− ·0010). 12^h to 13^h Wave in H.F. (+ ·0010). 17½^h to 19¼^h Two successive waves in H.F. (− ·0014) and (− ·0010), followed by small fluctuations till 23^h. 18½^h to 20½^h Prolonged wave in Dec. with superposed fluctuations (− 7′).

14^d 0^h to 2^h Double-crested wave in Dec. (+ 6′). 0¾^h to 2^h Wave in H.F. (+ ·0012): in V.F. (− ·0003). 12^h to 13¾^h Double wave in H.F. (− ·0018 to + ·0010). 12¾^h to 13¾^h Wave in Dec. (+ 3′). 14^h to 15^h Wave in H.F. (− ·0016): in Dec. small. 15^h to 16½^h Wave in H.F. (− ·0012). 17^h to 19^h Serrated wave in Dec. (− 4′). 20½^h to 22^h Double-crested wave in Dec. (− 4′): wave in H.F. (+ ·0014).

15^d 2^h to 6^h Small fluctuations in Dec. and H.F.

16^d 18^h to 21^h Prolonged shallow wave in Dec. (− 4′). 19^h to 22^h Prolonged shallow wave in H.F. (− ·0010).

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

20^d 16^h to 18^h Wave in H.F. (− ·0010). 20½^h to 21¼^h Wave in Dec. (− 3′): in H.F. small.

21^d 0^h to 5^h Small fluctuations in Dec. and H.F.

21^d 12^h to 23^d 12^h. See Plates I. and II.

23^d 15^h to 16¼^h Wave in H.F. (+ ·0010). 16¾^h to 17¾^h Wave in Dec. (− 3′): in H.F. (− ·0016). 22½^h to 23½^h Wave in Dec. (− 4′). 23^d 23^h to 24^d 1^h Prolonged wave in H.F. (+ ·0020). 23½^h Decrease of V.F. (− ·0003).

24^d 2½^h to 4^h Wave in Dec. (+ 4′): in H.F. (− ·0012).

25^d 23^h Increase of H.F. (+ ·0020), followed by fluctuations till 26^d 2^h. 25^d 23^h to 26^d 1¾^h Double wave in Dec. (+ 4′ to − 7′).

26^d 2^h to 3¼^h Wave in Dec. (+ 7′): in H.F. (+ ·0010). 7^h to 7½^h Decrease of H.F. (− ·0022). 7¾^h to 9^h Wave in H.F. (− ·0028): small fluctuations in Dec. 11¼^h to 12^h Wave in H.F. (− ·0018): in Dec. (+ 3′). 13^h to 17^h Sharp fluctuations in H.F. (± ·0010). 17^h to 18^h Wave in H.F. (+ ·0020). 21^h to 22^h Wave in Dec. (− 3′). 21¼^h to 23^h Double-crested wave in H.F. (+ ·0018). 26^d 22½^h to 27^d 2^h Irregular double wave in Dec. (− 4′ to + 6′).

27^d 0½^h to 2^h Wave in H.F. (+ ·0010): in V.F. (+ ·0003). 3^h to 5^h Shallow wave in Dec. (+ 3′). 13^h to 16^h Two successive waves in H.F. (− ·0010) and (− ·0010). 15^h to 16^h Wave in Dec. (− 3′).

28^d 0^h to 1^h Wave in H.F. (+ ·0010).

30^d 12¾^h to 13¼^h Wave in H.F. (+ ·0010). 14¼^h to 15½^h Wave in H.F. (+ ·0014). 16^h to 17^h Wave in H.F. (+ ·0010). 21^h to 22^h Wave in Dec. (− 4′): in H.F. (− ·0010).

September 1^d 11½^h to 12^h Wave in H.F. (− ·0010): in Dec. small. 14¾^h to 15¼ Wave in H.F (+ ·0010), followed by small fluctuations till 19^h.

4^d 15¼^h Increase of H.F. (+ ·0016): in Dec. small. 17^h to 19^h Double wave in H.F. (+ ·0010 to − ·0012). 22^h to 24^h Irregular wave in Dec. (− 4′).

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September 5^{d} $9\frac{3}{4}^{h}$ to $10\frac{1}{4}^{h}$ Wave in H.F. (+ ·0012): in Dec. small. 12^{h} to 15^{h} Two successive double waves in H.F., each with superposed fluctuations (− ·0010 to + ·0010) and (− ·0016 to + ·0014), followed by sharp fluctuations till 17^{h}. $12\frac{1}{2}^{h}$ to $13\frac{1}{2}^{h}$ Double wave in Dec. (+ 6′ to − 3′): small wave in V.F. 15^{h} to $17\frac{1}{4}^{h}$ Prolonged irregular wave in Dec. with superposed fluctuations (− 6′): wave in V.F. (+ ·0004). $17\frac{3}{4}^{h}$ to $18\frac{1}{2}^{h}$ Wave in Dec. (− 5′). 18^{h} to $18\frac{3}{4}^{h}$ Wave in H.F. (+ ·0010). 22^{h} to 23^{h} Wave in H.F. (+ ·0010).

6^{d} 0^{h} to 4^{h} Two successive waves in Dec. (+ 3′) and (+ 5′). $1\frac{1}{2}^{h}$ to 4^{h} Prolonged wave in H.F. (− ·0012). $6\frac{1}{2}^{h}$ to $8\frac{1}{2}^{h}$ Wave in H.F. (− ·0014): in Dec. small.

7^{d} $20\frac{1}{2}^{h}$ to $21\frac{1}{2}^{h}$ Wave in H.F. (+ ·0014): in Dec. small. $20\frac{1}{2}$ to $22\frac{1}{2}^{h}$ Decrease of Dec. (− 9′). $21\frac{1}{2}$ to 23^{h} Decrease of H.F. (− ·0026). 7^{d} $23\frac{1}{2}^{h}$ to 8^{d} $1\frac{1}{2}^{h}$ Wave in Dec. with superposed fluctuations (+ 10′): in H.F. (+ ·0026). 7^{d} $23\frac{3}{4}^{h}$ to 8^{d} 3^{h} Prolonged wave in V.F. (− ·0008).

8^{d} 1 to 2^{h} Small double wave in H.F. (− ·0008 to + ·0008). $1\frac{1}{2}^{h}$ to 3^{h} Increase of Dec. (+ 5′). 12^{h} to 22^{h} Fluctuations in Dec. (± 2′): in H.F. (± ·0010).

9^{d} 1^{h} to 3^{h} Wave in Dec. (+ 9′): in H.F. + ·0010: in V.F. small. 16^{h} to 19^{h} Fluctuations in H.F. (± ·0008). 21^{h} to $22\frac{3}{4}^{h}$ Serrated wave in Dec. (− 3′). 21^{h} to 23^{h} Two successive waves in H.F. (+ ·0016) and (+ ·0010). 9^{d} 23^{h} to 10^{d} $0\frac{1}{2}^{h}$ Serrated wave in Dec. (− 4′).

10^{d} $0\frac{1}{2}^{h}$ to $3\frac{1}{2}^{h}$ Two successive double-crested waves in Dec. (− 3′) and (− 3′): in H.F. (+ ·0014) and (+ ·0014): decrease of V.F. (− ·0003). 13^{h} to $18\frac{1}{2}$ Fluctuations in H.F. (± ·0010). $16\frac{1}{2}^{h}$ to 18^{h} Wave in Dec. (− 8′). $18\frac{3}{4}^{h}$ to $21\frac{1}{2}^{h}$ Two successive waves in Dec. (− 3′) and (− 4′): in H.F. (+ ·0010) and (+ ·0018). 20^{h} to 21^{h} Wave in V.F. (+ ·0003). $22\frac{1}{2}^{h}$ to 24^{h} Double-crested wave in H.F. (+ ·0014). 23^{h} to 24^{h} Wave in Dec. (− 3′).

11^{d} 19^{h} to $20\frac{1}{2}^{h}$ Sharp wave in Dec. (− 8′): followed till 24^{h} by an irregular double wave with superposed fluctuations (− 7′ to + 4′). $19\frac{1}{2}^{h}$ to $20\frac{1}{2}^{h}$ Double wave in H.F. (− ·0012 to + ·0012). 21^{h} to $21\frac{1}{4}^{h}$ Decrease of H.F. (− ·0012). $21\frac{1}{2}^{h}$ to $22\frac{1}{4}^{h}$ Wave in H.F. (− ·0012).

12^{d} 12^{h} to 13^{h} Serrated wave in H.F. (− ·0016). $13\frac{1}{2}^{h}$ to $14\frac{1}{2}^{h}$ Wave in Dec. (+ 3′). 14^{h} to $16\frac{1}{2}^{h}$ Two successive waves in H.F. with superposed fluctuations (− ·0018) and (− ·0022). 16^{h} to 17^{h} Wave in Dec. (− 6′). $17\frac{1}{4}^{h}$ to 19^{h} Two successive waves in Dec. (− 3′) and (− 3′): in H.F. (− ·0010) and (− ·0010): $19\frac{1}{2}^{h}$ to $20\frac{1}{2}^{h}$ Wave in Dec. (− 4′): in H.F. (+ ·0014). 21^{h} to $22\frac{1}{2}^{h}$ Irregular wave in H.F. (+ ·0010): in Dec. (− 4′). 21^{h} to 24^{h} Double-crested wave in Dec. (− 6′), followed by a wave (− 4′).

13^{d} 23^{h} to 24^{h} Wave in Dec. (− 4′). 13^{d} 23^{h} to 14^{d} 1^{h} Double-crested wave in H.F. (+ ·0014).

15^{d} 22^{h} to 23^{h} Wave in H.F. (+ ·0010).

18^{d} 2^{h} to 12^{h} Loss of Dec. and H.F. registers. 6^{h} to 11^{h} Loss of V.F. register.

19^{d} 5^{h} to $6\frac{1}{2}^{h}$ Irregular wave in Dec. (− 3′): in H.F. (+ ·0010). $10\frac{1}{2}^{h}$ to $11\frac{1}{2}$ Wave in Dec. (+ 3′).

19^{d} 12^{h} to 21^{d} 12^{h}. See Plate II.

21^{d} $15\frac{1}{2}^{h}$ to $18\frac{1}{2}^{h}$ Flat-crested wave in Dec. (+ 3′). $17\frac{1}{2}^{h}$ to $18\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010). 23^{h} to 24^{h} Wave in H.F. (− ·0010): in Dec. small.

22^{d} 23^{h} to 23^{d} $1\frac{1}{4}^{h}$ Double wave in Dec. (− 3′ to + 6′).

23^{d} $2\frac{1}{4}^{h}$ to 4^{h} Double wave in Dec. (− 3′ to + 5′). $3\frac{1}{4}^{h}$ to 4^{h} Wave in H.F. (+ ·0020): in V.F. (− ·0003). 7^{h} to $8\frac{1}{2}^{h}$ Decrease of H.F. (− ·0030). 12^{h} to 14^{h} Irregular wave in Dec. (− 4′). 12^{h} to 13^{h} Increase of H.F. (+ ·0003). $13\frac{1}{2}^{h}$ to $15\frac{1}{4}^{h}$ Double-crested wave in H.F. (− ·0024). $14\frac{1}{2}^{h}$ to 15^{h} Sharp decrease of Dec. (− 6′). $20\frac{1}{2}^{h}$ to $22\frac{1}{2}^{h}$ Prolonged irregular wave in Dec. (− 6′). 21^{h} to 22^{h} Wave in H.F. (− ·0010).

24^{d} 0^{h} to 1^{h} Double wave in Dec. (+ 3′ to − 4′). 0^{h} to $2\frac{1}{2}^{h}$ Wave in H.F. (+ ·0020). $0\frac{1}{4}^{h}$ to $0\frac{3}{4}^{h}$ Decrease of V.F. (− ·0003). 5^{h} to $8\frac{1}{2}^{h}$ Two successive waves in H.F. (− ·0014) and (− ·0014). 10^{h} to 11^{h} Wave in H.F. (− ·0014). $21\frac{1}{2}^{h}$ to 23^{h} Wave in Dec. (+ 3′): in H.F. (+ ·0010).

25^{d} $19\frac{1}{2}^{h}$ to $22\frac{1}{2}^{h}$ Two successive waves in Dec. (− 3′) and (− 3′).

27^{d} 21^{h} to 24^{h} Two successive waves in H.F., with superposed fluctuations (− ·0012) and (− ·0016). $21\frac{1}{2}^{h}$ to 24^{h} Prolonged wave in Dec. (− 5′).

28^{d} $15\frac{3}{4}^{h}$ Increase of Dec. (+ 2′). 19^{h} to 24^{h} Small fluctuations in H.F.

29^{d} 0^{h} to 4^{h} Small fluctuations in Dec. and H.F. 4^{h} to $5\frac{1}{2}^{h}$ Wave in H.F. (− ·0010). 5^{h} to 6^{h} Wave in Dec. (+ 3′). 8^{h} to 9^{h} Wave in H.F. (− ·0010). 14^{h} to 16^{h} Wave in Dec. with superposed fluctuations (− 8′). 15^{h} to 16^{h} Wave in H.F. (+ ·0012). $17\frac{1}{2}^{h}$ to $18\frac{1}{2}^{h}$ Wave in Dec. (− 5′): in H.F. (+ ·0010). 23^{h} to 24^{h} Wave in Dec. (+ 3′): in H.F. (+ ·0010).

30^{d} 20^{h} to 21^{h} Wave in Dec. (+ 3′): in H.F. (+ ·0010).

October 1^{d} 1^{h} to $2\frac{1}{2}^{h}$ Double-crested wave in Dec. (+ 3′). 21^{h} to 24^{h} Prolonged irregular wave in Dec. (− 10′). 21^{h} to $22\frac{1}{2}^{h}$ Wave in H.F. (− ·0020). $23\frac{1}{4}^{h}$ to 24^{h} Waves in H.F. (− ·0010).

2^{d} $7\frac{1}{2}^{h}$ to 8^{h} Decrease of H.F. (− ·0020). 14^{h} to $14\frac{1}{2}^{h}$ Wave in Dec. (+ 4′): in H.F. small.

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3^{d} $0\frac{1}{2}^{h}$ to 1^{h} Wave in Dec. (+ 3′). 18^{h} to 19^{h} Wave in Dec. (− 3′).

4^{d} $0\frac{1}{2}^{h}$ to $1\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010): in Dec. small. $18\frac{1}{2}^{h}$ to $20\frac{1}{2}^{h}$ Double crested wave in Dec. (− 5′).

5^{d} $19\frac{1}{4}^{h}$ Decrease of H.F. (− ·0008). $19\frac{1}{4}^{h}$ to $22\frac{1}{2}^{h}$ Prolonged irregular wave in Dec. (− 12′), sharp at commencement. $18\frac{1}{2}^{h}$ to 20^{h} Wave in V.F. (+ ·0003). $20\frac{1}{4}^{h}$ to 21^{h} Wave in H.F. (+ ·0010). $21\frac{1}{4}^{h}$ to $21\frac{1}{2}^{h}$ Wave in H.F. (− ·0010).

6^{d} $0\frac{1}{2}^{h}$ to $1\frac{3}{4}$ Wave in Dec. (+ 6′). 13^{h} to $13\frac{1}{2}^{h}$ Wave in Dec. (+ 3′): in H.F. (+ ·0010). 16^{h} to 18^{h} Flat-crested wave in Dec. (− 4′). $18\frac{1}{4}^{h}$ to $20\frac{1}{2}$ Three successive waves in Dec. (− 5′), (− 3′) and (− 3′). $18\frac{1}{4}^{h}$ to 19^{h} Wave in H.F. (+ ·0022). 20^{h} to $20\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010), followed by fluctuations till 23^{h}. $21\frac{1}{4}^{h}$ to 23^{h} Wave in Dec. (+ 3′).

7^{d} $0\frac{1}{4}^{h}$ to $1\frac{1}{4}^{h}$ Wave in Dec. (+ 3′): in H.F. small. $17\frac{1}{4}^{h}$ to $18\frac{3}{4}^{h}$ Two successive waves in H.F. (+ ·0010) and (+ ·0010). $18\frac{1}{2}^{h}$ to 19^{h} Wave in Dec. (+ 3′), followed till $20\frac{1}{2}^{h}$ by a double wave (+ 5′ to − 5′). 19^{h} to $20\frac{1}{2}^{h}$ Two successive waves in H.F. (+ 0026) and (+ ·0018). $19\frac{1}{4}^{h}$ to 20^{h} Wave in V.F. (− ·0003). $21\frac{1}{2}^{h}$ to $22\frac{1}{4}^{h}$ Serrated wave in H.F. (+ ·0016): in Dec. small. 7^{d} $23\frac{1}{2}^{h}$ to 8^{d} $0\frac{3}{4}$ Wave in Dec. (+ 4′): in H.F. (+ ·0018): in V.F. (− ·0003).

8^{d} $3\frac{1}{2}^{h}$ to 5^{h} Wave in Dec. (+ 3′). 7^{h} to $9\frac{1}{2}^{h}$ Wave in H.F. (− ·0024). 18^{h} to $19\frac{1}{4}^{h}$ Wave in Dec. (− 7′): serrated wave in H.F. (+ ·0014). 20^{h} to 23^{h} Prolonged irregular wave in H.F. (+ 0015). 20^{h} to 21^{h} Wave in Dec. (− 3′). $22\frac{1}{2}^{h}$ to $23\frac{1}{4}^{h}$ Wave in Dec. (− 3′).

11^{d} 10^{h} to $17\frac{1}{2}^{h}$ Wave in Dec. (− 3′): in H.F. (− ·0014). 21^{h} to $21\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010). 22^{h} to 24^{h} Wave in Dec. with superposed fluctuations (− 12′): double wave in H.F. with superposed fluctuations (+ ·0022 to − ·0024): small fluctuations in V.F.

12^{d} 12^{h} to 14^{d} 12^{h} See Plate III.

14^{d} $14\frac{1}{4}^{h}$ to $15\frac{1}{2}^{h}$ Wave in H.F. (− ·0020). $14\frac{1}{4}^{h}$ to $17\frac{1}{4}^{h}$ Two successive waves in Dec. (− 5′) and (− 10′). $16\frac{1}{4}^{h}$ to $19\frac{1}{4}^{h}$ Small double wave in H.F. (− ·0010 to + ·0010).

15^{d} $12\frac{1}{2}^{h}$ to $14\frac{1}{2}^{h}$ Wave in H.F. (− ·0014). 22^{h} to 23^{h} Wave in Dec. (− 6′): in H.F. (+ ·0012). 15^{d} 23^{h} to 16^{d} $0\frac{1}{2}^{h}$ Wave in Dec. (− 3′): in H.F. small.

16^{d} 17^{h} to 19^{h} Wave in Dec. (− 3′): in H.F. small.

17^{d} 1^{h} to 3^{h} Double wave in Dec. (+ 3′ to − 3′): in H.F. small. $17\frac{1}{2}^{h}$ to $19\frac{1}{2}^{h}$ Prolonged wave in Dec. (− 10′): in H.F. (+ ·0010). 21^{h} to 22^{d} Wave in Dec. (− 3′). 21^{h} to 23^{h} Wave in H.F. (+ ·0014).

18^{d} $20\frac{1}{2}^{h}$ to 24^{h} Wave in Dec. (− 4′). $21\frac{1}{4}^{h}$ to 23^{h} Wave in H.F. (+ ·0010).

19^{d} $20\frac{1}{4}^{h}$ to 21^{h} Wave in H.F. (+ ·0012), followed by fluctuations till 23^{h}. 19^{h} to 22^{h} Fluctuations in Dec.

20^{d} $16\frac{1}{2}^{h}$ to $17\frac{1}{4}^{h}$ Wave in Dec. (− 3′).

22^{d} $16\frac{1}{4}^{h}$ to $17\frac{1}{2}^{h}$ Wave in H.F. (− ·0014). $17\frac{3}{4}^{h}$ to 19^{h} Irregular wave in Dec. (− 5′). 18^{h} to $19\frac{1}{2}^{h}$ Wave in H.F. (+ ·0012).

23^{d} 22^{h} to 24^{h} Double wave in Dec. (+ 3′ to − 4′): wave in H.F. (+ ·0020): in V.F. (− ·0003).

24^{d} 12^{h} to 13^{h} Wave in H.F. (+ ·0010): in Dec. small.

25^{d} 9^{h} to 16^{h} Fluctuations in H.F. (± ·0008). 22^{h} to 24^{h} Irregular wave in Dec. (− 4′): in H.F. (+ ·0032).

26^{d} $0\frac{1}{2}^{h}$ to 2^{h} Wave in Dec. (− 3′). $1\frac{1}{2}^{h}$ to 3^{h} Wave in H.F. (+ ·0010). $2\frac{1}{2}^{h}$ to $3\frac{3}{4}^{h}$ Wave in Dec. (− 4′). $5\frac{1}{2}^{h}$ to $7\frac{1}{2}^{h}$ Wave in Dec. (+ 3′): in H.F. (− ·0012). $9\frac{1}{2}^{h}$ to 10^{h} Wave in H.F. (− ·0010): in Dec. small. 12^{h} to 23^{h} Fluctuations in H.F. 12^{h} to 17^{h} Small fluctuations in Dec. $19\frac{1}{2}^{h}$ to 21^{h} Wave in Dec. (− 4′). 26^{d} 23^{h} to 27^{d} 2^{h} Double-crested wave in Dec. (− 7′).

27^{d} $7\frac{1}{2}^{h}$ to $8\frac{1}{2}^{h}$ Wave in H.F. (− ·0010). 22^{h} to 23^{h} Wave in H.F. (+ ·0010): in Dec. small.

28^{d} 19^{h} to 20^{h} Double-crested wave in Dec. (− 3′): wave in H.F. (+ ·0010). 23^{h} to 24^{h} Wave in H.F. (+ ·0014).

29^{d} 3^{h} to 4^{h} Wave in Dec. (+ 3′). $21\frac{1}{2}^{h}$ to $22\frac{1}{2}^{h}$ Double wave in H.F. (− ·0006 to + ·0010), followed till $23\frac{1}{4}^{h}$ by another wave (+ ·0010). $21\frac{3}{4}^{h}$ to 24^{h} Two successive waves in Dec. (− 4′) and (− 3′).

30^{d} 0^{h} to 10^{h} Fluctuations in Dec. (± 2′).

30^{d} 12^{h} to November 1^{d} 12^{h} See Plates III. and IV.

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1^{d} 13^{h} to 14^{h} Wave in H.F. (+ ·0010): in Dec. small. 20^{h} to 21^{h} Wave in Dec. (− 4′): in H.F. (+ ·0010). 1^{d} $22\frac{1}{2}^{h}$ to 2^{d} 1^{h} Prolonged wave in H.F. (+ ·0020). 1^{d} 23^{h} to 2^{d} 2^{h} Two successive waves in Dec. (− 3′) and (− 4′).

2^{d} 14^{h} to $14\frac{1}{4}^{h}$ Decrease of Dec. (− 4′). $14\frac{1}{2}^{h}$ to $15\frac{1}{2}^{h}$ Wave in Dec. (− 5′): double wave in H.F. (− ·0010 to + ·0018). $15\frac{1}{2}^{h}$ to $16\frac{1}{2}^{h}$ Wave in V.F. (− ·0003). $16\frac{1}{2}^{h}$ to $17\frac{1}{4}^{h}$ Wave in H.F. (− ·0010). 17^{h} to $18\frac{1}{4}^{h}$ Two successive waves in H.F. (+ ·0024) and (+ ·0024): fluctuations in V.F. $17\frac{1}{4}^{h}$ to $18\frac{1}{4}^{h}$ Two successive waves in Dec. (− 8′) and (− 8′). $18\frac{1}{2}^{h}$ to $21\frac{1}{2}^{h}$ Two successive waves in Dec. (− 5′) and (− 5′). $20\frac{3}{4}^{h}$ to 22^{h} Wave in H.F. (+ ·0030). 21^{h} to $21\frac{1}{2}^{h}$ Decrease of V.F. (− ·0003).

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November 3^{d} 0^{h} to 6^{h} Fluctuations in Dec. $5\frac{1}{2}^{h}$ to $7\frac{1}{2}^{h}$ Irregular wave in H.F. (− ·0018). 8^{h} to 9^{h} Wave in Dec. (− 3′). $9\frac{1}{2}^{h}$ to $10\frac{1}{2}^{h}$ Wave in Dec. (− 3′): in H.F. (− ·0010). $10\frac{3}{4}^{h}$ to $11\frac{1}{4}^{h}$ Wave in Dec. (+ 4′): in H.F. (+ ·0010). $18\frac{3}{4}^{h}$ to $21\frac{1}{2}^{h}$ Prolonged irregular wave in Dec. (− 12′). $18\frac{3}{4}^{h}$ to $19\frac{1}{2}^{h}$ Wave in H.F. (+ ·0012): followed till $21\frac{1}{2}^{h}$ by a double wave (+ ·0020 to − ·0010).

4^{d} 0^{h} to $0\frac{1}{2}^{h}$ Wave in Dec. (− 3′): in H.F. small. $6\frac{1}{2}^{h}$ to 8^{h} Wave in Dec. (+ 5′): in H.F. (− ·0010). 9^{h} to 10^{h} Wave in Dec. (+ 3′). 12^{h} to 14^{h} Wave in H.F. (− ·0016). $12\frac{3}{4}^{h}$ to $13\frac{1}{4}$ Wave in Dec. (− 3′). 18^{h} to 19^{h} Wave in Dec. (− 8′): in H.F. (− ·0014): in V.F. small. $19\frac{1}{4}^{h}$ to $20\frac{1}{4}^{h}$ Irregular wave in Dec. (− 4′): in H.F. (+ ·0012). $20\frac{3}{4}^{h}$ to 23^{h} Four successive waves in Dec. (− 3′), (− 4′), (− 4′) and (− 3′). 21^{h} to 22^{h} Double wave in H.F. (− ·0010 to + ·0014): wave in V.F. (− ·0003). 22^{h} Increase of H.F. (+ ·0010). 23^{h} to 24^{h} Wave in H.F. (+ ·0014).

5^{d} 0^{h} to $0\frac{1}{2}^{h}$ Increase of Dec. (+ 13′). 2^{h} to 3^{h} Wave in Dec. (− 3′), followed till 5^{h} by a double wave (− 4′ to + 5′). 3^{h} to $5\frac{1}{2}^{h}$ Two successive waves in H.F. (+ ·0010) and (+ 0010).

6^{d} 22^{h} to 23^{h} Flat-crested wave in Dec. (− 3′). $22\frac{1}{2}^{h}$ to $23\frac{1}{2}^{h}$ Small double wave in H.F. (− ·0008 to + ·0008).

7^{d} 0^{h} to 3^{h} Double wave in Dec. (− 4′ to + 6′). $1\frac{1}{4}^{h}$ to 2^{h} Wave in H.F. (+ ·0012): in V.F. (− ·0003). 19^{h} to 21^{h} Wave in Dec. (− 8′). 19^{h} to 20^{h} Wave in H.F. (+ ·0010). $22\frac{1}{2}^{h}$ to $23\frac{1}{4}$ Wave in Dec. (+ 4′). $22\frac{1}{2}^{h}$ to 24^{h} Wave in H.F. (+ ·0012).

8^{d} $21\frac{1}{2}^{h}$ to 24^{h} Two successive waves in Dec. (− 3′) and (− 6′): in H.F. (+ ·0010) and (+ ·0012).

9^{d} $22\frac{1}{2}^{h}$ to 10^{d} $1\frac{1}{4}^{h}$ Irregular wave in Dec. (− 10′). 9^{d} $22\frac{1}{2}^{h}$ to 10^{d} $0\frac{1}{2}^{h}$ Irregular wave in H.F. (+ ·0024): in V.F. (− ·0004).

10^{d} $1\frac{1}{4}^{h}$ to $3\frac{1}{2}^{h}$ Wave in Dec. (− 7′). $1\frac{1}{4}^{h}$ to $2\frac{1}{4}^{h}$ Wave in H.F. (+ ·0016): in V.F. (− ·0003). $4\frac{1}{2}^{h}$ to 6^{h} Wave in Dec. (+ 3′): in H.F. (+ ·0012). $12\frac{1}{2}^{h}$ to $13\frac{1}{4}^{h}$ Wave in Dec. (− 3′): in H.F. (− ·0010). 14^{h} to 16^{h} Wave in H.F. (− ·0022). $14\frac{3}{4}^{h}$ to 16^{h} Wave in Dec. (− 5′). $16\frac{1}{4}^{h}$ to $18\frac{1}{4}^{h}$ Double wave in H.F. (− ·0010 to + ·0010). $17\frac{1}{2}^{h}$ to 19^{h} Two successive waves in Dec. (− 4′) and (− 3′). $19\frac{1}{2}^{h}$ to 20^{h} Wave in H.F. (+ ·0020). $19\frac{3}{4}^{h}$ to $21\frac{1}{4}^{h}$ Two successive waves in Dec. (− 4′) and (− 6′). 21^{h} to 23^{h} Double wave in H.F. (− ·0018 to + ·0012). 22^{h} to 24^{h} Double wave in Dec. (+ 3′ to − 4′): wave in V.F. (− ·0003).

11^{d} 0^{h} to 6^{h} Fluctuations in Dec. and H.F. $8\frac{1}{2}^{h}$ to $9\frac{1}{2}^{h}$ Wave in H.F. (− ·0010). $13\frac{1}{2}^{h}$ to $14\frac{1}{2}^{h}$ Wave in Dec. (− 3′): in H.F. (− ·0010). 17^{h} to $18\frac{1}{4}^{h}$ Wave in Dec. (− 4′): in H.F. small.

12^{d} 0^{h} to 2^{h} Two successive waves in Dec. (+ 3′) and (+ 3′). $15\frac{1}{2}^{h}$ to 17^{h} Wave in Dec. (− 6′). $15\frac{3}{4}^{h}$ to $16\frac{1}{2}^{h}$ Wave in H.F. (− ·0010). 23^{h} to 24^{h} Wave in H.F. (+ ·0010): in Dec. small.

13^{d} $15\frac{3}{4}^{h}$ to $17\frac{1}{4}^{h}$ Flat-crested wave in Dec. (− 4′): in H.F. small. 19^{h} to 20^{h} Wave in Dec. (− 3′): in H.F. (+ ·0010). $21\frac{1}{2}^{h}$ to $22\frac{1}{2}^{h}$ Wave in H.F. (+ ·0012).

14^{d} 23^{h} to 24^{h} Wave in Dec. (+ 3′).

16^{d} 19^{h} to 22^{h} Fluctuations in H.F. 16^{d} $23\frac{3}{4}^{h}$ to 17^{d} 1^{h} Wave in H.F. (+ ·0010).

17^{d} 0^{h} to 2^{h} Double-crested wave in Dec. (− 5′). 2^{h} to 3^{h} Wave in Dec. (+ 3′). $4\frac{1}{4}^{h}$ to $5\frac{1}{4}^{h}$ Wave in Dec. (+ 4′). $20\frac{1}{2}^{h}$ to $21\frac{3}{4}^{h}$ Wave in Dec. (− 6′): in H.F. (+ ·0016): decrease in V.F. (− ·0004).

18^{d} 1^{h} to 2^{h} Wave in Dec. (− 3′): in H.F. (+ ·0010). $2\frac{1}{4}^{h}$ to $4\frac{1}{4}^{h}$ Wave in Dec. (− 3′): in H.F. (− ·0012). 19^{h} to $19\frac{1}{2}^{h}$ Decrease of Dec. (− 4′): followed till 20^{h} by a wave (− 4′). 21^{h} to 24^{h} Three successive waves in Dec. (− 3′), (− 10′) and (− 10′): in H.F. (− ·0014), (− ·0022) and (− 0010). 22^{h} to $23\frac{1}{2}^{h}$ Two successive waves in V.F. (− ·0003) and (− ·0003).

19^{d} 0^{h} to $0\frac{3}{4}^{h}$ Wave in Dec. (− 5′): in H.F. (− ·0012): in V.F. (− ·0003). 1^{h} to $2\frac{3}{4}^{h}$ Irregular wave in Dec. (− 9′): double wave in H.F. (− ·0010 to + ·0014): wave in V.F. (+ ·0003). $19\frac{1}{2}^{h}$ to 23^{h} Prolonged irregular wave in Dec. (− 5′).

20^{d} $19\frac{1}{4}^{h}$ to $20\frac{1}{4}^{h}$ Wave in Dec. − 3′. 21^{h} to $22\frac{1}{2}^{h}$ Wave in Dec. (− 4′): small double wave in H.F. (− ·0007 to + ·0008).

21^{d} 0^{h} to 1^{h} Small double wave in Dec. (+ 3′ to − 2′). $0\frac{1}{2}^{h}$ to $3\frac{1}{4}^{h}$ Two successive waves in H.F. (+ ·0010) and (+ ·0010). $1\frac{1}{4}^{h}$ to 3^{h} Small double wave in Dec. (− 3′ to + 2′). $22\frac{1}{4}^{h}$ Decrease of Dec. (− 5′), followed till $23\frac{3}{4}^{h}$ by a wave (− 6′): wave in H.F. (+ ·0024). 23^{h} to 24^{h} Wave in V.F. (+ ·0003).

22^{d} 0^{h} to 1^{h} Wave in Dec. (− 5): in H.F. (+ ·0010). $1\frac{1}{4}^{h}$ to $2\frac{1}{4}^{h}$ Wave in Dec. (+ 5′). $1\frac{1}{2}^{h}$ to 3^{h} Wave in H.F. (+ ·0010). 3^{h} Increase of Dec. (+ 5′). $5\frac{1}{4}^{h}$ to 7^{h} Flat-crested wave in Dec. (+ 3′). 12^{h} to $12\frac{1}{2}^{h}$ Wave in H.F. (− ·0010): in Dec. small. $19\frac{3}{4}^{h}$ to $23\frac{3}{4}^{h}$ Two successive waves in Dec., the first being serrated (− 13′) and (− 7′). 20^{h} to $20\frac{1}{4}^{h}$ Sharp wave in H.F. (− ·0014). $20\frac{1}{2}^{h}$ to $21\frac{1}{2}^{h}$ Wave in H.F. (− ·0014). 21^{h} to 22^{h} Decrease of V.F. (− ·0004).

23^{d} $14\frac{1}{2}^{h}$ Decrease of H.F. (− ·0006). $17\frac{3}{4}^{h}$ to $19\frac{1}{4}^{h}$ Two successive waves in Dec. (− 3′) and (− 3′): in H.F. (+ ·0010) and (+ ·0010). $20\frac{1}{2}^{h}$ to $21\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010). $21\frac{1}{2}^{h}$ to $22\frac{1}{2}^{h}$ Wave in Dec. (− 4′).

24^{d} 1^{h} to $2\frac{1}{4}^{h}$ Wave in Dec. (+ 3′): in H.F. (+ ·0010).

26^{d} $21\frac{3}{4}^{h}$ to $23\frac{1}{4}^{h}$ Two successive waves in Dec. (− 3′) and (− 3′): in H.F. small.

1903.

November 29^{d} $0\frac{1}{4}^{h}$ to $2\frac{1}{4}^{h}$ Double wave in Dec. (+ $2\frac{1}{2}'$ to − 3′). $0\frac{1}{4}^{h}$ to $0\frac{3}{4}^{h}$ Wave in H.F. (+ ·0010). $21\frac{1}{2}^{h}$ to 24^{h} Two successive waves in Dec. (− 3′) and (− 4′): in H.F. (+ ·0010) and (+ ·0012).

30^{d} $0\frac{1}{2}^{h}$ to 2^{h} Wave in Dec. (− 3′): in H.F. (+ ·0010).

December 1^{d} 20^{h} to 24^{h} Sharp fluctuations in H.F. (± ·0008): in Dec. small.

2^{d} $1\frac{1}{4}^{h}$ to 2^{h} Sharp wave in Dec. (− 7′): serrated wave in H.F. (+ ·0012): wave in V.F. (− ·0003). $4\frac{1}{2}^{h}$ to 7^{h} Two successive waves in H.F. (− ·0010) and (− ·0022): fluctuations in Dec. $7\frac{3}{4}^{h}$ to 9^{h} Wave in H.F. (− ·0010). $9\frac{3}{4}^{h}$ Decrease of H.F. (− ·0008).

3^{d} 2^{h} to 4^{h} Wave in Dec. (+ 5′). $19\frac{1}{2}^{h}$ to $20\frac{1}{2}^{h}$ Wave in H.F. (+ ·0010): in Dec. small.

4^{d} $12\frac{1}{2}^{h}$ to 14^{h}. Wave in Dec. (− 3′). 14^{h} to $14\frac{3}{4}^{h}$ Decrease of H.F. (− ·0014). $16\frac{1}{4}^{h}$ to $17\frac{3}{4}^{h}$ Sharp wave in Dec. (− 15′): serrated wave in H.F. (− ·0022): wave in V.F. (+ ·0003). 19^{h} to $21\frac{1}{4}^{h}$ Irregular wave in Dec. (− 4′): in H.F. (− ·0020).

5^{d} 0^{h} to $1\frac{1}{2}^{h}$ Wave in Dec. (+ 7′): in H.F. (+ ·0030): in V.F. (+ ·0003). 14^{h} to $15\frac{1}{2}^{h}$ Serrated wave in Dec. (− 3′): in H.F. small. 19^{h} to 21^{h} Irregular wave in Dec. (− 10′): double wave in H.F. (− ·0010 to + ·0010).

6^{d} $19\frac{1}{4}^{h}$ to $20\frac{1}{4}^{h}$ Wave in Dec. (− 3′). 22^{h} to 24^{h} Double-crested wave in Dec. (− 5′): in H.F. (+ ·0025): decrease of V.F. (− ·0003).

7^{d} $0\frac{1}{4}^{h}$ to 1^{h} Wave in Dec. (− 3′). 13^{h} to $14\frac{1}{2}^{h}$ Wave in H.F. (− ·0010). $15\frac{1}{4}^{h}$ to 18^{h} Prolonged wave in H.F. (− ·0020): in Dec. small. $19\frac{1}{4}^{h}$ to $20\frac{3}{4}^{h}$ Serrated wave in Dec. (− 4′). $19\frac{1}{2}^{h}$ to $21\frac{1}{2}^{h}$ Irregular wave in H.F. (+ ·0020).

8^{d} $10\frac{3}{4}^{h}$ to $11\frac{1}{4}$ Wave in Dec. (− 3′). 16^{h} to 18^{h} Irregular wave in Dec. (− 4′): in H.F. (+ ·0010). $19\frac{1}{2}^{h}$ to 20^{h} Wave in Dec. (− 3′): in H.F. small. $20\frac{1}{2}^{h}$ to $21\frac{1}{4}^{h}$ Wave in H.F. (+ ·0010).

10^{d} 0^{h} to 1^{h} Wave in H.F. (+ ·0010): in Dec. small. $20\frac{3}{4}^{h}$ to $21\frac{1}{2}^{h}$ Wave in Dec. (− 3′): in H.F. small.

13^{d} 12^{h} to 14^{d} 12^{h} See Plate V.

15^{d} $18\frac{1}{4}^{h}$ to $19\frac{1}{4}^{h}$ Wave in Dec. (− 8′): in H.F. (− ·0014).

19^{d} $22\frac{1}{2}^{h}$ to 20^{d} $0\frac{1}{4}^{h}$ Wave in Dec. (− 8′): in H.F. small.

20^{d} $12\frac{3}{4}^{h}$ to 13^{h} Decrease of H.F. (− ·0014): followed till $13\frac{1}{2}^{h}$ by a wave (− ·0010). 13^{h} to 14^{h} Wave in Dec. (− 3′). 14^{h} to 17^{h} Fluctuations in Dec. and H.F. $20\frac{1}{2}^{h}$ to 22^{h} Double-crested wave in Dec. (− 4′): in H.F. (+ ·0010).

21^{d} 0^{d} to 1^{h} Wave in Dec. (+ 3′): in H.F. small. 3^{h} to 4^{h} Wave in Dec. (+ 3′): followed by fluctions till 8^{h} (± 2′). 5^{h} to 6^{h} Wave in H.F. (+ ·0010).

23^{d} $18\frac{3}{4}^{h}$ to 19^{h} Wave in Dec. (− 3′). $20\frac{1}{2}^{h}$ to $21\frac{1}{2}^{h}$ Wave in H.F. (+ ·0012).

30^{d} 3^{h} to 5^{h} Double wave in Dec., with superposed fluctuations (+ 3′ to − 3′): in H.F. (+ ·0008 to − ·0010). 8^{h} to 9^{h} Wave in H.F. (− ·0010). $11\frac{1}{2}^{h}$ Commencement of double-crested wave in Dec.

30^{d} 12^{h} to 31^{d} 12^{h} See Plate V.

31^{d} 13^{h} to 20^{h} Loss of V.F. register. 13^{h} to 24^{h} Loss of H.F. register. 18^{h} to 21^{h} Two successive double-crested waves in Dec. (− 4′) and (− 6′).

EXPLANATION OF THE PLATES.

The magnetic motions figured on the Plates are :—

(1.) Those for days of great disturbance—October 12–13, 30–31, October 31–November 1, December 13–14.

(2.) Those for days of lesser disturbance—April 5^{d} 23^{h} to 6^{d} 23^{h}, June 29–30, August 21–22, 22–23, September 19–20, 20–21, October 13–14, December 30–31.

(3.) Those for four quiet days—February 4, May 26, August 7, November 14—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 $0^{\text{in.}}80 = \overset{\text{mm.}}{20{\cdot}2}$ in the declination curve, by $0^{\text{in.}}73 = \overset{\text{mm.}}{18{\cdot}6}$ in the horizontal force curve, and by $0^{\text{in.}}64 = \overset{\text{mm.}}{16{\cdot}3}$ in the vertical force curve.

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

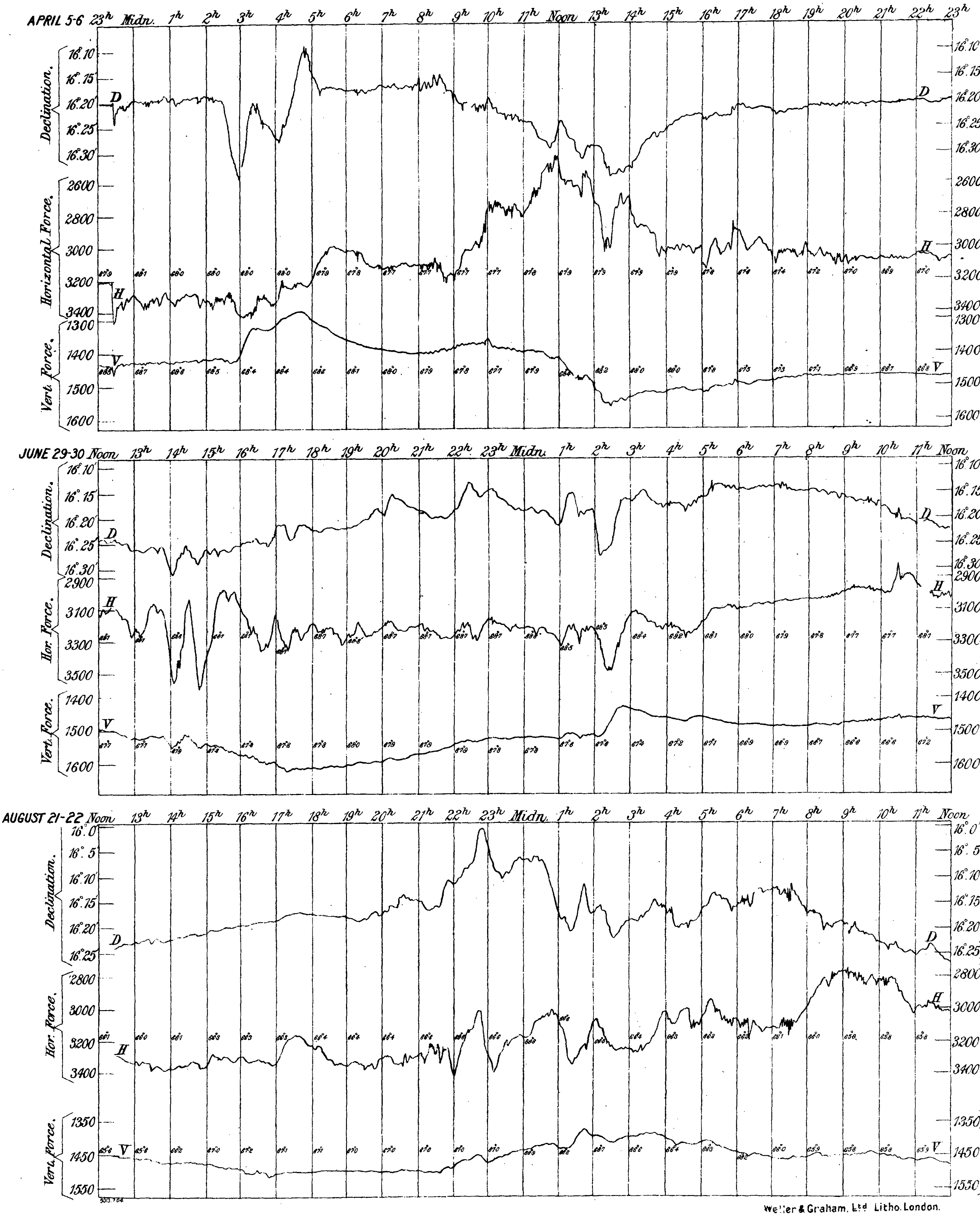
The earth current registers are not given on the plates in consequence of interference with the records caused by the running of trains on the City and South London Electric Railway.

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.

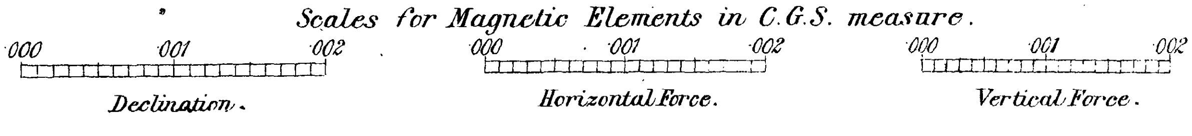
Plate I.

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1903.

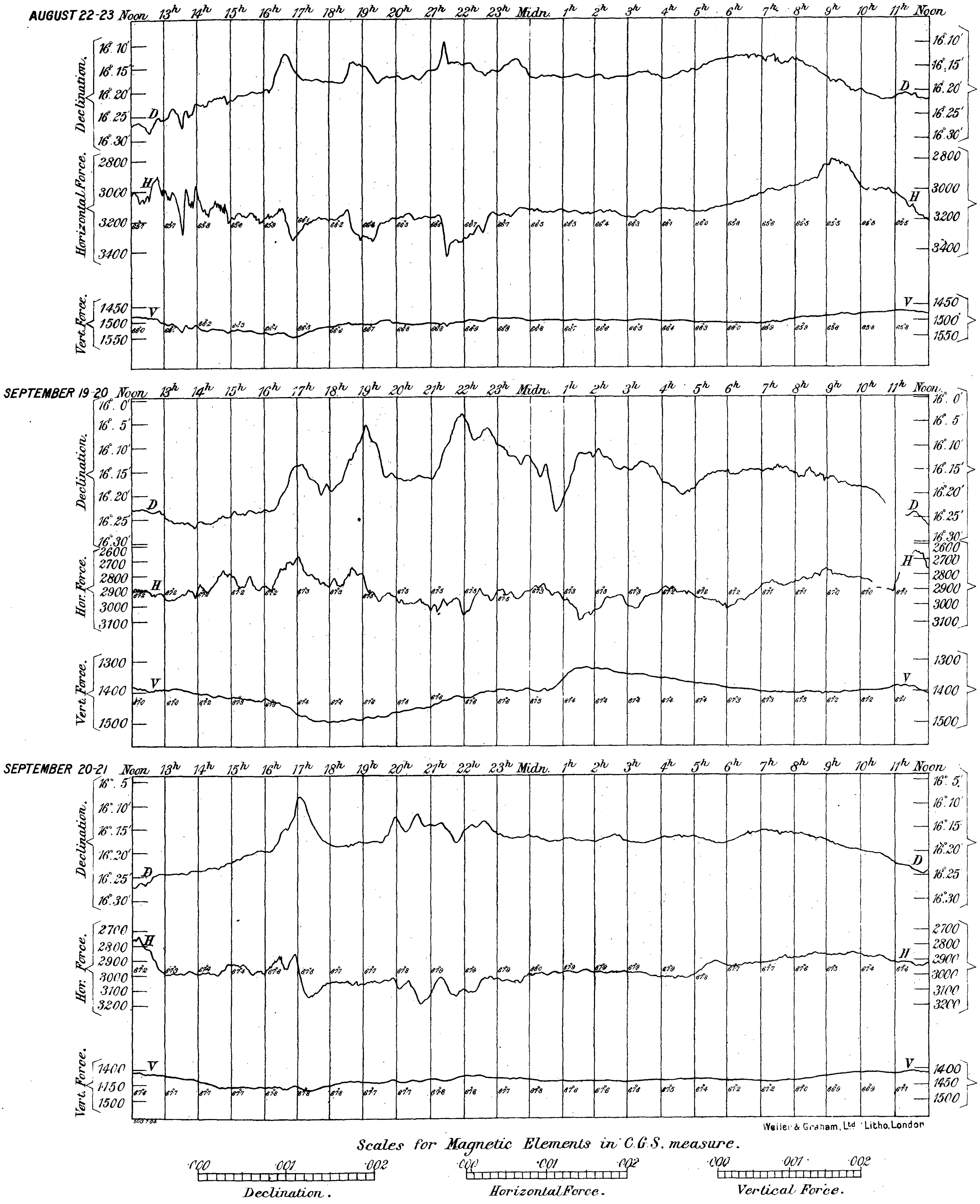


Weller & Graham, Ltd Litho. London.

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

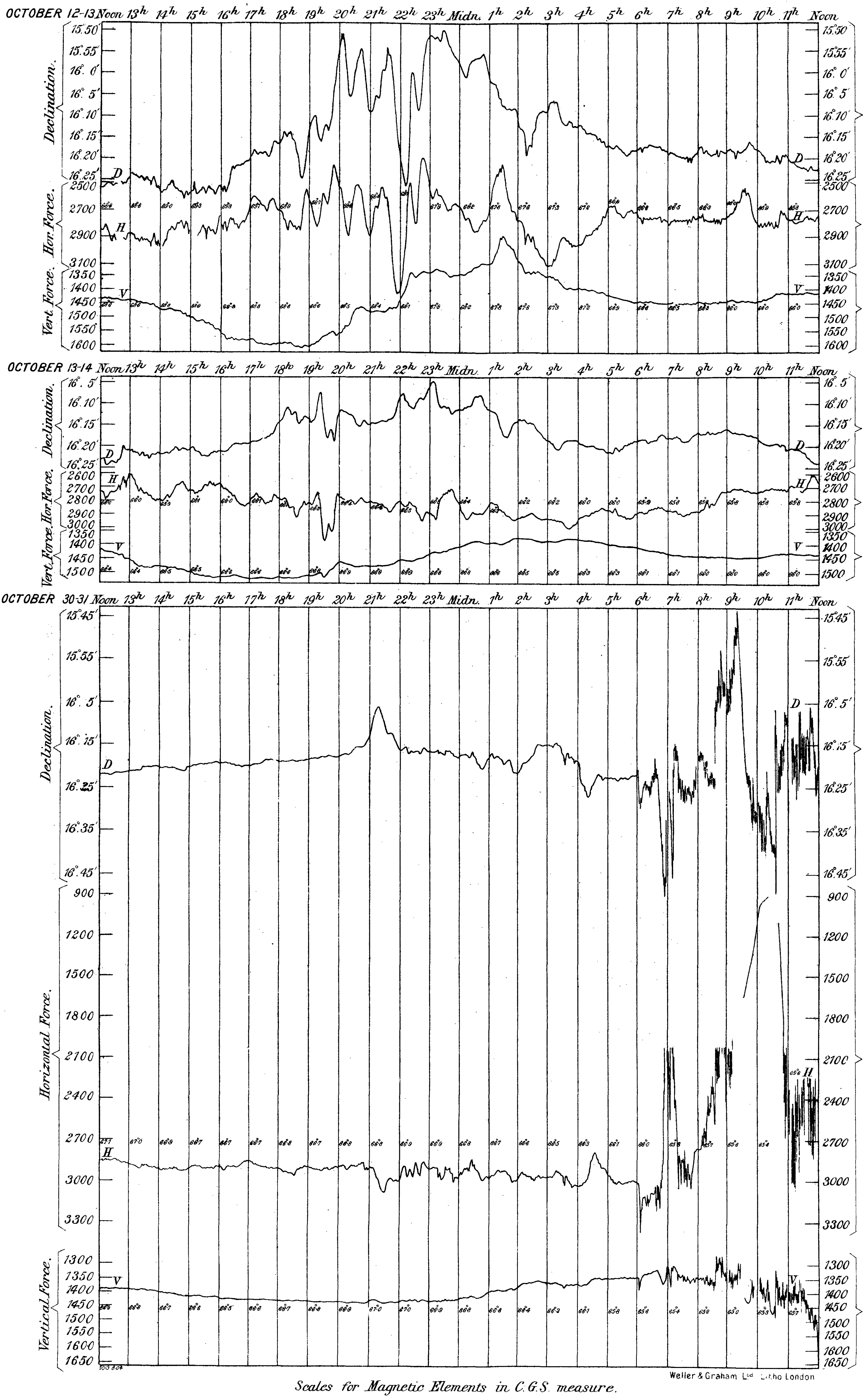


Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1903.



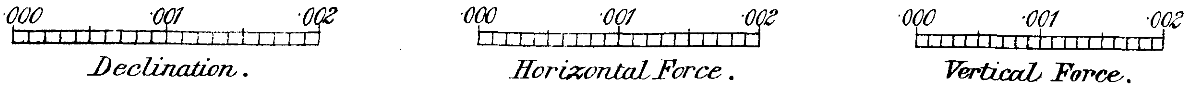
Weiler & Graham, Ltd. Litho, London

Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1903.

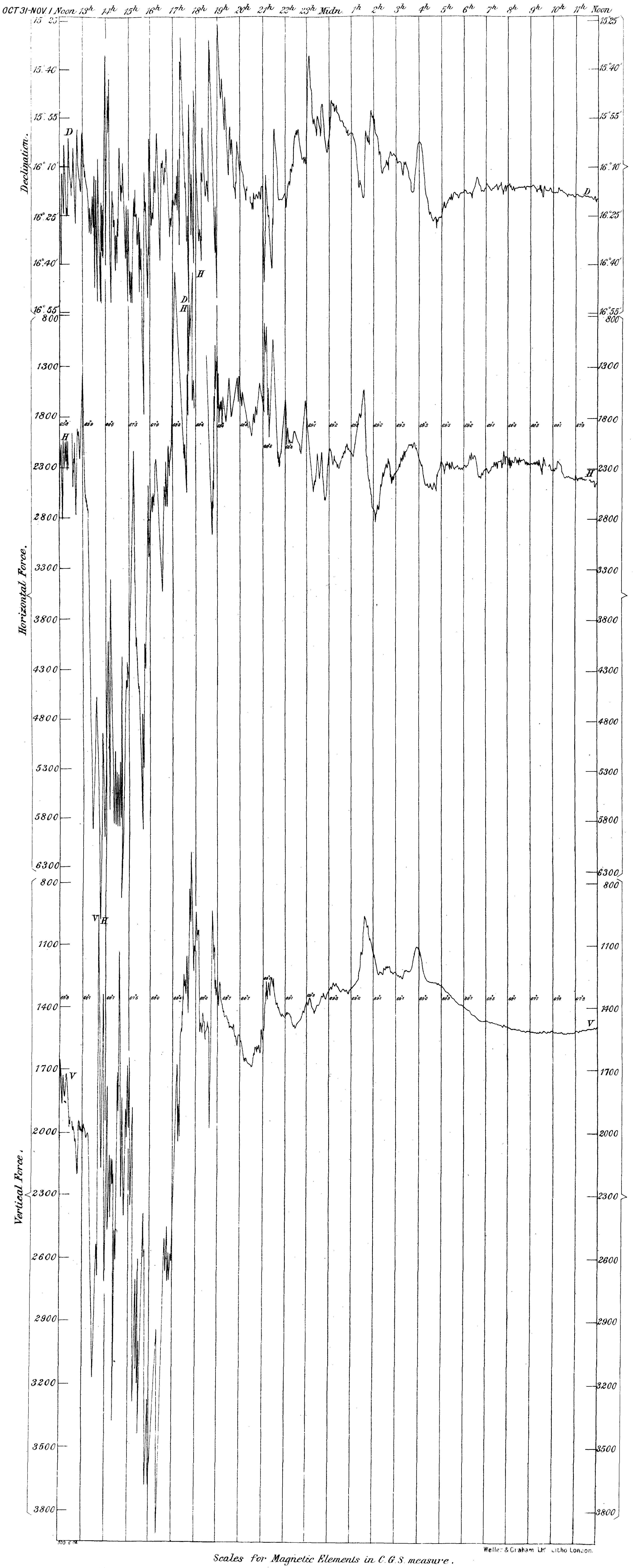


Weller & Graham Ltd Litho London

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

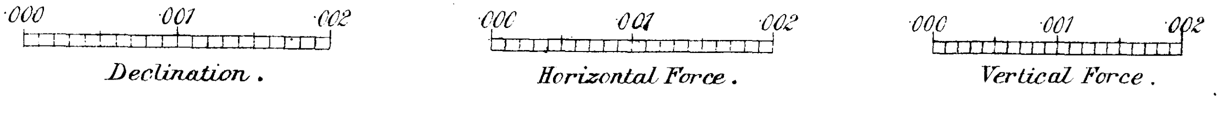


Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1903.

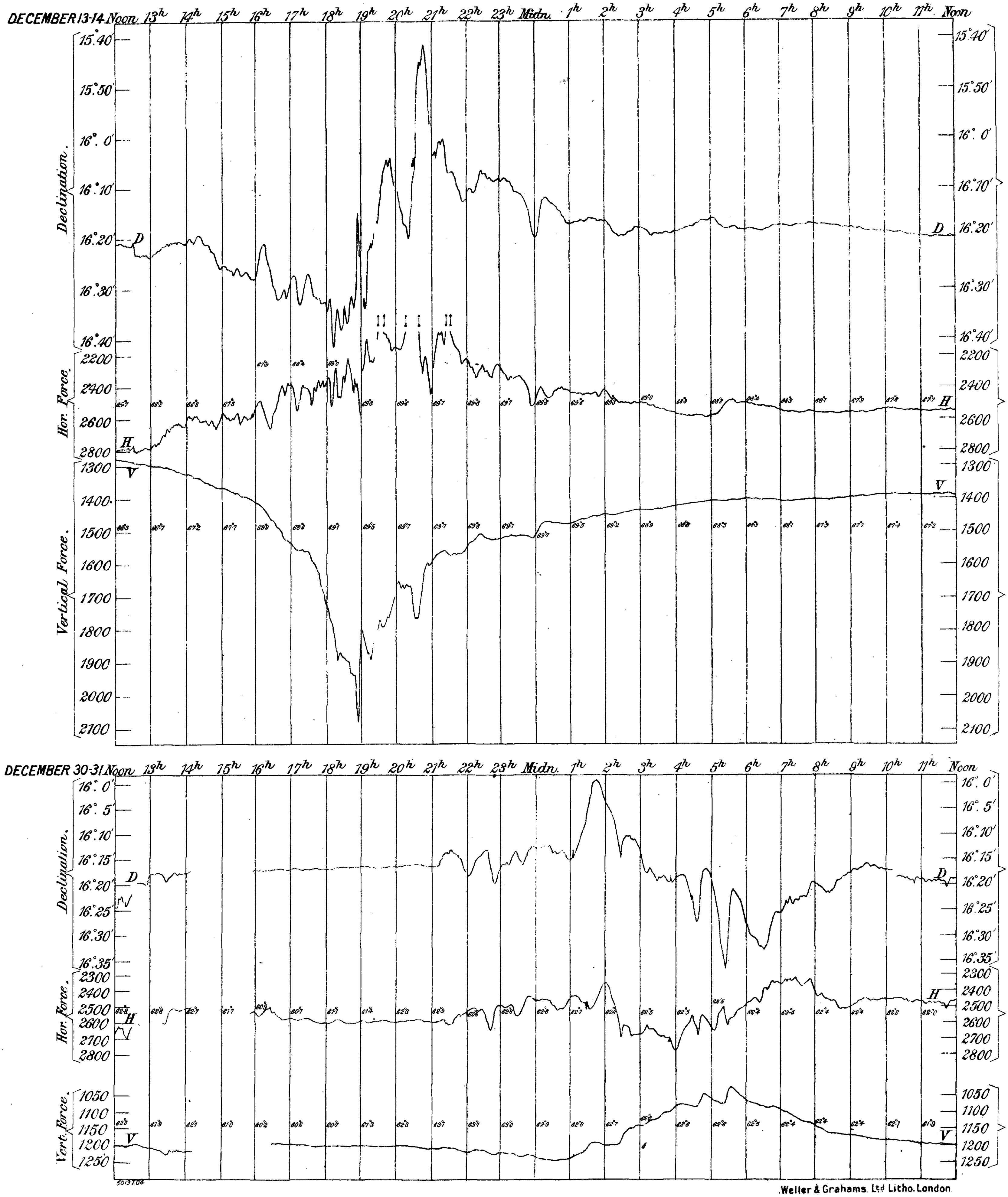


Weller & Graham Ltd Litho London.

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

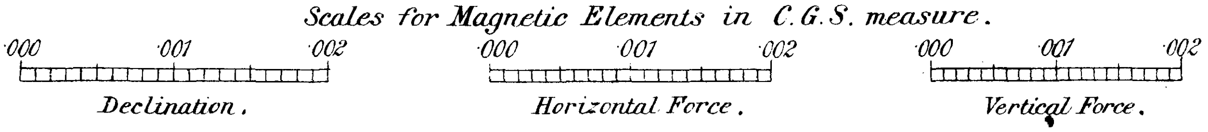


Magnetic Disturbances recorded at the Royal Observatory, Greenwich, 1903.

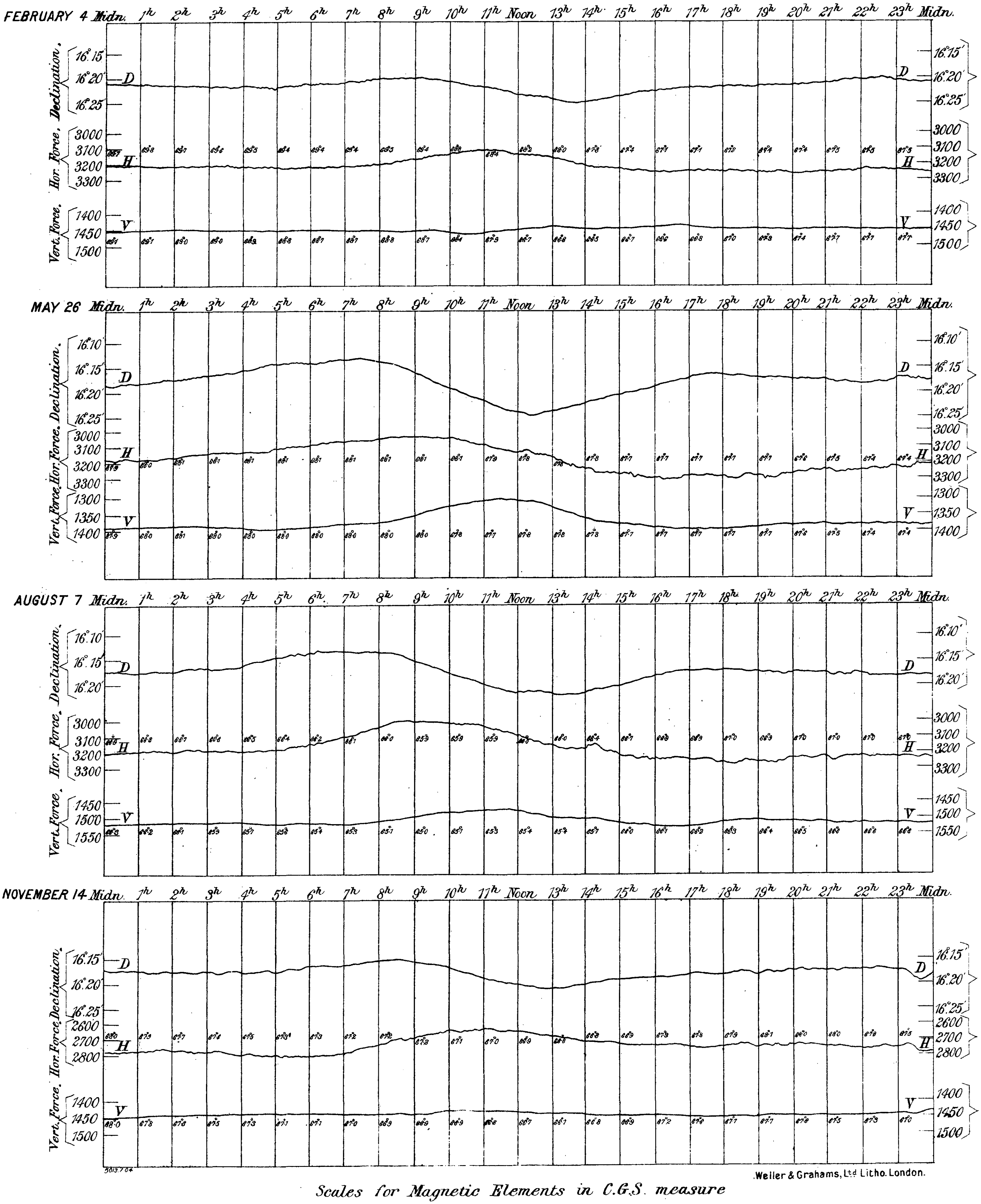


Weller & Grahams. Ltd Litho. London.

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

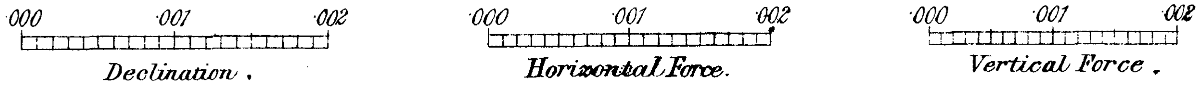


Types of Magnetic Diurnal Variations at four Seasons of the Year.
Recorded at the Royal Observatory, Greenwich, 1903.



Weller & Grahams, Ltd Litho. London.

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



ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS.

1903.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.	Mean.	Greatest.	Least.		Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.					Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Jan. 1	...	29·469	39·1	29·5	9·6	34·6	− 3·9	33·8	32·5	2·1	4·1	0·0	92	48·1	23·5	0·000	0·5	mP : sP : sP
2	...	29·326	51·8	35·5	16·3	45·9	+ 7·4	44·7	43·3	2·6	5·1	0·0	91	55·2	26·3	0·138	3·5	wP, wN : ... : wP
3	...	29·407	50·0	41·2	8·8	45·4	+ 6·9	43·1	40·5	4·9	7·3	3·0	83	67·2	35·1	0·090	9·5	wP : wP, sN : mP
4	...	29·605	47·7	41·8	5·9	44·7	+ 6·3	42·7	40·4	4·3	8·6	0·7	85	58·0	35·6	0·273	7·0	wP, sN : mP : wP, vN
5	In Equator	29·505	53·9	43·4	10·5	49·8	+11·5	48·6	47·4	2·4	5·6	0·0	92	56·7	41·9	0·592	3·5	wwP
6	First Quarter	29·325	52·3	50·1	2·2	51·2	+13·0	49·5	47·8	3·4	6·0	2·5	88	61·9	46·0	0·037	2·0	wwP : wP : wP
7	...	29·225	50·2	42·9	7·3	47·7	+ 9·6	43·8	39·5	8·2	13·9	3·1	74	68·3	37·5	0·000	6·0	wP, wN : wP : mP
8	...	29·519	45·3	35·0	10·3	41·1	+ 3·1	39·9	38·4	2·7	6·8	0·2	91	46·9	27·1	0·031	1·0	mP : vP, wN : wP
9	...	29·268	50·8	44·3	6·5	47·7	+ 9·8	46·1	44·4	3·3	7·1	2·2	89	68·0	33·2	0·021	3·5	wP : wP : wP, vN
10	...	29·220	50·5	36·8	13·7	45·3	+ 7·4	42·9	40·2	5·1	12·4	3·5	82	68·0	26·5	0·000	1·5	wP : mP : sP
11	Greatest Declination N.	29·511	37·0	30·8	6·2	35·0	− 2·9	33·9	32·1	2·9	6·9	2·2	89	46·6	23·9	0·000	0·0	wP : mP
12	...	29·990	36·0	29·3	6·7	32·3	− 5·6	29·6	23·6	8·7	13·2	0·8	69	57·2	23·0	0·000	0·0	mP : sP : sP
13	Perigee : Full	30·244	32·5	25·9	6·6	29·1	− 8·9	26·9	19·0	10·1	14·4	0·0	65	53·0	20·0	0·003	0·0	sP
14	...	30·356	32·0	27·5	4·5	29·6	− 8·6	26·2	14·9	14·7	19·8	2·6	52	57·3	21·0	0·000	3·0	... : ... : mP
15	...	30·272	32·7	24·1	8·6	28·2	−10·1	24·9	11·6	16·6	17·0	3·8	47	58·2	12·5	0·000	3·0	mP : vP, sN : mP
16	...	30·145	31·1	23·6	7·5	26·8	−11·7	24·8	15·5	11·3	13·2	4·5	61	59·3	12·3	0·000	0·0	mP : mP : sP
17	In Equator	29·983	34·7	23·9	10·8	29·3	− 9·2	28·1	24·0	5·3	6·9	1·2	79	67·0	17·2	0·210	0·0	sP : mP : wP, ssN
18	...	29·998	38·9	33·3	5·6	35·9	− 2·6	35·4	34·6	1·3	1·4	0·0	95	39·0	31·6	0·098	0·0	vN, wwP : mP
19	...	30·039	41·6	36·5	5·1	39·7	+ 1·2	39·5	39·2	0·5	0·5	0·0	98	43·2	35·0	0·066	0·0	wP : vP : wP, wwN
20	Last Quarter	30·108	44·8	37·4	7·4	40·5	+ 2·1	40·0	39·4	1·1	2·2	0·0	96	54·7	28·6	0·023	0·0	wP : mP : wwP
21	...	30·147	41·0	33·9	7·1	38·4	+ 0·1	37·8	37·0	1·4	3·4	0·0	95	56·1	27·7	0·004	4·0	...
22	...	29·914	45·2	39·0	6·2	43·2	+ 4·9	41·9	40·4	2·8	7·7	1·1	90	54·2	35·8	0·097	7·0	... : ... : wP, ssN
23	...	29·909	45·7	34·2	11·5	39·9	+ 1·5	37·6	34·6	5·3	7·7	1·4	82	58·3	27·6	0·013	3·0	mP : sP : mP
24	...	29·946	48·9	37·5	11·4	46·0	+ 7·5	44·4	42·6	3·4	5·0	1·8	89	56·1	30·6	0·061	3·0	wP : vN, wP : wP
25	Greatest Declination S.: Apogee	29·913	49·5	47·3	2·2	48·6	+ 9·8	46·6	44·5	4·1	7·1	1·5	86	55·2	43·8	0·012	9·0	wP
26	...	30·027	51·8	47·3	4·5	50·6	+11·6	48·3	45·9	4·7	7·4	2·5	84	62·0	41·7	0·000	5·0	wP
27	...	29·944	52·6	45·5	7·1	49·6	+10·3	47·6	45·5	4·1	6·7	0·4	87	70·2	43·0	0·230	2·0	wP : wP : wP, vN
28	New	29·950	48·1	39·3	8·8	44·4	+ 4·9	41·8	38·7	5·7	10·1	1·1	80	72·0	34·7	0·100	0·0	vN, wP : mP : mP
29	...	30·173	49·3	39·5	9·8	44·5	+ 4·8	41·6	38·2	6·3	10·3	2·3	78	75·6	34·4	0·000	0·5	wP : mP : mP
30	...	30·095	50·2	45·0	5·2	46·6	+ 6·8	43·5	40·0	6·6	10·3	6·4	79	79·6	42·7	0·000	1·5	wP : wP : mP
31	...	29·756	46·1	40·2	5·9	44·0	+ 4·2	41·0	37·5	6·5	8·8	3·1	77	73·0	35·0	0·029	0·0	wP : wP : wP, mN
Means	...	29·816	44·6	36·8	7·7	41·1	+ 2·6	39·2	35·9	5·2	8·3	1·7	82·1	59·6	30·8	Sum 2·128	2·5	...
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day.

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records. The average temperature (Column 7) is deduced from the 50 years' observations, 1841–1890. 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 29$^{\text{in}}$·816, being 0$^{\text{in}}$·038 *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 53°·9 on January 5; the lowest in the month was 23°·6 on January 16; and the range was 30°·3.
The mean of all the highest daily readings in the month was 44°·6, being 1°·5 *higher* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 36°·8, being 3°·2 *higher* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 7°·7, being 1°·8 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 41°·1, being 2°·6 *higher* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.		
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.		A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Jan. 1	2·4	7·8	WSW : SW	SW : S : SSE	0·0	0·0	0·00	181	0, ho.-fr : 0, m, h : 3, s, ci.-s, h, so.-ha	1, ci.-s : 1, th.-cl, slt.-f : th.-cl
2	0·0	7·9	S	SW : SSW : WSW	5·7	0·0	0·36	374	p.-cl : 10, sc, slt.-r : 10, sc, fq.-r	9 : 10, fq.-r : p.-cl, l, w
3	2·5	7·9	WSW : SW	WSW : SW	18·7	0·0	1·06	551	0 : 9, sc, cu.-s, w	v, sc, hy.-r, hl, l, t : th.-cl, st.-w : 0
4	0·7	7·9	SW : WSW	WSW : SW : E	6·9	0·0	0·64	419	p.-cl : p.-cl, oc.-shs, w : 1, w, so.-ha	7 : 10, c.-r : 10, c.-r
5	0·0	7·9	E : Calm : WSW	SW	12·0	0·0	1·25	495	10, c.-r : 10, sc, fq.-r, w	10, sc, w : 10, sc, oc.-slt.-r, w : 10, sc, li.-shs, w
6	0·0	8·0	SW : SSW	SW	10·5	0·0	1·52	636	10, li.-shs, w : 10, sc, w	9, sc, cu.-s, ci.-s, slt.-sh : 9, oc.-shs, w
7	5·2	8·0	SW	WSW	13·0	0·0	1·77	662	9, w : p.-cl, w : 5, cu.-s, ci.-s, th.-cl, w	5, th.-cl, w : p.-cl
8	0·0	8·0	WSW : SW	E : ESE : SSE	3·2	0·0	0·09	203	0, ho.-fr : 0, ho.-fr : 6, ci.-s, th.-cl, slt.-f	10, fq.-r : 10, oc.-slt.-r, slt.-f : p.-cl
9	0·7	8·0	S	S : SSW	5·8	0·0	0·60	428	1 : 2, th.-cl	10 : 10, sc, oc.-slt.-r : p.-cl, w
10	4·0	8·1	SW	WSW : SW	5·7	0·0	0·35	314	p.-cl, w : 4, cu.-s, ci.-s	5, ci.-s, ci.-cu, cu.-s : 5, ci.-cu : 2, slt.-f
11	0·0	8·1	NE : NNE	NNE : N	4·6	0·0	0·50	395	9 : 10 : 9, ci, ci.-s	p.-cl, w : p.-cl : 1, ho.-fr
12	4·6	8·1	N : NNE	NE : NNE	5·0	0·0	0·56	409	p.-cl, ho.-fr : 1, li.-cl	1, th.-cl, w : 1, th.-cl : li.-cl
13	0 9	8·2	NNE : NE	ENE : NE	3·5	0·0	0·19	357	p.-cl, oc.-sn : 9, oc.-sn : 8, ci.-cu, ci.-s, oc.-sn	7, cu.-s, li.-cl, slt.-sn : 8, cu.-s : 10
14	5·6	8·2	NE : E	E : ENE : ESE	11·0	0·0	0·75	426	10 : 9 : 2, th.-cl, w	1, cu.-s, th.-cl, w : p.-cl, w
15	5·5	8·2	E	ESE	5·3	0·0	0·24	260	p.-cl, fr : 0, ho.-fr : 0, w	0 : 0, fr
16	5·8	8·3	ESE	ESE : E	1·8	0·0	0·08	258	0, ho.-fr : 0	0 : th.-cl, ho.-fr : 1, th.-cl, m
17	0·8	8·3	E	ESE	1·2	0·0	0·01	204	9 : 10 : 9, so.-ha	9, th.-cl, so.-ha : 10, fq.-r : 10, slt.-r
18	0·0	8·4	ESE	Calm : ESE	0·1	0·0	0·00	96	10, sl, slt.-r : 10 : 10, oc.-th.-r, f	10, fq.-th.-r, f : 10, oc.-th.-r, tk.-f
19	0·0	8·4	ESE	ESE	0·0	0·0	0·00	95	10, tk.-f : 10, tk.-f : 10, f	10, f : 10, fq.-r
20	0·0	8·5	ESE : ENE	ESE : E	0·1	0·0	0·00	91	10, oc.-slt.-r, f : 10	10 : 8, th.-cl, hy.-d
21	0·2	8·5	ESE : Calm	Calm : SE	0·0	0·0	0·00	88	10, f : 10 : 8, slt.-f, glm	9, ci.-cu, li.-cl, slt.-f : 9, f : 10
22	0·0	8·6	SSE : S : SSW	SSW	3·9	0·0	0·35	358	10 : 10 : 10, sc	10, sc : 10, w : 10, r, w
23	4·6	8·6	WSW : W	W : SW	2·7	0·0	0·11	280	p.-cl : li.-cl : 3, th.-cl, li.-shs	3, cu.-s, ci.-s : 0, hy.-d : p.-cl
24	0·0	8·7	SW	WSW : SW	4·1	0·0	0·53	445	p.-cl : 10 : 10, sc, fq.-r, w	10, sc, th.-r, w : 9 : 10, oc.-th.-r
25	0·0	8·7	SW	WSW	9·2	0·0	1·34	585	10, w : 10, sc, w	10, fq.-r, w : 5, cu.-s, th.-cl, w : 0, w
26	0·0	8·7	SW	SW : SSW	14·0	0·0	1·39	606	9 : 10, slt.-r, w : 10, w	10, sc, st.-w : 10, sc, w
27	0·1	8·8	SSW : SW	SSW : WSW	8·6	0·0	1·16	555	10, w : 10, w	10, oc.-slt.-r, w : 10, c.-r, w : 10, c.-r
28	5·7	8·9	NW : WSW : SW	WSW	12·0	0·0	0·72	473	10, fq.-r : p.-cl : 1, li.-cl, w	4, cu.-s, th.-cl, w : 0
29	3·7	8·9	WSW	WSW	7·8	0·0	0·81	502	0, d : 2, ci.-s, th.-cl	p.-cl : 9 : 9, w
30	1·8	9·0	WSW	WSW : SW	9·0	0·0	1·50	628	10, w : 10, w : 8, cu.-s, ci.-s, li.-cl, w	8, cu.-s, ci.-s, th.-cl, w : p.-cl : 9, w
31	2·4	9·0	SW : SSW	SSW : S	14·0	0·0	0·80	487	10, w : 9 : 6	8, cu.-s : 9 : 10, fq.-r, l, st.-w
Means	1·8	8·3	...	...	...	...	0·60	383		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 39°·2, being 2°·0 *higher* than
The mean *Temperature of the Dew Point* for the month was 35°·9, being 0°·5 *higher* than
The mean *Degree of Humidity* for the month was 82·1, being 6·7 *less* than
The mean *Elastic Force of Vapour* for the month was 0$^{\text{in}}$·211, being 0$^{\text{in}}$·004 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2$^{\text{grs}}$·5, being 0$^{\text{gr}}$·1 *greater* than
The mean *Weight of a Cubic Foot of Air* for the month was 552 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 6·5.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·221. The maximum daily amount of *Sunshine* was 5·8 hours on January 16.

The highest reading of the *Solar Radiation Thermometer* was 79°·6 on January 30; and the lowest reading of the *Terrestrial Radiation Thermometer* was 12°·3 on January 16.

The mean daily distribution of *Ozone* for the 12 hours ending 9$^{\text{h}}$ was 1·7; for the 6 hours ending 15$^{\text{h}}$ was 0·5; and for the 6 hours ending 21$^{\text{h}}$ was 0·3.

The *Proportions of Wind* referred to the cardinal points were N. 2, E. 8, S. 11, and W. 9. One day was calm.

The *Greatest Pressure of the Wind* in the month was 18·7 lbs. on the square foot on January 3. The mean daily *Horizontal Movement of the Air* for the month was 383 miles; the greatest daily value was 662 miles on January 7; and the least daily value was 88 miles on January 21.

Rain fell on 18 days in the month, amounting to 2$^{\text{in}}$·128, as measured by gauge No. 6 partly sunk below the ground; being 0$^{\text{in}}$·139 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
			Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Feb. 1	In Equator	29·195	46·3	31·3	15·0	39·5	− 0·2	37·6	35·1	4·4	9·4	1·6	85	64·0	24·1	0·205	0·0	vP, vN : vP, ssN : sP
2	...	29·749	41·1	30·7	10·4	36·3	− 3·4	33·6	29·6	6·7	13·6	2·0	77	64·1	23·3	0·000	0·0	mP : sP : sP
3	...	30·153	47·1	32·4	14·7	41·4	+ 1·7	39·8	37·8	3·6	5·3	2·9	88	52·7	26·1	0·000	1·0	mP
4	...	30·222	47·0	45·1	1·9	46·2	+ 6·4	43·8	41·1	5·1	6·3	4·0	83	54·1	42·8	0·000	3·0	wP : mP
5	First Quarter	30·196	46·9	38·5	8·4	44·4	+ 4·6	42·3	39·8	4·6	5·7	2·6	84	51·2	31·7	0·000	0·0	wP
6	...	29·918	51·9	36·3	15·6	43·4	+ 3·7	41·0	38·2	5·2	12·2	1·6	81	85·0	27·2	0·000	5·5	wP : wP : mP
7	...	29·870	52·1	42·9	9·2	48·6	+ 9·2	46·4	44·0	4·6	8·0	1·5	85	69·2	36·0	0·021	14·0	wP
8	Greatest Declination N.	29·966	54·5	50·0	4·5	52·1	+13·0	50·0	47·9	4·2	6·8	2·7	85	63·0	47·3	0·000	4·5	wwP
9	...	30·235	56·0	48·5	7·5	52·3	+13·6	50·5	48·7	3·6	6·8	1·9	88	73·3	43·1	0·000	0·5	wwP : wP
10	Perigee	30·423	55·6	45·2	10·4	49·5	+11·1	47·4	45·1	4·4	8·4	1·9	86	86·0	39·6	0·000	4·5	wP
11	...	30·323	54·6	44·3	10·3	48·0	+ 9·7	45·8	43·4	4·6	9·0	1·9	85	79·6	38·2	0·000	0·0	wP
12	Full	30·167	52·7	40·5	12·2	46·9	+ 8·4	44·4	41·6	5·3	10·1	3·0	83	73·8	31·1	0·000	0·0	wP : mP : mP
13	...	30·267	45·5	38·0	7·5	41·8	+ 3·0	39·1	35·8	6·0	9·0	3·0	80	60·6	29·1	0·000	1·0	mP : vP : sP
14	In Equator	29·981	48·8	36·4	12·4	44·1	+ 4·9	41·6	38·6	5·5	8·4	2·6	81	61·8	31·8	0·000	0·0	mP
15	...	29·904	47·4	42·6	4·8	45·7	+ 6·1	43·7	41·4	4·3	8·2	1·1	86	50·3	39·0	0·011	0·0	wP
16	...	30·220	46·1	31·3	14·8	40·7	+ 0·9	37·7	33·9	6·8	12·3	2·7	77	90·4	23·0	0·000	5·0	wP : wP : mP
17	...	30·444	46·5	28·9	17·6	36·5	− 3·3	33·8	29·9	6·6	13·0	4·3	77	86·8	19·8	0·000	8·0	mP
18	...	30·352	50·1	26·2	23·9	38·1	− 1·6	34·9	30·5	7·6	17·4	4·2	74	88·2	18·1	0·000	4·0	mP
19	Last Quarter	30·168	56·7	36·7	20·0	46·3	+ 6·7	42·8	38·9	7·4	13·3	2·3	76	91·1	28·5	0·000	0·5	mP
20	...	30·159	58·3	48·9	9 4	52·9	+13·4	49·0	45·1	7·8	14·1	3·0	76	92·2	40·5	0·000	6·3	wP : mP : wP
21	Greatest Declination S.	29·922	56·9	45·1	11·8	53·0	+13·5	49·5	46·0	7·0	12·9	4·0	77	72·0	39·7	0·000	11·0	wwP : vN, wwP : wP
22	Apogee	29·826	54·4	43·8	10·6	49·8	+10·2	47·9	45·9	3·9	4·8	2·6	87	60·1	38·6	0·017	5·2	wP : wwP
23	...	29·609	53·5	35·4	18·1	43·9	+ 4·1	40·6	36·8	7·1	14·3	3·2	75	82·6	30·0	0·172	3·0	wwP, vN : vP, ssN : sP
24	...	29·706	48·7	35·2	13·5	43·8	+ 3·9	40·4	36·4	7·4	8·8	3·4	75	79·2	29·6	0·030	11·3	mP : wP : wP, vN
25	...	29·594	53·2	44·2	9·0	47·7	+ 7·7	43·8	39·5	8·2	15·2	1·9	74	95·2	38·0	0·176	16·2	vN, vP : mP : mP
26	...	29·587	49·1	41·2	7·9	45·4	+ 5·3	41·4	36·8	8·6	16·6	4·4	72	85·3	34·9	0·170	6·5	vP, ssN : mP, ssN : sP
27	New	29·340	52·0	42·6	9·4	47·9	+ 7·8	45·3	42·4	5·5	11·5	1·5	83	73·9	40·2	0·171	10·0	wP, wN : wP : mP
28	In Equator	29·409	45·4	36·9	8·5	40·7	+ 0·5	38·6	35·9	4·8	10·1	1·9	84	61·2	32·0	0·393	0·0	ssN, vP : mP, ssN
Means	...	29·961	50·7	39·3	11·4	45·2	+ 5·7	42·6	39·5	5·7	10·4	2·6	80·9	73·1	33·0	1·366	4·3	...
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 deduced from the 50 years' observations, 1841–1890. 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 $29^{\text{in}}{\cdot}961$, being $0^{\text{in}}{\cdot}162$ *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 58°·3 on February 20; the lowest in the month was 26°·2 on February 18; and the range was 32°·1.
The mean of all the highest daily readings in the month was 50°·7, being 5°·4 *higher* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 39°·3, being 5°·0 *higher* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 11°·4, being 0°·4 *greater* than the average for the 50 years, 1841–1890.
The mean for the month was 45°·2, being 5°·7 *higher* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.		
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.		A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Feb. 1	3·3	9·1	SW : WSW	WSW : SW	25·0	0·0	1·10	454	10, st.-w, hy.-shs: p.-cl, w : 5,ci.-s, th.-cl	v, sn, sl, r : 0, ho. fr, l
2	5·1	9·1	W : NNW : N	N : NNW : NW	3·8	0·0	0·27	319	1, ho.-fr : 0, ho.-fr : 1, th.-cl	1, th.-cl : 0 : 1,th.-cl,ho.-fr
3	0·0	9·2	WSW	WSW	1·1	0·0	0·04	262	0, ho.-fr : 10 : 10	10 : 10
4	0·0	9·2	WSW	WSW	2·6	0·0	0·20	338	10 : 10	10 : 10
5	0·0	9·3	WSW : SW	SW : SSW	2·2	0·0	0·12	297	10 : 10	10 : 10 : p.-cl
6	7·3	9·4	SSW : S	SSW : SW	3·0	0·0	0·16	295	10 : p.-cl, ho.-fr : 3, ci, ci.-s, th.-cl	0 : 1, th.-cl : p.-cl
7	0·0	9·4	SSW : SW	SW	13·3	0·0	1·32	572	p.-cl : 10 : 10, oc.-slt.-r	10, sc, w : 10,oc.-r,st.-w: 9, lu.-ha, w
8	0·0	9·4	WSW : SW	SW : WSW	8·3	0·0	1·54	652	10, w : 10, sc, w	10, w : 10
9	1·0	9·5	WSW	W : WSW	5·0	0·0	0·52	418	10 : 10, w	8, li.-cl : v, d : 9
10	2·9	9·6	WSW : SW	WSW : SW	4·2	0·0	0·30	352	10 : 10 : 9, th.-cl	8, cu.-s, ci.-s, th.-cl : 1, th.-cl
11	4·0	9·6	SW : WSW	WSW : W	3·3	0·0	0·26	371	1, li.-cl,hy.-d : 2 : 6, ci.-s, th.-cl	1, th.-cl : 1, th.-cl : 10
12	2·0	9·7	W : WSW	NW : NNW : N	3·8	0·0	0·30	333	10 : 9 : 6, li.-cl	8, cu.-s,ci -s,ci : p.-cl : 1, th.-cl, d,slt.-m
13	1·4	9·8	N : NNE : SW	W : NW : WSW	0·5	0·0	0·01	161	6 : 10, slt.-f : 9, glm, f	4, th.-cl : p.-cl, m, lu.-ha
14	0·0	9·8	WSW : W	W : WNW	2·4	0·0	0·29	369	9 : 9 : 8, th.-cl	10 : 10
15	0·0	9·9	W : NW	NNW : NE	3·0	0·0	0·13	282	10 : 10 : 10, slt.-r	10, fq.-th.-r : 10, fq.-th.-r
16	3·2	10·0	ENE : E : ESE	ESE : SE	0·6	0·0	0·00	162	10 : 10 : 8, li.-cl	6, cu.-s : 9 : 2, ho.-fr
17	5·7	10·0	SE : S : SSW	SSW : SW	0·9	0·0	0·03	210	p.-cl, ho.-fr : 6, th.-cl	1, th.-cl : 0, ho.-fr
18	8·7	10·1	SSW : SE : SSE	S : SSW	2·2	0·0	0·07	243	0, ho.-fr : 0	2, ci, ci.-s : 0 : 0, ho.-fr
19	6·2	10·1	SSW : SW	SW : SSW	12·0	0·0	0·66	449	p.-cl, ho.-fr : 4, ci.-s, th.-cl	5, ci, th.-cl : 4, th. cl : p.-cl, w
20	5·9	10·2	SW : WSW	WSW : SW	12·0	0·0	1·37	563	10, w : 9 : 2, ci, ci.-s, so.-ha	3, ci, ci.-s, th.-cl, : 10 : 10, sc, st.-w
21	0·0	10·3	WSW	WSW : W	15·3	0·0	2·26	702	10, st.-w : 10, st.-w	10, st.-w : p.-cl,slt. sh,w: 1, th.-cl, w
22	0·0	10·3	WSW : SW	SW	16·0	0·0	2·17	612	p.-cl : 10 : 10, sc,oc.-slt.-r,w	10, oc. slt.-r, w : 10, oc.-shs, w
23	2·5	10·4	WSW : SW	W : WSW	19·2	0·0	2·16	630	10, r, w : 10, w : 9, ci.-s, th.-cl, st.-w, so.-ha	v, r, hl, sn, st.-w : 0
24	0·4	10·5	WSW : SSW : SW	SW : SSW	37·0	0·0	2·39	748	0, ho.-fr : 0 : 10, sc, st.-w	10, sc,oc.-slt.-r,st.-w : 10, sc, oc.-r, hy.-g
25	7·1	10·5	SW : WSW	SW : SSW	17·0	0·0	2·04	613	10, fq.-hy.-shs, st.-w : 0, w : 2, cu, th.-cl, w	4, cu, th.-cl, w : 0, w : 1, st.-w
26	5·9	10·6	SSW : WSW	WSW : SW : SSW	20·3	0·0	2·12	624	9, hy.-shs, st.-w : 3,cu,th.-cl,hl,l,t,w	3, cu, th.-cl, w : 3, th.-cl : 9, w
27	0·7	10·7	SSW : WSW	SW	33·2	0·0	2·26	602	10, r, g : 8, w	10 : 10, fq.-r
28	0·0	10·7	ENE : NE : N	WSW : SW	3·9	0·0	0·33	348	10, r : 10, r	10, oc.-th.-r : 0
Means	2·6	9·9	...	...	...	...	0·87	428		
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°·6, being 4°·8 *higher* than
The mean *Temperature of the Dew Point* for the month was 39°·5, being 3°·9 *higher* than
The mean *Degree of Humidity* for the month was 80·9, being 5·1 *less* than
The mean *Elastic Force of Vapour* for the month was 0$^{\rm in}$·242, being 0$^{\rm in}$·034 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2$^{\rm grs}$·8, being 0$^{\rm gr}$·4 *greater* than
The mean *Weight of a Cubic Foot of Air* for the month was 550 grains, being 3 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 6·4.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·265. The maximum daily amount of *Sunshine* was 8·7 hours on February 18.

The highest reading of the *Solar Radiation Thermometer* was 95°·2 on February 25; and the lowest reading of the *Terrestrial Radiation Thermometer* was 18°·1 on February 18.

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

The *Proportions of Wind* referred to the cardinal points were N. 2, E. 2, S. 10, and W. 14.

The *Greatest Pressure of the Wind* in the month was 37·0 lbs. on the square foot on February 24. The mean daily *Horizontal Movement of the Air* for the month was 428 miles; the greatest daily value was 748 miles on February 24; and the least daily value was 161 miles on February 13.

Rain fell on 10 days in the month, amounting to 1$^{\rm in}$·366, as measured by gauge No. 6 partly sunk below the ground; being 0$^{\rm in}$·118 *less* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BARO-METER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation=100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Mar. 1	...	29·485	50·1	35·7	14·4	40·8	+ 0·6	38·9	36·5	4·3	10·7	2·2	85	88·0	30·0	0·169	2·0	wP : vP, ssN : sP
2	...	28·975	50·8	34·5	16·3	43·3	+ 2·9	41·9	40·2	3·1	5·3	1·8	89	63·6	30·0	0·297	12·0	wP, wN : vN, vP : wP
3	...	29·099	46·3	38·4	7·9	44·0	+ 3·5	41·5	38·6	5·4	15·1	2·9	80	67·0	30·7	0·016	0·5	wP : mP : sP
4	...	29·670	54·9	35·4	19·5	45·5	+ 4·8	42·3	38·6	6·9	12·4	3·0	77	88·6	28·6	0·000	1·5	mP
5	...	29 663	50·3	39 3	11·0	46·3	+ 5·4	44·2	41·8	4·5	7·5	1·5	85	56·3	35·0	0·176	0·0	wP : mP : sP
6	First Quarter	29·945	48·7	34·0	14·7	40·5	− 0·6	37·5	33·7	6·8	14·9	1·1	77	88·3	28·5	0·000	5·2	mP : mP : sP
7	Greatest Declination N.	29·804	45·5	35·5	10·0	41·0	0·0	38·5	35·3	5·7	9·0	2·6	81	68·7	28·8	0·191	6·8	vP : vvP, ssN : sP
8	...	30·113	47·0	33·0	14·0	39·5	− 1·4	35·5	30·2	9·3	14·7	3·2	70	80·8	25·0	0·000	0·5	mP
9	...	30·004	49·7	30·6	19·1	41·2	+ 0·4	38·7	35·6	5·6	12·0	2·9	81	91·7	24·1	0·078	10·5	mP : mP : mP, vN
10	Perigee	29·796	45·5	36·2	9·3	42·3	+ 1·6	41·4	40·3	2·0	5·1	0·4	93	61·0	29·5	0·092	14·0	vN, wwP : vN, wwP : mP
11	...	29·820	51·3	29·5	21·8	40·9	+ 0·3	38·2	34·8	6·1	15·0	0·5	79	94·3	20·4	0·000	6·5	mP
12	...	29·790	55·5	32·2	23·3	42·4	+ 1·7	39·3	35·5	6·9	16·6	1·8	77	104·0	25·3	0·000	8·5	mP : mP : sP
13	Full : In Equator	29·777	57·7	36·3	21·4	47·1	+ 6·2	41·9	36·1	11·0	20·9	4·6	66	110·3	28·1	0·000	4·0	mP : wP : sP
14	...	29·741	57·8	36·2	21·6	46·1	+ 4·9	43·5	40·5	5·6	11·1	1·6	82	85·3	27·0	0·004	0·0	mP : vP, wN
15	...	29·645	51·9	32·8	19·1	42·4	+ 1·0	39·2	35·3	7·1	15·1	0·7	77	101·9	25·9	0·000	3·5	mP : wP : sP
16	...	29·574	50·9	36·3	14·6	43·5	+ 2·0	39·2	34·1	9·4	16·6	2·8	69	100·1	26·1	0·000	1·5	wP : vP, ssN : sP
17	...	29·609	50·7	36·3	14·4	45·8	+ 4·2	43·8	41·5	4·3	9·9	1·3	86	84·3	26·1	0·032	0·5	wP : wP, wN : wP
18	...	29·633	51·3	42·2	9·1	47·1	+ 5·5	42·4	37·1	10·0	18·3	2·2	69	100·7	36·7	0·085	1·5	wwP, sN : sP : mP
19	..	29·960	52·8	44·1	8·7	49·3	+ 7·8	46·1	42·7	6·6	8·6	5·2	78	85·6	36·9	0·048	0·0	wP : wP, mN : mP
20	Greatest Declination S.	30·055	57·2	47·4	9·8	50·9	+ 9·5	46·9	42·7	8·2	13·2	5·5	75	103·5	42·0	0·000	0·5	wP : wP : mP
21	Last Quarter	30·021	55·8	46·5	9·3	50·3	+ 8·9	45·0	39·4	10·9	15·4	7·3	67	100·9	41·0	0·000	1·5	wP : mP : mP
22	Apogee	29·906	61·2	46·5	14·7	53·3	+11·8	48·5	43·7	9·6	17·7	3·6	70	110·7	38·4	0·000	0·0	wP : wP, wN : mP
23	...	29·633	59·9	42·0	17·9	54·2	+12·4	49·9	45·7	8·5	15·4	5·0	72	106·0	36·4	0·170	0·0	wP : wP : wP, vN
24	...	29·637	54·1	38·6	15·5	46·3	+ 4·2	42·9	39·1	7·2	12·8	1·6	77	111·3	33·1	0·044	0·0	ssN, vP : mP
25	...	29·300	68·0	43·9	24·1	58·4	+16·0	50·6	43·6	14·8	24·5	4·9	58	111·1	36·7	0·030	0·0	wP : wP : vvP, ssN
26	...	29·242	57·2	44·5	12·7	51·3	+ 8·4	47·1	42·7	8·6	17·8	1·9	73	104·0	32·0	0·060	1·5	wP, vvN : wP : mP
27	...	29·319	53·7	44·1	9·6	47·5	+ 4·2	44·9	42·1	5·4	15·2	1·9	82	92·0	31·2	0·166	6·5	wP : mP : vP, ssN
28	In Equator	29·437	57·9	43·2	14·7	49·6	+ 5·9	46·8	43·8	5·8	10·1	1·0	81	98·0	36·0	0·126	6·5	wP : wP : mP, ssN
29	New	29·866	56·6	40·8	15·8	47·0	+ 2·9	43·0	38·5	8·5	16·4	3·1	73	109·6	34·1	0·037	1·5	wP : wP : ssN, vP
30	...	29·683	52·4	42·4	10·0	47·5	+ 2·9	43·3	38·6	8·9	16·4	3·2	72	105·2	36·0	0·379	0·0	wP, vN : vP, ssN : vP, ssN
31	...	29·931	52·7	41·4	11·3	47·4	+ 2·4	43·6	39·4	8·0	13·6	4·0	75	93·8	30·7	0·000	0·0	sP
Means	...	29·682	53·4	38·7	14·7	46·2	+ 4·5	42·8	39·0	7·3	13·8	2·8	76·6	92·5	31·3	Sum 2·200	3·1	...
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 deduced from the 50 years' observations, 1841–1890. 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 29$^{\text{in}}$·682, being 0$^{\text{in}}$·071 *lower* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 68°·0 on March 25; the lowest in the month was 29°·5 on March 11; and the range was 38°·5.
The mean of all the highest daily readings in the month was 53°·4, being 3°·7 *higher* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 38°·7, being 3°·7 *higher* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 14°·7, being the same as the average for the 50 years, 1841–1890.
The mean for the month was 46°·2, being 4°·5 *higher* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.		
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.		A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Mar. 1	1·4	10·8	SW : SSW : S	SSW : SW	21·0	0·0	1·16	467	0 : 8, cu, th.-cl, st.-w	10, fq.-r : p.-cl : p.-cl, l
2	0·1	10·8	SW : SSW : S	SW	15·2	0·0	1·19	523	v : 10, slt.-r : 10, sc, fq.-r, w	10, sc, fq.-shs, w : 10, sc, fq.-th.-r
3	1·8	10·9	WSW : NNW	NNW : NW : W	7·8	0·0	0·71	427	10 : 10 : 10, sc, oc.-r, w	8, th.-cl : 0 : 0
4	1·1	11·0	WSW : SSW : SW	SW : WSW	6·4	0·0	0·65	427	0 : 2, th.-cl : 9, slt.-sh	8, ci, ci.-s, th.-cl, w : 9
5	0·0	11·0	SW : SSW : WSW	NW : WNW : WSW	4·0	0·0	0·29	326	10, li.-shs, w : 10, shs.-r : 10, sc, fq.-r	10, fq.-r, glm : 8
6	7·1	11·1	WSW	WSW : SW	5·1	0·0	0·42	362	0, ho.-fr : 0 : 3, cu, th.-cl	6, cu, th.-cl, w : 1
7	0·5	11·2	SSW : SW	W : NW	11·6	0·0	0·79	455	p.-cl : 10 : 10, sc, fq.-r, hl, w	9, fq.-r : 6, hy.-sqs, hl, sn : 0, m
8	5·2	11·2	W : WSW : NNW	NNW : SW : S	4·9	0·0	0·21	287	1 : p.-cl : 3, cu, ci.-s, li.-cl	5, cu, ci.-s : 0, ho.-fr, slt.-f
9	1·1	11·3	S : SSW	SSW : S	3·9	0·0	0·21	311	0, ho.-fr : p.-cl : 8, ci.-cu, ci.-s, th.-cl	9 : 10, fq.-r : 10, c.-r
10	0·0	11·4	S : SSW	SSW : WSW	2·3	0·0	0·09	251	10, slt.-r : 10, sc, fq.-r	10, sc, fq.-r : 10, oc.-slt.-r : p.-cl, slt.-f
11	9·5	11·4	SW : WSW	SW : SSW	0·8	0·0	0·01	196	0, ho.-fr, f : 0, f : 1, li.-cl	3, ci.-s, th.-cl : 0, d, ho.-fr
12	8·0	11·5	S : SSW	SW : SSW : S	1·0	0·0	0·05	222	0, ho.-fr : 0 : 1, th.-cl	3, cu, cu.-s, th.-cl : 1, th.-cl, lu.-ha, lu.-co
13	7·4	11·6	SSE : S : SSW	SSW : SSE	2·2	0·0	0·07	218	1, li.-cl, ho.-fr : 3, ci.-s, li.-cl	1, th.-cl : 5, ci.-s, th.-cl, d : p.-cl, lu.-ha, d
14	0·1	11·7	Calm : ENE	S : WSW : SW	0·6	0·0	0·01	125	p.-cl, ho.-fr, slt.-f : 1, li.-cl, f : 6, th.-cl, slt.-f, so.-ha	10, slt.-r, t : 10, slt.-r : 2, s, li.-cl, d
15	8·2	11·7	SW : SSW	SW : SSW	2·2	0·0	0·12	256	p.-cl, ho.-fr : 4, ci, ci.-s, th.-cl	2, th.-cl : 1, th.-cl, hy.-d : p.-cl, slt.-sh
16	6·0	11·8	S : SSW : WSW	W : WSW : SW	3·7	0·0	0·37	360	0, ho.-fr : 2, li.-cl : 7, cu, th.-cl	6, cu, th.-cl, sh.-r, hl : 0
17	0·0	11·9	SSW	SSW	13·7	0·0	1·55	545	th.-cl, ho.-fr : 2, th.-cl : 9, so.-ha	10, sc, fq.-r, w : 10, sc, fq.-r, w
18	6·7	11·9	SSW : SW : W	W : SW	16·5	0·0	1·87	670	10, r, w : 10, hy.-sqs, hy.-sh, hl, w : 8, cu, th.-cl, w	4, cu, th.-cl, w : th.-cl, w : 0
19	1·1	12·0	SW	WSW : SW : SSE	9·9	0·0	...	632	0, d, w : 1, w : 8, sc, oc.-slt.-r	10, fq.-r, w : 9, w : 10
20	2·7	12·0	SSE : SW	SW	13·0	0 0	...	612	10 : 10, w : 9, w	9, w : p.-cl : 9
21	8·1	12·1	SW : SSW	SSW	5·5	0·0	...	474	10 : 4, ci, th.-cl	4, ci, th.-cl, w : 0 : 0
22	7·3	12·2	SW : SSW	SW : SSW	14·5	0·0	...	514	0 : p.-cl : 6, cu, th.-cl, w	5, cu, th.-cl, w : 0, w
23	5·4	12·2	SW : SSW	SW	14·0	0·0	...	587	0, w : p.-cl, w : 3, cu, ci.-s, th.-cl, w	7, cu, w : 10, oc.-slt.-r, w : v, fq.-r, hy.-sqs
24	8·0	12·3	NW : SW : SSW	SW : SSW : S	7·0	0·0	...	397	9 : li.-cl : 6, cu, ci.-s, shs.-r, hl, w	7, cu, n : 5, cu, th.-cl : p.-cl
25	7·0	12·4	SSE : S	SSE : S : SSW	16·0	0·0	...	451	9 : 9, sh.-r : 1, ci, ci.-s	5, th.-cl, so.-ha : 10, sc, l, t : 10, shs.-r, w
26	8·4	12·4	SSW : S	SW : S : SE	17·0	0·0	...	475	10, shs.-r, w : p.-cl : 7, cu, ci, ci.-s, w	4, cu, th.-cl, w : 1, hy.-d, l : 0, d
27	1·9	12·5	Variable : S	NW : WSW : SW	3·6	0·0	...	312	p.-cl : 9 : 10, slt.-r, glm	9, cu, th.-cl, slt.-r : 10, oc.-hy.-shs, hl : 10, shs.-r
28	1·8	12·6	SSW : SW	SW : WSW	18·2	0·0	1·60	610	10, li.-shs : 9 : 10, sc, w	10, slt.-r, w : p.-cl, hy.-sh : v, shs.-r
29	7·4	12·6	WSW : W	WSW : SW	4·7	0·0	0·76	477	0, d : 1, li.-cl : 6, cu, th.-cl	v, oc.-shs : p.-cl, sh.-r
30	5·9	12·7	SW : WSW : W	W : WNW	25·5	0·0	2·26	728	p.-cl, oc.-shs : p.-cl, hy.-sqs, hy.-r, hl : 8, th.-cl	7, cu, th.-cl, shs.-r : p.-cl, st.-w : v, fq.-r, w
31	3·4	12·8	W : WNW : NNW	NNW : NW : WSW	5·1	0·0	0·42	346	0 : 0 : 9, w	10 : p.-cl : 2, th.-cl
Means	4·3	11·8	...	...	...	...	...	421		
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°·8, being 3°·5 *higher* than
The mean *Temperature of the Dew Point* for the month was 39°·0, being 2°·7 *higher* than
The mean *Degree of Humidity* for the month was 76·6, being 4·5 *less* than
The mean *Elastic Force of Vapour* for the month was 0^{in}·238, being 0^{in}·024 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2^{grs}·7, being 0^{gr}·2 *greater* than
The mean *Weight of a Cubic Foot of Air* for the month was 544 grains, being 6 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 6·1.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·363. The maximum daily amount of *Sunshine* was 9·5 hours on March 11.

The highest reading of the *Solar Radiation Thermometer* was 111°·3 on March 24; and the lowest reading of the *Terrestrial Radiation Thermometer* was 20°·4 on March 11.

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

The *Proportions of Wind* referred to the cardinal points were N. 2, E. 0, S. 16, and W. 13.

The *Greatest Pressure of the Wind* in the month was 25·5 lbs. on the square foot on March 30. From March 19 to 27 inclusive the driving clock was under repair. The mean daily *Horizontal Movement of the Air* for the month was 421 miles; the greatest daily value was 728 miles on March 30; and the least daily value was 125 miles on March 14.

Rain fell on 18 days in the month, amounting to 2^{in}·200, as measured by gauge No. 6 partly sunk below the ground; being 0^{in}·739 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Apr. 1	...	29·818	50·6	38·4	12·2	46·7	+ 1·3	45·4	44·0	2·7	7·1	0·2	91	67·1	27·6	0·161	0·5	mP : mP : mP, ssN
2	...	29·717	47·5	41·0	6·5	43·9	− 1·8	41·4	38·5	5·4	9·2	3·1	81	49·0	36·0	0·068	1·5	mP : vP,ssN : vP
3	Greatest Declination N.	29·887	53·5	35·4	18·1	45·3	− 0·7	41·6	37·3	8·0	14·4	1·5	74	103·3	25·6	0·004	0·0	mP
4	...	29·689	53·7	43·8	9·9	49·4	+ 3·2	47·6	45·7	3·7	8·0	1·5	88	70·7	33·4	0·165	0·0	wP : wP : vN, sP
5	First Quarter: Perigee	29·885	52·3	39·0	13·3	46·8	+ 0·6	41·3	35·1	11·7	17·4	6·4	65	93·2	31·5	0·000	0·0	mP
6	...	29·867	56·8	38·8	18·0	48·2	+ 2·0	45·3	42·1	6·1	11·2	2·7	80	105·4	30·0	0·000	0·0	mP : wP : mP
7	...	29·655	53·1	45·4	7·7	48·9	+ 2·8	44·4	39·5	9·4	16·0	3·6	70	94·3	37·0	0·000	0·0	wP : mP : sP
8	...	29·882	52·3	39·3	13·0	45·4	− 0·5	40·5	34·9	10·5	16·2	6·2	67	103·6	31·2	0·032	0·5	vP : sP : sP
9	...	30·051	49·1	38·0	11·1	43·9	− 1·7	40·2	35·9	8·0	12·0	2·8	73	82·0	30·3	0·000	1·5	mP : sP : sP
10	In Equator	30·134	55·6	33·3	22·3	46·2	+ 0·7	42·3	37·9	8·3	13·4	2·2	74	103·0	24·4	0·000	0·0	sP : vP : wP
11	...	29·935	54·4	44·2	10·2	48·7	+ 3·2	45·8	42·7	6·0	10·8	4·2	80	99·0	36·3	0·000	6·0	wP : wP : mP
12	Full	29·827	49·5	36·7	12·8	42·6	− 3·1	37·4	31·1	11·5	18·3	6·5	65	98·0	26·5	0·000	0·5	mP : vP, ssN : sP
13	...	29·741	47·0	33·6	13·4	39·5	− 6·5	34·8	28·7	10·8	20·0	5·6	66	99·0	25·4	0·006	1·5	sP : ssP, ssN : ssP
14	...	29·844	47·0	30·9	16·1	39·0	− 7·4	34·4	28·3	10·7	18·9	5·1	66	92·8	21·1	0·000	0·0	sP : ssP : vP
15	...	29·799	47·2	34·4	12·8	40·5	− 6·4	36·1	30·5	10·0	21·0	4·2	67	99·0	23·7	0·041	0·0	vP : ssP : ssP
16	...	30·018	45·8	31·3	14·5	37·4	− 9·9	33·3	27·6	9·8	15·4	6·0	68	100·0	19·6	0·000	0·0	ssP : vvP, ssN : ssP
17	Greatest Declination S.	30·168	46·4	30·9	15·5	37·8	− 9·9	33·0	26·4	11·4	18·9	7·1	63	104·4	21·7	0·000	0·0	ssP : sP
18	...	30·187	49·5	30·2	19·3	39·8	− 8·3	33·9	26·3	13·5	21·6	10·4	58	103·0	21·6	0·000	0·0	ssP : sP
19	Apogee: Last Quarter	30·063	52·1	30·8	21·3	42·3	− 6·0	38·0	32·8	9·5	20·2	3·2	70	88·0	16·7	0·000	0·0	sP : sP : vP
20	...	29·735	55·2	28·4	26·8	43·8	− 4·7	39·7	34·9	8·9	15·8	1·5	71	103·7	16·9	0·000	0·0	sP : vP : mP
21	...	29·417	47·8	34·6	13·2	42·1	− 6·4	38·4	33·9	8·2	12·8	3·5	74	82·0	20·5	0·000	0·0	vP
22	...	29·328	50·0	34·3	15·7	40·8	− 7·7	36·2	30·4	10·4	16·4	4·2	66	103·0	25·6	0·000	0·0	sP
23	...	29·345	49·1	31·4	17·7	39·9	− 8·5	35·5	29·8	10·1	17·0	3·0	67	106·2	22·6	0·000	0·0	sP : sP : ssP
24	In Equator	29·477	48·9	35·4	13·5	41·7	− 6·7	36·6	30·3	11·4	16·8	4·2	65	92·2	27·2	0·000	0·0	sP : sP : ssP
25	...	29·486	58·4	32·2	26·2	45·9	− 2·5	40·0	33·3	12·6	25·8	3·4	61	111·2	20·3	0·000	0·0	sP : vP : vP
26	...	29·322	46·8	41·0	5·8	44·4	− 4·0	43·2	41·8	2·6	7·6	1·1	91	53·2	36·9	0·526	0·0	sP, ssN : ssN. wP : wP, wN
27	New	29·196	59·0	34·7	24·3	49·7	+ 1·2	47·0	44·1	5·6	13·9	0·8	82	114·7	31·6	0·185	0·0	wwP, wwN : mP : sP
28	...	29·378	60·1	41·6	18·5	50·7	+ 2·1	47·8	44·8	5·9	12·7	1·1	81	103·1	32·0	0·113	0·0	vP, ssN : mP, vN : mP, ssN
29	...	29·215	60·1	47·0	13·1	52·7	+ 3·9	48·9	45·1	7·6	15·4	1·0	76	111·0	39·7	0·323	0·0	vP, ssN : wP : mP, vN
30	...	29·279	60·2	46·4	13·8	51·9	+ 2·9	48·7	45·5	6·4	12·7	1·5	79	120·1	39·1	0·231	0·0	wP : wP, mN : vN, wwP
Means	...	29·711	52·0	36·7	15·2	44·5	− 2·6	40·6	36·0	8·6	15·2	3·6	72·6	95·2	27·7	1·855	0·4	...
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day.

The mean reading of the Barometer (Column 2) and the mean temperatures of the Air and Evaporation (Columns 6 and 8) are deduced from the photographic records. The average temperature (Column 7) is deduced from the 50 years' observations, 1841–1890. 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 29^{in}·711, being 0^{in}·030 *lower* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 60°·2 on April 30; the lowest in the month was 28°·4 on April 20; and the range was 31°·8.
The mean of all the highest daily readings in the month was 52°·0, being 5°·2 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 36°·7, being 2°·2 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 15°·2, being 3°·1 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 44°·5, being 2°·6 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.		
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.		A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Apr. 1	0·0	12·8	WSW	SW : WSW	2·1	0·0	0·02	207	9 : 10 : 10, oc.-r	10, slt.-r : 10, fq.-m.-r : 10, c.-r
2	0·0	12·9	NW : NNW	N	4·7	0·0	0·65	386	10 : 10 : 10, fq.-r	10, oc.-slt.-r : 10
3	3·4	13·0	N : NW : WSW	WSW : SW	2·4	0·0	0·18	285	10 : 3, ci, th.-cl	5, ci.-cu : 10, oc.-slt.-r : 10, fq.-shs
4	0·0	13·0	SW : WSW	WSW:NNW:NW	8·5	0·0	0·82	508	10, oc.-slt.-r : 10, sc, w	10, slt.-r, w : 9, hy.-r : p.-cl
5	7·4	13·1	WNW:NW:NNW	NW:NNW:WNW	5·8	0·0	0·48	395	3, li.-cl : 4, th.-cl	p.-cl, w : p.-cl : p.-cl, lu.-ha
6	1·7	13·2	SW : WSW	WSW : SW : W	5·8	0·0	0·40	374	p.-cl, d : 8, th.-cl, so.-ha	9 : 9 : 9, w
7	1·2	13·2	WSW : W : NW	WNW : NW	17·0	0·0	1·34	596	10, w : 10, st.-w	9, sc, w : p.-cl, w : 9, w
8	5·9	13·3	N : NNW	N	14·0	0·0	0·91	426	p.-cl,sh.-r,hl,w: p.-cl, w : 7, cu.-s, th.-cl, w	7, cu.-s, n, ci.-s, th.-cl : 5, li.-cl
9	0·7	13·3	N : NNE	N : NNE	3·0	0·0	0·21	270	p.-cl : 9 : 10	10 : p.-cl : 5, th.-cl, d
10	4·4	13·4	Calm : S : Variable	NNW : Calm : SW	0·4	0·0	0·01	99	9 : p.-cl : 3, th.-cl	10, glm, f : 10 : 10
11	1·9	13·5	SW : WSW : W	W	5·7	0·0	0·41	401	10 : 9 : 7, cu, cu.-s	10, w : p.-cl : 9
12	6·9	13·5	NNW:NW:WNW	NW:WNW:NNW	15·0	0·0	0·60	408	2, li.-cl, ho.-fr : 0 : 5, cu, th.-cl	6, cu,cu.-s, hy.-sqs, sh.-r, sl : 2, th.-cl, w : 1, s, li.-cl
13	8·8	13·6	WNW : W : NW	NNW : NW : W	10·5	0·0	0·55	406	0, ho.-fr : 0 : 9, cu, th.-cl, hy.-sqs, slt.-sn	5, cu, th.-cl, hy.-sqs, sn : 0
14	7 5	13·7	WSW : W : NW	NNW:NW:WSW	4·7	0·0	0·35	367	0, ho.-fr : 2, li.-cl : 7, cu, li.-cl	7, cu, ci.-s, th.-cl : p. cl : p.-cl
15	4 7	13·7	WSW : NNW	NNW : N	7·6	0·0	0·93	456	10, w : 10, hy.-sh : 8, cu, ci.-s, th.-cl	6, cu, th.-cl, sh.-r, sn, sqs : 0
16	9·0	13·8	NNW : N	N : NNW	8·0	0·0	0·54	329	0, ho.-fr : 0 : 4, cu, th.-cl	5,cu,th.-cl,oc.-sn : p.-cl, w : 0
17	9·3	13·9	NNW : N	N : NNE : NE	3·8	0·0	0·40	351	0, ho.-fr : 0 : 4, cu, th.-cl	6, cu, th.-cl, slt.-sn : 1, d
18	9·2	13·9	N	N : NNE	6·1	0·0	0·38	337	0, ho.-fr : 0 : 2, cu.-s, th.-cl	6, cu.-s, th.-cl : p.-cl : th.-cl
19	3·2	14·0	Variable	NNW : ESE	3·8	0·0	0·04	154	p.-cl : 10, slt.-f : 8, slt.-f	5, li.-cl : 2, th.-cl : 0
20	5·3	14·0	Variable	Variable : SSW	0·1	0·0	0·00	109	0, ho.-fr, slt.-f : 0 : 2	8 : 6, h : 2, th.-cl, h
21	0·3	14·1	SE : NE : ENE	E : ENE	3·9	0·0	0·39	321	0, f : th.-cl : 9, sc	10 : p.-cl : 10
22	5·7	14·2	NE : ENE	NE : NNE	4·5	0·0	0·49	422	10 : 7, cu, cu.-s	10 : p.-cl : 0
23	3·2	14·2	N : NNE	NNE : N	3·5	0·0	0·23	327	0, ho.-fr : 0 : 7, th.-cl	9 : 9
24	2·0	14·3	N : NNW	N : NW	5·7	0·0	0·69	397	10 : 10 : 9, cu, th.-cl, so.-ha, w	9, w : p.-cl : 0
25	8·1	14·3	NW : WSW : W	WNW : W : WSW	2·9	0·0	0·17	305	0, ho.-fr : 0, slt.-f, h : 1, th.-cl, h	4, th.-cl : 10 : 10
26	0·0	14·4	W : SW : SSW	SSE	1·7	0·0	0·05	217	10, fq.-r : 10, c.-r : 10, c.-r	10, oc.-r : 10, r
27	4·0	14·5	SSE : ESE : SSW	SSW : S	2·5	0·0	0·09	219	10, slt.-r : 10, fq.-r : 10, oc.-slt.-r	6,cu,cu.-s,sh.-r : 2, th.-cl : p.-cl
28	4·6	14·5	SSW : SW	SW : ESE	2·9	0·0	0·13	256	10, slt.-r : p.-cl : p.-cl	8, cu, ci.-s, shs.-r : 10 : 10, r
29	8·3	14·6	ESE : SSW : SW	SSW	5·2	0·0	0·49	355	10, c.-r : 10, fq.-r : 5. ci, ci.-s, th.-cl	6, cu, th.-cl : 7, cu, th.-cl : 9, sh.-r
30	2·2	14·7	SSW	SSW : SE	2·8	0·0	0·12	258	10, li.-shs : 9 : 9, cu, th.-cl, sh.-r	8, cu, th.-cl : 10, c.-r
Means	4·3	13·8	...	...	...	...	0·40	331		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 40°·6, being 3°·3 *lower* than
The mean *Temperature of the Dew Point* for the month was 36°·0, being 4°·2 *lower* than
The mean *Degree of Humidity* for the month was 72·6, being 4·0 *less* than
The mean *Elastic Force of Vapour* for the month was $0^{\rm in}$·212, being $0^{\rm in}$·037 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was $2^{\rm grs}$·5, being $0^{\rm gr}$·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 6·9.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·312. The maximum daily amount of *Sunshine* was 9·3 hours on April 17.

The highest reading of the *Solar Radiation Thermometer* was 120°·1 on April 30; and the lowest reading of the *Terrestrial Radiation Thermometer* was 16°·7 on April 19.

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

The *Proportions of Wind* referred to the cardinal points were N. 12, E. 2, S. 6, and W. 9. One day was calm.

The *Greatest Pressure of the Wind* in the month was 17·0 lbs. on the square foot on April 7. The mean daily *Horizontal Movement of the Air* for the month was 331 miles; the greatest daily value was 596 miles on April 7; and the least daily value was 99 miles on April 10.

Rain fell on 11 days in the month, amounting to $1^{\rm in}$·855, as measured by gauge No. 6 partly sunk below the ground; being $0^{\rm in}$·194 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
May 1	Greatest Declination N. : Perigee	29·294	55·4	44·2	11·2	49·5	+ 0·3	47·9	46·2	3·3	7·6	0·4	89	101·8	36·0	0·052	0·0	wwP : wP, vN : mP
2	...	29·493	60·9	44·3	16·6	51·9	+ 2·5	47·7	43·5	8·4	15·2	1·3	74	120·6	35·6	0·002	0·0	wP : wP : mP
3	...	29·320	54·5	47·4	7·1	50·4	+ 0·7	47·7	44·9	5·5	9·0	1·0	82	74·8	38·6	0·337	0·0	wP, wN
4	First Quarter	29·099	65·3	46·6	18·7	53·4	+ 3·4	50·3	47·2	6·2	14·2	0·4	79	119·4	37·0	0·048	0·5	wwP : wP : mP
5	...	29·110	60·6	41·4	19·2	52·0	+ 1·7	49·1	46·1	5·9	12·0	0·4	81	120·3	33·4	0·027	1·5	vP, wN : wP : mP, ssN
6	...	29·314	62·2	47·8	14·4	52·3	+ 1·7	48·7	45·0	7·3	16·0	1·3	77	122·0	42·6	0·074	0·0	wP : wP : mP, vN
7	In Equator	29·479	58·9	42·0	16·9	51·4	+ 0·6	48·3	45·1	6·3	12·0	1·0	79	116·1	34·0	0·154	0·0	vN, wP : vP, ssN : mP, ssN
8	...	29·539	54·1	38·2	15·9	47·2	− 3·8	45·3	43·2	4·0	8·0	0·9	87	106·7	28·3	0·015	0·0	mP : mP, mN : mP
9	...	29·546	58·0	42·0	16·0	48·7	− 2·5	46·7	44·6	4·1	10·5	0·2	86	119·2	35·0	0·127	0·0	mP : mP, vN : ssN, vP
10	...	29·577	56·5	39·3	17·2	49·7	− 1·8	46·1	42·3	7·4	13·8	0·4	76	91·2	31·8	0·003	0·0	wP : mP
11	Full	29·625	52·0	42·2	9·8	46·8	− 4·9	45·5	44·1	2·7	6·7	1·7	91	113·1	42·0	0·119	0·0	wP, sN : mP, wN : mP
12	...	29·697	53·8	36·4	17 4	45·1	-- 6·9	40·2	34·5	10·6	18·6	2·5	67	115·2	31·0	0·019	0·0	mP : mP : sP
13	...	29·734	60·1	31·3	28·8	47·6	− 4·7	43·3	38·5	9·1	18·6	2·6	72	110·6	25·6	0·000	0·5	vP : vP : mP
14	Greatest Declination S.	29·872	60·9	46·8	14·1	53·2	+ 0·6	49·3	45·4	7·8	13·5	3·6	75	110·5	41·3	0·000	2·5	wP : mP
15	...	30·002	60·7	48·5	12·2	53·5	+ 0·7	49·4	45·3	8·2	14·2	4·0	74	103·1	44·2	0·000	0·0	wP
16	Apogee	29·978	55·9	43·3	12·6	48·5	− 4·6	45·8	42·9	5·6	15·2	1·1	82	102·0	32·4	0·167	0·2	wP : ssN, vP
17	...	29·625	54·7	44·0	10·7	48·3	− 5·0	45·9	43·3	5·0	10·8	1·3	83	106·0	41·8	0·332	0·8	vP, ssN
18	...	29·909	54·9	39·9	15·0	46·9	− 6·7	43·7	40·1	6·8	12·0	3·1	80	99·6	33·7	0·000	0·0	mP : sP : mP
19	Last Quarter	29·845	65·0	35·4	29·6	51·6	− 2·3	45·6	39·5	12·1	22·2	3·0	64	131·2	27·8	0·000	0·0	mP : wP : mP
20	...	29·826	67·2	41·1	26·1	54·9	+ 0·7	48·8	43·0	11·9	19·3	2·9	64	122·7	30·1	0·000	0·0	mP : wP : mP
21	In Equator	30·004	72·5	47·3	25·2	57·8	+ 3·2	52·3	47·3	10·5	21·4	1·9	68	130·0	34·0	0·000	0·0	wP
22	...	29·983	77·9	50·2	27·7	65·1	+10·1	56·3	49·1	16·0	29·1	6·0	56	140·2	38·5	0·009	0·0	wP
23	...	30·183	68·5	46·5	22·0	58·3	+ 3·0	53·2	48·6	9·7	21·2	3·8	70	130·6	37·5	0·000	0·0	wP : mP : mP
24	...	30·226	63·1	43·4	19·7	52·7	− 2·9	47·4	42·1	10·6	23·9	1·5	68	131·0	31·0	0·000	0·0	wP : wP : mP
25	...	30·149	67·6	38·1	29·5	53·8	− 1·9	48·5	43·3	10·5	20·5	1·6	67	136·3	23·7	0·000	1·0	mP : vP : vP
26	New	30·103	69·9	45·5	24·4	56·7	+ 0·8	49·6	43·0	13·7	22·1	5·9	60	137·6	37·6	0·000	0·0	mP
27	...	29·970	70·1	46·5	23·6	58·4	+ 2·4	52·6	47·4	11·0	21·6	2·5	67	139·0	39·1	0·000	0·0	mP : vP : mP
28	Greatest Declination N. : Perigee	29·729	65·6	53·0	12·6	59·3	+ 3·3	56·7	54·4	4·9	9·5	0·0	85	127·5	44·7	0·328	0·0	wP : ... : wwP
29	...	29·619	71·5	51·3	20·2	60·5	+ 4·3	57·3	54·6	5·9	13·0	0·0	81	138·3	43·9	0·000	5·5	wwP
30	...	29·601	77·5	53·0	24·5	65·0	+ 8·5	60·1	56·1	8·9	17·3	0·8	73	157·0	44·8	0·000	2·0	wwP : wwP : vN, wP
31	...	29·620	77·9	56·2	21·7	65·7	+ 8·9	61·0	57·1	8·6	15·3	0·9	75	134·2	52·3	0·133	3·5	vP, vN : wwP : wwP
Means	...	29·712	63·0	44·3	18·7	53·4	+ 0·3	49·4	45·4	8·0	15·6	1·9	75·2	119·6	36·4	1·946	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 deduced from the 50 years' observations, 1841–1890. 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 29^{in}·712, being 0^{in}·074 *lower* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 77°·9 on May 22 and 31 ; the lowest in the month was 31°·3 on May 13 ; and the range was 46°·6.
The mean of all the highest daily readings in the month was 63°·0, being 1°·1 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 44°·3, being 0°·6 *higher* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 18°·7, being 1°·7 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 53°·4, being 0°·3 *higher* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.		
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.		A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
May 1	1·1	14·7	SE	S : SW	5·0	0 0	0·23	286	10, oc.-slt.-r : 10 : 10, fq.-r	10, w : 10, sh.-r : p.-cl, d
2	8·8	14·8	SW	SW : SE	3·6	0·0	0·18	296	p.-cl, d : li.-cl : 9	7, cu : 5, th.-cl : p.-cl
3	0·0	14·8	SE : SSE : S	SSE : ESE	4·4	0·0	0·29	282	p.-cl : 10, r : 10, fq.-r	10, c.-r : 10, c.-r
4	2·8	14·9	E : ESE : SW	SSW : SW	0·2	0·0	0·00	137	10, slt.-r : 10, oc.-slt.-r	7, cu, li.-cl, so.-ha : 3, cu, ci.-s : p.-cl, lu.-ha, d
5	3·1	15·0	SSW : SE : S	S : SSW : SW	1·6	0·0	0·05	190	0, hy.-d : 2, ci.-s, slt.-sh : 9, cu, ci.-s	10 : 9, shs.-r : p.-cl
6	3·8	15·0	SW	SW	2·5	0·0	0·18	325	9, slt.-sh : 6, cu, th.-cl, so.-ha	9 : 9 : 10, slt.-r
7	4·2	15·1	WSW : SW	WSW : SW	3·0	0·0	0·15	311	10, c.-r : li.-cl : 9, cu, oc.-r	p.-cl, so.-ha : v, shs.-r : 0, hy.-d
8	0·5	15·1	Calm : E	ESE : ENE	0·6	0·0	0·01	146	0 : tk.-f : 10, oc.-slt.-r	10, sc, c.-r : 9 : 10
9	2·0	15·2	SE : ENE	Variable	0·8	0·0	0 00	94	9 : 9 : 5, t	9, t.-sm, hy.-shs, glm, f : p.-cl, f
10	1·5	15·2	W : WSW	WNW : NNW	0·6	0·0	0·01	146	10, slt.-f : 10 : 10	8, cu, th.-cl : 10, oc.-slt.-r
11	0·3	15·3	NNW : N	N : NNE	2·2	0·0	0·16	284	10 : 10, slt.-r : 10, oc.-slt.-r	10, oc.-slt.-r : 10, c.-r : 10, slt.-r
12	8·7	15·3	NNE : N	N : NNE	2·3	0·0	0·13	261	10, shs.-r : 9 : 8, cu, th.-cl	5, cu, th.-cl : 2, th.-cl : 0, d
13	6·0	15·4	SW : SSW : WSW	WSW : SW	2·6	0·0	0·13	266	0, ho.-fr : 0 : 3, cu, li.-cl	7, cu, ci.-s, th.-cl : p.-cl
14	0·8	15·4	SW : WSW	WSW : SW	5·1	0·0	0·42	394	9 : p.-cl : 9, slt.-sh	10, w : 9
15	2·4	15·5	SW	SW	5·0	0·0	0·45	386	10 : 9, sc	9, sc, w : 10
16	0·3	15·5	WSW : SW	SW	3·1	0·0	0·21	317	9 : 5, li.-cl, so.-ha : 10, sc	10, fq.-r : 10, fq.-r
17	3·9	15·6	SW : W	W : NNW : N	6·5	0·0	0·47	405	10, oc.-r : p.-cl, hy.-sh : p.-cl, fq.-hy.-shs, hl	v, hy.-r, hl, t.-sm, sq : v, shs.-r : 9, shs.-r
18	0 8	15·6	NNW : N	N : SE : SSW	1·0	0·0	0·00	134	9 : 9	9, cu.-s, ci.-s : 10 : li.-cl
19	10·0	15·7	Variable : Calm	SSW : S	0·5	0·0	0·00	127	p.-cl, ho.-fr : 0 : 1, th.-cl	4, th.-cl : 6, li.-cl : 2, d
20	1·5	15·7	S : Calm : SW	SW	3·7	0·0	0·15	245	1, d : p.-cl : 9, ci.-s, th.-cl	7, ci.-s, th.-cl : 3, s, th.-cl, l
21	13·2	15·8	WSW : SW	SW : SSW : S	1·9	0·0	0·05	252	p.-cl : p.-cl : 1, th.-cl	1, ci, ci.-s : 0 : 0, d
22	13·7	15·8	SSE : S	SSW	3·0	0·0	0·15	271	0, d : 0 : 1, ci, th.-cl	0 : 1 : p.-cl, sh.-r
23	13·9	15·9	WNW : N : NNE	NE : ESE : ENE	3·0	0·0	0·14	269	p.-cl : 0 : 0	2, ci.-s, th.-cl : 0 : 0, d
24	10·9	15·9	ENE	E : ENE	3·2	0·0	0·32	320	p.-cl : p.-cl : 1, cu, th.-cl	0 : 0
25	13·5	16·0	NNE : NE	ESE : NE	1·2	0·0	0·03	211	0, ho.-fr : p.-cl : 0	0 : 1, li.-cl
26	12·1	16·0	NE : NNE	ENE : NE	5·3	0·0	0·41	379	p.-cl : 1, li.-cl : 4, cu, ci.-cu, ci.-s	6, ci, ci.-s, th.-cl : 2, li.-cl, w
27	9·4	16·0	NE : NNE : ENE	E : ENE : NE	11·0	0·0	0·62	418	0, d : p.-cl : 9, cu, cu.-s, w	5, cu, ci.-s, w : 5, cu., cu.-s, w : 10
28	4·9	16·1	NE : ENE : E	ESE : ENE	2·7	0·0	0·07	245	10, slt.-r : 10 : 10, t.-sm, hy.-r	8, ci, th.-cl, oc.-r : 5, th.-cl : p.-cl
29	7·7	16·1	NE : ENE : E	ESE : E	3·4	0·0	0·27	269	10 : 10 : 7, ci, ci.-cu	2, cu, th.-cl : 1, ci.-cu, th.-cl : 1
30	7·6	16·1	E : NE	ESE : Variable : S	2·2	0·0	0·05	169	p.-cl, d : p.-cl : 4, ci.-cu, th.-cl	5, cu, ci, th.-cl, t : 8, l, t : li.-cl, l
31	13·5	16·2	Variable : NE : N	NNE : NE : N	1·0	0·0	0·03	197	v, t.-sm, hy.-r : 1, th.-cl : 0	0 : 0, d
Means	5·9	15·5	...	...	...	...	0·17	259		
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°·4, being 0°·2 *higher* than
The mean *Temperature of the Dew Point* for the month was 45°·4, being 0°·1 *higher* than
The mean *Degree of Humidity* for the month was 75·2, being 0·2 *greater* than
The mean *Elastic Force of Vapour* for the month was 0^{in}·304, being 0^{in}·001 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 3^{grs}·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 6·2.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·380. The maximum daily amount of *Sunshine* was 13·9 hours on May 23.

The highest reading of the *Solar Radiation Thermometer* was 157°·0 on May 30; and the lowest reading of the *Terrestrial Radiation Thermometer* was 23°·7 on May 25.

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

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

The *Greatest Pressure of the Wind* in the month was 11·0 lbs. on the square foot on May 27. The mean daily *Horizontal Movement of the Air* for the month was 259 miles; the greatest daily value was 418 miles on May 27; and the least daily value was 94 miles on May 9.

Rain fell on 15 days in the month, amounting to 1^{in}·946, as measured by gauge No. 6 partly sunk below the ground; being 0^{in}·057 *less* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
June 1	...	29·636	82·6	51·1	31·5	66·3	+ 9·1	59·6	54·2	12·1	25·5	1·4	65	146·5	45·8	0·000	1·0	wP : wwP
2	First Quarter	29·850	62·6	45·4	17·2	55·8	− 1·9	50·3	45·2	10·6	19·2	4·2	67	118·1	40·6	0·000	5·0	wP
3	In Equator	30·106	55·0	43·7	11·3	49·0	− 9·0	44·6	39·9	9·1	14·6	3·5	71	109·6	38·5	0·002	0·0	wP
4	...	30·214	67·9	42·0	25·9	55·0	− 3·2	49·5	44·2	10·8	18·0	2·0	68	136·3	36·2	0·000	1·0	wP
5	...	30·189	66·9	45·7	21·2	56·7	− 1·6	53·4	50·3	6·4	14·4	1·9	79	140·5	35·3	0·000	2·0	wP : wwP
6	...	30·200	63·1	45·2	17·9	56·0	− 2·3	51·3	46 9	9·1	14·8	3·9	71	134·3	39·0	0·000	0·0	wwP : wP : wP
7	...	30·119	57·9	45·2	12·7	51·8	− 6·4	49·4	47·0	4·8	12·5	3·8	84	118·8	38·6	0·000	0·0	wwP
8	...	29·939	64·9	48·2	16·7	56·7	− 1·5	50·9	45·5	11·2	21·4	2·7	67	137·0	45·0	0·000	0·0	wwP
9	...	29·644	65·1	49·4	15·7	57·3	− 0·9	54·2	51·4	5·9	11·9	0·6	81	130·6	49·4	0·573	0·0	vP, vN : wwP : wwP
10	Full : Greatest Declination S.	29 626	60·5	54·1	6·4	57·0	− 1·2	56·1	55·3	1·7	3·3	0·2	94	87·1	49·8	0·749	0·0	wP, wN : ...
11	...	29·703	55·9	48·1	7·8	53·4	− 5·0	52·8	52·2	1·2	3·8	0·2	96	59·6	46·6	0·435	0·0	...
12	...	29·880	54·8	40·4	14·4	49·1	− 9·5	45·2	41·0	8·1	12·2	2·9	74	108·3	31·1	0·000	0·0	... : ... : mP
13	Apogee	29·800	61·8	37·1	24·7	48·4	−10·4	46·6	44·7	3·7	12·0	0·0	87	115·3	29·1	0·581	0·0	wP : vP, ssN : wP, vN
14	...	29·650	51·2	44·9	6·3	48·6	−10·3	47·5	46·3	2·3	5·2	0·0	92	63·0	44·2	0·975	0·0	vP, ssN : wwP : vN, vP
15	...	29·515	51·1	45·7	5·4	49·1	− 9·9	48·5	47·9	1·2	3·6	0·0	96	60·2	44·0	1·324	0·0	vN, wN : vN
16	...	29·467	61·9	42·0	19·9	51·6	− 7·4	49·1	46·6	5·0	8·6	0·2	83	129·0	36·3	0·300	2·0	wP : vP, ssN : vP, wN
17	...	29·542	67·0	45·1	21·9	54·4	− 4·7	50·9	47·5	6·9	18·0	0·0	77	114·2	37·1	0·315	0·0	wP : wP : vP, ssN
18	Last Quarter : In Equator	29·525	59·9	41·3	18·6	51·9	− 7·3	48·0	44·1	7·8	12·7	2·2	75	120·8	37·2	0·000	3·0	mP : mP : wP
19	...	29·435	48·5	46·2	2·3	47·6	−11·9	46·4	45·1	2·5	6·1	0·6	92	59·7	45·5	0·811	4·0	wP : wP, wN : wP, wwN
20	...	29·670	51·7	45·8	5·9	49·0	−10·9	46·5	43·8	5·2	9·4	1·1	83	66·7	42·0	0·008	3·5	wP : wP : mP
21	...	29·989	61·1	42·8	18·3	50·8	− 9·5	46·0	41·0	9·8	15·6	1·3	70	111·7	35·0	0·000	1·5	wP
22	...	30·088	66·8	38·7	28·1	54·2	− 6·5	49·6	45·1	9·1	21·2	0·7	71	126·4	29·3	0·000	0·0	wP : vP : wP
23	...	30·005	67·7	40·3	27·4	56·1	− 4·9	51·1	46·4	9·7	19·8	1·1	70	135·7	30·2	0·000	2·0	wP
24	Greatest Declination N.	29·854	67·0	53·1	13·9	58·7	− 2·5	55·3	52·2	6·5	14·9	2·3	79	117·2	49·0	0·000	0·0	wP
25	New	29·942	74·0	49·2	24·8	60·9	− 0·4	56 5	52·7	8·2	18·7	1·4	74	131·4	44·6	0·000	0·0	wP
26	Perigee	30·025	76·3	54·9	21·4	64·2	+ 2·8	58·9	54·5	9·7	20·1	3·0	71	131·1	51·0	0·000	0·0	wP
27	...	29·952	83·3	57·0	26·3	71·5	+10·1	63·0	56·5	15·0	25·7	5·9	60	148·3	52·8	0·000	0·0	wP : wwP : wP
28	...	29·888	84·8	59·5	25·3	73·0	+11·7	64·2	57·7	15·3	26·2	4·1	59	142·4	52·6	0 000	0·0	wwP : wwP : wP
29	...	30·046	73·7	55·2	18·5	63·9	+ 2·7	57·1	51·5	12·4	21·7	2·5	64	130·2	49·7	0·000	0·0	wP
30	...	30·146	73·5	54·2	19·3	64·2	+ 3·0	55·8	48·9	15·3	20·2	6·6	58	130·0	45·5	0·000	0·0	mP : vP : mP
Means	...	29·855	64·6	47·0	17·6	56·1	− 3·3	51·9	48·2	7·9	15·0	2·0	75·9	115·3	41·7	6·073	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 deduced from the 50 years' observations, 1841–1890. 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 29^{in}·855, being 0^{in}·044 *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 84°·8 on June 28; the lowest in the month was 37°·1 on June 13; and the range was 47°·7.
The mean of all the highest daily readings in the month was 64°·6, being 6°·3 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 47°·0, being 2°·9 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 17°·6, being 3°·4 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 56°·1, being 3°·3 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.	A.M.	P.M.
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.			
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
June 1	10·9	16·2	N	NNE : N	4·1	0·0	0·05	181	0, hy.-d : 2, ci, ci.-cu, th.-cl	1, th.-cl : 3, th.-cl : 1, th.-cl
2	5·6	16·2	NNE : NE	NNE : N	6·8	0·0	0·76	463	9 : 10, w : 9, w	8, cu, ci, th.-cl, w : 0
3	3·2	16·3	N	N : NNE	5·8	0·0	0·51	427	p.-cl : 10 : 10	9, cu.-s : 5, cu, th.-cl, w: 0
4	13·9	16·3	NNE : N	NE	2·4	0·0	0·24	357	0, d : 0 : 1, cu, th.-cl	5, cu.-s, th.-cl : 0
5	7·6	16·3	NE : Calm	E	1·7	0·0	0·06	193	0, d : 5, ci, ci.-s, cu, cu.-s	8 : 9
6	9·0	16·4	NE : NNE	NNE : NE : ESE	2·5	0·0	0·23	314	10 : 10 : 8, cu.-s, th.-cl	5, ci.-s, th.-cl: 3, th.-cl : 1
7	0·6	16·4	E : ENE	NE	2·2	0·0	0·25	349	9 : 9	10 : 10
8	11·2	16·4	NNE : NE	ENE : NNE	9·9	0·0	1·00	506	p.-cl : 3, cu, th.-cl, w	5, cu, cu.-s, th.-cl, w: 8, w : p.-cl, w
9	4·9	16·4	NE : ENE	ENE	5·6	0·0	0·33	303	v, hy.-r, w : 9, sc	7, ci, ci.-s, th.-cl: 9, ci.-s : 9
10	0·0	16·5	E : SW	SW : WSW	0·5	0·0	0·00	157	10, fq.-shs : 10, hy.-r : 10, fq.-r, gt.-glm, f	10, fq.-r, f : 10 : 10, hy.-r
11	0·0	16·5	SW : NE : N	N	1·0	0·0	0·04	202	10, slt.-r : 10 : 10, fq.-th.-r	10, c.-r : 10, c.-r : 10
12	2·7	16·5	N : NNW	N	1·1	0·0	0·07	214	9 : p.-cl : 10	10 : 8 : 0
13	1·8	16·5	S : SSW	Variable:NNW:ENE	0·7	0·0	0·01	139	0, hy.-d : p.-cl : 9, cu	10, c.-hy.-r, gt.-glm: 10, c.-hy.-r : 10, c.-r
14	0·0	16·5	NE : N	NNE	4·3	0·0	0·13	253	10, c.-hy.-r : 10, fq.-r	10, c.-r : 10, r : 10, c.-r
15	0·0	16·5	NNE : Calm	SW : SSW	0·2	0·0	0·00	103	10, c.-hy.-r: 10, c.-hy.-r: 10, c.-r	10, c.-r : 10, c.-r : 10, oc.-r
16	5·5	16·5	SSE : NE	SE : ESE : N	1·3	0·0	0·01	123	9 : p.-cl : 10, oc.-hy.-shs, hl	8, cu, th.-cl, oc.-r: 6, t : 9
17	5·9	16·5	NW : WSW	SW : S : NNW	2·1	0·0	0·07	217	9 : 9 : 8, cu, th.-cl	7, cu, th.-cl : 8, hy.-r, t : 10, slt.-sh
18	5·1	16·5	NNW : NNE	NE : ENE	2·9	0·0	0·08	206	9 : li.-cl : 4, cu, th.-cl	9, cu, th.-cl : 10 : 10
19	0·0	16·6	NNE	NNE : N	4·4	0·0	0·60	445	10 : 10 : 10, c.-r	10, sc, c.-r : 10, sc, c.-r : 10, oc.-r
20	0·0	16·6	N	NNW	5·0	0·0	0·58	422	10, oc.-slt.-r: 10 : 10, sc	10, sc : 10, oc.-slt.-r : p.-cl, ci.-cu
21	7·4	16·6	NW : NNW	NNW : N : SE	1·4	0·0	0·05	202	p.-cl : 0 : 9	p.-cl : 0
22	12·7	16·6	Variable : Calm : NE	ESE : SE : SSE	0·7	0·0	0·02	112	0, d : 0 : 3, cu, th.-cl	3, th.-cl : 1, th.-cl : 0
23	10·0	16·6	SE	ESE : E	3·1	0·0	0·15	215	0, d : 0 : 5, cu, th.-cl	5, cu, ci.-s, th.-cl: th.-cl : 10
24	0·1	16·6	E : ENE	E : S	0·7	0·0	0·01	128	10 : 10 : 9, th.-cl	10 : 6, cu.-s, ci.-s: li.-cl, l, d
25	10·3	16·6	SSW : SW	SW : SSW	0·9	0·0	0·02	203	1 : p.-cl : 7, ci, th.-cl	5, cu, th.-cl : 8 : 10
26	11·5	16·6	SSW : S	SSW : SSE	2·8	0·0	0·05	191	p.-cl : p.-cl : 1, ci, th.-cl	1, ci, th.-cl : 1, ci, th.-cl : 0
27	13·0	16·5	SSE : SSW	S : SE	2·1	0·0	0·08	215	0 : 2, ci.-cu, ci.-s	1, ci, ci.-cu : p.-cl
28	12·4	16·5	SSE : SW	SW : W : WSW	2·0	0·0	0·15	279	p.-cl : 3, ci, ci.-s	3, ci, ci.-cu, ci.-s: 3, ci, ci.-s : p.-cl
29	13·2	16·5	SW : W : WSW	W : WSW	2·0	0·0	0·09	274	0 : 1, ci.-s, th.-cl	3, cu, th.-cl : li.-cl : 2, s, th.-cl
30	9·4	16·5	NNW	NW : W : SW	1·2	0·0	0·01	154	p.-cl : 4, cu, th.-cl	9 : 5, ci.-cu, th.-cl: 0
Means	6·3	16·5	...	...	...	...	0·19	252		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 51°·9, being 3°·1 *lower* than
The mean *Temperature of the Dew Point* for the month was 48°·2, being 2°·9 *lower* than
The mean *Degree of Humidity* for the month was 75·9, being 1·9 *greater* than
The mean *Elastic Force of Vapour* for the month was 0^{in}·338, being 0^{in}·037 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 3^{grs}·8, being 0^{gr}·4 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 536 grains, being 5 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 0·380. The maximum daily amount of *Sunshine* was 13·9 hours on June 4.

The highest reading of the *Solar Radiation Thermometer* was 148°·3 on June 27; and the lowest reading of the *Terrestrial Radiation Thermometer* was 29°·1 on June 13.

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

The *Proportions of Wind* referred to the cardinal points were N. 12, E. 8, S. 5, and W. 4. One day was calm.

The *Greatest Pressure of the Wind* in the month was 9·9 lbs. on the square foot on June 8. The mean daily *Horizontal Movement of the Air* for the month was 252 miles; the greatest daily value was 506 miles on June 8; and the least daily value was 103 miles on June 15.

Rain fell on 10 days in the month, amounting to 6^{in}·073, as measured by gauge No. 6 partly sunk below the ground; being 4^{in}·051 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
July 1	In Equator : First Quarter	30·118	78·2	53·2	25·0	65·0	+ 3·7	57·9	52·1	12·9	24·1	4·2	63	133·8	43·2	0·000	0·0	wP
2	...	29·884	80·9	50·6	30·3	68·5	+ 7·1	60·5	54·2	14·3	27·9	3·4	60	144·0	38·8	0·000	0·0	wP
3	...	29·856	72·1	54·2	17·9	62·8	+ 1·1	55·6	49·4	13·4	22·9	5·5	62	132·7	50·0	0·000	0·0	wP : wP : mP
4	...	29·960	72·1	50·6	21·5	60·3	− 1·6	54·0	48·5	11·8	21·1	3·4	65	137·2	45·3	0·000	0·0	wP
5	...	29·776	68·9	55·0	13·9	61·2	− 0·9	55·0	49·6	11·6	12·4	2·9	66	120·2	50·2	0·000	0·0	wP : wwP : wP
6	...	29·644	66·5	51·9	14·6	58·6	− 3·6	52·1	46·3	12·3	22·3	0·9	65	130·6	47·0	0·003	0·0	wP : vP : mP
7	...	29·893	65·3	46·9	18·4	55·6	− 6·5	48·3	41·4	14·2	20·5	6·4	59	122·0	36·0	0·000	0·0	mP
8	Greatest Declination S.	30·047	71·4	42·2	29·2	60·6	− 1·4	54·4	49·0	11·6	21·6	3·1	66	128·7	30·2	0·000	0·0	mP
9	Full	30·110	79·2	58·3	20·9	68·2	+ 6·2	62·3	57·7	10·5	18·9	1·9	68	139·2	48·0	0·000	0·0	wP
10	Apogee	30·121	86·1	57·2	28·9	71·0	+ 8·9	64·5	59·6	11·4	22·6	2·1	67	136·0	46·1	0·000	1·0	wwP
11	...	29·977	87·5	59·2	28·3	73·1	+10·8	66·3	61·3	11·8	23·8	2·1	67	142·0	50·4	0·000	0·0	wwP
12	...	29·777	67·2	53·7	13·5	61·4	− 1·2	58·9	56·8	4 6	9·7	3·6	85	103·1	46·0	0·015	0·0	wP
13	...	29·760	65·6	49·5	16·1	57·6	− 5·3	50·8	44·6	13·0	20·1	5·7	62	117·0	41·1	0·000	0·0	wP : mP : sP
14	...	29 807	71·0	46·0	25·0	59·1	− 4·0	52·6	46·9	12·2	20·5	2 9	64	127·1	35·4	0·000	0·0	wP
15	In Equator	29·720	77·1	53·1	24·0	63·7	+ 0·5	56·8	51·0	12·7	23·6	3·8	63	136·7	47·9	0·000	0·0	wP
16	...	29·543	68·5	54·4	14·1	61·1	− 2·1	57·7	54·8	6·3	10·6	0·8	80	115·0	46·0	0·085	0·5	wP : wP, wN : wP, wN
17	Last Quarter	29·427	74·5	54·8	19·7	64·1	+ 1·0	59·0	54·7	9·4	17·3	0·6	72	140·0	45·9	0·000	1·5	wP
18	...	29·481	72·8	55·6	17·2	60·7	− 2·3	58·3	56·2	4·5	13·0	0·8	86	129·1	51·2	0·469	2·0	vP, ssN : vP, ssN : wP
19	...	29·682	67·0	54·6	12·4	60·1	− 2·9	57·2	54·7	5·4	9·6	1·3	83	116·1	51·7	0·007	0·0	wP : vP, vN
20	...	29·853	60·1	52·6	7·5	57·7	− 5·3	55·5	53·5	4·2	7·0	1·7	86	79·6	45·0	0·002	0·0	wP
21	...	29·929	72·5	45·7	26·8	59·7	− 3·3	55·7	52·2	7·5	16·6	0·2	77	130·0	35·4	0·000	0·0	wP
22	Greatest Declination N.	29·747	74·9	60·2	14·7	64·9	+ 2·0	61·3	58·3	6·6	15·4	1·5	79	125·3	57·0	0·010	0·0	wP
23	...	29·572	70·6	55·7	14·9	61·8	− 1·0	58·7	56·1	5·7	11·5	0·8	82	116·2	54·4	2·465	0·0	wP : vP, ssN
24	Perigee : New	29·653	72·3	53·1	19·2	60·7	− 1·9	56·1	52·1	8·6	17·8	0·4	73	129·3	44·0	0·683	0·0	vN, wwP : wP : wP
25	...	29·807	73·3	47·2	26·1	61·8	− 0·6	56·1	51·2	10·6	19·8	2·0	69	136·6	38·8	0·010	0·0	wP
26	...	29·652	71·5	53·7	17·8	61·4	− 0·9	58·6	56·2	5·2	15·2	1·1	84	117·0	46·0	0·637	0·0	vP, ssN : vP, ssN : wP
27	...	29·654	67·7	49·0	18·7	58·7	− 3·6	56·6	54·7	4·0	12·1	1·7	86	127·0	42·3	0·084	0·0	wP
28	In Equator	29·473	66·0	55·6	10·4	59·8	− 2·5	57·5	55·5	4·3	9·8	0·8	86	115·2	49·9	0·399	2·0	wP : wP : wP, ssN
29	...	29·466	66·9	51·0	15·9	57·7	− 4·6	55·1	52·8	4·9	12·8	0·2	83	125·5	44·6	0·388	0·0	wP, wN : vP, ssN : wP
30	...	29·549	65·9	50·2	15·7	56·6	− 5·7	53·5	50·6	6·0	13·9	0·8	80	114·0	43·8	0·011	0·0	wP
31	First Quarter	29·768	61·7	54·0	7·7	57·4	− 4·9	54·1	51·1	6·3	11·5	2·4	80	84·0	49·1	0·003	1·0	wP
Means	...	29·765	71·5	52·6	18·9	61·6	− 0·8	56·8	52·7	9·0	17·0	2·2	73·2	124·2	45·2	5·271	0·3	...
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 deduced from the 50 years' observations, 1841-1890. 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 29$^{\text{in}}$·765, being 0$^{\text{in}}$·028 *lower* than the average for the 50 years, 1841-1890.

TEMPERATURE OF THE AIR.

The highest in the month was 87°·5 on July 11; the lowest in the month was 42°·2 on July 8; and the range was 45°·3.
The mean of all the highest daily readings in the month was 71°·5, being 2°·5 *lower* 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°·5 *lower* than the average for the 50 years, 1841-1890.
The mean of the daily ranges was 18°·9, being 2°·0 *less* than the average for the 50 years, 1841-1890.
The mean for the month was 61°·6, being 0°·8 *lower* than the average for the 50 years, 1841-1890.

MONTH and DAY, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.					
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.	Horizontal Movement of the Air.	A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
July 1	13·0	16·5	SW	SW : SSW : S	1·2	0·0	0·04	175	0 : 0 : 6, ci, ci.-s, th.-cl	6, ci, ci.-s : 3, s, th.-cl : 0
2	12 3	16·5	Variable : Calm : SE	SE	2·6	0·0	0·10	180	0, d : 0 : 3, ci, ci.-s, ci.-cu	4, ci, th.-cl : 2, li.-cl, d
3	13·0	16·5	SW	WSW : SW	5·3	0·0	0·60	453	p.-cl, w : p.-cl : 9, cu, cu.-s, th.-cl	7, cu, cu.-s, th.-cl : 3, th.-cl : p.-cl, lu.-ha
4	9·4	16·5	SW	W : SW : WSW	2·1	0·0	0 10	257	p.-cl : 6, cu, cu.-s, th.-cl	7, cu, th.-cl, so.-ha : p.-cl : 10
5	1·3	16·4	WSW : SW	S : SSW	2·0	0·0	0·10	238	9 : 10 : 10, oc.-th.-r	10, oc.-th.-r : 8, th.-cl : 10, oc.-slt.-r
6	8·3	16·4	SW : W	W : WNW	15·5	0·0	1·55	578	10, oc. th.-r : 8, cu, th.-cl, w	6, cu, th.-cl, w : p.-cl, w
7	10·3	16·4	W : NW	W : NW : N	4·3	0·0	0·47	394	p.-cl, w : p.-cl : 7, cu, li.-cl, w	7, cu, th.-cl, w : 4, cu, th.-cl, w : 0
8	7·3	16·4	NW	NW : WNW	1·8	0·0	0·12	238	0, d : 0, h : 3, ci, th.-cl	9 : 10 : 10
9	6·6	16·4	WNW:NW:NNW	NNW : E	1·4	0·0	0·06	204	10 : p.-cl : 7, cu, th.-cl	7, cu, th.-cl : p.-cl : 0, d
10	12·8	16·3	SW	SW : SSW	1·6	0·0	0·03	179	9 : 0, d : 1, th.-cl	4, cu, th.-cl : 0
11	12·9	16·3	SW	SW : SSW	1·1	0·0	0·04	177	0, d : 0 : 3, cu, th.-cl	6, cu, th.-cl : 4, cu, th.-cl : p.-cl, lu.-ha
12	0·0	16·3	NNW : NW	NNW : N : NW	2·0	0·0	0·04	171	9 : 10, slt.-sh : 10, oc.-slt.-r	10 : 2
13	5·9	16·2	WNW : NW	NW	2·7	0·0	0·21	274	p.-cl : 1 : 8, cu, cu.-s	8 : p.-cl : 3, li.-cl
14	2·2	16·2	SSW : SSE	SSW : SW	0·8	0·0	0·03	155	p.-cl : 9, cu, ci.-cu	9, cu, cu.-s : 10 : 10, oc.-slt.-r
15	9·9	16·1	SSW : SW	SW : SSW : S	2·2	0·0	0·11	260	9 : li.-cl : 6, ci, ci.-s, ci.-cu	7, ci, ci.-s, so.-ha : 7, th.-cl : p.-cl, cu.-s, s
16	0·5	16·1	NE : Calm : SSW	SSW : S	3·7	0·0	0·09	176	9 : 10 : 10, fq.-th.-r	9, ci.-cu, n : 9, fq.-th.-r : 4, th.-cl
17	7·3	16·1	SSW	SW : SSW	1·1	0·0	0 04	193	9 : 6, cu, th.-cl	7, cu, th.-cl : 8, ci.-cu, ci.-s, th.-cl : p.-cl
18	2·7	16·0	SSW : Variable	SW : NW : N	2·9	0·0	0 02	117	9, r : 10, c.-r, t : 9, hy.-sh	9, cu.-s, th.-cl, t : v, shs.-r : 10
19	0·4	16·0	Calm : N	NE : SW : SE	0·3	0·0	0·00	88	10 : 10 : 9, glm	10, li.-shs, gt.-glm, t : p.-cl : 10
20	0·0	16·0	N	NNE : N	0·3	0·0	0·00	139	10 : 10	10, oc.-slt.-r : 10, sc : 9
21	5·8	15·9	Variable : S	SW : SSW	2·8	0·0	0·10	221	0 : 9 : 7, cu, ci.-cu, ci.-s	8, cu, th.-cl : 9 : 10, slt.-sh
22	5·7	15·9	SSW	SSW	4·0	0·0	0·28	326	10, li.-shs : 9 : 10, oc.-slt.-r	8, cu, ci, ci.-cu, so.-ha : p.-cl : 9, l
23	1·4	15·8	SSW : SW	SW : NNW : WNW	2·6	0·0	0·06	180	10 : p.-cl : 10, hy.-sh	p.-cl, hy.-sh : 10, fq.-r, l, t : 10, c.-hy.-r
24	6·6	15·8	W : WSW : SW	WSW : SW	2·7	0·0	0·24	340	10, c.-hy.-r : 10, c.-r : 9, cu, li.-cl, oc.-slt.-r	8, cu, th.-cl : 8, cu, li.-cl : 0
25	10·7	15·7	SW : S	S : SE	2·2	0·0	0·09	208	0, hy.-d : 1, li.-cl : 3, cu, ci, ci.-s	5, cu, ci.-cu, ci.-s, so.-ha : 7, cu, th.-cl : 9, oc.-r
26	3·0	15·7	SSE : SW	SW : NW	2·8	0·0	0·07	210	10, hy.-r : 10, c.-r : 10, c.-r	v, shs.-r, t : 5, sh.-r, t : 0
27	4·2	15·6	SW : S : SSE	SSE : SSW : SW	3·1	0·0	0·21	293	0 : p.-cl : v, shs.-r	10, sc, th.-r : 10, sc, oc.-th.-r : 9, sc
28	2·4	15·6	SW : SSW	S : NNE : Variable	3·3	0·0	0·13	215	p.-cl : 1, ci : 9, sc, fq.-th.-r	10, sc, oc.-th.-r : 10, r : v, r, f
29	3·7	15·6	SW : WSW : W	WSW : SSW	6·0	0·0	0·17	289	10, hy.-shs : th.-cl : 9, sc, hy.-r	v, t.-sm, hy.-r, hl, w : 6, cu, cu.-s, oc.-shs, l, t : v, sh.-r, l
30	4·0	15·5	SW : NW	WNW : W : SW	3·7	0·0	0·18	283	p.-cl : p.-cl : 9, cu, li.-cl	10, sc, sh.-r : 10, sc : p.-cl
31	0·5	15·5	SW : WSW : W	WSW : W	3·8	0·0	0·29	402	10 : 10, slt.-sh : 10	10, sc : 9 : p.-cl
Means	5·9	16·1	...	...	...	...	0·18	246		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 56°·8, being 1°·0 *lower* than
The mean *Temperature of the Dew Point* for the month was 52°·7, being 1°·2 *lower* than
The mean *Degree of Humidity* for the month was 73·2, being 0·6 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·399, being 0in·017 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 4grs·4, being 0gr·2 *less* than
The mean *Weight of a Cubic Foot of Air* for the month was 528 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 7·3.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·370. The maximum daily amount of *Sunshine* was 13·0 hours on July 1 and 3.

The highest reading of the *Solar Radiation Thermometer* was 144°·0 on July 2; and the lowest reading of the *Terrestrial Radiation Thermometer* was 30°·2 on July 8.

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

The *Proportions of Wind* referred to the cardinal points were N. 5, E. 1, S. 12, and W. 12. One day was calm.

The *Greatest Pressure of the Wind* in the month was 15·5 lbs. on the square foot on July 6. The mean daily *Horizontal Movement of the Air* for the month was 246 miles; the greatest daily value was 578 miles on July 6; and the least daily value was 88 miles on July 19.

Rain fell on 13 days in the month, amounting to 5in·271, as measured by gauge No. 6 partly sunk below the ground; being 2in·801 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Aug. 1	...	29·854	71·4	54·0	17·4	61·7	− 0·5	58·3	55·4	6·3	11·0	2·4	80	112·5	48·8	0·000	4·0	wP : wwP : wP
2	...	29·787	70·5	55·3	15·2	61·0	− 1·1	56·7	53·0	8·0	15·5	1·8	75	128·7	50·9	0·075	6·0	wP
3	...	29·602	71·9	55·3	16·6	62·6	+ 0·5	57·6	53·4	9·2	19·4	1·0	72	132·7	51·0	0·259	2·2	wwP, wN : wP : wP
4	Greatest Declination S.	29·754	71·6	53·5	18·1	61·3	− 0·9	58·6	56·3	5·0	8·6	2·0	84	118·1	48·9	0·014	0·8	wP : wwP : wP
5	...	29·870	68·7	53·2	15·5	59·6	− 2·7	54·4	49·8	9·8	18·7	3·8	70	119·0	48·0	0·000	0·0	wP
6	Apogee	30·029	70·9	50·0	20·9	58·5	− 3·9	52·8	47·7	10·8	22·1	1·0	68	134·6	42·0	0·000	0·0	wP : wP : mP
7	...	30·000	74·9	44·2	30·7	59·1	− 3·4	53·5	48·5	10·6	22·1	1·3	68	134·0	33·0	0·000	0·7	mP : wP : wP
8	Full	29·719	77·5	48·2	29·3	65·2	+ 2·7	58·3	52·7	12·5	24·8	3·4	64	140·2	39·8	0·000	2·3	wP : wwP : wP
9	...	29·630	71·5	55·0	16·5	62·2	− 0·3	57·6	53·7	8·5	17·3	2·5	74	126·3	42·8	0·000	2·2	wP : wwP : wP
10	...	29·601	66·6	51·5	15·1	58·5	− 4·0	55·2	52·2	6·3	14·9	1·8	80	133·0	44·0	0·644	1·3	vP, ssN : vP, ssN : wP
11	In Equator	29·721	67·1	45·3	21·8	56·1	− 6·4	53·7	51·4	4·7	13·5	0·0	85	121·0	38·0	1·153	1·5	wP : wP : sP, ssN
12	...	29·686	71·4	53·9	17·5	61·0	− 1·5	57·2	53·9	7·1	16·9	0·4	78	118·3	51·0	0·000	0·0	wwP : wP : wP
13	...	29·763	73·5	49·0	24·5	60·4	− 2·0	55·9	52·0	8·4	20·3	1·6	73	134·4	40·9	0·000	0·0	wP
14	...	29·319	70·9	50·4	20·5	60·4	− 1·9	58·6	57·0	3·4	8·3	1·3	89	115·2	42·1	0·272	7·0	wP : wwP, vN : wP
15	...	29·206	66·0	55·5	10·5	59·8	− 2·3	55·4	51·5	8·3	14·8	3·0	74	109·6	51·3	0·050	6·0	wwP : wwP : wP
16	Last Quarter	29·623	67·0	51·4	15·6	57·6	− 4·4	53·0	48·8	8·8	17·1	3·8	72	127·1	46·2	0·002	0·7	wwP : wwP : wP
17	...	29·540	73·4	53·8	19·6	61·0	− 0·8	57·2	53·9	7·1	15·1	1·3	78	131·0	49·0	0·288	3·3	wP, wN : wP : mP
18	Greatest Declination N.	29·419	64·1	52·5	11·6	58·5	− 3·1	54·8	51·5	7·0	12·7	1·6	78	110·6	51·0	0·078	3·5	wwP, wwN : wP : mP, ssN
19	...	29·572	65·8	52·3	13·5	57·8	− 3·6	53·9	50·4	7·4	17·9	1·2	76	120·0	47·7	0·561	2·2	vP, vN : wP
20	...	29·543	64·2	51·9	12·3	57·8	− 3·5	55·0	52·5	5·3	11·5	2·1	82	108·6	47·2	0·039	8·3	wP : wP : wwP
21	Perigee	29·463	67·8	52·0	15·8	59·7	− 1·4	54·6	50·1	9·6	17·5	2·2	70	126·8	46·5	0·140	0·0	wwP : wP : mP
22	New	29·704	69·9	47·6	22·3	57·6	− 3·4	52·0	46·9	10·7	21·8	2·1	68	129·3	43·0	0·000	0·0	wP
23	...	29·672	68·3	44·3	24·0	57·2	− 3·7	51·1	45·5	11·7	22·7	1·7	65	120·7	36·5	0·000	0·5	wP
24	In Equator	29·545	65·9	48·2	17·7	56·1	− 4·7	54·5	53·0	3·1	11·2	0·4	89	121·0	41·4	0·911	4·0	wP : wwP : vP, ssN
25	...	29·689	59·2	50·0	9·2	55·2	− 5·6	53·3	51·5	3·7	8·6	1·8	88	88·2	42·0	0·134	1·5	wwP : wP : mP
26	...	30·053	67·4	46·4	21·0	57·9	− 2·9	53·3	49·1	8·8	14·8	0·8	72	123·1	38·3	0·000	0·0	wP
27	...	29·923	71·0	54·8	16·2	60·8	+ 0·1	56·6	53·0	7·8	18·7	3·0	76	129·0	49·7	0·051	0·0	wP
28	...	29·822	70·2	55·2	15·0	60·9	+ 0·3	57·3	54·2	6·7	14·2	1·9	79	130·1	50·3	0·000	0·0	wP
29	First Quarter	29·745	66·9	54·0	12·9	61·4	+ 1·1	56·6	52·5	8·9	17·6	1·5	73	113·4	47·0	0·141	0·0	wwP, mN : wP : mP
30	...	29·926	67·1	48·9	18·2	57·7	− 2·4	55·6	53·7	4·0	12·4	1·4	86	120·0	41·3	0·007	0·0	wP
31	Greatest Declination S.	29·865	71·8	54·6	17·2	62·8	+ 2·9	58·0	54·0	8·8	18·5	1·5	73	124·0	45·5	0·003	0·0	wwP : wP : wP
Means	...	29·698	69·2	51·4	17·8	59·6	− 2·0	55·5	51·9	7·7	16·1	1·8	76·1	122·6	45·0	4·822	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 deduced from the 50 years' observations, 1841–1890. 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 29^{in}·698, being 0^{in}·084 *lower* than the average for the 50 years, 1841–1890.

Temperature of the Air.

The highest in the month was 77°·5 on August 8 ; the lowest in the month was 44°·2 on August 7 ; and the range was 33°·3.
The mean of all the highest daily readings in the month was 69°·2, being 3°·6 *lower* than the average for the 50 years, 1841–1890.
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The mean of the daily ranges was 17°·8, being 2°·0 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 59°·6, being 2°·0 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Aug. 1	...	29·854	71·4	54·0	17·4	61·7	− 0·5	58·3	55·4	6·3	11·0	2·4	80	112·5	48·8	0·000	4·0	wP : wwP : wP
2	...	29·787	70·5	55·3	15·2	61·0	− 1·1	56 7	53·0	8·0	15·5	1·8	75	128·7	50·9	0 075	6·0	wP
3	...	29·602	71·9	55·3	16·6	62·6	+ 0·5	57·6	53·4	9·2	19·4	1·0	72	132·7	51·0	0·259	2·2	wwP, wN : wP : wP
4	Greatest Declination S.	29·754	71·6	53·5	18·1	61·3	− 0·9	58·6	56·3	5·0	8·6	2·0	84	118·1	48·9	0·014	0·8	wP : wwP : wP
5	...	29·870	68·7	53·2	15·5	59·6	− 2·7	54·4	49·8	9·8	18·7	3·8	70	119·0	48·0	0·000	0·0	wP
6	Apogee	30·029	70·9	50·0	20·9	58·5	− 3·9	52·8	47·7	10·8	22·1	1·0	68	134·6	42·0	0·000	0·0	wP : wP : mP
7	...	30·000	74·9	44·2	30·7	59·1	− 3·4	53·5	48·5	10·6	22·1	1·3	68	134·0	33·0	0·000	0·7	mP : wP : wP
8	Full	29·719	77·5	48·2	29·3	65·2	+ 2·7	58·3	52 7	12·5	24·8	3·4	64	140·2	39·8	0·000	2·3	wP : wwP : wP
9	...	29·630	71·5	55 0	16·5	62·2	− 0·3	57·6	53·7	8·5	17·3	2·5	74	126·3	42·8	0·000	2·2	wP : wwP : wP
10	...	29·601	66·6	51·5	15·1	58·5	− 4·0	55·2	52·2	6·3	14·9	1·8	80	133·0	44·0	0·644	1·3	vP, ssN : vP, ssN : wP
11	In Equator	29·721	67·1	45·3	21·8	56·1	− 6·4	53·7	51·4	4 7	13·5	0·0	85	121·0	38·0	1·153	1·5	wP : wP : sP, ssN
12	...	29·686	71·4	53·9	17·5	61·0	− 1·5	57·2	53·9	7·1	16·9	0·4	78	118·3	51·0	0·000	0·0	wwP : wP : wP
13	...	29·763	73·5	49·0	24·5	60·4	− 2·0	55·9	52·0	8·4	20·3	1·6	73	134·4	40·9	0·000	0·0	wP
14	...	29·319	70·9	50·4	20·5	60·4	− 1·9	58·6	57·0	3·4	8·3	1·3	89	115·2	42·1	0·272	7·0	wP : wwP, vN : wP
15	...	29·206	66 0	55·5	10·5	59·8	− 2·3	55·4	51·5	8·3	14·8	3·0	74	109·6	51·3	0·050	6·0	wwP : wwP : wP
16	Last Quarter	29·623	67·0	51·4	15·6	57·6	− 4·4	53·0	48·8	8·8	17·1	3·8	72	127·1	46·2	0·002	0·7	wwP : wwP : wP
17	...	29·540	73·4	53·8	19·6	61·0	− 0·8	57·2	53·9	7·1	15·1	1·3	78	131·0	49·0	0·288	3·3	wP, wN : wP : mP
18	Greatest Declination N.	29·419	64·1	52·5	11·6	58·5	− 3·1	54·8	51·5	7·0	12·7	1·6	78	110·6	51·0	0·078	3·5	wwP, wwN : wP : mP, ssN
19	...	29·572	65·8	52·3	13·5	57·8	− 3·6	53·9	50·4	7 4	17·9	1·2	76	120·0	47·7	0·561	2·2	vP, vN : wP
20	...	29·543	64·2	51·9	12·3	57·8	− 3·5	55·0	52·5	5·3	11·5	2·1	82	108·6	47·2	0·039	8·3	wP : wP : wwP
21	Perigee	29·463	67·8	52·0	15·8	59·7	− 1·4	54·6	50·1	9·6	17·5	2·2	70	126 8	46 5	0·140	0·0	wwP : wP : mP
22	New	29·704	69·9	47·6	22 3	57·6	− 3·4	52·0	46·9	10·7	21·8	2·1	68	129·3	43·0	0·000	0·0	wP
23	...	29·672	68·3	44·3	24·0	57·2	− 3·7	51·1	45·5	11·7	22·7	1·7	65	120·7	36·5	0·000	0·5	wP
24	In Equator	29·545	65·9	48·2	17·7	56·1	− 4·7	54·5	53·0	3·1	11·2	0·4	89	121·0	41·4	0·911	4·0	wP : wwP : vP, ssN
25	...	29·689	59·2	50·0	9·2	55·2	− 5·6	53·3	51·5	3·7	8·6	1·8	88	88·2	42·0	0·134	1·5	wwP : wP : mP
26	...	30·053	67·4	46·4	21·0	57·9	− 2·9	53·3	49·1	8·8	14·8	0·8	72	123·1	38·3	0·000	0·0	wP
27	...	29·923	71·0	54·8	16·2	60·8	+ 0·1	56·6	53·0	7·8	18·7	3·0	76	129·0	49·7	0·051	0·0	wP
28	...	29·822	70·2	55·2	15·0	60·9	+ 0·3	57·3	54·2	6·7	14·2	1·9	79	130·1	50·3	0·000	0·0	wP
29	First Quarter	29·745	66·9	54·0	12·9	61·4	+ 1·1	56·6	52·5	8·9	17·6	1·5	73	113·4	47·0	0·141	0·0	wwP, mN : wP : mP
30	...	29·926	67·1	48·9	18·2	57·7	− 2·4	55·6	53·7	4·0	12·4	1·4	86	120·0	41·3	0·007	0·0	wP
31	Greatest Declination S.	29·865	71·8	54·6	17·2	62·8	+ 2·9	58·0	54·0	8·8	18·5	1·5	73	124·0	45·5	0·003	0·0	wwP : wP : wP
Means	...	29·698	69·2	51·4	17·8	59·6	− 2·0	55·5	51·9	7·7	16·1	1·8	76·1	122·6	45·0	4·822	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

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The highest in the month was 77°·5 on August 8 ; the lowest in the month was 44°·2 on August 7 ; and the range was 33°·3.
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The mean of the daily ranges was 17°·8, being 2°·0 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 59°·6, being 2°·0 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BARO-METER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Aug. 1	...	29·854	71·4	54·0	17·4	61·7	− 0·5	58·3	55·4	6·3	11·0	2·4	80	112·5	48·8	0·000	4·0	wP : wwP : wP
2	...	29·787	70·5	55·3	15·2	61·0	− 1·1	56 7	53·0	8·0	15·5	1·8	75	128·7	50·9	0 075	6·0	wP
3	...	29·602	71·9	55·3	16·6	62·6	+ 0·5	57·6	53·4	9·2	19·4	1·0	72	132·7	51·0	0·259	2·2	wwP, wN : wP : wP
4	Greatest Declination S.	29·754	71·6	53·5	18·1	61·3	− 0·9	58·6	56·3	5·0	8·6	2·0	84	118·1	48·9	0·014	0·8	wP : wwP : wP
5	...	29·870	68·7	53·2	15·5	59·6	− 2·7	54·4	49·8	9·8	18·7	3·8	70	119·0	48·0	0·000	0·0	wP
6	Apogee	30·029	70·9	50·0	20·9	58·5	− 3·9	52·8	47·7	10·8	22·1	1·0	68	134·6	42·0	0·000	0·0	wP : wP : mP
7	...	30·000	74·9	44·2	30·7	59·1	− 3·4	53·5	48·5	10·6	22·1	1·3	68	134·0	33·0	0·000	0·7	mP : wP : wP
8	Full	29·719	77·5	48·2	29·3	65·2	+ 2·7	58·3	52 7	12·5	24·8	3·4	64	140·2	39·8	0·000	2·3	wP : wwP : wP
9	...	29·630	71·5	55 0	16·5	62·2	− 0·3	57·6	53·7	8·5	17·3	2·5	74	126·3	42·8	0·000	2·2	wP : wwP : wP
10	...	29·601	66·6	51·5	15·1	58·5	− 4·0	55·2	52·2	6·3	14·9	1·8	80	133·0	44·0	0·644	1·3	vP, ssN : vP, ssN : wP
11	In Equator	29·721	67·1	45·3	21·8	56·1	− 6·4	53·7	51·4	4 7	13·5	0·0	85	121·0	38·0	1·153	1·5	wP : wP : sP, ssN
12	...	29 686	71·4	53·9	17·5	61·0	− 1·5	57·2	53·9	7·1	16·9	0·4	78	118·3	51·0	0 000	0·0	wwP : wP : wP
13	...	29·763	73·5	49·0	24·5	60·4	− 2·0	55·9	52·0	8·4	20·3	1·6	73	134·4	40·9	0·000	0·0	wP
14	...	29·319	70·9	50·4	20·5	60·4	− 1·9	58·6	57·0	3·4	8·3	1·3	89	115·2	42·1	0·272	7·0	wP : wwP, vN : wP
15	...	29·206	66 0	55·5	10·5	59·8	− 2·3	55·4	51·5	8·3	14·8	3·0	74	109·6	51·3	0·050	6·0	wwP : wwP : wP
16	Last Quarter	29·623	67·0	51·4	15·6	57·6	− 4·4	53·0	48·8	8·8	17·1	3·8	72	127·1	46·2	0·002	0·7	wwP : wwP : wP
17	...	29·540	73·4	53·8	19·6	61·0	− 0·8	57·2	53·9	7·1	15·1	1·3	78	131·0	49·0	0·288	3·3	wP, wN : wP : mP
18	Greatest Declination N.	29·419	64·1	52·5	11·6	58·5	− 3·1	54·8	51·5	7·0	12·7	1·6	78	110·6	51·0	0·078	3·5	wwP, wwN : wP : mP, ssN
19	...	29·572	65·8	52·3	13·5	57·8	− 3·6	53·9	50·4	7 4	17·9	1·2	76	120·0	47·7	0·561	2·2	vP, vN : wP
20	...	29·543	64·2	51·9	12·3	57·8	− 3·5	55·0	52·5	5·3	11·5	2·1	82	108·6	47·2	0·039	8·3	wP : wP : wwP
21	Perigee	29·463	67·8	52·0	15·8	59·7	− 1·4	54·6	50·1	9·6	17·5	2·2	70	126 8	46 5	0·140	0·0	wwP : wP : mP
22	New	29·704	69·9	47·6	22 3	57·6	− 3·4	52·0	46·9	10·7	21·8	2·1	68	129·3	43·0	0·000	0·0	wP
23	...	29·672	68·3	44·3	24·0	57·2	− 3·7	51·1	45·5	11·7	22·7	1·7	65	120·7	36·5	0·000	0·5	wP
24	In Equator	29·545	65·9	48·2	17·7	56·1	− 4·7	54·5	53·0	3·1	11·2	0·4	89	121·0	41·4	0·911	4·0	wP : wwP : vP, ssN
25	...	29·689	59·2	50·0	9·2	55·2	− 5·6	53·3	51·5	3·7	8·6	1·8	88	88·2	42·0	0·134	1·5	wwP : wP : mP
26	...	30·053	67·4	46·4	21·0	57·9	− 2·9	53·3	49·1	8·8	14·8	0·8	72	123·1	38·3	0·000	0·0	wP
27	...	29·923	71·0	54·8	16·2	60·8	+ 0·1	56·6	53·0	7·8	18·7	3·0	76	129·0	49·7	0·051	0·0	wP
28	...	29·822	70·2	55·2	15·0	60·9	+ 0·3	57·3	54·2	6·7	14·2	1·9	79	130·1	50·3	0·000	0·0	wP
29	First Quarter	29·745	66·9	54·0	12·9	61·4	+ 1·1	56·6	52·5	8·9	17·6	1·5	73	113·4	47·0	0·141	0·0	wwP, mN : wP : mP
30	...	29·926	67·1	48·9	18·2	57·7	− 2·4	55·6	53·7	4·0	12·4	1·4	86	120·0	41·3	0·007	0·0	wP
31	Greatest Declination S.	29·865	71·8	54·6	17·2	62·8	+ 2·9	58·0	54·0	8·8	18·5	1·5	73	124·0	45·5	0·003	0·0	wwP : wP : wP
Means	...	29·698	69·2	51·4	17·8	59·6	− 2·0	55·5	51·9	7·7	16·1	1·8	76·1	122·6	45·0	4·822	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

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The mean for the month was 59°·6, being 2°·0 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.		
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.		A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Sept. 1	10·7	13·6	ESE : SE : S	SW : SSW : NW	2·0	0·0	0·05	190	p.-cl, d : 0	2, cu, so.-ha : 3, cu, ci.-s : li.-cl
2	9·8	13·5	NE : SE	S : SSW : WSW	4·4	0·0	0·28	293	9 : 5, ci, ci.-cu, ci.-s	3, ci, ci.-s, so.-ha : 9, sh.-r
3	11·2	13·5	SW : SSW	SSW : S : SSE	3·0	0·0	0·13	282	0, hy.-d : 0 : 3, cu, th.-cl	4, cu, th.-cl : 8, ci.-s, th.-cl, lu.-ha : li.-cl, d
4	5·4	13·4	SSE : ESE	ESE : ENE : N	3·2	0·0	0·07	193	li.-cl, d : 8, th.-cl : 7, cu.-s, ci.-cu, ci.-s, so.-ha	8, ci.-s, ci.-cu, so.-ha : 9, hy.-r, l, t : v, t.-sm, hy.-r
5	1·9	13·3	ESE : S	SSW : SW	4·0	0·0	0·18	281	p.-cl, l : 9, s, ci.-s : 10, sc, hy.-sh	9 : 1, ci.-s, s, d
6	0·0	13·3	SW	N : SW	0·0	0·0	0·00	91	0, hy.-d : p.-cl : 10, glm, f, fq.-r	9, f : 9, slt.-f
7	10·6	13·2	SSW : SW	WSW : SSW	2·1	0·0	0·09	250	p.-cl, d : 0, h : 1, li.-cl	1, li.-cl : 2, ci.-s, s, d
8	1·5	13·1	SSW : SW	SW : SSW	6·0	0·0	0·52	433	p.-cl, d : 9 : 9	10 : 10, oc.-slt.-r, w
9	8·6	13·1	SW : WNW : W	W : WSW	16·0	0·0	1·61	576	10, shs.-r, w : 10, shs.-r, w : 7, cu, th.-cl, w	6, cu, th.-cl : p.-cl, sh.-r, hy.-sqs. : 0, d
10	4·3	13·0	SW	SSW : S	36·0	0·0	1·20	506	0, d : 1, th.-cl : 8, ci.-s, th.-cl, so.-ha	10, sc : 10, sc, fq.-r, w : 9, sc, oc.-r, g, l
11	7·7	12·9	SW : WNW	W : SW	25·5	0·0	1·67	530	10, fq.-r, st.-w : 8, cu, li.-cl, w	5, cu, ci.-s, th.-cl : 0, hy.-d, l
12	6·7	12·9	SW : WSW	WNW : SW	3·4	0·0	0·08	241	0, hy.-d : 0 : 6, cu, cu.-s, n, slt.-r	9, cu, n, oc.-slt.-r : 10 : 9, l
13	6·7	12·8	SW : NE	NNE : N : NNW	1·8	0·0	0·07	195	9 : p.-cl : 5, cu, cu.-s	9 : 0 : 0, d
14	1·4	12·8	NNW	N : NNW	6·6	0·0	0·66	426	8 : 10, w : 9, w	10 : 8 : p.-cl
15	3·2	12·7	NNW : N	N : NNW	2·6	0·0	0·24	309	0, hy.-d : p.-cl : 8, cu, th.-cl	8 : 9 : 3, ci.-cu, cu.-s, d
16	6·7	12·6	NNW	N : NNW : SSW	2·5	0·0	0·09	212	p.-cl : 8, ci.-cu, ci.-s, th.-cl : 8, cu, th.-cl	6, cu, ci.-cu : 5, slt.-f : th.-cl, d, slt.-f
17	8·0	12·6	SSW : SSE	SE	0·9	0·0	0·03	149	8, th.-cl, hy.-d : 1, li.-cl : 3, cu, ci	4, cu, th.-cl : 6, ci.-s, cu.-s, d : 10
18	10·6	12·5	NE : E	E : NNE	1·8	0·0	0·04	157	p.-cl, hy.-d : 0 : 0	0 : p.-cl : 10, oc.-slt.-r
19	8·9	12·4	NNE : E : ENE	E : ENE	4·9	0·0	0·38	315	10 : p.-cl : 1, li.-cl	1, li.-cl, w : p.-cl, w : 10
20	8·9	12·4	ENE : E	ENE : E	4·0	0·0	0·34	329	10 : 5, li.-cl, so.-ha	3, li.-cl : 0, d
21	6·4	12·3	ENE : E	ENE : E	6·5	0·0	0·55	392	0, hy.-d : 1, li.-cl : 4, ci, ci.-s, w	7, ci.-s, li.-cl : 5, li.-cl : 5, li.-cl
22	0·0	12·2	E	E : ESE	1·7	0·0	0·02	148	9 : 10, fq.-r	10, r : 10 : 8
23	1·8	12·2	Calm : ESE	SE : ESE : E	0·1	0·0	0·00	74	10, oc.-slt.-r, f : 10, f : 10, slt.-f	8, ci, ci.-cu, ci.-s, so.-ha : 10, slt.-f : 10, f, oc.-th.-r
24	0·2	12·1	E	E	0·2	0·0	0·00	97	10, f : 10, f : 9, th.-cl, slt.-f	9 : 10, slt.-f : 10, hy.-sh
25	4·8	12·0	E : SSW : SW	SSW : SW	1·9	0·0	0·07	208	10, oc.-slt.-r : p.-cl : 9, cu, li.-cl	7, cu, li.-cl, slt.-sh : 3, cu, th.-cl : 0, d
26	6·2	12·0	SW	S : SE	0·1	0·0	0·00	127	10 : 10, slt.-r : 8, cu, li.-cl	3, cu.-s, li.-cl : 0, d
27	1·0	11·9	SE	SSE : S : SSW	0·3	0·0	0·00	146	9 : 9 : 10, c.-r	9, fq.-r : 6, ci, ci.-cu, ci.-s : 9, l
28	4·7	11·9	S : SSE	S : SE : ESE	1·6	0·0	0·05	194	9 : 9 : p.-cl	8, cu, th.-cl : 7, th.-cl : 9, oc.-hy.-shs
29	1·7	11·8	SSE : SSW	SSW : SSE : SW	2·2	0·0	0·10	223	10, oc.-shs : 9 : 9	10 : 10, c.-r : 10, oc.-r
30	9·7	11·7	S : SSW	SSW : S : SSE	2·5	0·0	0·13	256	p.-cl : 3, cu, ci, ci.-s	5, cu, ci, ci.-s : 5, ci.-s : p.-cl
Means	5·6	12·7	...	...	...	...	0·29	261		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 54°·3, being 0°·1 *higher* than
The mean *Temperature of the Dew Point* for the month was 51°·5, being 0°·1 *higher* than
The mean *Degree of Humidity* for the month was 80·9, being 0·1 *greater* than
The mean *Elastic Force of Vapour* for the month was 0^{in}·381, being 0^{in}·002 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 4^{grs}·2, being *the same as*
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 6·2.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·446. The maximum daily amount of *Sunshine* was 11·2 hours on September 3.

The highest reading of the *Solar Radiation Thermometer* was 132°·2 on September 2; and the lowest reading of the *Terrestrial Radiation Thermometer* was 29°·0 on September 17.

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

The *Proportions of Wind* referred to the cardinal points were N. 5, E. 8, S. 11, and W. 6.

The *Greatest Pressure of the Wind* in the month was 36·0 lbs. on the square foot on September 10. The mean daily *Horizontal Movement of the Air* for the month was 261 miles; the greatest daily value was 576 miles on September 9; and the least daily value was 74 miles on September 23.

Rain fell on 15 days in the month, amounting to 2^{in}·238, as measured by gauge No. 6 partly sunk below the ground; being 0^{in}·013 *less* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Oct. 1	...	29·673	68·5	50·4	18·1	58·8	+ 4·7	57·2	55·8	3·0	8·5	1·5	90	105·2	44·0	0·000	0·0	...
2	...	29·590	65·0	51·5	13·5	57·6	+ 3·8	54·4	51·5	6·1	13·0	1·8	80	111·7	47·0	0·006	0·0	...
3	...	29·567	67·2	52·3	14·9	59·4	+ 5·9	55·6	52·2	7·2	16·6	2·1	78	117·0	43·4	0·000	0·0	... : wP
4	...	29·561	63·9	53·3	10·6	57·8	+ 4·6	54·6	51·8	6·0	11·3	1·5	81	104·2	48·9	0·200	0·0	wwP, sN : wP : wP
5	In Equator	29·457	62·3	54·2	8·1	57·7	+ 4·7	55·4	53·3	4·4	8·9	1·3	85	96·4	48·0	0·428	0·0	wwP, vN : wP
6	Full	29·463	63·1	52·8	10·3	57·8	+ 5·1	55·4	53·2	4·6	9·5	1·0	85	69·0	47·7	0·178	4·0	wwP : ... : wwP
7	...	29·667	63·0	52·4	10·6	57·1	+ 4·6	53·7	50·5	6·6	11·8	1·2	79	100·0	45·0	0·042	0·0	wwP : ... : wwP
8	...	29·398	64·8	53·3	11·5	58·4	+ 6·3	57·3	56·3	2·1	5·9	0·6	93	87·8	49·5	0·122	0·5	wwP : ...
9	...	29·409	57·9	44·3	13·6	51·7	0·0	49·0	46·3	5·4	11·6	1·9	82	98·3	39·8	0·076	1·5	... : vP, ssN : mP
10	...	29·700	56·8	39·2	17·6	46·5	− 4·8	43·8	40·7	5·8	11·2	2·1	82	102·3	32·0	0·000	0·0	mP
11	...	29·405	56·9	42·3	14·6	50·9	− 0·1	50·0	49·1	1·8	4·8	0·6	94	60·0	35·1	0·723	0·0	vP, wN : vP, vN : wwP
12	Greatest Declination N.	28·919	62·6	51·6	11·0	57·1	+ 6·5	55·2	53·5	3·6	9·7	0·0	88	112·6	43·2	0·528	0·0	wwP : wP, vN : wP, ssN
13	Last Quarter	29·310	58·2	49·5	8·7	53·2	+ 2·9	49·7	46·2	7·0	12·7	1·2	77	101·6	42·0	0·007	0·0	wwP : wP : mP
14	...	29·563	60·0	47·2	12·8	54·6	+ 4·5	52·4	50·3	4·3	9·5	2·3	85	91·6	38·0	0·012	0·0	mP : wP
15	...	29·426	57·9	45·4	12·5	53·5	+ 3·6	50·0	46·5	7·0	12·2	2·9	77	102·3	39·7	0·103	0·0	wwP, wwN : mP, ssN : mP
16	Perigee	29·528	57·1	43·3	13·8	48·6	− 1·2	44·9	40·9	7·7	14·1	4·2	75	104·6	38·0	0·004	0·0	mP
17	...	29·668	54·5	45·7	8·8	50·0	+ 0·4	46·4	42·6	7·4	10·6	3·8	76	79·0	38·3	0·017	0·0	vP, wwN : sP : sP
18	In Equator	29·901	52·2	43·9	8·3	47·9	− 1·6	45·4	42·7	5·2	12·4	3·2	83	66·0	38·0	0·000	0·0	mP : mP : sP
19	...	29·880	55·5	43·2	12·3	50·6	+ 1·3	48·9	47·1	3·5	6·4	1·7	89	67·0	39·6	0·142	0·7	mP, wN : wP : wP
20	New	29·729	55·0	48·8	6·2	52·2	+ 3·2	50·1	48·0	4·2	6·8	2·5	86	74·0	42·8	0·040	2·3	wP : wP : ssN, mP
21	...	29·557	56·6	45·9	10·7	51·9	+ 3·1	49·8	47·8	4·1	5·3	1·0	86	74·0	38·1	0·211	0·7	wP : vP, ssN : mP
22	...	29·329	55·2	44·1	11·1	49·7	+ 1·2	47·6	45·4	4·3	5·6	1·9	86	88·1	38·0	0·209	2·3	wP : wP, ssN : wP
23	...	29·382	53·0	41·6	11·4	47·0	− 1·2	44·3	41·3	5·7	12·0	2·0	81	86·7	34·5	0·000	0·0	wP : sP
24	...	29·565	55·7	36·5	19·2	48·2	+ 0·3	46·0	43·6	4·6	10·8	1·6	85	81·4	29·6	0·001	1·0	mP : mP : wP
25	Greatest Declination S.	29·265	58·7	49·3	9·4	54·7	+ 7·1	52·9	51·2	3·5	6·5	1·8	88	87·4	43·0	0·388	5·5	wwP, mN : wP, wN : vP, ssN
26	...	29·157	58·3	48·9	9·4	53·3	+ 5·9	51·3	49·3	4·0	8·4	1·2	86	101·0	45·5	0·392	10·0	wwP : vP, ssN : vvP, vvN
27	...	29·175	56·8	45·2	11·6	52·4	+ 5·1	50·6	48·8	3·6	7·6	1·4	88	79·0	42·0	0·054	13·5	wP, wwN : wP : wN, wwP
28	First Quarter : Apogee	29·094	54·4	43·0	11·4	50·4	+ 3·2	48·3	46·1	4·3	10·3	1·4	86	83·9	33·8	0·314	4·8	wP, vN : vP
29	...	29·421	57·6	45·5	12·1	51·7	+ 4·7	49·5	47·3	4·4	8·7	1·5	85	94·0	37·6	0·027	10·2	wP, ssN : wP : mP
30	...	29·612	55·9	41·5	14·4	49·3	+ 2·3	46·6	43·7	5·6	12·8	1·5	81	91·0	35·0	0·010	2·0	wP : mP : mP
31	...	29·809	53·7	38·2	15·5	47·2	+ 0·4	45·1	42·8	4·4	12·6	0·4	86	93·0	31·0	0·207	11·0	mP : wP
Means	...	29·490	58·7	46·6	12·1	52·8	+ 2·8	50·4	47·9	4·9	9·9	1·7	84·0	90·6	40·3	4·441	2·3	...
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 deduced from the 50 years' observations, 1841–1890. 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 $29^{\rm in}{\cdot}490$, being $0^{\rm in}{\cdot}226$ *lower* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 68°·5 on October 1; the lowest in the month was 36°·5 on October 24; and the range was 32°·0.
The mean of all the highest daily readings in the month was 58°·7, being 1°·0 *higher* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 46°·6, being 3°·3 *higher* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 12°·1, being 2°·3 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 52°·8, being 2°·8 *higher* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	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	0·8	11·7	SE	SE : SW : SSW	2·7	0·0	0·00	139	v : p.-cl : 10	10, n : 10, oc.-slt.-r
2	7·7	11·6	SW	SW : SSW	6·5	0·0	0·54	399	9 : 7, cu, ci.-cu, w	7,cu, ci.-s, so.-ha,w: 9, oc.-slt.-r : 10, slt.-r
3	4·9	11·5	SW : SSW	WSW : SW : SSW	9·1	0·0	0·66	418	9 : 10 : 8,cu,th.-cl,w	7, ci, th.-cl, w : 8, lu.-ha
4	6·5	11·5	SSW : WSW	WSW : SSW	5·5	0·0	0·59	415	10,hy.-sh : 10, oc.-slt.-r : 7, cu,ci.-cu,th.-cl,w	5, th.-cl, w : p.-cl, lu.-ha
5	0·9	11·4	S : SSW	SW	14·0	0·0	1·13	554	10, c.-r, w: 10,sc,fq.-r,st.-w : 10, sc,fq.-r,w	8, w : 7,ci.-s,th.-cl: p.-cl, lu.-ha
6	0·0	11·3	SW : S	SSW : SW	23·7	0·0	2·39	653	9 : 10, shs.-r : 10, sc, c.-r, w	10, sc, fq.-r, st.-w : 7, st.-w, lu.-co
7	1·7	11·3	SW	SW : S : Variable	14·5	0·0	0·50	299	p.-cl,st.-w: 8 : 9,ci.-cu,li.-cl	9 : 5, ci.-cu : p.-cl, hy.-sh, lu.-ha
8	0·2	11·2	Variable : SSW	S : E	2·6	0·0	0·02	158	9 : 9 : 10, fq.-r	10, fq.-r : 10, shs.-r, l
9	5·2	11·1	SW	WSW : WNW : W	10·0	0·0	0·95	522	9 : 1,li.-cl,w: 5, th.-cl, w	10, fq.-r, w : p.-cl, w : 3, li.-cl,lu.-ha
10	5·8	11·0	W : WSW : SW	NW : SW : SSE	1·8	0·0	0·07	222	0, d : 1, li.-cl : 4, th.-cl	7, so.-ha : 6, th.-cl, slt.-f: 8,th.-cl,slt.-f
11	0·0	11·0	ESE : SE	SE : SSE : S	4·0	0·0	0·22	293	10 : 10, fq.-r : 10, sc, fq.-r,w	10, sc, fq.-r : 9, fq.-r
12	2·4	10·9	SSW : S	SSW : WSW	5·5	0·0	0·35	347	p.-cl,oc.-slt.-r : 8,oc.-shs : 8, sc, hy.-r, w	7, cu, cu.-s, li.-cl, slt.-sh : 9, fq.-r : p.-cl, li.-shs
13	7·4	10·9	WSW	SW : SSW	9·6	0·0	1·04	515	p.-cl, w : 1, w : 2,cu,th.-cl,w	5,cu, th.-cl, w: p.-cl, sh.-r : 0
14	0·0	10·8	SSW	S	4·8	0·0	0·53	420	0 : p.-cl : 9, sc,oc.-slt.-r,so.-ha	10, sc, fq.-th.-r, w : 9, w
15	5·0	10·7	S : SW	SW : SSW	8·8	0·0	0·86	488	9, sh.-r : 10,hy.-shs: 6,cu,th.-cl,w	v, shs.-r, w : 2, ci, ci.-s : 1, hy.-d, l
16	6·0	10·7	SW	SW	7·3	0·0	0·71	470	1, li.-cl, hy.-d : 3, cu, th.-cl	6,cu, n, li.-cl, sh.-r, w : p.-cl, w, l
17	1·7	10·6	SW : NW	NNW : WNW : SW	5·2	0·0	0·67	418	9, oc.-shs,w : 10 : 8, sc, oc.-shs, w	7,cu.-s,li.-cl,w: p.-cl : 9
18	0·0	10·5	WSW : W : WNW	NW : S	0·6	0·0	0·04	212	9 : 10	10 : 10 : p.-cl,slt.-f
19	0·0	10·5	SSE	SSW	2·0	0·0	0·15	256	10, hy.-r : 10, slt.-r : 10	10, sc, fq.-th.-r : 10
20	0·0	10·4	S : SSE	SSE : SE	1·9	0·0	0·06	208	9 : 10, sc, fq.-shs	9,sc,shs.-r,so.-ha: 9, sc : 9
21	0·1	10·4	SSW : SW	Variable : SSW : SW	1·0	0·0	0·02	212	9 : li.-cl : 8,oc.-r,so.-ha	10, oc.-r : 1 : 0, hy.-d
22	1·3	10·3	S : SSE : SSW	S : SW	5·4	0·0	0·33	346	p.-cl : 10,slt.-sh : 9,li.-sc,fq.-shs,w	8, cu, ci.-s, li.-cl : p.-cl
23	5·1	10·2	SW	WNW : W	3·3	0·0	0·31	357	0, d : 1, li.-cl : 4, cu, cu.-s, sh.-r	7,cu,cu.-s,n: 9 : 0, d, l
24	0·6	10·2	SW : S	S : SSE	6·3	0·0	0·53	370	0, hy.-d : 5, th.-cl : 9	10, w : 10, sc, oc.-slt.-r, w
25	1·2	10·1	S : SSW : SSE	SSE : SSW	12·0	0·0	0·73	413	p.-cl, hy.-r : p.-cl : 9, sc, fq.-r	8, n, cu.-s, li.-cl, oc.-shs : 3, li.-cl, w, l: 9, hy.-shs, l, st.-w
26	2·7	10·0	S : SSE	S	13·2	0·0	0·75	470	p.-cl : p.-cl : 7, cu, n, shs.-r, w	v, shs.-r, w : 10, c.-r, w : 10, sc, oc.-r
27	0·6	10·0	S : SE	SE	5·8	0·0	0·42	354	9, shs.-r : p.-cl : 8,n,ci.-cu,li-cl,oc.-shs	9, sc, fq.-r, w : p.-cl, sc, w
28	2·0	9·9	SE : SW	SW : SSE	3·4	0·0	0·24	313	10, hy.-r : 10, hy.-sh: 10, hy.-sh	7, ci, ci.-cu, ci.-s, so.-ha : 6 : 3, li.-cl
29	6·7	9·9	SSE : SE	S	2·3	0·0	0·11	273	p.-cl, d : 9,oc.-shs: 5, cu, ci.-cu, ci.-s	5,cu,ci.-cu,th.-cl: 3,li.-cl,hy.-d: 10, th.-cl,oc.-shs
30	5·1	9·8	S : SW	WSW : SW	5·0	0·0	0·36	365	p.-cl,slt.-sh: 4, cu, ci : s, n	7, cu, n,ci.-s : 3, cu, ci.-s : 0, hy.-d
31	2·7	9·7	SW	SSW : SSE	4·2	0·0	0·15	274	0, hy.-d : 0 : 5, ci.-s	9, oc.-slt.-r : 10, c.-r : 10, slt.-r, slt.-f
Means	2·7	10·7	...	...	...	...	0·50	360		
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28

The mean *Temperature of Evaporation* for the month was 50°·4, being 2°·4 *higher* than
The mean *Temperature of the Dew Point* for the month was 47°·9, being 2°·0 *higher* than
The mean *Degree of Humidity* for the month was 84·0, being 1·6 *less* than
The mean *Elastic Force of Vapour* for the month was 0^{in}·334, being 0^{in}·025 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 3^{grs}·8, being 0^{gr}·3 *greater* than
The mean *Weight of a Cubic Foot of Air* for the month was 532 grains, being 7 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 7·6.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·255. The maximum daily amount of *Sunshine* was 7·7 hours on October 2.

The highest reading of the *Solar Radiation Thermometer* was 117°·0 on October 3; and the lowest reading of the *Terrestrial Radiation Thermometer* was 29°·6 on October 24.

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

The *Proportions of Wind* referred to the cardinal points were N. 0, E. 3, S. 19, and W. 9.

The *Greatest Pressure of the Wind* in the month was 23·7 lbs. on the square foot on October 6. The mean daily *Horizontal Movement of the Air* for the month was 360 miles; the greatest daily value was 653 miles on October 6; and the least daily value was 139 miles on October 1.

Rain fell on 24 days in the month, amounting to 4^{in}·441, as measured by gauge No. 6 partly sunk below the ground; being 1^{in}·630 *greater* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Nov. 1	In Equator	29·832	54·5	48·2	6·3	52·3	+ 5·6	51·3	50·3	2·0	7·6	0·2	93	61·0	47·1	0·076	0·0	wwP : wP : wP
2	...	29·986	56·2	41·4	14·8	50·6	+ 4·1	48·7	46·7	3·9	9·4	0·4	87	75·0	33·0	0·021	2·0	wP
3	...	30·095	53·4	42·9	10·5	50·7	+ 4·4	49·2	47·6	3·1	9·6	0·2	90	69·0	33·5	0·135	0·0	wP : mP : mP
4	...	30·272	51·7	38·2	13·5	44·2	− 1·9	43·3	42·2	2·0	7·4	0·0	93	81·0	27·8	0·000	0·0	mP
5	Full	30·400	52·9	39·0	13·9	45·8	− 0·1	44·0	41·9	3·9	9·2	0·0	86	83·3	29·0	0·000	5·0	vP : mP
6	...	30·378	53·7	40·6	13·1	47·2	+ 1·7	44·9	42·4	4·8	10·6	2·2	84	84·0	29·0	0·000	0·0	wP : mP : mP
7	...	30·328	49·7	35·2	14·5	43·2	− 1·9	41·5	39·5	3·7	8·0	0·0	87	76·9	26·4	0·000	0·0	mP
8	Greatest Declination N.	30·113	48·7	35·3	13·4	42·8	− 1·8	41·3	39·5	3·3	6·5	0·2	88	59·1	27·0	0·000	0·0	wP : mP
9	...	29·893	57·0	37·0	20·0	47·6	+ 3·6	45·9	44·0	3·6	9·9	0·4	89	79·6	29·0	0·136	9·0	vP, wN : sP
10	Perigee	29·981	55·4	42·0	13·4	48·9	+ 5·3	47·0	44·9	4·0	8·0	2·2	87	74·6	36·0	0·000	7·5	wP : mP : wP
11	...	30·134	52·6	49·0	3·6	51·4	+ 8·2	50·1	48·8	2·6	4·8	0·4	91	54·5	46·3	0·023	1·5	wP
12	Last Quarter	30·110	51·9	44·3	7·6	49·3	+ 6·4	47·8	46·2	3·1	3·9	0·6	90	67·0	37·3	0·084	1·0	wP : wP : vP, vvN
13	...	29·990	53·5	48·1	5·4	51·2	+ 8·4	50·1	49·0	2·2	5·6	0·8	92	64·0	45·2	0·000	0·5	wP
14	In Equator	29·622	54·3	41·1	13·2	49·8	+ 7·2	47·6	45·3	4·5	9·6	1·4	85	77·0	34·4	0·023	2·0	wwP : mP : sP
15	...	29·573	48·0	36·2	11·8	41·8	− 0·7	39·9	37·5	4·3	8·8	0·7	86	70·6	29·6	0·000	1·5	mP : sP
16	...	29·648	43·2	33·4	9·8	38·4	− 4·0	36·9	34·8	3·6	8·8	0·3	88	56·9	26·4	0·002	3·0	mP : ssP : ssP
17	...	29·701	42·6	36·6	6·0	39·5	− 2·8	37·8	35·6	3·9	6·0	1·6	86	57·0	30·1	0·055	0·0	mP : sP, vN : sP
18	...	29·939	43·1	34·3	8·8	38·9	− 3·3	37·8	36·4	2·5	6·2	0·2	92	63·3	25·5	0·000	0·0	sP
19	New	30·060	44·9	30·1	14·8	38·4	− 3·8	36·9	34·8	3·6	6·2	0·8	88	57·9	23·4	0·000	0·0	sP
20	...	29·874	48·1	26·4	21·7	40·0	− 2·1	38·5	36·6	3·4	4·2	0·3	88	50·8	23·5	0·006	0·0	sP : sP : vP, ssN
21	Greatest Declination S.	29·672	54·6	46·1	8·5	50·2	+ 8·1	46·1	41·8	8·4	14·8	2·3	74	62·7	37·2	0·000	4·0	mP : sP
22	...	29·961	52·5	43·2	9·3	48·3	+ 6·1	45·4	42·2	6·1	6·2	1·3	80	65·0	36·1	0·006	0·0	mP
23	...	30·017	52·8	46·9	5·9	50·6	+ 8·5	48·3	45·9	4·7	6·4	2·1	84	61·3	40·2	0·000	0·0	mP : wP
24	...	29·998	53·1	36·7	16·4	47·2	+ 5·1	43·9	40·2	7·0	15·3	3·2	77	58·0	28·0	0·038	0·0	wP : vP : ssP
25	Apogee	30·041	46·7	34·2	12·5	40·1	− 1·9	38·0	35·3	4·8	9·7	2·1	83	65·2	28·0	0·000	0·0	sP : ssP : sP
26	...	29·961	44·9	39·3	5·6	41·5	− 0·4	38·6	35·0	6·5	13·2	3·4	79	58·6	32·7	0·030	0·0	sP : ssP : ssP
27	First Quarter	29·430	50·0	39·2	10·8	46·7	+ 5·1	45·6	44·4	2·3	2·7	0·8	92	54·6	37·4	0·676	2·0	vP, vN : wP, vN
28	...	28·933	45·5	41·4	4·1	43·9	+ 2·6	42·7	41·3	2·6	4·0	0·9	90	49·1	40·9	0·420	0·0	vN : wN, wP : vvN, wP
29	In Equator	29·109	42·7	34·8	7·9	38·9	− 2·1	37·3	35·1	3·8	7·1	1·3	87	46·0	29·7	0·190	0·0	vvN, wP : mP
30	...	29·193	35·0	31·9	3·1	33·3	− 7·4	32·4	30·7	2·6	4·4	1·7	90	40·0	25·0	0·007	0·0	mP : sP : sP
Means	...	29·875	49·8	39·1	10·7	45·1	+ 1·9	43·3	41·2	3·9	7·8	1·1	86·9	64·1	31·8	1·928	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 deduced from the 50 years' observations, 1841–1890. 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 29^{in}·875, being 0^{in}·131 *higher* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 57°·0 on November 9; the lowest in the month was 26°·4 on November 20; and the range was 30°·6.
The mean of all the highest daily readings in the month was 49°·8, being 1°·0 *higher* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 39°·1, being 1°·5 *higher* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 10°·7, being 0°·6 *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, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.		
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.		A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Nov. 1	0·0	9·7	SW : NW : WNW	W : NW : SW	1·6	0·0	0·08	224	10, oc.-r : 9 : 10, glm	10 : 10
2	1·5	9·6	SSE : S	S	2·3	0·0	0·10	223	9 : p.-cl : 9, so.-ha	10, oc.-slt.-r : 10, oc.-slt.-r
3	0·6	9·5	S : NNW : N	N	2·6	0·0	0·08	222	10, c.-r : 10 : 9	8, ci, ci.-cu, ci.-s, so.-ha : 5,th.-cl,lu.-ha,d : 1, hy.-d, lu.-ha, slt.-f
4	3·7	9·5	N	NNE : N	0·8	0·0	0·02	158	0, hy.-d, ho.-fr, f : 1, th.-cl, slt.-f	1,th.-cl, slt.-f : 0 : 0, hy.-d,slt.-f
5	4·9	9·4	NNE : N	NE	1·0	0·0	0·02	180	tk.-f, ho.-fr : 6, cu, ci.-s, slt.-f	5, cu, th.-cl : p.-cl : 10
6	2·9	9·4	NE : ENE	ENE	1·5	0·0	0·02	166	10 : 10 : 9	5, th.-cl : 0 : p.-cl, ho.-fr
7	2·3	9·3	ENE : NNE	ESE : E	0·1	0·0	0·00	93	p.-cl : 5, th.-cl, slt.-f	6 : 0 : p.-cl, ho.-fr
8	0·1	9·3	E : ESE : SSE	SSW : SE : S	0·3	0·0	0·00	140	10, slt.-f : 10	8, ci.-cu : p.-cl : 1, ho.-fr, slt.-f
9	0·4	9·2	S : SSW	SW : W	3·0	0·0	0·22	343	9, slt.-f, ho.-fr : 10 : 10, fq.-r	10, hy.-sh : 0, slt.-f : 0, lu.-ha, d
10	3·0	9·2	SW	WSW : SW	3·9	0·0	0·35	394	9 : 10 : 8, cu, li.-cl	9, cu, th.-cl : p.-cl : 10
11	0·0	9·1	WSW : NW	SW	1·4	0·0	0·02	199	10 : 10, slt.-f	10 : 10, fq.-th.-r : 10, th.-r
12	0·0	9·0	SW	SW : SSW	1·5	0·0	0·08	278	9 : 10 : 10	10 : 10, oc.-slt.-r : p.-cl, oc.-r
13	0·0	9·0	SW : SSW	SSW : S : SSE	1·8	0·0	0·07	228	10 : p.-cl : 10	10 : 9
14	1·3	8·9	S : SSE	SSW : SW	5·3	0·0	0·28	365	10 : 10 : 10, oc.-th.-r, sq	v, shs.-r : 0
15	4·6	8·9	SSW : SW	WSW : SW	2·9	0·0	0·08	270	0, ho.-fr : 1, th.-cl	p.-cl : 0, hy.-d
16	0·5	8·8	SW	W : WNW : NW	2·8	0·0	0·13	288	0, ho.-fr : 5,ci.-cu,th.-cl,slt.-f	5,ci.-cu,th.-cl : 4, li.-cl : 10, slt.-sh
17	0·0	8·8	NNW:NW:WSW	WSW : NNW : N	5·0	0·0	0·26	329	10 : 10, shs.-r : 8, cu, ci.-cu, oc.-r	10,sc,fq.-r, glm,w : 9, w : p.-cl
18	0·7	8·7	NNW	NNW	2·6	0·0	0·18	271	0 : 9 : 8, ci.-cu, th.-cl	6, ci.-cu, s : 0, d, ho.-fr
19	2·6	8·7	NNW : N	N : NNW	0·9	0·0	0·02	161	0, ho.-fr : 0,ho.-fr,f : 4, cu.-s,th.-cl,slt.-f	1, li.-cl : 0 : p.-cl, ho.-fr, f
20	0·0	8·6	SW : WSW	SW : WSW	3·2	0·0	0·20	321	10 : 10 : 10, slt.-sh	10 : 10, oc.-r : 10
21	0·2	8·6	SW : WSW	W : WNW : NW	17·5	0·0	1·40	620	10 : 6,ci.-s,th.-cl,st.-w	7, cu.-s, th.-cl, st.-w : p.-cl, w
22	0·8	8·5	W : WSW : SW	SW : WSW	5·8	0·0	0·59	466	9, oc.-shs : 1, li.-cl : 9	9, w : p.-cl
23	0·0	8·5	SW	SW	12·5	0·0	0·62	458	9 : 10	9 : 10, st.-w
24	0·6	8·5	SW : NNW	NNW : NW : SW	14·0	0·0	0·65	383	10, st.-w : 10 : 10, oc.-slt.-r, gt.-glm	p.-cl : 0 : p.-cl, ho.-fr, f
25	4·5	8·4	SW	W : WSW : SW	4·5	0·0	0·34	381	10 : 0, ho.-fr : 1, ci.-s	1, ci, ci.-s : 1, th.-cl
26	0·2	8·4	WSW	NW : WNW	6·9	0·0	0·35	383	p.-cl, d : 1, li.-cl : 8, w	v, sl, hl, glm, w : 10, oc.-slt.-r : 10, oc.-slt.-r
27	0·0	8·3	S : SSW	SSE : WSW : W	11·0	0·0	0·31	382	10,oc.-slt.-r : 10, slt.-r : 10, th.-r	10, sc, c.-r : 10, c.-r, w
28	0·0	8·3	W	WSW : NE	7·0	0·0	0·47	378	10, c.-r, w : 10, sc, fq.-r	10,oc.-r, glm : 10, slt.-r : 10, c.-r
29	0·0	8·2	NE	NE : NNE	6·6	0·0	0·44	402	10, c.-r, w : 10 : 10, sc, fq.-r	9 : 9, slt.-sn : p.-cl, lu.-ha
30	0·0	8·2	N	NNW : N	3·0	0·0	0·30	348	p.-cl : 10, oc.-sn : 10, oc.-sn	p.-cl, oc.-sn : 9, n, cu.-s : p.-cl, ho.-fr
Means	1·2	8·9	...	...	...	...	0·26	302		
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°·3, being 1°·7 *higher* than
The mean *Temperature of the Dew Point* for the month was 41°·2, being 1°·5 *higher* than
The mean *Degree of Humidity* for the month was 86·9, being 0·6 *less* than
The mean *Elastic Force of Vapour* for the month was 0in·259, being 0in·015 *greater* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2grs·9, being 0gr·1 *greater* than
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 0·133. The maximum daily amount of *Sunshine* was 4·9 hours on November 5.

The highest reading of the *Solar Radiation Thermometer* was 84°·0 on November 6; and the lowest reading of the *Terrestrial Radiation Thermometer* was 23°·4 on November 19.

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

The *Proportions of Wind* referred to the cardinal points were N. 8, E. 2, S. 10, and W. 10.

The *Greatest Pressure of the Wind* in the month was 17·5 lbs. on the square foot on November 21. The mean daily *Horizontal Movement of the Air* for the month was 302 miles; the greatest daily value was 626 miles on November 21; and the least daily value was 93 miles on November 7.

Rain fell on 16 days in the month, amounting to 1in·928, as measured by gauge No. 6 partly sunk below the ground; being 0in·338 *less* than the average fall for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Phases of the Moon.	BAROMETER.	TEMPERATURE.							Difference between the Air Temperature and Dew Point Temperature.			Degree of Humidity (Saturation = 100).	TEMPERATURE.		Rain collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground.	Daily Amount of Ozone.	Electricity.
		Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit).	Of the Air.					Of Evaporation.	Of the Dew Point.					Of Radiation.				
			Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 50 Years.	Mean of 24 Hourly Values.	Deduced Mean Daily Value.	Mean.	Greatest.	Least.		Highest in Sun's Rays.	Lowest on the Grass.			
		in.	°	°	°	°	°	°	°	°	°	°		°	°	in.		
Dec. 1	...	29·371	36·9	31·3	5·6	33·5	− 7·1	32·3	30·1	3·4	6·3	2·5	87	48·5	18·8	0·000	1·0	mP : sP : sP
2	...	29·793	37·7	26·3	11·4	32·4	− 8·2	30·3	25·8	6·6	8·4	2·5	75	41·8	19·2	0·000	0·0	sP : ssP
3	...	29·759	43·4	25·2	18·2	37·3	− 3·5	34·3	30·1	7·2	11·2	4·2	76	51·3	17·1	0·006	4·0	sP : vP : wP, wwN
4	Full	29·284	45·8	33·9	11·9	41·7	+ 0·6	39·7	37·2	4·5	9·2	2·0	85	70·8	24·0	0·072	2·0	wP, vN : mP : sP
5	Greatest Declination N.	29·064	34·7	28·4	6·3	31·7	− 9·6	30·7	28·4	3·3	3·7	0·0	86	34·7	19·5	0·000	0·0	sP : vP : wP
6	...	29·334	33·8	28·5	5·3	31·3	−10·0	30·5	28·5	2·8	3·1	0·0	88	35·0	27·0	0·000	0·5	wP : mP
7	Perigee	29·209	44·6	28·9	15·7	38·9	− 2·1	37·6	35·9	3·0	6·7	0·0	90	52·0	25·0	0·120	3·5	wP : wP, vN : mP
8	...	29·147	48·0	38·5	9·5	44·0	+ 3·4	41·4	38·3	5·7	7·8	3·2	80	55·3	32·0	0·018	2·0	wP : mP, wN : mP
9	...	29·115	52·8	41·7	11·1	46·5	+ 6 2	44·3	41·8	4·7	9·0	1·5	85	67·9	37·2	0·198	1·0	wP, ssN : vN, wP : mP, mN
10	...	29·005	48·1	40·4	7·7	45·0	+ 5·1	43·2	41·1	3·9	8·4	2·0	86	64·0	34·1	0·583	3·0	vvP, ssN : vvP, vvN : mP
11	Last Quarter	29·215	45·6	37·0	8·6	41·4	+ 1·6	40·1	38·4	3·0	6·2	1·8	90	55·0	31·1	0·058	0·0	wP : vP, ssN
12	In Equator	29·309	43·9	34·2	9·7	40·7	+ 0·8	39·1	37·1	3·6	5·9	1·4	87	55·6	28·4	0·142	8·2	vP, ssN : mP : wP, ssN
13	...	29·175	48·5	42·2	6·3	45·9	+ 5·8	43·6	41·0	4·9	6·9	2·0	84	69·0	38 6	0·014	10·8	wP : wP : wP, sN
14	...	29·489	49·9	36·2	13·7	43·1	+ 2·9	41·6	39·8	3·3	8·8	0·9	88	72·0	29·3	0·000	0·0	wP : mP : mP
15	...	29·576	44·8	38·8	6·0	41·1	+ 0·8	39·6	37·7	3·4	5·9	1·8	88	58·6	32·0	0·000	7·0	wP : mP : mP
16	...	29·477	42·7	37·0	5·7	40·6	+ 0·4	39·1	37·2	3·4	5·3	2·8	88	50·4	31·0	0·000	0·0	mP
17	...	29·623	44·7	36·2	8·5	41·5	+ 1·5	40·7	39·7	1·8	2·6	0·0	95	54·0	29·0	0·000	0·0	mP : wP
18	New	29·659	42·9	38·5	4·4	41·5	+ 1·8	40·2	38·6	2·9	3·1	0·7	90	43·9	30·2	0·013	0·0	wP
19	Greatest Declination S.	29·741	42·4	37·8	4·6	40·7	+ 1·4	39·3	37·5	3·2	4·1	2·3	89	44·0	36·2	0·002	0·0	wP
20	...	29·903	40·9	35·9	5·0	38·1	− 0·9	37·6	36·9	1·2	4·4	1·0	96	53·6	35·2	0·000	0·0	wP
21	...	30·087	47·1	36·4	10·7	42·4	+ 3·6	41·3	40·0	2·4	4·6	0·7	91	54·6	36·4	0·000	0·2	wP
22	...	30·056	48·9	44·1	4·8	46·3	+ 7·7	44·7	42·9	3·4	6·1	2·7	89	62·0	39·6	0·000	1·3	wwP, wwN : wP : wP
23	Apogee	29·859	44·2	36·1	8·1	40·1	+ 1·7	39·2	38·0	2·1	3·3	0·7	93	44·7	36·1	0·000	1·5	wP : ...
24	...	29·757	39·9	36·1	3·8	37·9	− 0·4	35·8	32·9	5·0	7·1	1·7	83	44·5	32·2	0·000	0·0	mP : sP : sP
25	...	29·853	40·0	37·3	2·7	38·7	+ 0·4	37·1	34·9	3·8	5·8	2·9	87	45·0	32·5	0·000	0·0	mP : sP
26	In Equator	29·851	39·2	34·1	5·1	36·6	− 1·8	35·1	33·0	3·6	6·2	2·5	87	51·4	31·3	0·000	0 0	mP
27	First Quarter	29·930	37·1	34·0	3·1	35·6	− 2·8	34·0	31·6	4·0	6·7	2·3	85	37·6	31·2	0·020	0·0	vP : mP
28	...	29·970	36·8	33·1	3·7	35·3	− 3·2	34·4	33·0	2·3	6·8	1·0	91	38·7	31·0	0·029	0·0	vP
29	...	29·915	33·3	29·6	3·7	31·5	− 7·1	29·1	23·2	8·3	11·9	5·2	70	46·6	21·2	0·000	0·0	mP : sP
30	...	29·873	34·1	26·6	7·5	30·8	− 7·8	28·2	21·0	9·8	12·0	5·9	66	56·4	13·0	0·000	0·0	mP : sP : sP
31	...	29·690	30·2	25·3	4·9	28·5	−10·1	26·8	20·4	8·1	10·0	5·8	70	33·9	12·0	0·000	4·0	vP : sP
Means	...	29·584	42·0	34·5	7·5	38·7	− 0·9	37·1	34·6	4·1	6·7	2·1	85·3	51·4	28·8	1·275	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 deduced from the 50 years' observations, 1841–1890. 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 $29^{\mathrm{in}}{\cdot}584$, being $0^{\mathrm{in}}{\cdot}207$ *lower* than the average for the 50 years, 1841–1890.

TEMPERATURE OF THE AIR.

The highest in the month was 52°·8 on December 9; the lowest in the month was 25°·2 on December 3; and the range was 27°·6.
The mean of all the highest daily readings in the month was 42°·0, being 2°·0 *lower* than the average for the 50 years, 1841–1890.
The mean of all the lowest daily readings in the month was 34°·5, being 0°·3 *lower* than the average for the 50 years, 1841–1890.
The mean of the daily ranges was 7°·5, being 1°·7 *less* than the average for the 50 years, 1841–1890.
The mean for the month was 38°·7, being 0°·9 *lower* than the average for the 50 years, 1841–1890.

MONTH and DAY, 1903.	Daily Duration of Sunshine.	Sun above Horizon.	WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.	
			OSLER'S.					ROBINSON'S.		
			General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.		
			A.M.	P.M.	Greatest.	Least.	Mean of 24 Hourly Measures.		A.M.	P.M.
	hours.	hours.			lbs.	lbs.	lbs.	miles.		
Dec. 1	0·0	8·2	NNW	NNW	3·2	0·0	0·35	341	li.-cl,ho.-fr: th.-cl : 8, th.-cl, so.-ha	8, ci.-cu, ci.-s, so.-ha : 7, ci.-s, th.-cl, lu.-ha : 1, li.-cl, ho.-fr,lu.-ha
2	1·3	8·1	NNW	NNW : NW : SSW	1·5	0·0	0·05	206	1, ho.-fr : 0 : 0, h	0 : 0, slt.-f : 0, ho.-fr
3	0·0	8·1	SW : SSW : S	S	20·0	0·0	1·41	565	0, ho.-fr : 0 : 9, ci.-cu, th.-cl	10, sc, st.-w : 10, oc.-slt.-r, st.-w: 10, slt.-r, st.-w
4	1·2	8·1	S : SSW : SW	SW : SSW : S	12·8	0·0	0·74	395	10, st.-w : 10, slt.-r : 9	4, cu, ci.-cu : 1, ho.-fr : 0, ho.-fr, lu.-co
5	0·0	8·0	S : SE : Variable	NNW : NW	0·1	0·0	0·00	134	0, ho.-fr : 0 : tk.-f	10, f : 10, f : p.-cl, ho.-fr, f
6	0·0	8·0	NW : WNW	NW : SW	0·1	0·0	0·00	168	9, f, glm : 10, gt.-glm: 10, glm	10 : 9, ho.-fr : 10
7	0·0	8·0	SE : ESE	SSE : S : SSW	15·3	0·0	0·63	395	10 : 10, sc : 10,sc,fq.-r, w	8, sc, st.-w : v, shs.-r : 1, th.-cl
8	0·3	8·0	SSW : S	SSW	10·5	0·0	0·69	494	1, d : 1, li.-cl : 8,cu.-s, ci.-s,oc.-shs	v, shs.-r,st.-w: p.-cl : 2, th.-cl
9	0·9	7·9	SSW : S : SE	SW : SSW : S	8·2	0·0	0·55	443	p.-cl : 10, sc, r : 9, sc, slt.-r	4, cu.-s, th.-cl, w: 4, li.-cl : 1, li.-cl
10	0·3	7·9	S : SSE	S	12·0	0·0	0·61	452	p.-cl,hy.-r: p.-cl, w :10, sc, fq.-r, w	v, shs.-r : p.-cl, hy.-sh: p.-cl,oc.-slt.-r
11	0·0	7·9	S	S : SE	5·5	0·0	0·10	289	0 : p.-cl : 5, ci, ci.-s, th.-cl	p.-cl,sq, sh.-r, hl, w: 8, li.-shs : p.-cl, li.-shs
12	0·1	7·9	SE : E	ESE : E	4·7	0·0	0·34	310	p.-cl,oc.-shs, d, ho.-fr : 2, li.-cl : 9	9, so.-ha : 10, r, w
13	1 0	7·8	E : SE	SE : SSE : S	12·0	0·0	0·78	450	p.-cl : 8, cu.-s, ci, w	10, sc, w : 10, shs.-r, w : 10, slt.-r
14	5·2	7·8	S : SE	S : SE	1·1	0·0	0·01	204	p.-cl : p.-cl : 0	1, ci : 0, ho.-fr : p.-cl
15	2·0	7·8	ESE : SE	SE : ESE : E	1·9	0·0	0·08	233	9 : 6, ci.-cu, ci.-s	8, cu.-s : 9 : 1, hy.-d
16	0·7	7·8	E : ENE	E	4·1	0·0	0·30	306	p.-cl : p.-cl : 6, cu.-s, li.-cl	6, cu.-s, li.-cl: 10 : 10
17	0·4	7·8	ESE : SE	ESE	0·1	0·0	0·00	94	10 : 10, slt.-f : 8, th.-cl	8, cu.-s, th.-cl, glm : 5,th.-cl,hy.-d: p.-cl
18	0·0	7·8	E : ENE	E : ENE	1·9	0·0	0·13	240	10 : 10, f : 10, oc.-m.-r	10 : 10, oc.-slt.-r : 10
19	0·0	7·8	ENE : E	E	3·5	0·0	0·19	267	10 : 10 : 10, oc.-slt.-r	10, oc.-slt.-r : 10 : 10
20	0·0	7·8	E	Calm : NE : E	0·3	0·0	0·00	94	10 : 10	10 : 10
21	0·1	7·8	E : SSE : NE	SE : S	0·6	0·0	0·02	133	10, slt.-f : 10, slt.-f : 9	10 : 10
22	0·0	7·8	S	S : SSE	3·2	0·0	0·21	287	10 : 10	10 : 10
23	0·0	7·8	SSE : NE	NE : NNE : N	1·3	0·0	0·04	181	10 : 10 : 10, slt.-f	10,oc.-m.-r, slt.-f : 10 : 10
24	0·0	7·8	NNW : N	N : NNW	0·9	0·0	0·03	174	10 : 10 : 10, n, glm	10 : 10
25	0·0	7·8	NNW : NW	NNW	1·9	0·0	0·13	231	10 : 10	10 : 10
26	0·2	7·8	NNW : N : NE	E : ENE : NE	2·8	0·0	0·17	263	10 : 10 : 8, oc.-slt.-r	p.-cl : 10 : 10
27	0·0	7·8	ENE : NE	NE : NNE	2·4	0·0	0·08	213	10 : 10, glm : 10	10 : 10, slt.-sn : 10, slt.-r, sl
28	0·0	7·8	NNE : NE	ENE : NE : E	1·4	0·0	0·07	202	10 : 10, oc.-m.-r, sl	10,oc.-m.-r, sn: 10 : 10
29	3·3	7·8	E : ENE	ENE	4·0	0·0	0·34	332	p.-cl : 10 : 8,n, cu.-s, th.-cl	3 : 1, ho.-fr : p.-cl, lu.-co
30	4·4	7·8	ENE	ENE : E : ESE	4·6	0·0	0·34	329	p.-cl,ho.-fr: 1,li.-cl,ho.-fr: 1, li.-cl,	0 : 8,th.-cl,ho.-fr: p.-cl, ho.-fr
31	0·0	7·8	E : ESE	ENE : E	2·9	0·0	0·09	217	p.-cl,ho.-fr: 10 : 10	9, n, cu.-s, slt.-sn: 4, th.-cl : 1, ho.-fr
Means	0·7	7·9	...	...	...	...	0·27	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 37°·1, being 1°·2 *lower* than
The mean *Temperature of the Dew Point* for the month was 34°·6, being 1°·9 *lower* than
The mean *Degree of Humidity* for the month was 85·3, being 3·2 *less* than
The mean *Elastic Force of Vapour* for the month was 0^{in}·200, being 0^{in}·016 *less* than
The mean *Weight of Vapour in a Cubic Foot of Air* for the month was 2^{grs}·4, being 0^{gr}·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 7·5.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0·088. The maximum daily amount of *Sunshine* was 5·2 hours on December 14.

The highest reading of the *Solar Radiation Thermometer* was 72°·0 on December 14; and the lowest reading of the *Terrestrial Radiation Thermometer* was 12°·0 on December 31.

The mean daily distribution of *Ozone* for the 12 hours ending 9^h was 0·6; for the 6 hours ending 15^h was 0·8; and for the 6 hours ending 21^h was 0·2.

The *Proportions of Wind* referred to the cardinal points were N. 6, E. 12, S. 10, and W. 2. One day was calm.

The *Greatest Pressure of the Wind* in the month was 20·0 lbs. on the square foot on December 3. The mean daily *Horizontal Movement of the Air* for the month was 279 miles; the greatest daily value was 565 miles on December 3; and the least daily value was 94 miles on December 17 and 20.

Rain fell on 12 days in the month, amounting to 1^{in}·275, as measured by gauge No. 6 partly sunk below the ground; being 0^{in}·495 *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.			MINIMA.			MAXIMA.			MINIMA.		
	Greenwich Civil Time, 1903.	Reading.		Greenwich Civil Time, 1903.	Reading.		Greenwich Civil Time, 1903.	Reading.		Greenwich Civil Time, 1903.	Reading.
	d h m	in.		d h m	in.		d h m	in.		d h m	in.
January	1. 20. 55	29·546	January	2. 12. 35	29·226	March	27. 20. 55	29·494	March	28. 14. 20	29·345
	4. 12. 10	29·672		7. 4. 55	29·138		29. 11. 0	29·939		30. 20. 5	29·602
	8. 10. 55	29·591		9. 15. 20	29·174		31. 20. 35	30·020			
	14. 9. 0	30·401		17. 14. 0	29·957				April	2. 3. 55	29·622
	21. 10. 35	30·167		22. 21. 55	29·708	April	3. 9. 10	29·942		4. 16. 25	29·595
	23. 20. 45	30·026		25. 15. 20	29·859		5. 22. 10	29·967		7. 14. 10	29·614
	26. 11. 15	30·057		27. 20. 5	29·851		10. 8. 15	30·160		13. 14. 50	29·687
	29. 11. 0	30·240					14. 21. 0	29·892		15. 5. 25	29·694
			February	1. 4. 10	29·110		18. 9. 40	30·228		22. 15. 5	29·294
February	4. 10. 30	30·249		6. 15. 20	29·808		24. 21. 45	29·530		27. 6. 0	29·122
	7. 10. 0	29·927		7. 18. 5	29·821		28. 10. 40	29·432		29. 4. 50	29·118
	10. 10. 10	30·476		12. 14. 10	30·105						
	13. 10. 0	30·332		15. 6. 40	29·853	May	2. 11. 45	29·523	May	4. 18. 0	29·050
	17. 10. 20	30·487		20. 3. 10	30·046		16. 5. 45	30·064		17. 8. 15	29·530
	20. 11. 50	30·284		21. 15. 25	29·754		18. 10. 15	29·955		19. 18. 25	29·791
	22. 3. 15	30·042		23. 0. 5	29·526		21. 21. 0	30·060		22. 16. 20	29·923
	24. 3. 0	29·866		24. 23. 15	29·443		23. 21. 50	30·271		30. 15. 0	29·573
	25. 11. 25	29·687		26. 3. 0	29·402						
	26. 18. 25	29·770		27. 5. 55	29·236	June	4. 22. 55	30·236	June	5. 16. 30	30·156
	27. 12. 35	29·370		28. 7. 45	29·208		6. 7. 50	30·240		10. 16. 50	29·590
	28. 23. 45	29·742					12. 23. 5	29·921		16. 5. 5	29·428
			March	1. 16. 20	29·245		17. 10. 20	29·575		19. 12. 40	29·394
March	2. 1. 30	29·408		2. 22. 50	28·616		22: 8. 10	30·107		24. 11. 40	29·839
	4. 4. 35	29·702		4. 15. 5	29·602		26. 9. 55	30·045		28. 6. 15	29·841
	4. 20. 35	29·705		5. 6. 20	29·563		30. 23. 55	30·170			
	6. 18. 40	30·015		7. 12. 0	29·677				July	2; 22. 20	29·718
	8. 20. 5	30·208		16. 5. 30	29·475	July	4. 10. 10	29·986		6. 3. 15	29·543
	17. 1. 5	29·737		18. 3. 55	29·292		9. 23. 45	30·167		13. 4. 40	29·726
	20. 23. 20	30·116		23. 23. 5	29·400		14. 7. 40	29·830		17. 14. 35	29·408
	24. 12. 25	29·702		25. 20. 25	29·094		21. 7. 20	29·971		23. 23. 50	29·489
	26. 20. 50	29·316		27. 7. 15	29·217		25. 9. 0	29·854		26. 5. 10	29·605
							27. 1. 55	29·766		28. 19. 40	29·376

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

MAXIMA.			MINIMA.		
Greenwich Civil Time, 1903.		Reading.	Greenwich Civil Time, 1903.		Reading.
	d h m	in.		d h m	in.
August	1. 9. 25	29·889	August	3. 6. 20	29·457
	6. 9. 30	30·057		8. 19. 45	29·577
	9. 11. 0	29·665		10. 5. 5	29·492
	11 7. 15	29·790		12. 1. 10	29·523
	13. 9. 0	29·804		15. 4. 25	29·081
	16. 20. 0	29·713		17. 7. 50	29·442
	17. 20. 50	29·601		18. 7. 30	29·257
	19. 22. 35	29·727		21. 0. 35	29·270
	22. 22. 25	29·752		24. 20. 40	29·448
	26. 10. 35	30·083		29. 3. 5	29·580
	30. 8. 45	29·999		31. 3. 45	29·755
	31. 21. 10	29·953			
September	1. 21. 5	29·889	September	1. 16. 15	29·780
	3. 21. 0	29·989		2. 16. 40	29·532
	7. 10. 5	30·089		5. 4. 5	29·624
	10. 7. 35	29·846		9. 5. 15	29·465
	15. 7. 45	30·312		11. 0. 20	28·716
	17. 23. 30	30·189		16. 16. 30	29·986
	23. 21. 10	30·144		21. 18. 25	29·724
	26. 9. 0	30·088		25. 5. 20	29·910
	30. 21. 0	29·833		29. 5. 25	29·570
October	3. 20. 40	29·613	October	3. 10. 25	29·532
	4. 21. 0	29·663		4. 8. 35	29·456
				5. 8. 45	29·380

MAXIMA			MINIMA.		
Greenwich Civil Time, 1903		Reading.	Greenwich Civil Time, 1903.		Reading.
	d h m	in.		d h m	in.
October	6. 7. 10	29·580	October	6. 17. 35	29·326
	7. 10. 15	29·745		8. 21. 35	29·183
	10. 9. 45	29·744		12. 20. 20	28·799
	14. 9. 0	29·610		15. 5. 40	29·266
	16. 9. 35	29·570		17. 4. 50	29·484
	18. 18. 50	29·945		22. 15. 35	29·170
	24. 7. 50	29·662		25. 21. 55	29·116
	27. 5. 0	29·299		28. 3. 25	28·886
	31. 10. 50	29·869			
November	5. 9. 0	30·437	November	1. 2. 15	29·675
	11. 21. 0	30·181		9. 13. 50	29·814
	17. 4. 35	29·745		14. 15. 15	29·537
	19. 21. 0	30·116		17. 13. 55	29·597
	23. 10. 45	30·068		21. 12. 35	29·541
	24. 22. 10	30·127		24. 3. 5	29·850
				27. 22. 40	28·873
December	3. 0. 10	29·939	December	5. 15. 0	28·975
	6. 22. 30	29·512		7. 15. 35	29·025
	9. 1. 20	29·263		9. 11. 30	28·985
	9. 20. 5	29·104		10. 16. 35	28·928
	12. 10. 20	29·380		13. 13. 35	29·127
	15. 10. 20	29·604		16. 14. 15	29·444
	17. 23. 25	29·712		18. 15. 0	29·623
	21. 10. 20	30·127		24. 6. 10	29·709
	28. 10. 5	30·009		31. 14. 35	29·645

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

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

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

HIGHEST and LOWEST READINGS of the BAROMETER in each Month for the YEAR 1903.

[Extracted from the preceding Table.]

MONTH, 1903.	Readings of the Barometer.		Range.
	Highest.	Lowest.	
	in.	in.	in.
January	30·401	29·138	1·263
February	30·487	29·110	1·377
March	30·208	28·616	1·592
April	30·228	29·118	1·110
May	30·271	29·050	1·221
June	30·240	29·394	0·846
July	30·167	29·376	0·791
August	30·083	29·081	1·002
September	30·312	28·716	1·596
October	29·945	28·799	1·146
November	30·437	28·873	1·564
December	30·127	28·928	1·199

The highest reading in the year was $30^{\text{in}}{\cdot}487$ on February 17. The lowest reading in the year was $28^{\text{in}}{\cdot}616$ on March 2.
The range of reading in the year was $1^{\text{in}}{\cdot}871$.

MONTHLY RESULTS of METEOROLOGICAL ELEMENTS for the YEAR 1903.

MONTH, 1903.	Mean Reading of the Barometer.	TEMPERATURE OF THE AIR.								Mean Temperature of Evaporation.	Mean Temperature of the Dew Point.	Mean Degree of Humidity. (Saturation = 100.)
		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.			
	in.	°	°	°	°	°	°	°	°	°	°	
January.....	29·816	53·9	23·6	30·3	44·6	36·8	7·7	41·1	+ 2·6	39·2	35·9	82·1
February....	29·961	58·3	26·2	32·1	50·7	39·3	11·4	45·2	+ 5·7	42·6	39·5	80·9
March.......	29·682	68·0	29·5	38·5	53·4	38·7	14·7	46·2	+ 4·5	42·8	39·0	76·6
April.........	29·711	60·2	28·4	31·8	52·0	36·7	15·2	44·5	− 2·6	40·6	36·0	72·6
May	29·712	77·9	31·3	46·6	63·0	44·3	18·7	53·4	+ 0·3	49·4	45·4	75·2
June.........	29·855	84·8	37·1	47·7	64·6	47·0	17·6	56·1	− 3·3	51·9	48·2	75·9
July	29·765	87·5	42·2	45·3	71·5	52·6	18·9	61·6	− 0·8	56·8	52·7	73·2
August......	29·698	77·5	44·2	33·3	69·2	51·4	17·8	59·6	− 2·0	55·5	51·9	76·1
September...	29·850	82·0	38·4	43·6	66·0	49·3	16·7	57·5	+ 0·3	54·3	51·5	80·9
October......	29·490	68·5	36·5	32·0	58·7	46·6	12·1	52·8	+ 2·8	50·4	47·9	84·0
November...	29·875	57·0	26·4	30·6	49·8	39·1	10·7	45·1	+ 1·9	43·3	41·2	86·9
December...	29·584	52·8	25·2	27·6	42·0	34·5	7·5	38·7	− 0·9	37·1	34·6	85·3
Means.......	29·750	Highest. 87·5	Lowest. 23·6	Annual Range. 63·9	57·1	43·0	14·1	50·2	+ 0·7	47·0	43·6	79·1

MONTH, 1903.	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.		WIND.										
						Number of Rainy Days.	Amount collected in Gauge No. 6 whose receiving Surface is 5 inches above the Ground.	From Osler's Anemometer.										From Robinson's Anemometer.
								Number of Hours of Prevalence of each Wind referred to different Points of Azimuth.								Number of Calm or nearly Calm Hours.	Mean Daily Pressure on the Square Foot.	Mean Daily Horizontal Movement of the Air.
								N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.			
	in.	grs.	grs.				in.	h	h	h	h	h	h	h	h	h	lbs.	miles.
January......	0·211	2·5	552	2·5	6·5	18	2·128	24	60	113	56	84	290	79	4	34	0·60	383
February....	0·242	2·8	550	4·3	6·4	10	1·366	31	13	19	21	65	324	166	31	2	0·87	428
March.......	0·238	2·7	544	3·1	6·1	18	2·200	18	5	6	11	204	328	130	36	6	...	421
April.........	0·212	2·5	546	0·4	6·9	11	1·855	190	48	31	32	47	136	104	113	19	0·40	331
May	0·304	3·4	536	0·6	6·2	15	1·946	93	100	94	57	84	215	46	22	33	0·17	259
June.........	0·338	3·8	536	0·8	6·8	10	6·073	179	160	88	42	60	91	34	37	29	0·19	252
July	0·399	4·4	528	0·3	7·3	13	5·271	51	18	6	39	133	273	89	104	31	0·18	246
August	0·386	4·3	529	1·9	6·7	17	4·822	5	9	6	52	180	372	76	36	8	0·33	315
September...	0·381	4·2	534	0·9	6·2	15	2·238	61	57	138	77	118	186	34	37	12	0·29	261
October......	0·334	3·8	532	2·3	7·6	24	4·441	2	3	13	101	253	285	57	24	6	0·50	360
November...	0·259	2·9	548	1·3	7·1	16	1·928	121	58	28	19	86	237	97	67	7	0·26	302
December...	0·200	2·4	551	1·6	7·5	12	1·275	73	84	191	103	158	46	2	68	19	0·27	279
Sums.........	...	...	...	...	...	179	35·543	848	615	733	610	1472	2783	914	579	206	...	...
Means.......	0·292	3·3	540	1·7	6·8	...	...	...	...	...	...	...	...	...	...	...	...	320

The greatest recorded pressure of the wind on the square foot in the year was 37·0 lbs. on February 24.
The greatest recorded daily horizontal movement of the air in the year was 748 miles on February 24.
The least recorded daily horizontal movement of the air in the year was 74 miles on September 23.

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

Hour, Greenwich Civil Time.	1903												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in	in.
Midnight	29·817	29·963	29·694	29·732	29·717	29·855	29·773	29·705	29·845	29·496	29·889	29·589	29·756
1h	29·813	29·954	29·693	29·726	29·714	29·851	29·771	29·700	29·842	29·498	29·886	29·587	29·753
2	29·816	29·947	29·686	29·719	29·711	29·846	29·767	29·694	29·840	29·494	29·885	29·586	29·749
3	29·815	29·941	29·677	29·713	29·706	29·844	29·762	29·687	29·839	29·487	29·879	29·582	29·744
4	29·812	29·937	29·672	29·710	29·704	29·843	29·762	29·681	29·839	29·485	29·879	29·578	29·742
5	29·809	29·935	29·668	29·711	29·707	29·845	29·763	29·680	29·842	29·485	29·878	29·574	29·741
6	29·808	29·936	29·670	29·714	29·713	29·850	29·768	29·682	29·848	29·486	29·880	29·576	29·744
7	29·811	29·945	29·674	29·721	29·718	29·856	29·773	29·688	29·856	29·491	29·883	29·579	29·750
8	29·817	29·958	29·679	29·724	29·720	29·859	29·776	29·693	29·864	29·499	29·889	29·582	29·755
9	29·824	29·967	29·683	29·725	29·719	29·860	29·777	29 698	29·869	29·498	29·891	29·587	29·758
10	29·828	29·975	29·683	29·723	29·719	29·862	29·779	29·701	29·870	29·499	29·893	29·590	29·760
11	29·830	29·979	29·682	29·720	29·718	29·862	29·775	29·705	29·864	29·498	29·887	29·588	29·759
Noon	29·821	29·972	29·681	29·715	29·715	29·861	29·770	29·702	29·863	29·491	29·875	29·579	29·754
13h	29·811	29·962	29·677	29·711	29·710	29·858	29·767	29·704	29·859	29·486	26·863	29·570	29·748
14	29·806	29·955	29·670	29·703	29·704	29·856	29·763	29·704	29·854	29·481	29·857	29·567	29·743
15	29·807	29·955	29·665	29·695	29·699	29·851	29·757	29·701	29·847	29·479	29·852	29·569	29·740
16	29·809	29·955	29·665	29·692	29·695	29·847	29·754	29·700	29·843	29·478	29·853	29·572	29·739
17	29·814	29·958	29·671	29·691	29·695	29·844	29·748	29·696	29·840	29·481	29·857	29·577	29·739
18	29·817	29·966	29·682	29·693	29·700	29·847	29·748	29·694	29·842	29·487	29·862	29·581	29·743
19	29·819	29·975	29·690	29·700	29·705	29·851	29·749	29·699	29·846	29·490	29·866	29·588	29·748
20	29·817	29·981	29·695	29·707	29·715	29·856	29·755	29·707	29·851	29·488	29·869	29·595	29·753
21	29·818	29·983	29·700	29·710	29·725	29·867	29·763	29·713	29·852	29·490	29·873	29·600	29·758
22	29·818	29·983	29·703	29·710	29·729	29·872	29·766	29·714	29·850	29·491	29·873	29·603	29·759
23	29·818	29·981	29·703	29·709	29·730	29·873	29·767	29·711	29·846	29·493	29·873	29·605	29·759
24	29·816	29·978	29·702	29·707	29·730	29·872	29·764	29·707	29·841	29·492	29·875	29·603	29·757
Means 0h.–23h.	29·816	29·961	29·682	29·711	29·712	29·855	29·765	29·698	29·850	29·490	29·875	29·584	29·750
Means 1h.–24h.	29·816	29·962	29·682	29·710	29·712	29·856	29·765	29·698	29·850	29·489	29·874	29·584	29·750
Number of Days employed.	31	28	31	30	31	30	31	31	30	31	30	31	...

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

Hour, Greenwich Civil Time.	1903.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Midnight	40°·3	43°·8	43°·1	41°·6	48°·7	51°·6	57°·7	55°·6	53°·8	51°·2	43°·5	37°·6	47°·4
1h	40·2	43·4	42·7	41·1	47·9	51·0	56·9	55·1	53·5	51·0	43·6	37·6	47·0
2	40·1	43·4	42·5	40·6	47·6	50·5	56·3	54·5	53·3	50·8	43·5	37·5	46·7
3	39·9	43·4	42·3	40·0	47·2	49·9	55·9	54·1	53·0	50·8	43·4	37·4	46·4
4	39·8	43·3	42·5	39·6	47·0	49·8	55·4	53·6	52·7	50·7	43·3	37·4	46·3
5	39·6	43·2	42·9	39·4	47·1	50·4	55·4	53·6	52·7	50·7	43·3	37·6	46·3
6	39·5	43·2	42·9	39·4	48·1	51·5	56·5	54·7	52·9	50·6	43·5	37·8	46·7
7	39·5	43·2	43·3	40·6	50·1	53·3	58·4	56·4	54·0	51·0	43·6	38·0	47·6
8	39·8	43·6	44·5	42·9	52·9	55·4	61·0	58·8	56·3	52·2	44·1	38·2	49·1
9	40·2	44·5	46·5	44·9	55·3	57·7	63·0	61·1	58·7	53·5	44·7	38·7	50·7
10	41·0	45·6	48·3	46·7	56·8	59·4	64·2	62·4	60·7	54·8	45·7	39·3	52·1
11	42·1	46·9	49·7	48·1	58·0	60·3	65·5	63·8	62·1	55·6	46·8	40·1	53·2
Noon	43·0	48·0	50·6	48·7	58·8	61·1	66·5	65·0	63·0	56·1	47·9	40·7	54·1
13h	43·3	49·1	51·1	49·1	59·9	61·8	66·8	65·8	63·8	56·3	48·6	40·8	54·7
14	43·4	49·3	51·5	49·5	60·5	62·1	68·0	66·2	63·9	56·5	48·6	40·9	55·0
15	43·0	49·0	51·1	50·0	60·3	62·3	67·9	66·3	63·5	55·8	48·1	40·4	54·8
16	42·6	48·0	50·4	49·3	59·5	61·8	67·2	65·0	62·6	54·9	47·3	39·9	54·0
17	42·1	47·2	49·2	48·8	58·4	61·1	66·7	63·7	61·0	53·7	46·2	39·4	53·1
18	41·8	46·2	47·7	47·7	57·0	59·8	65·7	62·8	59·2	52·9	45·7	39·1	52·1
19	41·5	45·3	46·6	46·2	55·1	58·1	63·9	61·2	57·8	52·2	45·0	38·8	51·0
20	41·3	44·7	45·7	44·7	53·2	56·4	62·2	59·4	56·3	51·8	44·5	38·4	49·9
21	41·2	44·1	45·2	43·7	51·7	54·7	60·5	58·1	55·4	51·6	44·0	38·1	49·0
22	41·1	43·8	44·5	43·0	50·6	53·6	59·4	57·2	54·9	51·4	43·6	37·8	48·4
23	41·0	43·7	43·9	42·4	49·8	52·6	58·2	56·3	54·2	51·2	43·2	37·6	47·8
24	40·7	43·5	43·2	41·7	49·0	51·7	57·5	55·7	53·7	51·1	42·9	37·4	47·3
Means 0h.–23h.	41·1	45·2	46·2	44·5	53·4	56·1	61·6	59·6	57·5	52·8	45·1	38·7	50·1
Means 1h.–24h.	41·1	45·2	46·2	44·5	53·4	56·1	61·6	59·6	57·5	52·8	45·1	38·7	50·1
Number of Days employed.	31	28	31	30	31	30	31	31	30	31	30	31	...

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

Hour, Greenwich Civil Time.	1903.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Midnight	38°·8	41°·8	40°·8	39°·2	46°·8	49°·6	55°·3	53°·9	52°·4	49°·5	42°·5	36°·3	45°·6
1^{h}	38·6	41·5	40·6	38·7	46·3	49·2	54·8	53·5	52·3	49·4	42·4	36·2	45·3
2	38·6	41·5	40·6	38·4	46·0	48·8	54·5	53·1	52·1	49·2	42·4	36·2	45·1
3	38·5	41·5	40·5	38·0	45·8	48·4	54·2	52·7	51·9	49·2	42·3	36·1	44·9
4	38·5	41·4	40·8	37·7	45·7	48·4	53·8	52·3	51·7	49·0	42·1	36·2	44·8
5	38·3	41·3	41·1	37·5	45·7	48·7	53·8	52·3	51·6	48·9	42·2	36·3	44·8
6	38·2	41·3	41·1	37·5	46·5	49·6	54·4	53·0	51·7	49·1	42·4	36·5	45·1
7	38·2	41·3	41·3	38·4	47·9	50·7	55·5	54·1	52·5	49·3	42·5	36·6	45·7
8	38·5	41·6	42·2	39·8	49·4	51·9	56·8	55·4	54·1	50·1	42·9	36·8	46·6
9	38·7	42·2	43·4	40·9	50·7	52·9	57·4	56·3	55·4	51·0	43·2	37·2	47·4
10	39·2	42·9	44·2	41·8	51·4	53·7	58·0	56·6	56·3	51·7	43·9	37·7	48·1
11	40·0	43·6	44·8	42·6	51·7	53·9	58·4	57·3	56·7	52·0	44·6	38·1	48·6
Noon	40·4	44·1	45·2	42·7	52·2	54·4	59·0	57·8	57·1	52·1	45·2	38·6	49·1
13^{h}	40·6	44·8	45·5	43·2	52·8	54·7	59·1	58·2	57·4	52·2	45·5	38·6	49·4
14	40·6	44·8	45·6	43·2	53·0	54·9	59·7	58·3	57·4	51·9	45·4	38·6	49·5
15	40·3	44·7	45·5	43·3	52·8	55·0	59·7	58·5	57·4	51·7	44·9	38·3	49·3
16	40·0	44·0	44·8	43·0	52·5	54·7	59·2	57·9	57·2	51·4	44·4	38·0	48·9
17	39·7	43·9	44·1	43·0	52·0	54·4	59·0	57·5	56·5	50·9	43·9	37·7	48·5
18	39·6	43·4	43·4	42·4	51·3	53·9	58·7	57·1	55·6	50·5	43·6	37·6	48·1
19	39·5	42·8	42·9	41·8	50·4	53·3	58·1	56·4	55·0	50·2	43·1	37·3	47·6
20	39·4	42·4	42·3	41·2	49·5	52·5	57·3	55·7	54·2	50·1	42·8	36·9	47·0
21	39·4	41·9	42·1	40·6	48·8	51·8	56·6	55·2	53·6	49·9	42·6	36·7	46·6
22	39·3	41·6	41·9	40·3	48·3	51·0	56·1	54·6	53·1	49·7	42·3	36·4	46·2
23	39·4	41·7	41·6	39·9	47·6	50·3	55·5	54·3	52·6	49·6	41·9	36·2	45·9
24	39·1	41·5	41·0	39·4	47·1	49·6	55·2	54·0	52·3	49·4	41·8	36·2	45·6
Means 0^{h}.–23^{h}.	39·3	42·6	42·8	40·6	49·4	51·9	56·9	55·5	54·4	50·4	43·3	37·1	47·0
Means 1^{h}.–24^{h}.	39·3	42·6	42·8	40·6	49·4	51·9	56·9	55·5	54·4	50·4	43·3	37·1	47·0
Number of Days employed.	31	28	31	30	31	30	31	31	30	31	30	31	...

MONTHLY MEAN TEMPERATURE of the DEW POINT at every HOUR of the DAY, as deduced by GLAISHER'S TABLES from the corresponding AIR and EVAPORATION TEMPERATURES.

Hour, Greenwich Civil Time.	1903.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Midnight	36°·9	39°·5	38°·0	36°·2	44°·8	47°·6	53°·1	52°·3	51°·0	47°·8	41°·3	34°·5	43°·6
1^{h}	36·5	39·3	38·1	35·7	44·5	47·3	52·9	52·0	51·1	47·7	41·0	34·3	43·4
2	36·7	39·3	38·3	35·6	44·2	47·0	52·8	51·7	50·9	47·5	41·1	34·4	43·3
3	36·7	39·3	38·3	35·4	44·3	46·8	52·6	51·3	50·8	47·5	41·0	34·3	43·2
4	36·8	39·1	38·8	35·2	44·3	46·9	52·3	51·0	50·7	47·2	40·7	34·6	43·1
5	36·6	39·0	38·9	35·0	44·2	46·9	52·3	51·0	50·5	47·0	40·9	34·5	43·1
6	36·5	39·0	38·9	35·0	44·7	47·7	52·4	51·3	50·5	47·5	41·1	34·8	43·3
7	36·5	39·0	38·9	35·6	45·6	48·1	52·9	51·9	51·0	47·5	41·2	34·7	43·6
8	36·8	39·3	39·5	36·1	45·9	48·5	53·1	52·3	52·0	48·0	41·5	34·9	44·0
9	36·8	39·5	39·9	36·3	46·4	48·6	52·7	52·2	52·4	48·5	41·5	35·2	44·2
10	36·9	39·8	39·7	36·3	46·4	48·6	52·8	51·6	52·5	48·7	41·8	35·6	44·2
11	37·4	39·9	39·6	36·6	46·0	48·3	52·6	51·9	52·1	48·6	42·1	35·5	44·2
Noon	37·3	39·8	39·6	36·2	46·3	48·6	52·9	51·9	52·1	48·3	42·2	35·9	44·3
13^{h}	37·4	40·2	39·7	36·8	46·6	48·6	52·9	52·0	52·1	48·4	42·2	35·8	44·4
14	37·3	40·0	39·5	36·5	46·4	48·7	53·2	51·9	52·0	47·6	41·9	35·7	44·2
15	37·1	40·1	39·7	36·2	46·2	48·8	53·2	52·2	52·3	47·8	41·4	35·6	44·2
16	36·8	39·6	38·9	36·2	46·3	48·6	52·8	52·1	52·6	48·1	41·2	35·5	44·1
17	36·7	40·2	38·6	36·7	46·3	48·6	52·8	52·4	52·6	48·2	41·3	35·5	44·2
18	36·9	40·2	38·6	36·5	46·1	48·7	53·0	52·3	52·4	48·1	41·2	35·6	44·1
19	37·0	39·9	38·8	36·8	45·9	49·0	53·3	52·3	52·5	48·2	40·9	35·3	44·2
20	37·0	39·7	38·4	37·1	45·8	48·9	53·1	52·4	52·2	48·4	40·8	34·9	44·1
21	37·1	39·3	38·5	37·0	45·9	49·0	53·2	52·6	51·9	48·3	40·9	34·8	44·0
22	37·0	39·0	38·8	37·1	45·9	48·5	53·2	52·2	51·3	48·0	40·7	34·5	43·8
23	37·4	39·4	38·9	36·8	45·3	48·0	53·1	52·4	51·0	48·0	40·4	34·3	43·8
24	37·1	39·2	38·4	36·5	45·0	47·5	53·1	52·4	50·9	47·7	40·5	34·6	43·6
Means 0^{h}.–23^{h}.	36·9	39·6	39·0	36·2	45·6	48·2	52·9	52·0	51·7	48·0	41·3	35·0	43·9
Means 1^{h}.–24^{h}.	36·9	39·5	39·0	36·2	45·6	48·2	52·9	52·0	51·7	48·0	41·2	35·0	43·9

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.	1903.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Midnight	88	85	82	82	87	87	85	89	90	88	92	89	87
$1^{\rm h}$	87	85	84	81	89	87	86	89	92	89	90	88	87
2	88	85	86	83	89	89	88	90	92	89	91	89	88
3	89	85	86	84	90	89	89	90	92	89	91	89	89
4	90	85	87	85	91	90	90	91	94	88	90	90	89
5	90	85	86	85	90	89	90	91	93	88	91	89	89
6	90	85	86	85	89	87	86	88	92	89	91	89	88
7	90	85	84	83	85	82	82	85	90	88	91	88	86
8	90	85	83	77	78	78	76	79	86	85	91	88	83
9	88	83	79	72	72	72	69	73	80	83	89	88	79
10	86	81	72	68	68	68	66	68	74	79	87	87	75
11	84	78	68	64	64	64	63	65	70	78	85	84	72
Noon	80	74	66	62	64	64	62	62	67	75	82	84	70
$13^{\rm h}$	80	71	65	63	61	62	61	61	66	75	79	83	69
14	79	70	64	61	60	61	59	61	65	72	78	83	68
15	80	71	65	60	60	61	59	61	67	75	76	84	68
16	81	73	65	61	62	62	60	63	70	77	80	85	70
17	82	77	67	63	64	64	61	67	75	81	84	86	73
18	84	81	72	66	66	67	64	69	79	84	85	88	75
19	85	82	75	71	71	72	69	73	82	86	86	88	78
20	85	83	76	74	76	76	72	78	86	88	87	88	81
21	86	83	77	77	81	81	77	82	89	89	89	88	83
22	86	83	80	80	84	82	81	84	87	89	90	88	85
23	87	85	82	82	85	84	83	87	89	89	90	88	86
24	87	85	83	83	87	86	85	89	90	88	91	90	87
Means $0^{\rm h}.-23^{\rm h}.$	86	81	77	74	76	76	74	77	82	84	87	87	80
Means $1^{\rm h}.-24^{\rm h}.$	86	81	77	74	76	76	74	77	82	84	87	87	80

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 1903.

Month, 1903.	Registered Duration of Sunshine in the Hour ending																Total registered Duration of Sunshine in each Month.	Corresponding aggregate Period during which the Sun was above the Horizon.	Proportion of Sunshine.	Mean Altitude of the Sun at Noon.
	$5^{\rm h.}$	$6^{\rm h.}$	$7^{\rm h.}$	$8^{\rm h.}$	$9^{\rm h.}$	$10^{\rm h.}$	$11^{\rm h.}$	Noon.	$13^{\rm h.}$	$14^{\rm h.}$	$15^{\rm h.}$	$16^{\rm h.}$	$17^{\rm h.}$	$18^{\rm h.}$	$19^{\rm h.}$	$20^{\rm h.}$				
	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h		°
January	…	…	…	…	1·5	7·9	10·0	10·3	10·6	9·6	6·7	0·6	…	…	…	…	57·2	258·6	0·221	18
February	…	…	…	1·5	3·4	5·3	10·1	10·6	12·9	12·0	10·1	5·8	1·6	…	…	…	73·3	276·4	0·265	26
March	…	…	0·3	6·6	12·0	14·8	16·8	15·2	15·4	15·2	14·9	11·9	8·5	1·0	…	…	132·6	365·0	0·363	37
April	…	…	7·6	11·6	14·0	15·0	16·1	15·0	10·2	10·4	8·3	9·0	7·1	4·3	0·3	…	128·9	412·6	0·312	48
May	0·1	5·0	10·1	11·7	13·6	14·6	13·7	12·8	15·3	16·4	15·1	15·6	13·5	14·4	10·0	1·0	182·9	480·7	0·380	57
June	0·9	10·3	14·2	13·3	14·7	14·9	13·4	13·4	14·7	14·5	14·7	14·1	14·0	12·0	8·2	0·6	187·9	494·2	0·380	62
July	1·3	8·3	12·3	15·4	13·4	14·7	14·0	14·8	15·4	15·4	14·2	12·0	13·0	11·2	8·2	0·5	184·1	498·2	0·370	60
August	…	3·9	9·1	13·5	16·9	16·9	18·4	16·9	16·5	16·1	16·6	14·1	12·6	12·1	4·3	0·1	188·0	451·4	0·416	52
September	…	0·3	4·1	11·6	16·2	17·5	18·5	19·4	17·3	16·3	16·9	14·5	12·5	4·0	0·2	…	169·3	379·7	0·446	41
October	…	…	…	3·5	7·4	11·0	10·5	12·1	10·1	10·2	9·9	7·4	2·2	…	…	…	84·3	331·1	0·255	30
November	…	…	…	…	0·6	2·0	5·1	7·5	6·6	7·0	6·0	0·6	…	…	…	…	35·4	266·5	0·133	20
December	…	…	…	.	0·1	2·4	4·3	4·4	3·2	4·9	2·1	…	…	…	…	…	21·4	244·3	0·088	16
For the Year	…	…	…	…	…	…	…	…	…	…	…	. .	…	…	…	…	1445·3	4458·7	0·324	…

The hours are reckoned from *apparent* midnight.

READINGS OF DRY-BULB THERMOMETERS placed in a STEVENSON'S SCREEN in the OBSERVATORY GROUNDS, 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 MAGNETIC PAVILION ENCLOSURE, in the YEAR 1903.

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

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 a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.						Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.					
	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h		Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°	°	°	°	°	d	°	°	°	°	°	°	°	°	°	°	°	°
1	47·0	33·3	...	...	...	...	+0·7	−0·7	...	...	...	...	1	46·7	31·9	...	...	...	...	+0·4	−2·1	...	...	...	...
2	41·1	31·2	34·8	40·0	41·1	37·2	0·0	+0·5	+0·1	+0·6	+0·2	+0·5	2	41·4	29·7	34·3	40·4	41·4	37·1	+0·3	−1·0	−0·4	+1·0	+0·5	+0·4
3	46·8	32·4	39·8	44·0	46·8	46·0	−0·3	0·0	−0·5	−0·3	+0·1	−0·4	3	47·0	31·2	40·0	44·3	47·0	46·0	−0·1	−1·2	−0·3	0·0	+0·3	−0·4
4	47·1	44·6	45·9	46·3	46·8	46·9	+0·1	−0·5	−0·4	−0·2	+0·1	+0·1	4	47·3	44·4	45·9	46·6	46·7	46·9	+0·3	−0·7	−0·4	+0·1	0·0	+0·1
5	46·9	40·8	45·6	46·7	45·5	41·1	0·0	+0·3	+0·2	+0·1	+0·2	+0·6	5	46·9	39·7	45·7	46·8	45·5	40·5	0·0	−0·8	+0·3	+0·2	+0·2	0·0
6	51·1	37·5	40·0	48·4	49·1	40·9	−0·8	+1·2	−0·7	−0·7	−0·2	+0·9	6	50·6	36·3	40·8	48·9	49·3	40·1	−1·3	0·0	+0·1	−0·2	0·0	+0·1
7	52·0	40·2	48·5	50·6	51·3	50·8	−0·1	+0·2	+0·2	0·0	−0·3	+0·3	7	51·8	39·1	48·6	50·8	51·2	50·5	−0·3	−0·9	+0·3	+0·2	−0·4	0·0
8	54·1	49·7	...	...	...	...	−0·4	−0·3	...	...	...	...	8	54·2	49·8	...	...	...	...	−0·3	−0·2	...	...	...	...
9	55·8	50·3	52·0	54·1	55·4	50·6	−0·2	+0·1	−0·1	−0·2	+0·1	−0·2	9	55·7	49·4	52·1	54·5	55·4	50·2	−0·3	−0·8	0·0	+0·2	+0·1	−0·6
10	55·2	46·3	49·1	51·9	53·8	46·9	−0·4	0·0	+0·5	−0·1	+0·3	+0·2	10	55·4	46·2	49·0	52·3	54·0	46·7	−0·2	−0·1	+0·4	+0·3	+0·5	0·0
11	54·4	44·2	46·0	52·0	53·9	46·2	−0·2	−0·1	−0·4	−0·5	+0·2	+0·2	11	54·5	43·1	46·1	52·3	54·3	46·0	−0·1	−1·2	−0·3	−0·2	+0·6	0·0
12	52·9	43·5	45·2	50·7	52·8	44·5	+0·2	0·0	−0·2	0·0	+0·2	+1·0	12	52·8	43·0	45·1	51·0	52·8	44·2	+0·1	−0·5	−0·3	+0·3	+0·2	+0·7
13	45·9	39·2	40·4	41·5	45·7	39·9	+0·4	+1·0	0·0	+0·1	+0·5	−0·1	13	45·8	37·4	40·2	41·8	45·7	39·6	+0·3	−0·8	−0·2	+0·4	+0·5	−0·4
14	49·0	36·5	40·7	46·6	48·3	48·2	+0·2	+0·1	−1·5	−0·1	+0·4	+0·1	14	48·7	35·5	40·8	47·0	48·5	48·0	−0·1	−0·9	−1·4	+0·3	+0·6	−0·1
15	48·5	43·3	...	...	...	...	+0·3	−0·1	...	...	...	...	15	48·1	42·9	...	...	...	...	−0·1	−0·5	...	...	...	...
16	44·9	38·0	39·5	44·1	43·9	38·1	−1·2	+1·4	−0·2	−1·2	+0·4	+1·5	16	46·3	36·5	39·6	44·5	45·0	37·7	+0·2	−0·1	−0·1	−0·8	+1·5	+1·1
17	46·0	32·1	36·3	44·8	45·2	35·2	−0·5	+3·2	+0·6	+0·3	+0·3	+3·6	17	45·8	29·8	37·0	45·1	45·4	34·8	−0·7	+0·9	+1·3	+0·6	+0·5	+3·2
18	49·6	29·3	34·0	45·7	48·2	39·2	−0·5	+3·1	−0·8	−0·5	−0·6	+1·7	18	50·0	27·2	35·2	45·7	48·5	39·1	−0·1	+1·0	+0·4	−0·5	−0·3	+1·6
19	57·0	38·3	43·8	52·3	54·2	47·9	+0·3	+1·6	−0·3	+0·4	+0·2	+0·9	19	56·8	37·2	44·1	52·5	54·1	47·8	+0·1	+0·5	0·0	+0·6	+0·1	+0·8
20	57·8	47·2	52·2	56·3	57·8	51·9	−0·5	+0·4	−0·6	+0·4	+0·1	+0·2	20	58·6	47·2	52·4	56·6	58·1	52·0	+0·3	+0·4	−0·4	+0·7	+0·4	+0·3
21	56·6	49·1	53·3	56·6	54·0	49·2	−0·3	−0·1	0·0	−0·1	+0·2	−0·2	21	56·5	48·2	53·1	56·4	53·9	48·9	−0·4	−1·0	−0·2	−0·3	+0·1	−0·5
22	53·9	43·8	...	...	...	...	0·0	0·0	...	...	...	...	22	53·4	43·0	...	...	...	...	−0·5	−0·8	...	...	...	...
23	54·4	37·5	44·9	47·1	43·1	38·5	0·0	−0·3	−0·1	0·0	+0·3	+0·7	23	54·5	36·5	45·0	47·3	43·0	37·7	+0·1	−1·3	0·0	+0·2	+0·2	−0·1
24	48·2	34·9	43·9	47·3	47·9	48·0	−0·5	−0·3	−0·6	−1·0	−0·1	−0·3	24	48·3	33·7	44·0	47·2	47·8	48·0	−0·4	−1·5	−0·5	−1·1	−0·2	−0·3
25	52·0	44·1	46·4	51·1	50·3	47·1	−1·2	−0·1	−1·0	+0·2	−0·1	+0·3	25	52·1	43·2	46·8	51·5	50·6	47·0	−1·1	−1·0	−0·6	+0·6	+0·2	+0·2
26	49·2	41·5	43·6	41·9	48·6	42·9	+0·1	+0·3	−0·3	−0·1	+0·7	+0·7	26	49·2	40·2	43·3	42·2	48·6	42·6	+0·1	−1·0	−0·6	+0·2	+0·7	+0·4
27	51·0	41·6	50·8	50·5	49·6	43·9	−1·0	+0·1	−0·4	0·0	−0·1	+0·2	27	51·3	41·0	51·1	50·4	49·7	44·0	−0·7	−0·5	−0·1	−0·1	0·0	+0·3
28	45·2	35·7	37·8	39·8	45·2	41·6	−0·2	−1·2	−0·2	−0·2	0·0	+0·7	28	45·2	35·7	37·0	39·5	45·2	40·3	−0·2	−1·2	−1·0	−0·5	0·0	−0·6
Means	50·5	40·2	43·9	47·9	49·1	44·3	−0·2	+0·3	−0·3	−0·1	+0·1	+0·6	Means	50·5	39·3	44·0	48·1	49·2	44·0	−0·2	−0·6	−0·2	+0·1	+0·3	+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 a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	49·1	36·5	...	...	...	...	−1·0	+0·8	...	...	...	...
2	50·4	34·5	41·8	45·9	50·4	46·9	−0·4	0·0	−0·1	−0·5	−0·2	−0·2
3	47·0	42·3	44·1	43·8	46·0	43·2	−0·1	+0·7	+1·6	+0·2	−0·2	+0·5
4	54·5	35·3	44·0	51·7	54·5	47·5	−0·4	−0·1	−0·4	+0·1	+0·2	+0·3
5	50·6	42·1	46·0	47·7	45·8	42·1	+0·3	+0·1	0·0	+0·2	0·0	+0·1
6	48·8	34·4	38·2	46·3	46·8	38·9	+0·1	+0·4	−0·5	+0·6	−0·2	+0·2
7	44·6	36·3	42·7	43·0	42·2	39·2	−0·9	+0·8	−0·2	−0·4	0·0	+0·1
8	47·3	34·2	...	...	...	...	+0·3	−0·1	...	...	...	...
9	48·3	34·0	43·5	48·3	45·5	41·2	−1·4	+3·4	−0·2	0·0	−0·1	+0·2
10	44·8	40·3	42·6	44·0	43·4	42·0	−0·7	−0·1	−0·8	−0·4	−0·3	+0·6
11	51·0	32·9	38·4	48·8	51·0	39·9	−0·3	+3·4	−1·6	+1·8	+0·6	+1·1
12	53·6	32·2	44·1	51·7	52·0	41·9	−1·9	0·0	0·0	+0·9	+0·9	+1·9
13	57·7	38·7	46·9	55·7	57·5	45·8	0·0	+2·4	−1·6	−0·8	+1·1	+2·9
14	56·3	37·7	43·7	53·3	55·5	45·1	−1·5	+1·5	−0·2	−1·0	+0·1	+0·4
15	50·9	35·4	...	...	...	...	−1·0	+2·6	...	...	...	...
16	51·0	37·7	44·4	49·3	49·9	41·4	+0·1	+1·2	−0·5	+0·2	0·0	+0·5
17	49·2	37·8	46·5	49·2	47·2	49·2	−1·4	+1·5	−0·3	−0·7	−0·3	+0·2
18	51·6	42·3	42·8	47·9	50·1	43·9	+0·3	+0·1	+0·1	+0·1	+0·7	0·0
19	52·7	42·8	50·1	51·5	52·0	50·2	−0·1	−0·8	−0·1	−0·1	−0·3	+0·2
20	56·2	47·5	51·2	53·1	54·3	48·5	−1·0	+0·1	+0·1	−0·6	+0·1	+0·5
21	55·2	46·4	47·9	51·9	54·6	51·8	−0·6	−0·1	−0·3	−1·2	−0·2	+1·4
22	61·2	47·1	...	...	...	...	0·0	+0·6	...	...	...	...
23	59·2	48·4	55·0	59·1	54·1	55·1	−0·7	+0·2	−0·8	−0·2	+0·1	+0·3
24	55·1	38·9	47·3	50·2	51·4	46·7	+0·2	+0·3	−0·8	−0·6	+0·2	+0·6
25	69·0	44·4	54·9	63·0	66·6	67·7	+1·0	+0·7	−1·6	−0·9	+0·7	+0·2
26	67·7	46·3	51·3	53·4	56·4	47·7	−0·3	+1·8	−0·4	−0·2	+0·6	+0·8
27	53·1	43·6	50·6	46·9	52·0	46·0	−0·6	−0·5	−0·3	0·0	+0·3	+0·2
28	57·2	44·4	51·5	56·0	52·1	46·7	−0·7	0·0	0·0	+0·2	+0·1	0·0
29	56·3	40·8	...	...	...	...	−0·3	0·0	...	...	...	...
30	52·0	43·3	48·8	49·7	51·1	47·1	−0·4	−0·7	−0·9	+1·3	+0·3	−0·1
31	52·0	41·3	48·3	50·9	51·5	46·2	−0·7	−0·1	−0·6	+0·2	+0·4	−0·1
Means	53·3	40·0	46·4	50·5	51·3	46·2	−0·5	+0·6	−0·4	−0·1	+0·2	+0·5

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	49·5	35·1	...	...	...	...	−0·6	−0·6	...	...	...	...
2	50·6	33·3	42·1	46·1	50·6	47·0	−0·2	−1·2	+0·2	−0·3	0·0	−0·1
3	47·1	40·3	43·9	44·0	46·0	43·2	0·0	−1·3	+1·4	+0·4	−0·2	+0·5
4	54·5	33·9	44·3	51·7	54·5	47·3	−0·4	−1·5	−0·1	+0·1	+0·2	+0·1
5	50·3	40·8	45·6	47·7	46·2	41·8	0·0	−1·2	−0·4	+0·2	+0·4	−0·2
6	48·4	32·2	38·4	46·2	47·1	38·7	−0·3	−1·8	−0·3	+0·5	+0·1	0·0
7	45·2	35·2	43·0	42·9	42·2	39·0	−0·3	−0·3	+0·1	−0·5	0·0	−0·1
8	47·3	33·1	...	...	...	...	+0·3	−1·2	...	...	...	...
9	49·0	33·1	44·4	48·6	45·4	41·6	−0·7	+2·5	+0·7	+0·3	−0·2	+0·6
10	45·0	40·2	43·5	44·3	43·6	42·0	−0·5	−0·2	+0·1	−0·1	−0·1	+0·6
11	51·4	31·9	39·2	49·3	51·4	39·8	+0·1	+2·4	−0·8	+2·3	+1·0	+1·0
12	54·1	33·3	45·2	51·6	52·0	41·8	−1·4	+1·1	+1·1	+0·8	+0·9	+1·8
13	58·1	37·8	48·3	56·1	57·4	45·2	+0·4	+1·5	−0·2	−0·4	+1·0	+2·3
14	58·8	35·9	44·4	53·6	55·4	44·9	+1·0	−0·3	+0·5	−0·7	0·0	+0·2
15	51·1	34·3	...	...	...	...	−0·8	+1·5	...	...	...	...
16	50·3	36·9	44·6	49·6	50·2	41·1	−0·6	+0·4	−0·3	+0·5	+0·3	+0·2
17	49·9	36·3	47·0	49·1	47·1	49·1	−0·7	0·0	+0·2	−0·8	−0·4	+0·1
18	51·1	42·0	42·8	48·3	50·4	43·8	−0·2	−0·2	+0·1	+0·5	+1·0	−0·1
19	52·6	42·7	50·2	51·7	52·0	50·0	−0·2	−0·9	0·0	+0·1	−0·3	0·0
20	56·5	47·1	51·5	53·3	54·2	48·1	−0·7	−0·3	+0·4	−0·4	0·0	+0·1
21	56·4	46·1	48·0	52·3	54·6	51·0	+0·6	−0·4	−0·2	−0·8	−0·2	+0·6
22	61·3	46·4	...	...	...	...	+0·1	−0·1	...	...	...	...
23	59·6	47·6	55·5	59·0	54·0	55·0	−0·3	−0·6	−0·3	−0·3	0·0	+0·2
24	55·0	37·4	47·9	50·5	51·3	46·1	+0·1	−1·2	−0·2	−0·3	+0·1	0·0
25	68·9	43·2	55·7	63·0	67·2	67·2	+0·9	−0·5	−0·8	−0·9	+1·3	−0·3
26	67·9	44·4	51·4	54·2	57·3	46·7	−0·1	−0·1	−0·3	+0·6	+1·5	−0·2
27	53·1	43·1	51·5	46·8	52·2	45·8	−0·6	−1·0	+0·6	−0·1	+0·5	0·0
28	57·5	44·0	51·8	56·8	52·6	46·2	−0·4	−0·4	+0·3	+1·0	+0·6	−0·5
29	56·4	40·2	...	...	...	...	−0·2	−0·6	...	...	...	...
30	52·3	41·1	49·3	49·7	51·2	46·0	−0·1	−2·9	−0·4	+1·3	+0·4	−1·2
31	52·0	40·1	48·6	51·0	51·5	46·1	−0·7	−1·3	−0·3	+0·3	+0·4	−0·2
Means	53·6	39·0	46·8	50·7	51·4	45·9	−0·2	−0·3	0·0	+0·1	+0·3	+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 a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.						Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. 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	50·1	39·7	45·5	47·2	49·1	50·1	−0·5	+1·3	−0·8	+0·1	−0·7	−0·2	1	50·2	38·8	46·1	47·3	49·1	50·0	−0·4	+0·4	−0·2	+0·2	−0·7	−0·3
2	50·2	41·7	42·8	42·6	43·9	42·4	−0·1	0·0	+0·1	+0·2	−0·4	+0·2	2	50·0	40·3	42·7	42·6	44·0	42·1	−0·3	−1·4	0·0	+0·2	−0·3	−0·1
3	54·1	35·4	41·1	50·7	52·7	47·1	+0·6	0·0	−0·7	+0·2	−0·2	0·0	3	54·2	34·2	41·3	50·7	53·1	47·0	+0·7	−1·2	−0·5	+0·2	+0·2	−0·1
4	53·7	46·3	49·4	51·6	53·3	47·2	0·0	+0·4	+0·2	−0·1	−0·1	+0·4	4	53·5	45·2	49·2	51·5	53·2	47·0	−0·2	−0·7	0·0	−0·2	−0·2	+0·2
5	52·3	39·3	...	...	...	...	0·0	+0·3	...	...	...	...	5	52·1	38·1	...	...	...	...	−0·2	−0·9	...	...	...	...
6	56·0	39·3	47·1	53·1	51·7	49·9	−0·8	+0·5	−0·9	−1·4	+0·2	−0·1	6	56·5	38·0	48·0	53·0	51·3	50·0	−0·3	−0·8	0·0	−1·5	−0·2	0·0
7	53·0	46·4	50·2	50·3	51·8	47·0	−0·1	+0·5	−0·1	+0·1	+0·3	+0·5	7	52·9	45·9	50·2	50·1	52·1	46·8	−0·2	0·0	−0·1	−0·1	+0·6	+0·3
8	52·0	39·4	43·9	48·9	51·9	44·4	−0·3	+0·1	−0·1	+0·1	−0·3	+0·5	8	52·1	37·6	43·8	48·8	52·1	44·2	−0·2	−1·7	−0·2	0·0	−0·1	+0·3
9	49·1	41·3	44·2	46·9	48·5	42·7	0·0	0·0	−0·3	+0·1	+0·4	+0·9	9	49·2	40·2	44·1	46·8	48·6	41·6	+0·1	−1·1	−0·4	0·0	+0·5	−0·2
10	54·6	35·2	...	...	...	...	−1·0	+1·9	...	...	...	...	10	56·0	34·0	...	...	...	..	+0·4	+0·7	...	...	...	..
11	53·7	44·3	50·1	51·5	51·0	48·9	−0·7	+0·1	−0·4	+0·3	0·0	+0·2	11	54·3	44·0	50·7	51·4	51·0	48·7	−0·1	−0·2	+0·2	+0·2	0·0	0·0
12	49·3	37·6	...	...	...	...	−0·2	+0·4	...	...	...	...	12	49·3	36·2	...	...	...	...	−0·2	−1·0	...	...	...	...
13	46·9	33·6	...	...	...	...	−0·1	0·0	...	...	...	...	13	46·9	32·4	...	...	...	...	−0·1	−1·2	...	...	...	...
14	47·1	30·9	39·2	43·8	47·0	41·1	+0·1	0·0	+0·4	+0·1	+1·7	+0·4	14	47·0	29·3	39·1	43·9	47·0	40·9	0·0	−1·6	+0·3	+0·2	+1·7	+0·2
15	47·3	35·2	40·2	43·8	47·0	37·3	+0·1	−1·3	−0·1	+0·7	+1·2	+0·5	15	47·5	36·1	40·3	43·9	47·0	37·2	+0·3	−0·4	0·0	+0·8	+1·2	+0·4
16	44·6	32·2	39·2	43·7	43·2	35·8	−1·2	+0·9	−0·1	+0·3	+0·2	+0·6	16	45·5	30·5	39·0	43·5	41·2	35·0	−0·3	−0·8	−0·3	+0·1	−1·8	−0·2
17	46·0	31·5	39·0	41·5	44·6	36·1	−0·4	+0·6	+0·5	−1·8	−1·1	+0·2	17	46·5	29·7	37·7	41·3	45·0	35·9	+0·1	−1·2	−0·8	−2·0	−0·7	0·0
18	49·0	30·5	39·5	45·4	48·4	39·8	−0·5	+0·3	−0·2	−0·4	+0·5	+0·5	18	49·1	29·0	38·6	45·6	48·6	39·5	−0·4	−1·2	−1·1	−0·2	+0·7	+0·2
19	51·8	32·3	...	...	...	...	−0·3	+1·5	...	...	...	...	19	52·2	31·9	...	...	...	...	+0·1	+1·1	...	...	...	...
20	54·1	31·2	45·1	52·9	52·0	44·0	−1·1	+2·8	−1·4	0·0	−0·4	+0·9	20	55·1	30·0	46·0	53·3	52·3	43·4	−0·1	+1·6	−0·5	+0·4	−0·1	+0·3
21	46·6	37·4	46·1	44·9	44·7	40·9	−1·2	+2·8	−0·2	−0·4	0·0	+0·2	21	48·2	35·1	47·2	44·8	45·7	40·6	+0·4	+0·5	+0·9	−0·5	+1·0	−0·1
22	48·2	34·3	42·9	46·1	45·9	38·6	−1·8	0·0	−0·8	+0·2	−0·1	+0·4	22	50·8	32·9	43·4	46·0	46·3	37·8	+0·8	−1·4	−0·3	+0·1	+0·3	−0·4
23	48·3	31·6	43·7	46·0	45·8	40·7	−0·8	+0·2	+0·8	+0·4	−0·1	+0·2	23	47·7	29·9	42·9	46·3	45·6	40·3	−1·4	−1·5	0·0	+0·7	−0·3	−0·2
24	48·0	35·5	41·6	46·1	46·9	42·9	−0·9	+0·1	−0·7	−0·2	+0·2	+1·7	24	47·7	34·2	42·0	46·0	47·0	41·9	−1·2	−1·2	−0·3	−0·3	+0·3	+0·7
25	58·6	32·3	46·0	54·7	56·2	49·5	+0·2	+0·1	0·0	+0·8	+0·5	+0·1	25	58·3	30·9	45·7	54·4	56·1	49·3	−0·1	−1·3	−0·3	+0·5	+0·4	−0·1
26	49·8	40·5	...	...	..	...	−0·1	−0·5	...	...	...	...	26	49·8	40·2	...	...	...	...	−0·1	−0·8	. .	...	...	...
27	57·3	44·5	49·5	55·0	56·0	45·8	−1·7	−0·2	−0·5	−0·7	−1·3	+0·2	27	58·9	44·3	50·8	56·2	56·9	45·6	−0·1	−0·4	+0·8	+0·5	−0·4	0·0
28	59·4	43·0	52·7	54·7	58·0	51·8	−0·7	+1·6	+0·4	−0·3	−0·3	+0·3	28	60·4	41·5	53·0	54·4	58·3	51·1	+0·3	+0·1	+0·7	−0·6	0·0	−0·4
29	59·2	47·6	50·1	56·1	57·0	49·1	−0·9	−0·4	−2·0	−0·6	−1·4	+0·6	29	59·7	47·3	50·2	56·4	56·9	48·9	−0·4	−0·7	−1·9	−0·3	−1·5	+0·4
30	58·2	47·0	51·6	55·8	56·7	48·9	−2·0	+0·6	−0·4	−0·2	−0·1	+0·2	30	59·0	46·0	52·1	57·5	57·8	48·8	−1·2	−0·4	+0·1	+1·5	+1·0	+0·1
Means	51·6	37·9	45·0	48·9	50·1	44·3	−0·5	+0·5	−0·3	−0·1	−0·1	+0·4	Means	52·0	36·8	45·2	49·0	50·3	43·9	−0·1	−0·6	−0·2	0·0	+0·1	0·0

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 a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.						Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. 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	54·0	45·7	50·2	52·2	52·0	49·0	−1·4	+1·5	−0·1	+1·5	0·0	+0·4	1	54·9	42·9	50·9	52·4	53·2	48·5	−0·5	−1·3	+0·6	+1·7	+1·2	−0·1
2	59·0	44·4	52·8	55·2	58·9	49·4	−1·9	+0·1	−0·5	−1·1	−0·1	+1·1	2	59·5	43·2	54·0	56·2	59·1	48·2	−1·4	−1·1	+0·7	−0·1	+0·1	−0·1
3	53·2	48·3	…	…	…	…	−1·3	+0·9	…	…	…	…	3	54·1	47·2	…	…	…	…	−0·4	−0·2	…	…	…	…
4	62·7	47·3	52·5	56·5	62·6	52·5	−2·6	+0·1	−0·4	−0·5	−0·8	+1·7	4	65·5	47·2	54·9	57·4	63·1	52·0	+0·2	0·0	+2·0	+0·4	−0·3	+1·2
5	59·3	43·9	56·8	56·2	55·8	50·1	−1·3	+2·5	−1·7	+0·3	0·0	0·0	5	62·2	42·5	58·7	56·8	56·4	49·7	+1·6	+1·1	+0·2	+0·9	+0·6	−0·4
6	60·4	48·4	55·8	58·9	57·0	50·1	−1·8	0·0	+0·2	+0·9	+0·1	+0·1	6	61·8	47·9	56·5	59·6	58·4	49·8	−0·4	−0·5	+0·9	+1·6	+1·5	−0·2
7	58·0	47·3	55·6	50·3	55·5	48·3	−0·9	−0·1	−0·1	−0·4	+0·1	+0·7	7	59·1	46·9	57·0	50·8	55·8	47·5	+0·2	−0·5	+1·3	+0·1	+0·4	−0·1
8	52·6	41·0	48·7	51·9	49·2	48·3	−1·5	+2·8	−1·5	+0·5	0·0	+0·3	8	55·1	39·1	50·0	53·1	49·5	47·1	+1·0	+0·9	−0·2	+1·7	+0·3	−0·9
9	56·1	45·8	53·0	54·6	53·0	46·8	−1·9	+1·5	+0·6	+0·9	+0·3	+1·9	9	58·7	43·9	52·9	55·0	53·4	46·2	+0·7	−0·4	+0·5	+1·3	+0·7	+1·3
10	56·0	41·7	…	…	…	…	−0·5	+2·4	…	…	…	…	10	56·1	41·2	…	…	…	…	−0·4	+1·9	…	…	…	…
11	51·3	44·4	45·4	47·1	48·9	45·7	−0·7	0·0	−0·3	+0·1	0·0	+0·4	11	51·2	43·7	45·5	47·0	48·6	45·2	−0·8	−0·7	−0·2	0·0	−0·3	−0·1
12	53·0	39·9	45·9	48·9	52·5	45·4	−0·8	−0·2	0·0	+0·2	+0·2	+1·7	12	54·4	38·8	46·1	49·6	53·2	45·7	+0·6	−1·3	+0·2	+0·9	+0·9	+2·0
13	58·7	34·7	53·1	56·7	54·9	49·7	−1·4	+3·4	+0·3	+0·5	+0·7	+0·1	13	60·1	32·9	53·6	57·4	55·4	49·3	0·0	+1·6	+0·8	+1·2	+1·2	−0·3
14	59·8	46·5	56·2	58·3	57·9	52·6	−1·1	−0·3	+0·4	0·0	+0·4	+0·2	14	60·7	46·1	57·1	58·7	57·5	52·4	−0·2	−0·7	+1·3	+0·4	0·0	0·0
15	59·2	48·3	53·1	55·0	58·0	53·4	−1·5	−0·2	−0·1	+0·1	+0·3	0·0	15	60·4	48·2	53·2	55·4	58·7	53·2	−0·3	−0·3	0·0	+0·5	+1·0	−0·2
16	54·6	43·4	51·1	53·6	51·9	46·5	−1·3	+0·1	+0·5	−0·1	−0·4	+0·1	16	55·3	42·7	53·2	54·2	52·1	46·0	−0·6	−0·6	+2·6	+0·5	−0·2	−0·4
17	54·0	43·4	…	..	..	…	−0·7	−0·6	…	…	…	…	17	54·7	42·3	…	…	…	…	0·0	−1·7	…	…	…	…
18	53·4	40·5	46·9	50·5	53·2	48·0	−1·5	+0·6	0·0	−0·3	−0·2	+1·3	18	55·1	38·2	46·9	51·3	53·4	47·9	+0·2	−1·7	0·0	+0·5	0·0	+1·2
19	63·0	38·3	55·9	61·7	60·2	51·5	−2·0	+2·9	+0·3	−0·2	−0·1	+1·0	19	65·5	37·8	58·1	63·3	62·3	51·3	+0·5	+2·4	+2·5	+1·4	+2·0	+0·8
20	65·2	43·6	56·7	60·6	64·0	54·9	−2·0	+2·5	+0·2	−0·2	−0·4	0·0	20	67·3	42·4	57·9	61·2	64·4	54·8	+0·1	+1·3	+1·4	+0·4	0·0	−0·1
21	71·2	47·4	59·5	68·5	69·9	57·2	−1·3	+0·1	+0·7	+1·4	+1·2	+0·9	21	73·3	47·0	60·1	69·4	70·6	57·0	+0·8	−0·3	+1·3	+2·3	+1·9	+0·7
22	77·9	52·3	69·3	75·6	77·7	64·9	0·0	+2·1	−1·0	0·0	+1·3	+2·1	22	79·1	51·1	71·0	76·0	78·1	64·7	+1·2	+0·9	+0·7	+0·4	+1·7	+1·9
23	68·0	50·3	62·5	66·6	67·3	50·4	−0·5	+1·1	+1·5	0·0	−0·1	+1·1	23	69·5	48·2	60·8	67·2	67·9	49·2	+1·0	−1·0	−0·2	+0·6	+0·5	−0·1
24	62·2	44·3	…	…	…	…	−0·9	+0·4	…	…	…	…	24	65·4	43·0	…	…	…	…	+2·3	−0·9	…	…	…	…
25	67·0	40·5	57·9	66·0	66·7	53·1	−0·6	+2·4	+1·5	−0·1	+0·5	+1·1	25	70·4	38·8	57·2	65·9	66·4	51·9	+2·8	+0·7	+0·8	−0·2	+0·2	−0·1
26	68·1	46·4	62·2	67·0	67·6	55·5	−1·8	+0·9	+1·0	+0·3	−0·2	+0·6	26	70·4	45·3	60·7	68·0	69·6	54·7	+0·5	−0·2	−0·5	+1·3	+1·8	−0·2
27	68·5	47·3	60·8	66·5	67·9	59·3	−1·6	+0·8	−0·3	−0·2	−0·4	+0·3	27	70·5	46·3	61·5	66·1	69·1	59·0	+0·4	−0·2	+0·4	−0·6	+0·8	0·0
28	64·1	55·5	60·0	57·6	63·5	56·2	−1·5	+0·1	−1·0	−0·3	−1·7	+0·4	28	66·5	55·3	61·5	57·5	63·9	56·4	+0·9	−0·1	+0·5	−0·4	−1·3	+0·6
29	69·2	51·5	58·5	68·2	67·6	58·1	−2·3	+0·2	−1·2	−0·6	−0·9	0·0	29	72·4	51·2	59·9	68·1	67·9	57·8	+0·9	−0·1	+0·2	−0·7	−0·6	−0·3
30	75·3	53·4	70·5	73·0	74·8	64·2	−2·2	+0·4	+0·6	−0·7	−0·4	+0·8	30	79·0	52·3	71·1	73·6	73·0	63·7	+1·5	−0·7	+1·2	−0·1	−2·2	+0·3
31	77·1	56·3	…	…	…	…	−0·8	+0·1	…	…	…	…	31	77·7	56·5	…	…	…	…	−0·2	+0·3	…	…	…	…
Means	61·7	45·9	55·8	59·1	60·3	52·4	−1·3	+0·9	0·0	+0·1	0·0	+0·7	Means	63·4	44·8	56·5	59·7	60·8	51·9	+0·4	−0·1	+0·7	+0·6	+0·5	+0·2

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 a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.						Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.					
	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h		Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°	°	°	°	°	d	°	°	°	°	°	°	°	°	°	°	°	°
1	80·9	51·6	...	...	...	...	−1·7	+0·5	...	...	...	...	1	81·8	51·2	...	...	...	...	−0·8	+0·1	...	...	...	...
2	73·3	48·7	55·8	59·2	60·3	48·7	+1·6	−0·4	−0·4	−0·8	−1·1	−0·5	2	73·4	48·2	56·0	60·2	60·5	48·8	+1·7	−0·9	−0·2	+0·2	−0·9	−0·4
3	54·6	44·4	49·5	51·1	53·6	48·0	−0·4	+0·5	+0·1	+0·4	+0·1	+0·4	3	54·6	43·2	49·2	51·0	53·9	47·2	−0·4	−0·7	−0·2	+0·3	+0·4	−0·4
4	66·6	42·4	56·0	63·1	65·2	56·9	−1·3	+0·4	−0·6	+0·1	−0·4	+0·2	4	67·7	41·2	54·7	62·0	66·0	56·0	−0·2	−0·8	−1·9	−1·0	+0·4	−0·7
5	66·8	48·3	63·7	64·7	61·9	55·5	−0·1	+2·6	+0·4	+0·4	+0·3	+0·5	5	67·8	47·1	62·2	65·9	63·1	55·2	+0·9	+1·4	−1·1	+1·6	+1·5	+0·2
6	62·1	50·0	52·9	59·9	62·0	51·3	−1·0	+0·2	−1·7	−0·5	+1·2	+0·7	6	63·7	49·8	53·1	60·6	61·8	50·3	+0·6	0·0	−1·5	+0·2	+1·0	−0·3
7	57·0	46·3	...	...	...	...	−0·9	+1·1	...	...	...	...	7	57·3	44·8	...	...	...	...	−0·6	−0·4	...	...	...	...
8	63·0	48·4	58·9	62·1	61·9	56·6	−1·9	+0·2	−0·8	+0·6	−2·0	+0·2	8	65·5	48·0	59·1	62·5	62·6	56·4	+0·6	−0·2	−0·6	+1·0	−1·3	0·0
9	64·2	49·4	54·0	59·5	63·4	58·9	−0·9	0·0	−0·5	−1·0	0·0	+0·4	9	66·5	48·6	54·0	58·9	63·8	58·5	+1·4	−0·8	−0·5	−1·6	+0·4	0·0
10	59·7	54·0	55·8	55·9	58·1	57·5	−0·8	−0·1	0·0	−0·5	−1·6	−0·1	10	59·9	53·9	55·2	56·0	57·9	57·5	−0·6	−0·2	−0·6	−0·4	−1·8	−0·1
11	57·6	50·0	54·0	54·9	53·9	50·1	0·0	−0·2	−0·1	−0·3	+0·2	−0·5	11	57·5	49·2	54·0	55·2	54·0	50·2	−0·1	−1·0	−0·1	0·0	+0·3	−0·4
12	54·0	45·6	52·5	52·3	52·1	46·7	−0·8	+0·8	+0·7	0·0	−0·8	+1·7	12	54·4	45·0	52·4	52·6	52·4	46·2	−0·4	+0·2	+0·6	+0·3	−0·5	+1·2
13	59·6	39·4	56·1	54·9	51·1	48·1	−2·2	+2·3	+0·2	−0·1	−0·1	+0·1	13	61·2	37·2	56·8	54·8	51·8	47·8	−0·6	+0·1	+0·9	−0·2	+0·6	−0·2
14	51·1	45·0	...	...	...	...	−0·1	+0·1	...	...	...	...	14	51·5	44·0	...	...	...	...	+0·3	−0·9	...	...	...	...
15	51·6	46·3	49·6	49·2	49·1	46·8	+0·1	+0·1	−0·2	−0·8	−0·4	0·0	15	51·5	45·8	49·8	49·1	49·0	46·2	0·0	−0·4	0·0	−0·9	−0·5	−0·6
16	59·6	42·6	54·7	51 0	56·7	50·9	−2·3	+0·6	−0·4	−1·8	−2·8	−0·6	16	60·5	41·3	56·8	51·0	57·2	50·8	−1·4	−0·7	+1·7	−1·8	−2·3	−0·7
17	66·0	45·6	52·5	60·1	65·1	53·1	−1·0	+0·5	0·0	−1·2	+0·2	−0·2	17	68·2	44·2	52·1	61·8	65·6	52·6	+1·2	−0·9	−0·4	+0·5	+0·7	−0·7
18	60·0	43·6	54·5	57·5	57·6	51·6	+0·1	+2·3	+0·4	+0·2	+0·4	+0·2	18	60·1	41·2	53·3	57·8	58·8	51·3	+0·2	−0·1	−0·8	+0·5	+1·6	−0·1
19	51·6	46·3	48·2	48·1	48·0	47·2	+0·2	+0·1	−0·1	−0·2	+0·1	+0·1	19	51·3	45·3	48·0	48·4	47·8	46·6	−0·1	−0·9	−0·3	+0·1	−0·1	−0·5
20	51·3	46·2	48·7	51·1	50·2	48·7	−0·4	0·0	−0·2	−0·4	−0·7	+0·4	20	51·7	45·1	47·8	51·1	50·1	48·3	0·0	−1·1	−1·1	−0·4	−0·8	0·0
21	59·8	45·0	...	...	...	...	−1·3	+0·2	...	...	...	...	21	60·6	44·4	..	...	...	...	−0·5	−0·4	...	...	...	...
22	67·1	41·4	60·1	65·9	65·6	53·7	+0·3	+2·7	+0·3	+0·9	+0·9	+2·9	22	69·1	40·3	61·9	66·2	65·9	53·3	+2·3	+1·6	+2·1	+1·2	+1·2	+2·5
23	67·0	43·3	61·9	64·7	64·7	55·3	−0·7	+3·0	−1·5	−0·4	−0·3	+0·7	23	68·7	41·2	63·4	66·7	65·3	54·9	+1·0	+0·9	0·0	+1·6	+0·3	+0·3
24	65·4	53·3	59·2	64·0	64·9	58·9	−1·6	+0·1	−0·4	+0·6	+0·1	+1·9	24	68·8	52·9	60·0	64·7	65·5	58·4	+1·8	−0·3	+0·4	+1·3	+0·7	+1·4
25	72·0	50·9	57·9	65·0	71·0	60·5	−2·0	+1·7	−0·8	+0·7	−0·6	−0·2	25	74·8	49·6	60·0	65·7	72·1	60·2	+0·8	+0·4	+1·3	+1·4	+0·5	−0·5
26	75·7	55·4	...	...	...	...	−0·6	+0·5	...	...	...	...	26	78·3	54·5	...	...	...	...	+2·0	−0·4	...	...	...	...
27	82·6	59·3	74·5	81·8	82·3	70·5	−0·7	+2·3	−2·2	+1·0	−1·0	+2·6	27	84·4	58·6	76·7	81·8	83·3	70·0	+1·1	+1·6	0·0	+1·0	0·0	+2·1
28	84·0	62·7	...	...	...	...	−0·8	+3·2	...	...	...	...	28	86·3	61·8	...	...	...	...	+1·5	+2·3	...	...	...	...
29	72·2	55·1	65·1	71·1	70·8	62·6	−1·5	−0·1	+0·3	0·0	+0·8	+0·2	29	74·5	54·6	65·1	71·7	71·8	62·1	+0·8	−0·6	+0·3	+0·6	+1·8	−0·3
30	71·9	55·6	66·8	67·2	69·5	62·6	−1·6	+1·4	−0·9	−0·2	−0·1	−0·1	30	73 7	54·5	66·1	67·8	69·1	62·8	+0·2	+0·3	−1·6	+0·4	−0·5	+0·1
Means	64·3	48·5	56·8	59·8	60·8	54·2	−0·8	+0·9	−0·3	−0·1	−0·3	+0·5	Means	65·5	47·6	57·0	60·1	61·2	53·8	+0·4	−0·1	−0·1	+0·2	+0·1	+0·1

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 a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	76·3	53·6	67·1	71·8	76·3	64·1	−1·9	+0·4	+1·2	−0·2	+0·7	+0·8
2	81·2	54·3	73·9	78·9	80·2	69·6	+0·3	+3·7	+0·7	0·0	+0·8	+1·6
3	70·6	58·4	66·5	68·7	68·9	59·7	−1·5	+0·3	−0·2	+2·2	+1·2	+0·3
4	70·2	50·9	62·4	66·1	68·0	60·5	−1·9	+0·3	−0·3	+0·5	−1·1	0·0
5	67·2	55·4	...	...	...	...	−1·7	+0·4	...	...	...	...
6	64·5	55·3	58·5	61·7	64·5	56·9	−2·0	0·0	+0·2	+0·5	0·0	+0·6
7	65·0	47·6	55·2	62·2	62·6	57·2	−0·3	+0·2	−0·6	+1·5	−1·0	+1·0
8	69·2	46·7	58·9	67·5	68·3	66·9	−2·2	+4·5	−0·5	−1·2	−0·1	+0·2
9	77·5	63·9	70·8	75·7	76·2	64·1	−1·7	+0·9	+0·4	+1·9	−0·1	+1·1
10	84·1	58·8	73·0	82·1	82·9	69·9	−2·0	+1·6	−0·2	−0·2	+0·3	+1·5
11	85·0	61·5	75·1	79·5	85·0	70·1	−2·5	+2·3	−0·2	−1·5	−1·2	+0·4
12	70·1	60·6	...	...	...	...	+0·4	+0·9	...	...	...	...
13	63·9	50·4	59·6	62·0	62·7	58·0	−1·7	+0·9	+0·3	−0·3	−0·8	+0·1
14	68·6	48·6	61·4	65·1	65·0	60·1	−2·4	+2·6	−1·0	0·0	−0·2	+0·2
15	75·8	53·4	63·1	72·8	74·6	64·1	−1·3	+0·3	−1·7	+2·0	+0·1	+2·6
16	65·7	56·4	64·2	61·9	65·2	59·4	−2·8	+2·0	+0·4	−0·5	−0·8	+0·1
17	74·1	55·7	65·0	71·6	71·5	62·2	−0·4	+0·9	+0·2	−0·4	−0·9	+0·2
18	71·1	57·0	59·2	60·5	65·2	59·4	−1·7	+0·6	−1·2	−0·4	−2·2	+0·6
19	65·4	55·7	...	...	...	...	−1·6	+1·1	...	...	...	...
20	59·9	55·5	57·9	58·2	58·7	57·2	−0·2	+0·3	+0·3	−0·2	−0·2	+0·2
21	71·3	48·9	61·5	68·1	70·1	59·7	−1·2	+3·2	−0·3	+0·9	+0·9	0·0
22	73·0	59·4	64·7	66·6	72·7	62·5	−1·9	+0·1	+0·3	−0·6	+0·1	+0·6
23	68·0	56·0	64·5	63·5	65·4	56·5	−2·6	−0·2	0·0	−0·8	−1·2	+0·2
24	71·6	54·3	55·3	64·3	68·8	59·9	−0·7	0·0	−0·6	−1·6	−0·8	+0·2
25	71·3	49·7	66·4	71·0	69·5	62·0	−2·0	+2·5	+0·5	−0·8	−0·2	+0·5
26	68·8	57·3	...	...	...	...	−2·7	0·0	...	...	...	...
27	65·5	50·6	64·5	61·2	60·2	59·9	−2·2	+1·6	−1·0	0·0	−0·3	−0·2
28	64·2	55·4	61·0	63·0	61·7	60·1	−1·8	−0·2	+0·2	−0·4	+0·6	+0·4
29	65·5	54·2	59·9	59·1	54·2	54·9	−1·4	0·0	−0·1	−1·6	−0·2	−0·2
30	64·4	51·6	59·7	62·1	60·9	57·5	−1·5	+1·4	+0·5	−0·6	+0·8	0·0
31	61·1	53·4	57·1	57·9	60·3	59·4	−0·6	0·0	−0·3	−0·2	−1·0	+0·4
Means	70·0	54·5	63·2	66·8	68·1	61·2	−1·5	+1·1	−0·1	−0·1	−0·3	+0·5

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	79·9	52·6	68·9	73·8	77·0	63·5	+1·7	−0·6	+3·0	+1·8	+1·4	+0·2
2	83·1	52·8	75·0	80·1	81·7	69·4	+2·2	+2·2	+1·8	+1·2	+2·3	+1·4
3	72·0	57·4	66·2	69·1	69·6	59·2	−0·1	−0·7	−0·5	+2·6	+1·9	−0·2
4	72·2	49·6	63·2	67·0	68·7	60·0	+0·1	−1·0	+0·5	+1·4	−0·4	−0·5
5	68·7	54·6	...	...	...	...	−0·2	−0·4	...	...	...	...
6	65·1	55·2	59·0	61·9	64·8	56·2	−1·4	−0·1	+0·7	+0·7	+0·3	−0·1
7	65·7	47·0	55·9	62·5	62·8	56·4	+0·4	−0·4	+0·1	+1·8	−0·8	+0·2
8	70·6	45·1	59·6	67·8	68·2	66·3	−0·8	+2·9	+0·2	−0·9	−0·2	−0·4
9	78·8	63·2	71·0	75·6	76·0	63·4	−0·4	+0·2	+0·6	+1·8	−0·3	+0·4
10	87·2	58·4	74·3	83·1	83·8	69·4	+1·1	+1·2	+1·1	+0·8	+1·2	+1·0
11	88·3	60·7	77·9	79·6	86·4	69·6	+0·8	+1·5	+2·6	−1·4	+0·2	−0·1
12	70·1	59·7	...	...	...	...	+0·4	0·0	...	...	...	...
13	64·5	49·5	60·0	62·3	63·0	57·0	−1·1	0·0	+0·7	0·0	−0·5	−0·9
14	71·3	47·4	63·5	66·8	64·9	60·0	+0·3	+1·4	+1·1	+1·7	−0·3	+0·1
15	77·3	53·0	64·0	72·7	76·3	63·7	+0·2	−0·1	−0·8	+1·9	+1·8	+2·2
16	67·4	55·9	65·0	62·3	66·9	59·1	−1·1	+1·5	+1·2	−0·1	+0·9	−0·2
17	75·0	55·1	66·7	73·1	72·0	61·3	+0·5	+0·3	+1·9	+1·1	−0·4	−0·7
18	72·5	56·4	60·2	61·3	65·2	59·0	−0·3	0·0	−0·2	+0·4	−2·2	+0·2
19	66·8	54·7	...	...	...	...	−0·2	+0·1	...	...	...	...
20	59·8	55·3	57·5	58·0	59·2	57·0	−0·3	+0·1	−0·1	−0·4	+0·3	0·0
21	73·1	48·2	63·6	68·9	71·0	59·4	+0·6	+2·5	+1·8	+1·7	+1·8	−0·3
22	74·7	58·0	65·1	67·9	72·6	61·8	−0·2	−1·3	+0·7	+0·7	0·0	−0·1
23	70·3	55·4	66·7	64·2	66·0	55·8	−0·3	−0·8	+2·2	−0·1	−0·6	−0·5
24	71·7	53·4	54·9	64·7	70·5	59·9	−0·6	−0·9	−1·0	−1·2	+0·9	+0·2
25	72·2	48·5	67·9	71·9	70·4	61·6	−1·1	+1·3	+2·0	+0·1	+0·7	+0·1
26	70·4	57·1	...	...	...	...	−1·1	−0·2	...	...	...	...
27	67·4	49·3	65·3	62·1	60·3	59·8	−0·3	+0·3	−0·2	+0·9	−0·2	−0·3
28	65·8	54·6	62·1	63·3	61·4	59·6	−0·2	−1·0	+1·3	−0·1	+0·3	−0·1
29	66·2	51·7	60·9	59·3	52·3	54·4	−0·7	−2·5	+0·9	−1·4	−2·1	−0·7
30	64·7	50·3	60·0	62·2	61·2	57·0	−1·2	+0·1	+0·8	−0·5	+1·1	−0·5
31	61·1	52·2	57·2	58·6	60·2	59·0	−0·6	−1·2	−0·2	+0·5	−1·1	0·0
Means	71·4	53·6	64·1	67·4	68·6	60·7	−0·1	+0·1	+0·8	+0·6	+0·2	0·0

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 a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.						Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.					
	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h		Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°	°	°	°	°	d	°	°	°	°	°	°	°	°	°	°	°	°
1	70·0	54·0	61·3	65·9	69·6	61·0	−1·4	0·0	−1·0	−0·8	−0·9	+0·2	1	71·5	52·9	62·2	68·3	70·7	60·2	+0·1	−1·1	−0·1	+1·6	+0·2	−0·6
2	68·4	55·3	...	...	...	...	−2·1	0·0	...	...	...	...	2	70·0	55·0	...	...	...	...	−0·5	−0·3	...	...	...	...
3	70·3	55·3	...	...	...	...	−1·6	0·0	...	...	...	...	3	71·3	55·3	...	...	...	...	−0·6	0·0	...	...	...	...
4	70·2	53·7	62·5	64·9	70·2	60·7	−1·4	+0·2	−0·4	−0·4	−0·5	+0·1	4	71·4	52·4	62·9	65·6	70·8	59·7	−0·2	−1·1	0·0	+0·3	+0·1	−0·9
5	67·2	53·3	62·7	63·6	67·2	58·4	−1·5	+0·1	+0·3	−0·3	+0·5	+0·1	5	68·0	52·1	64·0	63·5	68·0	58·0	−0·7	−1·1	+1·6	−0·4	+1·3	−0·3
6	68·6	50·3	60·8	64·9	66·8	59·9	−2·3	+0·3	0·0	+0·6	−0·1	+0·4	6	70·4	48·8	61·2	66·1	68·4	59·0	−0·5	−1·2	+0·4	+1·8	+1·5	−0·5
7	72·0	46·9	64·7	69·6	71·8	57·9	−2·9	+2·7	+1·4	+1·3	−0·1	+3·0	7	74·6	45·2	65·9	70·9	73·3	57·3	−0·3	+1·0	+2·6	+2·6	+1·4	+2·4
8	77·1	51·2	68·6	74·5	75·2	64·3	−0·4	+3·0	−1·3	0·0	+0·2	−0·1	8	79·1	49·8	70·0	75·3	76·0	64·1	+1·6	+1·6	+0·1	+0·8	+1·0	−0·3
9	70·3	54·9	...	...	...	...	−1·2	−0·1	...	...	...	...	9	71·5	54·2	...	...	...	...	0·0	−0·8	...	...	...	...
10	65·6	53·0	59·4	62·9	63·1	56·2	−1·0	−0·2	−0·3	−0·3	−1·1	−0·7	10	66·4	52·3	60·3	63·3	63·5	55·9	−0·2	−0·9	+0·6	+0·1	−0·7	−1·0
11	64·8	47·5	59·9	64·1	58·6	55·1	−2·3	+2·2	−1·1	−1·2	+0·5	+0·3	11	67·8	46·2	61·9	64·0	59·3	55·0	+0·7	+0·9	+0·9	−1·3	+1·2	+0·2
12	70·0	53·5	58·9	66·6	69·7	59·6	−1·4	−0·4	−0·6	+0·3	−0·4	−0·1	12	71·6	53·2	58·8	67·5	69·5	59·0	+0·2	−0·7	−0·7	+1·2	−0·6	−0·7
13	73·0	50·7	62·0	70·8	72·9	58·1	−0·5	+1·7	+0·1	+1·1	+2·0	+1·8	13	75·9	49·3	63·9	70·6	73·6	58·0	+2·4	+0·3	+2·0	+0·9	+2·7	+1·7
14	69·5	53·3	61·5	62·7	68·5	59·0	−1·4	+2·9	−0·2	−0·2	−0·8	0·0	14	70·5	51·5	61·8	62·9	69·0	59·2	−0·4	+1·1	+0·1	0·0	−0·3	+0·2
15	64·6	55·4	62·2	62·7	63·6	56·6	−1·4	−0·6	+0·4	−0·4	−0·1	−0·1	15	65·5	55·4	62·9	63·6	64·2	56·1	−0·5	−0·6	+1·1	+0·5	+0·5	−0·6
16	66·2	51·3	...	...	...	...	−0·8	−0·1	...	...	...	...	16	67·0	50·3	...	...	...	...	0·0	−1·1	...	...	...	...
17	70·6	54·1	60·1	67·7	68·3	60·5	−2·8	+0·3	0·0	−0·1	−1·3	+0·2	17	73·4	53·4	60·9	68·3	69·6	60·1	0·0	−0·4	+0·8	+0·5	0·0	−0·2
18	63·3	54·8	63·0	59·7	61·9	55·7	−0·8	+0·2	−0·7	0·0	0·0	+0·4	18	64·1	54·3	63·8	59·8	62·6	55·1	0·0	−0·3	+0·1	+0·1	+0·7	−0·2
19	64·7	52·5	55·0	59·1	62·5	56·8	−1·1	+0·2	−1·3	−0·9	−0·4	+0·1	19	65·4	52·3	55·2	59·6	62·3	56·0	−0·4	0·0	−1·1	−0·4	−0·6	−0·7
20	63·3	52·4	59·5	61·8	57·9	60·7	−0·9	+0·5	−0·3	+0·1	+0·1	−0·1	20	64·1	51·6	60·0	61·8	58·4	60·4	−0·1	−0·3	+0·2	+0·1	+0·6	−0·4
21	66·9	52·6	57·8	64·9	63·7	56·8	−0·9	+0·4	−0·9	+0·3	−0·5	+0·2	21	67·2	51·1	58·2	65·7	65·0	56·2	−0·6	−1·1	−0·5	+1·1	+0·8	−0·4
22	68·5	48·4	61·0	63·9	68·5	55·1	−1·4	+0·8	0·0	+1·6	−0·7	+0·8	22	71·7	47·1	61·9	64·6	70·2	54·1	+1·8	−0·5	+0·9	+2·3	+1·0	−0·2
23	67·0	46·3	...	...	...	...	−1·3	+2·0	...	...	...	...	23	69·2	44·4	...	...	...	...	+0·9	+0·1	...	...	...	...
24	64·9	50·0	54·7	58·6	62·0	57·0	−1·0	+1·8	−0·2	−0·6	+0·1	+0·1	24	66·2	49·1	54·8	58·4	62·3	57·2	+0·3	+0·9	−0·1	−0·8	+0·4	+0·3
25	58·7	52·2	55·1	57·4	57·7	56·0	−0·5	0·0	+0·3	+0·1	+0·4	+0·9	25	58·6	51·3	54·8	57·0	57·4	55·3	−0·6	−0·9	0·0	−0·3	+0·1	+0·2
26	66·0	47·1	59·0	65·0	65·5	58·9	−1·4	+0·7	−0·5	−0·4	−0·3	−0·1	26	67·5	45·2	60·1	65·7	65·9	58·6	+0·1	−1·2	+0·6	+0·3	+0·1	−0·4
27	70·9	54·7	64·1	70·0	66·5	57·0	−0·1	−0·1	+0·2	−0·1	−0·2	+0·3	27	71·4	54·2	64·1	70·8	67·3	56·0	+0·4	−0·6	+0·2	+0·7	+0·6	−0·7
28	69·6	55·1	59·5	67·1	67·0	59·9	−0·6	−0·1	−0·2	+0·4	−0·5	+0·2	28	69·7	54·4	59·8	68·0	67·6	59·6	−0·5	−0·8	+0·1	+1·3	+0·1	−0·1
29	66·3	57·4	61·7	62·9	66·3	57·9	−0·6	0·0	+0·3	−0·7	+0·5	+0·2	29	66·5	56·4	62·0	63·5	66·1	57·2	−0·4	−1·0	+0·6	−0·1	+0·3	−0·5
30	65·8	51·3	...	...	...	...	−1·3	+2·4	...	...	...	...	30	67·4	50·2	...	...	...	...	+0·3	+1·3	...	...	...	...
31	71·7	60·3	63·4	68·7	70·9	60·5	−0·1	+2·2	−0·1	+1·0	+1·2	+2·4	31	71·6	59·4	63·9	68·3	70·9	60·0	−0·2	+1·3	+0·4	+0·6	+1·2	+1·9
Means	67·9	52·5	60·7	64·8	66·2	58·4	−1·2	+0·7	−0·2	0·0	−0·1	+0·4	Means	69·2	51·6	61·4	65·3	66·9	57·9	+0·1	−0·2	+0·4	+0·5	+0·5	−0·1

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 a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.						Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. 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	81·9	55·2	70·3	79·1	79·8	67·5	−0·1	+2·0	−1·2	+0·5	−1·1	+0·8	1	83·3	54·3	71·4	79·0	80·4	66·9	+1·3	+1·1	−0·1	+0·4	−0·5	+0·2
2	81·7	60·5	75·5	80·8	79·7	65·0	+0·1	+1·7	+0·8	+0·1	+0·3	−0·3	2	82·5	59·6	74·3	81·4	80·1	65·0	+0·9	+0·8	−0·4	+0·7	+0·7	−0·3
3	69·3	52·3	62·1	67·9	67·9	57·0	−0·8	+1·8	+0·6	+0·4	+0·7	+0·1	3	70·4	50·2	62·9	68·5	68·4	56·3	+0·3	−0·3	+1·4	+1·0	+1·2	−0·6
4	72·0	53·1	64·9	71·2	68·5	61·3	+0·3	+2·5	+0·8	+0·6	+0·6	−0·2	4	72·7	51·4	65·6	70·6	68·5	60·9	+1·0	+0·8	+1·5	0·0	+0·6	−0·6
5	69·0	57·3	62·3	68·0	68·0	57·6	−1·3	+1·1	+0·1	+0·1	+0·4	+0·8	5	70·1	55·6	62·6	68·4	69·8	56·8	−0·2	−0·6	+0·4	+0·5	+2·2	0·0
6	59·0	47·4	...	...	...	...	−2·0	+2·0	...	...	...	...	6	60·2	45·4	...	...	...	...	−0·8	0·0	...	...	...	...
7	67·1	47·3	55·1	65·9	66·4	55·4	−0·8	+0·9	−0·8	+1·8	−0·7	0·0	7	68·5	46·0	54·6	65·3	66·9	55·0	+0·6	−0·4	−1·3	+1·2	−0·2	−0·4
8	65·3	53·5	60·6	64·9	64·9	59·8	−1·7	+0·1	+0·2	−0·5	−0·2	0·0	8	66·7	51·8	61·1	65·4	65·2	59·6	−0·3	−1·6	+0·7	0·0	+0·1	−0·2
9	64·7	50·3	60·9	61·6	61·9	50·5	−0·2	+0·6	+0·2	+1·0	+0·6	+0·8	9	65·1	49·2	58·1	61·6	61·9	49·7	+0·2	−0·5	−2·6	+1·0	+0·6	0·0
10	59·3	44·4	54·4	57·8	55·0	54·3	−0·8	+0·2	−0·3	−0·5	−0·8	−0·3	10	60·5	43·1	55·2	58·2	54·8	54·1	+0·4	−1·1	+0·5	−0·1	−1·0	−0·5
11	59·0	44·5	49·9	57·1	57·1	46·8	−0·9	−0·9	−0·5	+1·2	−0·3	0·0	11	59·3	43·3	50·0	57·4	57·6	45·7	−0·6	−2·1	−0·4	+1·5	+0·2	−1·1
12	57·1	40·5	50·3	55·9	55·5	48·1	−0·7	+0·2	−0·7	−0·5	+0·2	−0·4	12	57·7	38·9	51·1	55·6	55·9	47·1	−0·1	−1·4	+0·1	−0·8	+0·6	−1·4
13	58·3	40·6	...	...	...	...	−0·6	+1·6	...	...	...	...	13	59·5	39·0	...	...	...	...	+0·6	0·0	...	...	...	...
14	55·7	46·3	51·0	53·5	55·5	48·9	+0·2	0·0	+0·2	+0·5	+0·7	+0·6	14	56·8	44·8	51·0	53·3	55·5	48·0	+1·3	−1·5	+0·2	+0·3	+0·7	−0·3
15	56·9	42·3	50·8	54·5	54·6	48·8	−0·1	+0·1	+0·7	+1·1	+0·3	+1·1	15	56·5	41·0	50·0	54·3	54·5	48·0	−0·5	−1·2	−0·1	+0·9	+0·2	+0·3
16	59·6	44·2	51·2	58·6	57·9	46·7	−0·4	+0·2	−0·3	+2·8	+0·4	+3·0	16	59·7	43·0	51·7	56·1	57·4	45·9	−0·3	−1·0	+0·2	+0·3	−0·1	+2·2
17	63·8	41·0	54·9	60·5	59·8	51·8	−0·5	+2·6	−2·0	+1·0	+1·7	+1·7	17	65·0	39·6	57·0	61·4	60·2	51·3	+0·7	+1·2	+0·1	+1·9	+2·1	+1·2
18	62·9	45·0	56·8	62·7	62·0	56·0	−0·1	+3·5	−0·5	+0·6	−0·3	+0·5	18	64·8	43·1	58·8	63·0	62·7	55·8	+1·8	+1·6	+1·5	+0·9	+0·4	+0·3
19	63·2	53·3	58·1	62·0	63·0	59·6	−0·9	+0·1	−0·9	+0·6	−0·7	0·0	19	64·5	52·5	59·1	62·6	64·0	59·6	+0·4	−0·7	+0·1	+1·2	+0·3	0·0
20	65·5	56·7	...	...	...	...	−0·7	0·0	...	...	...	...	20	66·5	56·1	...	...	...	...	+0·3	−0·6	...	...	...	...
21	65·1	55·2	60·7	65·1	63·0	59·8	−1·7	+0·1	−1·1	−0·4	−0·1	+0·1	21	66·8	54·3	61·6	66·1	63·6	59·2	0·0	−0·8	−0·2	+0·6	+0·5	−0·5
22	60·6	55·3	57·5	58·9	59·6	58·5	−0·3	+0·1	−0·2	−0·4	−0·2	+0·7	22	62·0	54·6	57·5	59·3	59·8	58·0	+1·1	−0·6	−0·2	0·0	0·0	+0·2
23	68·8	55·9	58·4	61·9	68·7	59·6	−1·7	+1·7	−0·3	−1·7	−0·6	+0·2	23	70·7	55·3	58·4	62·4	69·3	59·4	+0·2	+1·1	−0·3	−1·2	0·0	0·0
24	65·6	53·6	57·3	63·1	64·1	60·8	−0·7	−0·1	−0·2	+0·2	−0·2	+0·7	24	66·8	53·8	57·5	63·9	64·6	60·3	+0·5	+0·1	0·0	+1·0	+0·3	+0·2
25	67·6	56·3	60·9	65·6	65·0	56·9	−1·3	0·0	−0·8	+0·3	−0·3	−0·1	25	68·5	55·3	61·9	66·2	65·6	56·1	−0·4	−1·0	+0·2	+0·9	+0·3	−0·9
26	67·9	51 6	54·7	64·5	67·9	55·1	−0·6	+0·4	0·0	+0·9	+0·5	+2·7	26	68·9	51·5	55·1	64·7	68·9	54·2	+0·4	+0·3	+0·4	+1·1	+1·5	+1·8
27	64·2	51·3	...	...	...	...	−1·7	+1·1	...	...	...	...	27	66·3	50·2	...	...	...	...	+0·4	0·0	...	...	...	...
28	68·2	55·3	60·3	64·7	67·2	58·8	−0·6	+1·1	−0·4	−0·7	−0·1	+0·2	28	69·3	54·6	61·3	66·0	67·6	58·1	+0·5	+0·4	+0·6	+0·6	+0·3	−0·5
29	69·0	57·3	66·0	66·9	65·8	57·5	−1·7	−0·1	−1·0	−0·5	−0·3	−0·4	29	69·8	56·9	67·1	67·8	66·1	57·2	−0·9	−0·5	+0·1	+0·4	0·0	−0·7
30	68·6	55·1	60·5	67·1	65·0	55·9	−0·9	+1·5	−1·8	+0·4	−0·6	+1·5	30	69·5	54·4	62·2	66·9	65·7	55·5	0·0	+0·8	−0·1	+0·2	+0·1	+1·1
Means	65·2	50·8	58·7	63·8	64·0	56·1	−0·8	+0·9	−0·4	+0·3	0·0	+0·5	Means	66·3	49·6	59·1	64·1	64·4	55·5	+0·3	−0·3	+0·1	+0·6	+0·4	0·0

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 a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	66·7	52·4	58·6	66·0	63·5	59·0	−1·8	+2·0	−0·7	+0·2	+0·5	+0·1
2	64·8	51·7	56·8	61·4	63·1	59·5	−0·2	+0·2	−0·9	+0·1	0·0	−0·2
3	67·0	53·3	61·8	63·5	63·4	55·0	−0·2	+1·0	0·0	+0·5	0·0	+0·3
4	63·3	53·3	...	...	...	...	−0·6	0·0	...	...	...	...
5	61·5	53·9	60·3	57·1	59·7	54·6	−0·8	+0·5	−0·6	−0·3	0·0	−0·1
6	62·6	53·5	55·8	60·1	62·0	58·8	−0·5	+0·7	−0·2	−0·7	−0·3	0·0
7	63·0	52·7	56·8	62·0	61·9	54·5	0·0	+0·3	−0·2	+0·1	−0·8	+0·7
8	63·0	54·1	60·9	61·6	59·5	58·2	−1·8	+0·8	−0·9	−0·1	−0·1	0·0
9	58·4	47·0	52·9	55·9	50·7	47·5	−0·1	+0·7	−0·5	+0·4	−0·5	+0·7
10	56·4	39·6	45·1	52·9	53·6	46·1	−0·4	+0·4	−1·6	+0·6	+0·9	+2·4
11	54·7	44·3	...	...	...	...	−0·1	+2·0	...	...	...	...
12	62·0	52·3	58·1	60·9	60·3	52·4	−0·6	+0·7	−0·2	−0·8	+0·6	+0·7
13	58·1	49·6	52·3	54·9	56·2	50·9	−0·1	−0·2	−0·7	+0·1	−0·5	0·0
14	59·2	48·1	55·2	58·4	57·6	56·7	−0·8	+0·9	−0·5	0·0	−0·1	0·0
15	57·9	47·4	51·9	54·9	53·1	47·9	0·0	−0·4	−0·4	−1·3	0·0	0·0
16	56·4	43·3	47·2	54·5	53·8	48·4	−0·7	0·0	−0·7	+0·2	+0·1	−0·2
17	54·5	46·9	49·9	52·0	54·4	50·8	0·0	+0·6	+0·1	−0·3	+0·1	+0·5
18	52·0	45·1	...	...	...	...	−0·2	0·0	...	...	...	...
19	55·0	44·9	49·3	53·5	54·0	52·1	−0·5	+1·7	−0·4	−0·1	−0·5	0·0
20	54·6	49·4	53·1	53·3	53·3	51·6	−0·4	+0·6	0·0	−0·4	−0·2	+0·5
21	55·8	47·3	54·1	52·6	50·9	48·8	−0·8	−0·5	−0·8	−0·1	+0·2	+0·4
22	54·0	44·8	51·6	52·3	51·5	49·3	−1·2	+0·7	+0·2	−0·6	−0·3	+0·2
23	52·6	42·2	47·0	50·3	49·9	46·8	−0·4	0·0	−0·8	−0·4	+0·4	+0·6
24	55·6	37·6	45·7	53·2	54·8	53·1	−0·1	+1·1	0·0	−0·2	+0·1	−0·1
25	58·0	50·3	...	...	...	...	−0·7	+1·0	...	...	...	...
26	57·6	48·5	56·7	53·8	51·7	51·5	−0·7	−0·4	−0·6	−0·7	+0·3	0·0
27	56·7	45·6	50·5	55·9	55·0	55·9	−0·1	+0·4	−0·3	−0·1	+0·1	+0·2
28	56·9	44·1	50·8	48·2	51·6	48·9	+1·0	+1·1	+0·1	−0·2	−0·1	+0·2
29	57·9	46·3	51·6	56·4	56·0	47·5	+0·3	+0·8	−1·5	−1·2	+0·3	+0·4
30	55·7	42·7	49·8	54·9	53·0	43·5	−0·2	−0·2	−0·3	+0·2	+0·1	+0·1
31	53·6	39·3	45·2	52·3	52·9	48·6	−0·1	+1·1	−1·1	−0·4	+0·2	+1·0
Means	58·2	47·5	52·9	56·0	55·8	51·8	−0·4	+0·6	−0·5	−0·2	0·0	+0·3

Days of the Month.	Readings of Thermometers on the Roof of the Magnet House, 20 ft. above the ground.						Excess above readings of the Thermometers on the ordinary stand, 4 ft. above the ground.					
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°
1	69·1	51·3	59·6	68·0	64·2	58·8	+0·6	+0·9	+0·3	+2·2	+1·2	−0·1
2	65·5	50·4	58·9	61·7	63·6	59·1	+0·5	−1·1	+1·2	+0·4	+0·5	−0·6
3	66·6	52·2	61·9	63·1	64·3	55·7	−0·6	−0·1	+0·1	+0·1	+0·9	+1·0
4	63·8	53·0	...	...	...	...	−0·1	−0·3	...	...	...	...
5	61·5	53·2	60·2	58·0	60·4	54·0	−0·8	−0·2	−0·7	+0·6	+0·7	−0·7
6	62·5	53·1	55·9	60·0	61·7	58·5	−0·6	+0·3	−0·1	−0·8	−0·6	−0·3
7	64·4	52·2	58·1	62·6	62·4	54·0	+1·4	−0·2	+1·1	+0·7	−0·3	+0·2
8	64·5	53·5	61·8	62·1	59·9	58·0	−0·3	+0·2	0·0	+0·4	+0·3	−0·2
9	58·4	46·1	53·6	56·0	51·2	47·1	−0·1	−0·2	+0·2	+0·5	0·0	+0·3
10	56·3	38·0	46·2	53·6	53·3	46·3	−0·5	−1·2	−0·5	+1·3	+0·6	+2·6
11	54·6	43·1	...	...	...	...	−0·2	+0·8	...	...	...	...
12	63·2	51·2	58·1	61·6	60·7	52·0	+0·6	−0·4	−0·2	−0·1	+1·0	+0·3
13	58·4	49·0	52·9	55·6	56·7	50·3	+0·2	−0·8	−0·1	+0·8	0·0	−0·6
14	60·1	47·2	55·7	58·4	57·6	56·7	+0·1	0·0	0·0	0·0	−0·1	0·0
15	57·5	46·1	52·3	55·6	53·7	47·1	−0·4	−1·7	0·0	−0·6	+0·6	−0·8
16	57·8	42·2	48·0	54·9	54·2	47·9	+0·7	−1·1	+0·1	+0·6	+0·5	−0·7
17	54·7	45·1	49·8	52·6	54·7	50·1	+0·2	−1·2	0·0	+0·3	+0·4	−0·2
18	52·6	43·9	...	...	...	...	+0·4	−1·2	...	...	...	...
19	55·5	45·1	49·9	53·6	54·6	52·0	0·0	+1·9	+0·2	0·0	+0·1	−0·1
20	55·5	49·2	53·6	53·3	53·6	51·2	+0·5	+0·4	+0·5	−0·4	+0·1	+0·1
21	56·4	46·1	54·4	53·2	50·8	47·2	−0·2	−1·7	−0·5	+0·5	+0·1	−1·2
22	54·4	44·1	51·6	52·5	51·5	49·0	−0·8	0·0	+0·2	−0·4	−0·3	−0·1
23	53·4	40·5	47·9	50·8	49·9	46·2	+0·4	−1·7	+0·1	+0·1	+0·4	0·0
24	55·9	36·1	46·6	53·1	55·1	53·1	+0·2	−0·4	+0·9	−0·3	+0·4	−0·1
25	58·3	49·5	...	...	...	...	−0·4	+0·2	...	...	...	...
26	58·1	48·8	57·1	54·4	51·6	51·0	−0·2	−0·1	−0·2	−0·1	+0·2	−0·5
27	57·5	45·1	51·0	56·4	55·3	56·0	+0·7	−0·1	+0·2	+0·4	+0·4	+0·3
28	56·3	42·3	50·9	48·7	52·2	49·0	+0·4	−0·7	+0·2	+0·3	+0·5	+0·3
29	58·1	45·5	53·1	56·9	56·7	47·3	+0·5	0·0	0·0	−0·7	+1·0	+0·2
30	56·0	41·6	50·2	55·2	53·2	43·0	+0·1	−1·3	+0·1	+0·5	+0·3	−0·4
31	54·1	38·0	46·3	52·6	52·8	48·6	+0·4	−0·2	0·0	−0·1	+0·1	+1·0
Means	58·7	46·5	53·5	56·5	56·1	51·5	+0·1	−0·4	+0·1	+0·2	+0·3	0·0

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

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

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

READINGS of the WET-BULB THERMOMETER placed in a STEVENSON'S SCREEN in the OBSERVATORY GROUNDS; and EXCESS of the READINGS above those of the corresponding THERMOMETER on the ORDINARY STAND in the MAGNETIC PAVILION ENCLOSURE, in the YEAR 1903.

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

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

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

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

MAY.

Days of the Month.	Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	9^{h}	Noon.	15^{h}	21^{h}	9^{h}	Noon.	15^{h}	21^{h}
d	°	°	°	°	°	°	°	°
1	47·9	49·4	48·3	46·5	− 0·8	0·0	− 0·7	+ 0·1
2	49·1	50·1	50·6	46·1	− 0·6	− 0·2	− 0·2	+ 0·8
4	51·3	52·8	54·5	49·4	− 0·4	− 0·5	− 0·2	+ 1·1
5	52·3	51·2	50·5	48·4	− 1·1	− 0·2	− 0·3	+ 0·1
6	51·0	51·9	49·1	48·2	+ 0·1	+ 0·8	− 0·2	+ 0·1
7	51·1	48·8	49·7	46·2	− 0·2	+ 0·4	0·0	+ 0·4
8	45·9	48·3	47·4	46·3	− 0·3	− 0·4	+ 0·1	+ 0·1
9	48·9	50·3	49·3	45·9	+ 0·3	+ 0·5	+ 0·2	+ 1·2
11	44·1	45·1	47·1	44·4	− 0·3	− 0·1	+ 0·5	− 0·1
12	40·8	42·1	43·1	39·1	− 0·1	+ 0·3	+ 0·2	+ 0·9
13	45·3	47·3	48·3	47·0	− 0·6	0·0	+ 0·6	+ 0·1
14	51·4	52·1	52·2	49·4	+ 0·2	+ 0·1	0·0	− 0·1
15	48·9	50·0	51·1	50·5	+ 0·7	0·0	− 0·4	− 0·3
16	47·2	47·3	46·4	45·4	− 0·2	− 0·4	− 0·7	− 0·1
18	43·0	45·1	47·1	44·1	− 0·3	− 0·3	− 0·3	+ 0·8
19	47·7	49·4	51·1	47·2	+ 0·3	+ 0·1	− 0·2	+ 0·4
20	49·9	52·6	53·1	49·8	0·0	− 0·3	+ 0·3	+ 0·1
21	53·1	57·7	60·7	52·2	+ 0·5	+ 1·5	+ 0·9	+ 0·2
22	58·6	61·2	61·2	57·4	− 0·6	+ 0·1	− 0·1	+ 1·3
23	54·7	56·2	56·2	48·2	+ 0·8	− 0·5	− 0·7	+ 0·4
25	52·3	55·4	58·1	47·9	+ 0·6	+ 0·3	+ 0·2	+ 1·0
26	54·2	59·0	56·3	47·0	+ 1·4	+ 0·5	+ 0·3	+ 0·5
27	56·1	55·4	55·7	55·4	+ 0·1	− 0·6	− 0·1	− 0·3
28	57·0	57·0	58·2	55·1	+ 0·2	− 0·6	− 1·1	0·0
29	56·1	62·1	61·4	56·0	− 0·6	− 0·6	− 0·6	− 0·5
30	63·2	63·9	64·5	60·7	− 0·2	+ 0·1	− 0·6	− 0·1
Means	50·8	52·4	52·7	49·0	0·0	0·0	− 0·1	+ 0·3

JUNE.

Days of the Month.	Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	9^{h}	Noon.	15^{h}	21^{h}	9^{h}	Noon.	15^{h}	21^{h}
d	°	°	°	°	°	°	°	°
2	51·1	51·1	51·0	44·4	− 0·4	− 1·1	− 0·7	− 0·4
3	44·1	45·2	46·7	44·0	− 0·5	0·0	− 0·4	+ 0·3
4	49·9	53·2	55·9	52·5	− 0·8	0·0	+ 0·1	+ 0·1
5	56·4	57·9	56·1	53·1	− 0·5	+ 0·3	− 0·3	+ 0·1
6	48·3	52·0	52·9	49·0	− 1·4	0·0	+ 0·4	0·0
8	50·4	51·0	52·0	51·8	− 1·0	+ 0·1	− 0·5	− 0·1
9	52·9	56·0	57·3	55·1	− 0·2	− 1·1	− 0·1	− 0·1
10	55·1	55·5	57·3	56·1	− 0·1	− 0·3	− 1·0	− 0·1
11	53·3	54·1	53·1	48·7	− 0·4	− 0·4	+ 0·1	− 0·1
12	47·1	46·2	46·1	43·0	0·0	− 0·4	− 0·7	+ 0·7
13	50·7	50·3	50·4	47·6	− 0·3	− 0·4	− 0·3	+ 0·1
15	49·1	48·0	48·2	46·1	− 0·2	− 0·1	− 0·3	− 0·2
16	50·1	49·5	52·1	49·0	− 0·4	− 1·5	− 1·6	− 0·2
17	50·2	52·2	55·3	52·1	− 0·1	− 1·3	0·0	− 0·1
18	49·1	51·1	51·4	49·2	− 0·3	0·0	+ 0·5	− 0·3
19	46·0	47·2	47·4	47·0	0·0	− 0·2	0·0	+ 0·1
20	46·5	47·2	46·6	44·9	− 0·2	− 0·5	− 0·6	− 0·1
22	53·1	55·1	53·8	49·5	− 0·1	+ 0·4	− 0·2	+ 0·8
23	53·9	54·9	56·1	52·4	− 0·9	− 0·2	− 0·3	− 0·3
24	55·1	58·0	58·7	57·1	− 0·6	+ 0·5	+ 0·4	+ 1·4
25	55·6	59·2	61·9	57·3	− 0·8	+ 0·3	+ 0·1	− 0·4
27	65·0	68·9	67·2	64·2	− 1·5	+ 0·2	− 0·8	+ 1·3
29	57·4	58·7	59·2	55·1	− 0·1	− 0·6	− 0·3	− 0·3
30	57·0	57·1	58·3	56·5	− 0·7	− 0·1	+ 0·5	+ 0·5
Means	52·0	53·3	54·0	51·1	− 0·5	− 0·3	− 0·2	+ 0·1

JULY.

Days of the Month.	Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	9^{h}	Noon.	15^{h}	21^{h}	9^{h}	Noon.	15^{h}	21^{h}
d	°	°	°	°	°	°	°	°
1	59·1	61·1	63·9	58·9	+ 1·1	− 0·3	+ 1·0	+ 0·8
2	62·1	65·4	64·1	62·3	+ 0·5	− 0·4	+ 0·6	+ 0·5
3	58·9	57·1	56·6	52·4	− 0·8	+ 1·7	+ 0·7	+ 0·3
4	54·1	56·1	57·1	55·0	− 0·4	− 0·6	− 0·7	− 0·3
6	50·2	51·7	53·1	48·4	− 0·5	− 0·1	− 0·4	− 0·1
7	49·1	51·6	51·7	49·2	− 0·7	+ 1·3	− 0·5	+ 0·1
8	51·1	56·1	59·1	61·9	− 0·6	− 0·6	− 0·2	+ 0·2
9	62·5	64·3	65·8	61·5	− 0·2	+ 0·5	+ 0·2	+ 0·6
10	66·1	70·1	71·1	65·6	+ 0·3	+ 0·3	+ 0·2	+ 0·8
11	66·9	68·9	70·8	64·9	+ 0·1	− 1·4	− 0·6	+ 0·1
13	51·3	51·6	52·8	51·3	− 0·3	0·0	− 1·0	+ 0·9
14	53·5	54·3	55·2	54·5	0·0	− 0·7	− 0·3	− 0·4
15	56·2	61·3	61·4	57·1	− 0·8	+ 1·2	− 0·3	+ 0·4
16	60·3	58·6	59·3	58·2	0·0	+ 0·3	− 0·7	− 0·1
17	59·6	61·5	61·8	59·0	+ 0·4	− 0·4	− 1·1	+ 0·2
18	58·3	59·0	58·5	57·6	− 0·6	+ 0·3	− 1·8	+ 0·1
20	55·7	55·9	56·1	54·7	+ 0·2	− 0·3	+ 0·1	+ 0·1
21	56·1	59·2	61·4	57·9	+ 0·4	+ 0·3	0·0	0·0
22	61·4	61·3	64·0	60·1	0·0	− 0·4	− 0·3	+ 0·2
23	60·1	60·1	59·9	56·1	0·0	− 0·9	− 0·5	+ 0·1
24	54·1	57·4	59·4	54·8	− 0·2	− 1·5	− 0·6	+ 0·4
25	57·4	60·4	59·6	57·2	0·0	− 0·7	− 0·4	− 0·1
27	57·5	57·9	59·5	58·3	− 1·2	− 0·1	− 0·2	− 0·1
28	57·0	58·1	60·3	59·3	+ 1·1	− 0·5	+ 0·7	+ 0·3
29	56·1	55·4	52·2	52·1	− 0·2	− 1·0	+ 0·2	+ 0·1
30	54·2	56·1	55·2	53·4	− 0·1	− 0·2	+ 0·3	− 0·1
31	52·1	53·3	55·8	54·9	− 0·4	− 0·4	− 0·1	− 0·1
Means	57·1	58·7	59·5	56·9	− 0·1	− 0·2	− 0·2	+ 0·2

AUGUST.

Days of the Month.	Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	9^{h}	Noon.	15^{h}	21^{h}	9^{h}	Noon.	15^{h}	21^{h}
d	°	°	°	°	°	°	°	°
1	57·8	62·1	65·0	56·5	− 0·5	− 0·7	− 0·2	− 0·3
4	59·7	62·2	65·2	55·9	+ 0·2	− 0·9	− 0·8	+ 0·2
5	57·1	56·3	56·2	54·6	− 0·4	+ 0·5	+ 0·1	+ 0·2
6	53·3	55·1	55·9	54·5	+ 0·2	+ 0·8	+ 0·6	+ 0·2
7	56·3	58·0	59·3	54·4	+ 1·0	+ 0·7	− 0·7	+ 1·7
8	59·6	62·1	63·5	59·9	− 0·9	+ 0·1	+ 0·1	+ 0·1
10	55·3	56·1	59·1	53·2	− 0·7	+ 0·5	− 0·3	− 0·2
11	54·9	57·0	57·0	55·1	− 0·6	− 0·6	+ 0·5	+ 0·3
12	55·2	60·5	60·5	56·5	− 0·6	+ 0·1	− 0·5	− 0·3
13	57·0	59·2	61·1	55·8	− 0·1	+ 0·1	+ 0·9	+ 0·8
14	59·8	60·8	64·1	58·0	+ 0·1	− 0·4	− 0·4	+ 0·1
15	57·3	57·1	56·2	52·9	− 0·1	+ 0·3	− 0·3	+ 0·1
17	57·5	60·3	59·9	57·5	+ 0·4	− 0·3	− 1·5	+ 0·2
18	58·3	53·2	55·1	53·1	+ 0·1	− 0·2	− 0·1	+ 0·4
19	54·0	55·7	56·2	53·1	− 0·6	− 0·5	+ 0·1	+ 0·3
20	54·4	56·1	55·4	59·2	− 0·6	+ 0·3	+ 0·7	− 0·2
21	54·0	56·2	54·1	53·1	− 1·1	+ 0·1	+ 0·2	+ 0·8
22	53·7	54·1	55·9	50·9	+ 0·3	+ 0·5	− 0·2	+ 0·2
24	53·4	56·8	57·8	56·8	− 0·2	− 0·4	+ 0·1	+ 0·1
25	53·0	55·1	55·1	52·4	+ 0·2	− 0·2	+ 0·1	+ 0·3
26	54·2	58·1	58·1	54·6	− 0·4	0·0	− 0·2	+ 0·1
27	58·0	60·7	57·2	55·1	+ 0·1	− 0·1	− 0·3	− 0·1
28	56·3	59·9	60·9	57·1	− 0·4	+ 0·3	0·0	+ 0·2
29	55·5	55·8	56·9	54·1	+ 0·5	− 0·8	+ 0·6	+ 0·3
31	57·9	59·7	60·8	58·1	+ 0·8	+ 0·8	+ 0·2	+ 0·9
Means	56·1	57·9	58·7	55·3	− 0·1	0·0	− 0·1	+ 0·3

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

SEPTEMBER.

Days of the Month.	Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°
1	64·9	70·2	71·3	61·9	−0·5	−0·6	−1·3	−0·4
2	69·3	70·3	71·1	63·4	+0·3	0·0	−0·6	−0·1
3	57·1	59·1	59·8	55·5	+1·4	0·0	+0·6	+0·4
4	59·4	61·2	61·9	60·3	−0·3	+0·5	+0·3	−0·2
5	61·3	63·3	62·3	55·2	−0·1	−0·4	+0·7	+0·7
7	52·7	56·4	56·0	53·1	−0·6	+1·0	−1·0	−0·2
8	56·9	59·2	59·2	56·3	+0·1	−0·7	−0·4	+0·1
9	58·1	52·1	51·3	48·1	+0·1	+0·4	−0·1	+0·6
10	49·2	51·7	49·1	53·7	−0·5	−0·1	−0·4	0·0
11	45·6	49·1	49·7	45·2	+0·1	+0·7	−0·6	+0·1
12	46·8	49·2	48·3	45·3	−0·7	+0·2	+0·2	+0·2
14	46·8	48·1	49·4	44·9	−0·2	+0·1	+0·4	+0·2
15	46·7	48·3	47·9	45·9	−0·1	+0·6	−0·4	+0·2
16	48·7	50·2	49·3	45·3	−0·3	+2·2	−0·1	+2·2
17	49·2	52·4	52·2	49·5	−1·0	+0·9	+0·2	+0·7
18	52·5	53·2	54·1	52·2	+0·2	−0·5	0·0	+0·2
19	53·9	55·2	55·7	58·2	−1·0	−0·2	−0·5	0·0
21	57·4	59·1	58·2	57·1	+0·3	−0·8	−0·2	+0·2
22	55·3	57·8	58·4	57·9	−0·6	−0·3	−0·4	+0·6
23	58·0	60·9	63·3	59·1	−0·7	−0·8	−0·8	−0·1
24	57·0	61·2	62·1	60·1	−0·5	−0·1	0·0	+0·5
25	59·9	60·2	60·1	55·2	0·0	+0·3	0·0	−0·3
26	53·9	59·2	60·5	54·0	−0·4	0·0	+0·5	+2·1
28	59·0	60·2	61·0	58·0	−0·5	−0·5	+0·4	+0·2
29	63·1	63·3	63·1	56·1	−0·4	−0·1	−0·3	+0·1
30	57·6	59·9	58·2	55·0	−0·8	−0·1	−0·1	+1·3
Means	55·4	57·3	57·4	54·1	−0·3	+0·1	−0·2	+0·4

OCTOBER.

Days of the Month.	Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°
1	57·3	61·2	60·4	57·9	−0·8	−0·3	−0·6	+0·2
2	53·3	54·4	56·0	57·6	−0·8	−0·4	+0·3	−0·2
3	59·1	56·4	53·8	53·7	+0·3	+0·7	+0·5	+0·1
5	58·4	55·2	55·1	51·4	−0·6	+0·1	−0·3	−0·2
6	53·2	59·4	60·4	53·6	−0·5	−0·7	−0·5	0·0
7	53·1	55·9	56·4	53·4	−0·4	−0·1	−0·2	+0·7
8	59·2	59·1	58·3	57·8	−0·5	−0·2	−0·4	0·0
9	49·7	50·1	49·1	44·9	−0·3	−0·2	−0·6	+0·1
10	43·0	48·1	48·6	45·0	−1·5	+0·3	+0·9	+2·0
12	57·0	56·9	56·1	52·1	+0·1	−0·8	−0·2	+0·4
13	47·8	49·3	49·8	48·3	−1·0	+0·1	−0·1	0·0
14	52·6	54·1	54·7	55·3	+0·5	+0·3	−0·1	−0·4
15	48·1	49·1	47·3	45·3	−0·4	−1·1	0·0	0·0
16	43·7	48·3	47·2	45·1	−1·0	−0·1	−0·5	0·0
17	46·8	48·1	49·1	47·0	+0·1	−0·4	+0·5	+0·3
19	48·3	52·1	51·3	51·2	−0·5	−0·1	−0·1	+0·1
20	51·5	51·2	51·2	49·4	+0·6	−0·3	0·0	+0·3
21	52·8	51·4	50·1	46·7	0·0	+0·1	0·0	+0·2
22	50·4	49·9	49·1	47·6	+0·2	0·0	−0·1	+0·2
23	45·1	46·2	45·5	44·3	−0·2	+0·1	+0·1	+0·6
24	42·8	49·2	50·2	51·9	+0·2	+0·3	+0·3	−0·3
26	53·3	52·0	48·7	50·8	0·0	−0·5	−0·4	+0·1
27	49·1	52·8	52·1	54·1	0·0	−0·3	+0·2	−0·3
28	50·1	46·9	46·1	46·3	+0·1	+0·1	0·0	+0·7
29	50·1	52·1	51·9	46·1	−0·8	−0·6	0·0	+0·1
30	47·0	50·1	46·6	42·4	+0·3	+0·4	−0·2	+0·2
31	43·0	46·1	49·1	48·3	0·0	−0·1	−0·8	+0·7
Means	50·6	52·1	51·6	49·9	−0·3	−0·1	−0·1	+0·2

NOVEMBER.

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

DECEMBER.

Days of the Month.	Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°
1	32·3	33·8	34·1	32·0	−0·2	0·0	+0·2	+0·3
2	30·0	33·4	34·0	28·8	+0·9	−0·1	−0·1	+0·9
3	33·2	38·1	38·1	39·4	−0·1	−0·2	+0·5	+0·4
4	42·7	42·1	40·0	34·1	+0·1	−0·3	+0·5	+0·2
5	30·6	30·7	30·4	29·1	−0·1	0·0	−0·2	0·0
7	37·9	38·4	43·1	39·9	−0·3	−0·3	+0·1	−0·4
8	40·2	44·0	44·1	42·6	−0·2	−0·4	−0·1	−0·1
9	46·0	50·3	45·9	44·0	+0·1	−0·6	+0·1	+0·2
10	44·1	45·0	45·1	43·1	−0·4	−0·3	−0·2	0·0
11	40·2	42·7	39·5	37·6	−0·3	+0·1	−0·1	−0·4
12	38·4	40·1	40·1	41·5	−0·2	−0·4	−0·4	−0·1
14	40·9	44·0	44·1	39·2	+0·5	−0·7	0·0	+1·9
15	39·0	41·1	40·1	38·1	+0·2	−0·9	+0·2	+0·3
16	38·5	39·7	40·1	38·2	−0·1	−0·2	−0·2	−0·2
17	39·6	43·0	43·0	42·1	−0·2	−0·4	+0·3	+0·6
18	39·8	40·8	41·3	41·0	+0·2	+0·6	−0·1	+0·2
19	39·1	39·1	38·9	37·9	−0·1	−0·1	0·0	0·0
21	38·9	42·1	45·1	43·1	−0·4	−0·3	0·0	+0·3
22	46·1	46·1	44·8	43·6	−0·1	−0·1	+0·2	−0·1
23	40·2	39·1	37·9	36·5	−0·3	+0·1	+0·1	+0·2
24	37·9	36·0	35·2	35·7	+0·2	+0·2	+0·3	+0·3
28	35·1	34·5	35·0	33·0	0·0	−0·2	+0·1	+0·1
29	28·0	28·9	28·2	28·4	−0·2	0·0	−0·1	−0·1
30	28·0	29·4	28·6	26·5	−0·2	−0·1	+0·1	−0·3
31	27·4	26·9	27·4	26·3	−0·1	−0·1	0·0	+0·2
Means	37·4	38·8	38·6	36·9	−0·1	−0·2	0·0	+0·2

READINGS of THERMOMETERS placed in a STEVENSON'S SCREEN near the ORDINARY STAND in the MAGNETIC PAVILION ENCLOSURE; and EXCESS of the READINGS above those of the corresponding THERMOMETERS on the ORDINARY STAND, in the YEAR 1903.

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

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

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

FEBRUARY.

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

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

MARCH.

Days of the Month.	Readings of Dry-Bulb Thermometers in a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of Thermometers on the ordinary stand, 4 ft. above the ground.						Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
1	49·0	36·3	...	...	...	...	−1·1	+0·6	...	...	...	...	...	...	...	...	...	...	...	...
2	50·4	35·2	41·9	46·0	50·2	47·0	−0·4	+0·7	0·0	−0·4	−0·4	−0·1	41·3	45·0	48·0	45·8	0·0	+0·2	−0·4	+0·2
3	47·0	42·0	42·6	43·3	45·8	43·3	−0·1	+0·4	+0·1	−0·3	−0·4	+0·6	42·0	40·4	39·8	40·0	0·0	0·0	−0·6	+0·6
4	54·4	35·9	44·0	51·5	54·0	47·6	−0·5	+0·5	−0·4	−0·1	−0·3	+0·4	42·8	47·7	50·8	44·7	−0·1	+0·1	+0·3	+0·6
5	50·4	41·9	45·9	47·6	45·7	42·2	+0·1	−0·1	−0·1	+0·1	−0·1	+0·2	45·3	45·4	42·6	40·0	−0·1	0·0	0·0	+0·3
6	48·0	34·4	39·0	45·7	47·2	39·0	−0·7	+0·4	+0·3	0·0	+0·2	+0·3	37·1	40·5	40·2	37·0	+0·2	−0·1	+0·3	+0·3
7	44·2	36·1	42·7	43·0	42·2	39·1	−1·3	+0·6	−0·2	−0·4	0·0	0·0	40·9	41·2	40·0	36·1	−0·1	+0·3	0·0	0·0
8	46·7	34·8	...	...	...	...	−0·3	+0·5	...	...	...	...	...	...	...	...	...	...	...	...
9	48·7	31·7	43·7	48·0	45·3	40·8	−1·0	+1·1	0·0	−0·3	−0·3	−0·2	40·5	42·8	42·0	40·0	−0·2	−0·1	−0·2	+0·1
10	44·4	40·8	42·9	43·9	43·1	41·8	−1·1	+0·4	−0·5	−0·5	−0·6	+0·4	41·8	42·0	42·0	40·3	−0·5	−0·4	−0·5	+0·1
11	50·3	30·6	40·7	48·1	50·0	39·2	−1·0	+1·1	+0·7	+1·1	−0·4	+0·4	38·8	42·6	42·3	37·6	+0·4	+0·9	−0·4	+0·3
12	54·3	33·3	44·6	50·8	51·3	40·0	−1·2	+1·1	+0·5	0·0	+0·2	0·0	40·8	44·0	44·2	38·0	−0·1	−0·1	+0·1	0·0
13	57·4	37·3	48·3	55·9	56·4	43·8	−0·3	+1·0	−0·2	−0·6	0·0	+0·9	44·0	47·8	46·9	40·7	−0·3	+0·3	0·0	+0·7
14	56·0	36·5	43·9	53·6	55·4	45·1	−1·8	+0·3	0·0	−0·7	0·0	+0·4	42·0	48·8	50·0	43·6	−0·4	+0·1	+0·3	+0·3
15	50·6	33·7	...	...	...	...	−1·3	+0·9	...	...	...	...	...	...	...	...	...	...	...	...
16	50·0	37·3	44·9	49·1	49·5	41·6	−0·9	+0·8	0·0	0·0	−0·4	+0·7	41·2	42·2	42·1	37·0	0·0	+0·1	+0·2	+0·7
17	49·3	37·2	46·3	48·8	47·1	48·9	−1·3	+0·9	−0·5	−1·1	−0·4	−0·1	43·0	45·2	45·3	48·0	−0·4	−0·6	−0·1	0·0
18	51·2	42·2	42·6	48·2	49·0	44·1	−0·1	0·0	−0·1	+0·4	−0·4	+0·2	39·8	40·7	40·0	40·6	+0·1	+0·9	−0·2	0·0
19	52·4	44·0	50·2	51·2	52·0	50·2	−0·4	+0·4	0·0	−0·4	−0·3	+0·2	46·5	47·0	48·4	47·4	0·0	−0·3	−0·2	+0·1
20	56·0	48·1	50·9	53·0	53·8	48·1	−1·2	+0·7	−0·2	−0·7	−0·4	+0·1	46·2	47·4	47·9	44·9	−0·4	−0·4	−0·3	+0·2
21	54·6	46·8	48·1	52·0	54·5	50·9	−1·2	+0·3	−0·1	−1·1	−0·3	+0·5	43·6	46·0	46·9	45·8	0·0	−0·9	−0·3	+0·8
22	60·8	47·3	...	...	...	...	−0·4	+0·8	...	...	...	...	...	...	...	...	...	...	...	...
23	59·0	48·4	55·8	58·2	53·7	55·0	−0·9	+0·2	0·0	−1·1	−0·3	+0·2	48·0	52·1	51·4	51·0	+0·1	−0·7	+0·2	+0·3
24	55·0	39·0	48·2	50·0	50·7	46·7	+0·1	+0·4	+0·1	−0·8	−0·5	+0·6	44·7	45·0	44·9	44·3	+0·3	−0·6	−0·4	+0·6
25	68·2	44·3	56·0	63·0	66·0	67·2	+0·2	+0·6	−0·5	−0·9	+0·1	−0·3	51·2	54·4	56·0	53·7	−0·1	+0·1	+0·4	0·0
26	68·1	45·2	51·9	52·9	55·2	46·9	+0·1	+0·7	+0·2	−0·7	−0·6	0·0	47·4	47·2	48·0	43·9	+0·4	−0·4	−0·2	+0·1
27	52·2	44·2	50·3	46·9	51·3	46·0	−1·5	+0·1	−0·6	0·0	−0·4	+0·2	48·1	44·8	45·5	43·4	−0·4	+0·1	0·0	+0·7
28	56·9	44·7	51·3	55·2	51·8	47·0	−1·0	+0·3	−0·2	−0·6	−0·2	+0·3	48·7	51·3	50·0	43·1	0·0	−0·3	+0·1	+0·5
29	55·4	41·3	...	...	...	...	−1·2	+0·5	...	...	...	...	...	...	...	...	...	...	...	...
30	51·3	44·2	49·1	48·3	50·3	46·4	−1·1	+0·2	−0·6	−0·1	−0·5	−0·8	44·8	42·8	43·9	43·2	+0·1	+0·2	+0·2	−0·3
31	51·8	41·5	48·5	50·2	51·2	47·1	−0·9	+0·1	−0·4	−0·5	+0·1	+0·8	44·2	45·0	46·5	44·5	−0·1	−0·2	+0·2	+1·0
Means	53·0	39·9	46·7	50·2	50·9	46·0	−0·8	+0·5	−0·1	−0·4	−0·3	+0·2	43·6	45·4	45·6	42·9	−0·1	−0·1	−0·1	+0·3

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

APRIL.

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

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

MAY.

Days of the Month.	Readings of Dry-Bulb Thermometers in a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of Thermometers on the ordinary stand, 4 ft. above the ground.						Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
1	53·6	44·9	49·6	50·3	51·5	48·9	−1·8	+0·7	−0·7	−0·4	−0·5	+0·3	48·0	49·1	48·8	46·8	− 0·7	− 0·3	− 0·2	+ 0·4
2	58·2	44·9	52·6	55·1	57·1	48·4	−2·7	+0·6	−0·7	−1·2	−1·9	+0·1	49·3	50·0	50·3	45·8	− 0·4	− 0·3	− 0·5	+ 0·5
3	53·0	47·3	...	...	...	...	−1·5	−0·1	...	...	...	...	...	...	...	...	...	...	...	...
4	62·4	47·4	52·1	56·0	62·0	51·7	−2·9	+0·2	−0·8	−1·0	−1·4	+0·9	51·1	52·7	54·5	49·0	− 0·6	− 0·6	− 0·2	+ 0·7
5	60·8	42·3	56·9	55·3	55·3	50·0	+0·2	+0·9	−1·6	−0·6	−0·5	−0·1	52·7	50·9	50·2	48·3	− 0·7	− 0·5	− 0·6	0·0
6	59·7	48·8	55·5	58·0	56·2	50·0	−2·5	+0·4	−0·1	0·0	−0·7	0·0	50·4	51·1	48·2	48·0	− 0·5	0·0	− 1·1	− 0·1
7	56·7	47·4	55·0	50·0	55·1	48·0	−2·2	0·0	−0·7	−0·7	−0·3	+0·4	50·5	48·1	49·7	46·0	− 0·8	− 0·3	0·0	+ 0·2
8	53·3	39·2	49·2	51·1	48·9	47·1	−0·8	+1·0	−1·0	−0·3	−0·3	−0·9	46·0	48·1	47·1	46·3	− 0·2	− 0·6	− 0·2	+ 0·1
9	56·0	44·8	51·7	53·7	52·5	45·1	−2·0	+0·5	−0·7	0·0	−0·2	+0·2	48·0	49·8	49·0	45·9	− 0·6	0·0	− 0·1	+ 0·3
10	55·1	39·9	...	...	...	...	−1·4	+0·6	...	...	...	...	...	...	...	...	...	...	...	...
11	51·3	44·6	45·2	46·8	48·4	45·4	−0·7	+0·2	−0·5	−0·2	−0·5	+0·1	44·0	44·9	46·1	44·5	− 0·4	− 0·3	− 0·5	0·0
12	52·2	40·2	45·4	48·1	51·6	43·0	−1·6	+0·1	−0·5	−0·6	−0·7	−0·7	40·6	41·5	42·7	38·0	− 0·3	− 0·3	− 0·2	− 0·2
13	57·6	32·2	52·9	55·8	54·2	50·0	−2·5	+0·9	+0·1	−0·4	0·0	+0·4	45·9	46·8	47·6	47·0	0·0	− 0·5	− 0·1	+ 0·1
14	58·6	47·2	55·8	57·4	56·8	52·7	−2·3	+0·4	0·0	−0·9	−0·7	+0·3	51·3	51·5	51·7	49·7	+ 0·1	− 0·5	− 0·5	+ 0·2
15	58·4	49·0	53·0	54·2	57·0	53·2	−2·3	+0·5	−0·2	−0·7	−0·7	−0·2	48·0	49·6	51·0	50·8	− 0·2	− 0·4	− 0·5	0·0
16	53·4	43·3	50·2	52·9	51·8	46·3	−2·5	0·0	−0·4	−0·8	−0·5	−0·1	46·8	47·0	46·3	45·3	− 0·6	− 0·7	− 0·8	− 0·2
17	53·2	44·1	...	...	...	...	−1·5	+0·1	...	...	...	...	...	...	...	...	...	...	...	..
18	53·5	40·4	46·7	50·2	53·1	47·2	−1·4	+0·5	−0·2	−0·6	−0·3	+0·5	42·9	45·3	47·2	43·3	− 0·4	− 0·1	− 0·2	0·0
19	64·0	36·2	55·7	61·0	59·6	50·9	−1·0	+0·8	+0·1	−0·9	−0·7	+0·4	47·4	48·4	50·7	46·9	0·0	− 0·9	− 0·6	+ 0·1
20	65·1	42·0	56·1	59·9	64·2	55·2	−2·1	+0·9	−0·4	−0·9	−0·2	+0·3	50·0	52·0	52·9	49·9	+ 0·1	− 0·9	+ 0·1	+ 0·2
21	70·0	47·8	58·5	66·7	67·7	56·7	−2·5	+0·5	−0·3	−0·4	−1·0	+0·4	52·2	56·9	59·4	52·5	− 0·4	+ 0·7	− 0·4	+ 0·5
22	76·3	50·9	69·0	75·1	75·7	63·2	−1·6	+0·7	−1·3	−0·5	−0·7	+0·4	58·9	60·9	60·2	56·4	− 0·3	− 0·2	− 1·1	+ 0·3
23	67·6	49·6	60·6	66·0	67·3	49·6	−0·9	+0·4	−0·4	−0·6	−0·1	+0·3	53·9	56·0	56·7	47·9	0·0	− 0·7	− 0·2	+ 0·1
24	62·0	44·2	...	...	...	...	−1·1	+0·3	...	...	...	...	...	...	...	...	...	...	...	...
25	66·5	38·3	56·1	65·5	65·8	52·0	−1·1	+0·2	−0·3	−0·6	−0·4	0·0	52·0	54·7	58·2	47·0	+ 0·3	− 0·4	+ 0·3	+ 0·1
26	68·7	45·9	60·7	66·0	67·9	54·9	−1·2	+0·4	−0·5	−0·7	+0·1	0·0	52·6	58·0	56·5	46·7	− 0·2	− 0·5	+ 0·5	+ 0·2
27	69·0	47·0	60·8	66·4	67·8	59·0	−1·1	+0·5	−0·3	−0·3	−0·5	0·0	55·3	56·1	56·1	55·7	− 0·7	+ 0·1	+ 0·3	0·0
28	64·7	55·5	61·1	57·5	64·6	56·1	−0·9	+0·1	+0·1	−0·4	−0·6	+0·3	57·0	57·2	58·6	55·3	+ 0·2	− 0·4	− 0·7	+ 0·2
29	70·9	51·5	58·9	68·6	67·7	58·0	−0·6	+0·2	−0·8	−0·2	−0·8	−0·1	56·0	62·8	61·4	56·0	− 0·7	+ 0·1	− 0·6	− 0·5
30	75·5	53·6	70·0	73·0	74·5	63·6	−2·0	+0·6	+0·1	−0·7	−0·7	+0·2	63·3	63·2	64·8	60·8	− 0·1	− 0·6	− 0·3	0·0
31	76·6	56·3	...	...	...	...	−1·3	+0·1	...	...	...	...	...	...	...	...	...	...	...	...
Means	61·4	45·4	55·4	58·5	59·8	51·8	−1·6	+0·4	−0·5	−0·6	−0·6	+0·1	50·5	52·0	52·5	48·8	− 0·3	− 0·4	− 0·3	+ 0·1

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

JUNE.

Days of the Month.	Readings of Dry-Bulb Thermometers in a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of Thermometers on the ordinary stand, 4 ft. above the ground.						Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h	9h	Noon.	15h	21h	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
1	80·5	51·1	...	...	...	...	−2·1	0·0	...	...	...	...	...	...	...	...	...	...	...	...
2	72·1	49·3	55·9	59·4	60·6	49·3	+0·4	+0·2	−0·3	−0·6	−0·8	+0·1	51·3	52·2	51·0	44·9	−0·2	0·0	−0·7	+0·1
3	54·7	44·1	49·0	50·7	53·1	47·6	−0·3	+0·2	−0·4	0·0	−0·4	0·0	44·5	45·3	46·7	43·7	−0·1	+0·1	−0·4	0·0
4	67·0	42·2	55·8	62·5	65·6	56·8	−0·9	+0·2	−0·8	−0·5	0·0	+0·1	49·7	53·0	55·9	52·5	−1·0	−0·2	+0·1	+0·1
5	67·2	46·4	62·2	64·0	61·3	55·0	+0·3	+0·7	−1·1	−0·3	−0·3	0·0	56·0	57·6	55·9	53·0	−0·9	0·0	−0·5	0·0
6	62·6	50·0	53·9	59·5	60·5	51·0	−0·5	+0·2	−0·7	−0·9	−0·3	+0·4	48·9	51·2	52·2	48·9	−0·8	−0·8	−0·3	−0·1
7	57·1	45·5	...	...	...	...	−0·8	+0·3	...	...	...	...	...	...	...	...	...	...	...	...
8	64·1	48·2	58·6	61·3	63·1	56·4	−0·8	0·0	−1·1	−0·2	−0·8	0·0	50·7	50·8	53·2	52·0	−0·7	−0·1	+0·7	+0·1
9	64·3	49·5	54·0	60·0	63·2	58·9	−0·8	+0·1	−0·5	−0·5	−0·2	+0·4	52·7	56·7	57·0	55·3	−0·4	−0·4	−0·4	+0·1
10	59·0	54·2	55·3	56·1	58·3	57·6	−1·5	+0·1	−0·5	−0·3	−1·4	0·0	55·0	55·8	57·0	56·0	−0·2	0·0	−1·3	−0·2
11	57·7	50·0	54·0	55·0	53·6	50·0	+0·1	−0·2	−0·1	−0·2	−0·1	−0·6	53·5	54·4	53·0	48·8	−0·2	−0·1	0·0	0·0
12	53·8	44·8	51·4	51·8	52·3	44·8	−1·0	0·0	−0·4	−0·5	−0·6	−0·2	46·4	46·1	47·2	42·0	−0·7	−0·5	+0·4	−0·3
13	59·1	38·1	55·6	54·8	51·3	48·0	−2·7	+1·0	−0·3	−0·2	+0·1	0·0	50·8	50·6	50·8	47·6	−0·2	−0·1	+0·1	+0·1
14	51·1	45·0	...	...	...	...	−0·1	+0·1	...	...	...	...	...	...	...	...	...	...	...	...
15	51·1	46·5	49·2	49·4	49·0	46·7	−0·4	+0·3	−0·6	−0·6	−0·5	−0·1	48·9	47·8	48·0	46·0	−0·4	−0·3	−0·5	−0·3
16	61·2	42·3	55·0	52·1	57·9	50·3	−0·7	+0·3	−0·1	−0·7	−1·6	−1·2	50·3	50·3	52·5	48·8	−0·2	−0·7	−1·2	−0·4
17	65·7	45·5	52·2	60·2	64·3	53·1	−1·3	+0·4	−0·3	−1·1	−0·6	−0·2	50·3	52·4	54·9	52·1	0·0	−1·1	−0·4	−0·1
18	59·0	42·3	53·1	56·9	57·2	51·3	−0·9	+1·0	−1·0	−0·4	0·0	−0·1	48·9	51·2	51·0	49·0	−0·5	+0·1	+0·1	−0·5
19	51·3	46·4	48·1	48·0	47·8	47·1	−0·1	+0·2	−0·2	−0·3	−0·1	0·0	46·0	47·3	47·3	46·9	0·0	−0·1	−0·1	0·0
20	51·3	46·2	48·8	51·1	50·9	48·3	−0·4	0·0	−0·1	−0·4	0·0	0·0	47·0	47·7	47·2	45·2	+0·3	0·0	0·0	+0·2
21	60·1	45·2	...	...	...	...	−1·0	+0·4	...	...	...	...	...	...	...	...	...	...	...	...
22	65·9	39·7	59·8	65·0	64·6	52·1	−0·9	+1·0	0·0	0·0	−0·1	+1·3	52·7	55·2	53·9	49·3	−0·5	+0·5	−0·1	+0·6
23	66·2	41·2	62·7	65·0	65·0	54·7	−1·5	+0·9	−0·7	−0·1	0·0	+0·1	54·9	55·3	56·5	53·0	+0·1	+0·2	+0·1	+0·3
24	66·4	53·6	59·1	63·6	64·7	57·3	−0·6	+0·4	−0·5	+0·2	−0·1	+0·3	55·3	57·2	57·9	56·1	−0·4	−0·3	−0·4	+0·4
25	73·0	50·2	58·6	63·0	70·6	60·7	−1·0	+1·0	−0·1	−1·3	−1·0	0·0	56·2	58·5	61·3	57·6	−0·2	−0·4	−0·5	−0·1
26	74·2	55·3	...	...	...	...	−2·1	+0·4	...	...	...	...	...	...	...	...	...	...	...	...
27	81·7	57·5	76·2	79·2	81·2	68·6	−1·6	+0·5	−0·5	−1·6	−2·1	+0·7	66·5	68·2	67·3	63·9	0·0	−0·5	−0·7	+1·0
28	82·5	61·0	...	...	...	...	−2·3	+1·5	...	...	...	...	...	...	...	...	...	...	...	..
29	72·0	55·5	64·4	69·3	70·1	62·3	−1·7	+0·3	−0·4	−1·8	+0·1	−0·1	57·0	58·0	59·3	55·2	−0·5	−1·3	−0·2	−0·2
30	71·4	54·5	66·8	66·3	68·9	63·6	−2·1	+0·3	−0·9	−1·1	−0·7	+0·9	56·8	57·1	57·4	56·7	−0·9	−0·1	−0·4	+0·7
Means	64·1	48·0	56·7	59·3	60·6	53·8	−1·0	+0·4	−0·5	−0·6	−0·5	+0·1	52·1	53·3	53·9	51·0	−0·4	−0·3	−0·3	+0·1

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

JULY.

Days of the Month.	Readings of Dry-Bulb Thermometers in a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of Thermometers on the ordinary stand, 4 ft. above the ground.						Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
1	76·1	53·9	65·3	71·1	75·0	63·8	−2·1	+0·7	−0·6	−0·9	−0·6	+0·5	57·9	60·9	62·4	58·8	− 0·1	− 0·5	− 0·5	+ 0·7
2	80·0	52·0	72·9	78·1	78·8	67·9	−0·9	+1·4	−0·3	−0·8	−0·6	−0·1	61·2	65·0	63·0	62·1	− 0·4	− 0·8	− 0·5	+ 0·3
3	70·0	58·2	65·0	66·7	67·3	60·0	−2·1	+0·1	−1·7	+0·2	−0·4	+0·6	58·7	55·7	55·8	52·7	− 1·0	+ 0·3	− 0·1	+ 0·6
4	69·6	51·1	62·7	65·9	68·0	60·3	−2·5	+0·5	0·0	+0·3	−1·1	−0·2	55·0	56·9	57·0	55·1	+ 0·5	+ 0·2	− 0·8	− 0·2
5	66·2	55·3	...	...	...	...	−2·7	+0·3	...	...	...	...	...	...	...	...	...	...	...	...
6	64·0	55·3	58·0	61·0	63·2	56·2	−2·5	0·0	−0·3	−0·2	−1·3	−0·1	51·0	51·8	53·3	48·0	+ 0·3	0·0	− 0·2	− 0·5
7	64·0	47·6	54·9	60·3	63·0	56·1	−1·3	+0·2	−0·9	−0·4	−0·6	−0·1	48·8	50·7	52·0	49·1	− 1·0	+ 0·4	− 0·2	0·0
8	69·0	43·4	58·8	67·2	67·8	66·1	−2·4	+1·2	−0·6	−1·5	−0·6	−0·6	51·5	56·1	59·0	61·1	− 0·2	− 0·6	− 0·3	− 0·6
9	77·1	63·5	69·6	73·3	75·1	63·5	−2·1	+0·5	−0·8	−0·5	−1·2	+0·5	62·3	63·4	65·0	61·1	− 0·4	− 0·4	− 0·6	+ 0·2
10	83·2	57·9	72·6	81·1	81·6	68·7	−2·9	+0·7	−0·6	−1·2	−1·0	+0·3	65·6	69·3	70·5	65·1	− 0·2	− 0·5	− 0·4	+ 0·3
11	84·2	60·2	75·0	80·1	84·2	70·2	−3·3	+1·0	−0·3	−0·9	−2·0	+0·5	66·4	69·7	71·0	65·2	− 0·4	− 0·6	− 0·4	+ 0·4
12	70·2	60·2	...	...	...	...	+0·5	+0·5	...	...	...	...	...	...	...	...	...	...	...	...
13	63·4	49·9	59·0	61·7	62·2	58·0	−2·2	+0·4	−0·3	−0·6	−1·3	+0·1	51·3	51·0	53·4	51·0	− 0·3	− 0·6	− 0·4	+ 0·6
14	67·6	47·1	61·2	64·6	64·6	60·1	−3·4	+1·1	−1·2	−0·5	−0·6	+0·2	53·3	54·6	55·2	55·1	− 0·2	− 0·4	− 0·3	+ 0·2
15	75·0	53·3	64·0	70·9	73·4	61·8	−2·1	+0·2	−0·8	+0·1	−1·1	+0·3	56·7	60·6	60·8	57·2	− 0·3	+ 0·5	− 0·9	+ 0·5
16	66·6	55·2	63·9	61·8	64·4	59·2	−1·9	+0·8	+0·1	−0·6	−1·6	−0·1	60·8	57·9	58·5	58·1	+ 0·5	− 0·4	− 1·5	− 0·2
17	72·3	55·6	65·0	70·3	71·0	62·0	−2·2	+0·8	+0·2	−1·7	−1·4	0·0	59·5	60·9	62·1	58·9	+ 0·3	− 1·0	− 0·8	+ 0·1
18	70·0	56·8	59·0	60·1	66·4	58·8	−2·8	+0·4	−1·4	−0·8	−1·0	0·0	57·8	58·2	59·1	57·6	− 1·1	− 0·5	− 1·2	+ 0·1
19	64·8	55·3	...	...	...	...	−2·2	+0·7	...	...	...	...	...	...	...	...	...	...	...	...
20	60·0	55·4	57·4	58·2	58·6	57·0	−0·1	+0·2	−0·2	−0·2	−0·3	0·0	55·5	56·1	56·0	54·8	0·0	− 0·1	0·0	+ 0·2
21	70·3	46·8	60·9	66·5	68·1	59·5	−2·2	+1·1	−0·9	−0·7	−1·1	−0·2	55·2	58·7	60·9	57·8	− 0·5	− 0·2	− 0·5	− 0·1
22	71·8	59·4	63·8	66·8	71·0	62·0	−3·1	+0·1	−0·6	−0·4	−1·6	+0·1	60·8	61·6	63·2	60·0	− 0·6	− 0·1	− 1·1	+ 0·1
23	67·3	56·0	64·1	64·0	66·8	56·0	−3·3	−0·2	−0·4	−0·3	+0·2	−0·3	59·9	60·8	60·6	55·8	− 0·2	− 0·2	+ 0·2	− 0·2
24	70·0	54·2	55·6	65·0	68·6	60·0	−2·3	−0·1	−0·3	−0·9	−1·0	+0·3	54·2	58·6	59·4	54·7	− 0·1	− 0·3	− 0·6	+ 0·3
25	71·4	48·3	66·1	71·4	68·3	61·4	−1·9	+1·1	+0·2	−0·4	−1·4	−0·1	57·1	60·6	59·0	57·2	− 0·3	− 0·5	− 1·0	− 0·1
26	69·3	57·5	...	...	...	...	−2·2	+0·2	...	...	...	...	...	...	...	...	...	...	...	...
27	65·6	50·0	64·6	60·7	60·0	60·0	−2·1	+1·0	−0·9	−0·5	−0·5	−0·1	58·2	57·5	59·2	58·3	− 0·5	− 0·5	− 0·5	− 0·1
28	63·7	56·1	60·4	62·2	61·3	59·8	−2·3	+0·5	−0·4	−1·2	+0·2	+0·1	56·2	57·8	59·9	59·2	+ 0·3	− 0·8	+ 0·3	+ 0·2
29	64·8	54·0	59·8	59·4	54·0	55·1	−2·1	−0·2	−0·2	−1·3	−0·4	0·0	56·1	56·1	52·0	52·2	− 0·2	− 0·3	0·0	+ 0·2
30	64·6	50·8	58·9	62·6	59·9	57·3	−1·3	+0·6	−0·3	−0·1	−0·2	−0·2	54·0	56·3	54·7	53·7	− 0·3	0·0	− 0·2	+ 0·2
31	61·0	53·8	57·0	57·9	60·3	59·2	−0·7	+0·4	−0·4	−0·2	−1·0	+0·2	52·9	53·8	56·1	55·2	+ 0·4	+ 0·1	+ 0·2	+ 0·2
Means	69·5	54·0	62·8	66·3	67·5	60·7	−2·1	+0·5	−0·5	−0·6	−0·9	+0·1	57·0	58·5	59·2	56·9	− 0·2	− 0·3	− 0·5	+ 0·1

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

AUGUST.

Days of the Month.	Readings of Dry-Bulb Thermometers in a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of Thermometers on the ordinary stand, 4 ft. above the ground.						Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	Maximum.	Minimum.	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h	9^h	Noon.	15^h	21^h
d	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
1	70·0	54·2	62·0	65·6	69·3	61·1	−1·4	+0·2	−0·3	−1·1	−1·2	+0·3	58·7	62·2	64·6	57·1	+0·4	−0·6	−0·6	+0·3
2	68·5	55·5	...	...	...	...	−2·0	+0·2	...	...	...	...	...	...	...	...	...	...	...	...
3	70·0	55·5	...	...	...	...	−1·9	+0·2	...	...	...	...	...	...	...	...	...	...	...	...
4	70·0	54·2	62·3	64·8	69·8	60·9	−1·6	+0·7	−0·6	−0·5	−0·9	+0·3	59·2	62·6	65·5	56·4	−0·3	−0·5	−0·5	+0·7
5	67·0	53·5	61·9	63·8	66·1	58·8	−1·7	+0·3	−0·5	−0·1	−0·6	+0·5	57·1	55·7	56·0	54·9	−0·4	−0·1	−0·1	+0·5
6	68·3	50·4	60·4	64·1	67·0	59·7	−2·6	+0·4	−0·4	−0·2	+0·1	+0·2	52·9	54·3	56·0	54·7	−0·2	0·0	+0·7	+0·4
7	71·8	45·2	63·2	67·7	71·8	55·2	−3·1	+1·0	−0·1	−0·6	−0·1	+0·3	55·0	57·3	60·1	53·1	−0·3	0·0	+0·1	+0·4
8	76·0	49·3	69·0	73·9	74·7	64·6	−1·5	+1·1	−0·9	−0·6	−0·3	+0·2	60·0	62·0	63·0	60·0	−0·5	0·0	−0·4	+0·2
9	69·6	55·4	...	...	...	...	−1·9	+0·4	...	...	...	...	...	...	...	...	...	...	...	...
10	65·0	53·2	59·0	63·0	63·0	57·1	−1·6	0·0	−0·7	−0·2	−1·2	+0·2	55·1	55·2	59·2	53·8	−0·9	−0·4	−0·2	+0·4
11	64·3	46·2	60·8	63·7	58·3	55·0	−2·8	+0·9	−0·2	−1·6	+0·2	+0·2	55·4	56·3	56·8	55·0	−0·1	−1·3	+0·3	+0·2
12	70·0	54·2	59·3	65·2	69·2	59·9	−1·4	+0·3	−0·2	−1·1	−0·9	+0·2	55·8	59·4	60·3	57·0	0·0	−1·0	−0·7	+0·2
13	73·0	50·2	61·8	70·0	71·1	56·9	−0·5	+1·2	−0·1	+0·3	+0·2	+0·6	56·9	58·1	60·3	55·3	−0·2	−1·0	+0·1	+0·3
14	70·0	51·4	61·4	62·9	68·2	58·9	−0·9	+1·0	−0·3	0·0	−1·1	−0·1	59·5	61·3	63·3	57·8	−0·2	+0·1	−1·2	−0·1
15	64·5	56·2	61·6	62·2	63·1	56·8	−1·5	+0·2	−0·2	−0·9	−0·6	+0·1	57·1	56·6	55·7	52·9	−0·3	−0·2	−0·8	+0·1
16	65·3	51·8	...	...	...	...	−1·7	+0·4	...	...	...	...	...	...	...	...	...	...	...	...
17	70·3	54·1	59·8	67·8	67·9	60·3	−3·1	+0·3	−0·3	0·0	−1·7	0·0	57·0	60·7	60·0	57·4	−0·1	+0·1	−1·4	+0·1
18	63·0	54·9	61·9	59·4	61·3	55·2	−1·1	+0·3	−1·8	−0·3	−0·6	−0·1	57·5	53·0	55·0	52·3	−0·7	−0·4	−0·2	−0·4
19	65·3	52·6	55·9	60·0	62·3	57·0	−0·5	+0·3	−0·4	0·0	−0·6	+0·3	54·1	56·0	55·8	52·9	−0·5	−0·2	−0·3	+0·1
20	62·4	52·2	59·7	61·1	57·7	60·6	−1·8	+0·3	−0·1	−0·6	−0·1	−0·2	54·7	55·6	54·5	59·2	−0·3	−0·2	−0·2	−0·2
21	66·0	52·3	57·7	64·0	64·0	56·1	−1·8	+0·1	−1·0	−0·6	−0·2	−0·5	53·6	55·7	53·9	51·9	−1·5	−0·4	0·0	−0·4
22	68·2	48·3	60·8	62·0	67·7	55·0	−1·7	+0·7	−0·2	−0·3	−1·5	+0·7	53·1	53·2	55·1	51·0	−0·3	−0·4	−1·0	+0·3
23	67·0	45·1	...	...	...	...	−1·3	+0·8	...	...	...	...	...	...	...	...	...	...	...	...
24	64·8	49·1	54·3	58·2	61·6	56·9	−1·1	+0·9	−0·6	−1·0	−0·3	0·0	53·3	56·7	57·6	56·7	−0·3	−0·5	−0·1	0·0
25	58·2	52·4	54·7	57·0	57·2	55·7	−1·0	+0·2	−0·1	−0·3	−0·1	+0·6	52·8	55·0	54·8	52·6	0·0	−0·3	−0·2	+0·5
26	65·8	47·3	59·3	65·3	65·2	59·0	−1·6	+0·9	−0·2	−0·1	−0·6	0·0	54·2	57·9	58·1	54·8	−0·4	−0·2	−0·2	+0·3
27	69·4	55·2	63·6	69·0	66·7	57·6	−1·6	+0·4	−0·3	−1·1	0·0	+0·9	58·0	60·1	57·2	56·2	+0·1	−0·7	−0·3	+1·0
28	68·5	55·5	59·0	66·4	66·6	59·8	−1·7	+0·3	−0·7	−0·3	−0·9	+0·1	56·1	59·7	60·7	57·1	−0·6	+0·1	−0·2	+0·2
29	65·8	58·0	61·0	63·0	65·2	58·0	−1·1	+0·6	−0·4	−0·6	−0·6	+0·3	55·4	56·1	56·3	54·1	+0·4	−0·5	0·0	+0·3
30	65·3	49·9	...	...	...	...	−1·8	+1·0	...	...	...	...	...	...	...	...	...	...	...	...
31	70·6	58·0	63·0	67·1	69·8	58·3	−1·2	−0·1	−0·5	−0·6	+0·1	+0·2	57·1	58·3	60·4	57·2	0·0	−0·6	−0·2	0·0
Means	67·5	52·3	60·5	64·3	65·8	58·2	−1·6	+0·5	−0·4	−0·5	−0·5	+0·2	56·0	57·6	58·4	55·3	−0·3	−0·4	−0·3	+0·2

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

SEPTEMBER.

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

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

OCTOBER.

Days of the Month.	Readings of Dry-Bulb Thermometers in a Stevenson's Screen, 4 ft. above the ground.						Excess above readings of Thermometers on the ordinary stand, 4 ft. above the ground.						Readings of the Wet-Bulb Thermometer in a Stevenson's Screen, 4 ft. above the ground.				Excess above readings of the Thermometer on the ordinary stand, 4 ft. above the ground.			
	Maximum.	Minimum.	9h	Noon.	15h	21h	Maximum.	Minimum.	9h	Noon.	15h	21h	9h	Noon.	15h	21h	9h	Noon.	15h	21h
d	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
1	66·6	51·3	58·6	65·5	63·0	59·1	−1·9	+0·9	−0·7	−0·3	0·0	+0·2	57·4	61·2	61·0	57·8	−0·7	−0·3	0·0	+0·1
2	64·6	52·1	57·8	61·0	62·9	59·6	−0·4	+0·6	+0·1	−0·3	−0·2	−0·1	54·0	54·3	55·4	58·3	−0·1	−0·5	−0·3	+0·5
3	65·6	53·2	61·8	62·4	63·2	55·0	−1·6	+0·9	0·0	−0·6	−0·2	+0·3	58·9	54·9	53·0	53·7	+0·1	−0·8	−0·3	+0·1
4	63·3	54·2	...	...	...	...	−0·6	+0·9	...	...	...	...	...	...	...	...	...	...	...	...
5	62·0	54·2	60·9	57·1	59·7	54·8	−0·3	+0·8	0·0	−0·3	0·0	+0·1	59·0	55·0	55·1	51·5	0·0	−0·1	−0·3	−0·1
6	63·0	53·3	55·7	60·3	62·0	59·0	−0·1	+0·5	−0·3	−0·5	−0·3	+0·2	53·5	59·9	60·9	53·9	−0·2	−0·2	0·0	+0·3
7	62·9	53·2	56·8	61·2	61·9	53·9	−0·1	+0·8	−0·2	−0·7	−0·8	+0·1	54·0	55·9	56·9	52·8	+0·5	−0·1	+0·3	+0·1
8	63·3	53·8	61·2	61·3	59·1	58·1	−1·5	+0·5	−0·6	−0·4	−0·5	−0·1	59·3	59·0	58·3	57·7	−0·4	−0·3	−0·4	−0·1
9	58·6	46·9	53·5	56·2	50·6	46·9	+0·1	+0·6	+0·1	+0·7	−0·6	+0·1	49·8	51·1	49·0	45·0	−0·2	+0·8	−0·7	+0·2
10	54·9	39·8	46·9	52·0	52·6	44·0	−1·9	+0·6	+0·2	−0·3	−0·1	+0·3	44·0	47·6	47·8	43·4	−0·5	−0·2	+0·1	+0·4
11	54·6	43·3	...	...	...	..	−0·2	+1·0	...	...	...	...	...	...	...	...	...	...	...	...
12	62·0	52·0	58·0	61·7	59·4	52·0	−0·6	+0·4	−0·3	0·0	−0·3	+0·3	57·0	57·7	55·9	51·9	+0·1	0·0	−0·4	+0·2
13	58·0	51·0	53·2	55·0	56·2	51·0	−0·2	+0·5	+0·2	+0·2	−0·5	+0·1	48·5	49·4	49·3	48·4	−0·3	+0·2	−0·6	+0·1
14	59·1	48·3	55·7	58·1	57·3	56·7	−0·9	+1·1	0·0	−0·3	−0·4	0·0	52·2	53·4	54·6	55·2	+0·1	−0·4	−0·2	−0·5
15	57·9	48·1	52·0	55·3	53·2	48·1	0·0	+0·3	−0·3	−0·9	+0·1	+0·2	48·1	49·4	47·3	45·5	−0·4	−0·8	0·0	+0·2
16	56·4	44·0	48·0	54·0	53·6	48·4	−0·7	+0·7	+0·1	−0·3	−0·1	−0·2	44·7	48·1	47·8	45·1	0·0	−0·3	+0·1	0·0
17	54·2	46·9	49·8	51·9	54·2	50·3	−0·3	+0·6	0·0	−0·4	−0·1	0·0	46·8	48·2	48·4	46·7	+0·1	−0·3	−0·2	0·0
18	51·6	45·2	...	...	...	...	−0·6	+0·8	...	...	...	...	...	...	...	...	...	...	...	...
19	54·7	43·6	49·3	53·6	54·1	52·0	−0·8	+0·4	−0·4	0·0	−0·4	−0·1	48·6	52·1	51·1	51·0	−0·2	−0·1	−0·3	−0·1
20	54·4	49·4	52·9	53·0	53·1	51·1	−0·6	+0·6	−0·2	−0·7	−0·4	0·0	50·8	51·0	51·0	49·1	−0·1	−0·5	−0·2	0·0
21	55·6	47·5	55·0	52·8	50·4	48·1	−1·0	−0·3	+0·1	+0·1	−0·3	−0·3	53·0	51·5	49·8	46·5	+0·2	+0·2	−0·3	0·0
22	54·7	44·4	51·0	52·8	51·5	49·1	−0·5	+0·3	−0·4	−0·1	−0·3	0·0	50·0	49·9	49·1	47·3	−0·2	0·0	−0·1	−0·1
23	52·0	42·8	48·2	50·7	49·2	46·4	−1·0	+0·6	+0·4	0·0	−0·3	+0·2	45·6	46·3	45·1	43·8	+0·3	+0·2	−0·3	+0·1
24	55·4	37·2	46·4	53·2	54·6	53·0	−0·3	+0·7	+0·7	−0·2	−0·1	−0·2	43·2	49·0	50·0	52·0	+0·6	+0·1	+0·1	−0·2
25	58·8	50·2	...	...	...	...	+0·1	+0·9	...	...	...	...	...	...	...	...	...	...	...	...
26	57·3	47·9	57·1	53·9	51·3	51·7	−1·0	−1·0	−0·2	−0·6	−0·1	+0·2	53·1	51·9	48·9	50·9	−0·2	−0·6	−0·2	+0·2
27	56·2	45·3	50·6	55·8	54·8	55·9	−0·6	+0·1	−0·2	−0·2	−0·1	+0·2	48·8	52·9	51·9	54·8	−0·3	−0·2	0·0	+0·4
28	56·4	43·2	50·3	48·1	51·6	49·0	+0·5	+0·2	−0·4	−0·3	−0·1	+0·3	49·5	46·8	46·1	46·0	−0·5	0·0	0·0	+0·4
29	57·7	46·3	53·2	57·2	56·0	47·3	+0·1	+0·8	+0·1	−0·4	+0·3	+0·2	50·9	53·1	52·6	46·4	0·0	+0·4	+0·7	+0·4
30	55·0	43·6	50·2	54·6	53·0	43·6	−0·9	+0·7	+0·1	−0·1	+0·1	+0·2	46·8	49·6	46·6	42·6	+0·1	−0·1	−0·2	+0·4
31	54·1	39·3	46·6	52·3	52·0	48·3	+0·4	+1·1	+0·3	−0·4	−0·7	+0·7	43·9	46·0	49·2	48·1	+0·9	−0·2	−0·7	+0·5
Means	58·1	47·5	53·4	56·0	55·6	51·6	−0·6	+0·6	−0·1	−0·3	−0·2	+0·1	50·8	52·0	51·6	49·8	0·0	−0·2	−0·2	+0·1

READINGS OF THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*continued.*

NOVEMBER.

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

READINGS of THERMOMETERS in a STEVENSON'S SCREEN in the MAGNETIC PAVILION ENCLOSURE—*concluded.*

DECEMBER.

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

(I.)—Readings 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.

	1903.											
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	52·33	51·62	50·92	50·24	49·77	49·61	49·77	50·47	51·60	52·46	53·04	53·16
2	52·27	51·60	50·90	50·21	49·79	49·58	49·79	50·53	51·60	52·47	53·08	53·18
3	52·27	51·59	50·86	50·19	49·74	49·58	49·82	50·55	51·62	52·51	53·08	53·17
4	52·29	51·57	50·80	50·18	49·77	49·56	49·82	50·57	51·68	52·51	53·08	53·18
5	52·28	51·56	50·77	50·16	49·77	49·59	49·87	50·60	51·71	52·52	53·11	53·15
6	52·24	51·52	50·78	50·07	49·76	49·59	49·85	50·63	51·73	52·56	53·15	53·18
7	52·23	51·50	50·77	50·07	49·75	49·59	49·88	50·67	51·77	52·60	53·12	53·18
8	52·15	51·50	50·74	50·06	49·75	49·56	49·88	50·72	51·78	52·61	53·15	53·17
9	52·15	51·46	50·72	50·05	49·77	49·56	49·92	50·75	51·80	52·61	53·16	53·18
10	52·16	51·40	50·69	50·02	49·73	49·57	49·92	50·76	51·85	52·61	53·18	53·18
11	52·11	51·37	50·66	50·00	49·70	49·56	49·94	50·78	51·87	52·64	53·17	53·18
12	52·10	51·37	50·66	50·03	49·70	49·58	49·97	50·85	51·91	52·66	53·18	53·16
13	52·07	51·32	50·64	50·03	49·68	49·58	49·99	50·88	51·93	52·68	53·22	53·18
14	52·02	51·31	50·62	50·01	49·69	49·57	50·02	50·91	51·97	52·69	53·21	53·15
15	51·95	51·30	50·57	49·98	49·68	49·54	50·04	50·91	52·00	52·72	53·19	53·14
16	51·97	51·28	50·56	49·93	49·68	49·56	50·06	50·97	52·02	52·74	53·17	53·10
17	51·96	51·25	50·54	49·91	49·65	49·60	50·08	50·96	52·06	52·77	53·16	53·10
18	51·95	51·22	50·53	49·95	49·65	49·60	50·10	51·05	52·09	52·77	53·18	53·12
19	51·93	51·20	50·50	49·91	49·66	49·60	50·13	51·09	52·11	52·80	53·19	53·09
20	51·90	51·16	50·48	49·90	49·65	49·60	50·14	51·13	52·16	52·85	53·22	53·05
21	51·90	51·12	50·44	49·91	49·66	49·63	50·17	51·17	52·18	52·86	53·23	53·07
22	51·88	51·11	50·40	49·88	49·66	49·63	50·20	51·20	52·18	52·85	53·22	53·06
23	51·85	51·08	50·38	49·87	49·62	49·64	50·22	51·24	52·22	52·88	53·22	53·04
24	51·84	51·05	50·39	49·86	49·61	49·65	50·24	51·26	52·28	52·90	53·25	53·00
25	51·85	51·04	50·34	49·86	49·61	49·68	50·27	51·30	52·30	52·90	53·23	53·01
26	51·81	51·00	50·35	49·85	49·58	49·70	50·30	51·32	52·32	52·92	53·23	52·97
27	51·77	50·97	50·33	49·84	49·62	49·72	50·33	51·37	52·35	52·97	53·23	52·94
28	51·75	50·92	50·32	49·84	49·58	49·73	50·36	51·41	52·37	53·00	53·20	52·92
29	51·71		50·31	49·82	49·55	49·71	50·37	51·43	52·42	53·02	53·22	52·92
30	51·71		50·27	49·81	49·57	49·71	50·42	51·50	52·43	53·03	53·17	52·90
31	51·68		50·26		49·62		50·45	51·55		53·02		52·87
Means	52·00	51·30	50·56	49·98	49·68	49·61	50·07	50·98	52·01	52·75	53·17	53·09

The mean of the twelve monthly values is 51°·27.

(II.)—Readings 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.

	1903.											
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	50·26	48·40	47·70	47·38	47·60	48·84	51·46	54·49	56·06	56·30	55·69	53·62
2	50·17	48·34	47·69	47·39	47·70	48·83	51·53	54·54	56·05	56·28	55·68	53·59
3	50·10	48·31	47·66	47·43	47·63	48·93	51·53	54·62	56·09	56·28	55·60	53·47
4	50·16	48·26	47·66	47·44	47·69	48·98	51·60	54·66	56·08	56·24	55·52	53·41
5	50·13	48·23	47·62	47·43	47·68	49·16	51·70	54·69	56·08	56·23	55·47	53·26
6	50·08	48·17	47·58	47·43	47·70	49·24	51·74	54·77	56·05	56·27	55·42	53·23
7	50·00	48·11	47·62	47·39	47·70	49·23	51·83	54·86	56·09	56·28	55·32	53·18
8	49·82	48·11	47·63	47·42	47·73	49·38	51·90	54·93	56·10	56·23	55·31	53·05
9	49·81	48·07	47·62	47·38	47·79	49·51	52·10	54·97	56·11	56·21	55·24	53·00
10	49·81	48·02	47·59	47·43	47·74	49·62	52·19	55·03	56·16	56·18	55·20	52·91

(II.)—Readings 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.*

	1903.											
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
11	49·72	48·00	47·58	47·47	47·72	49·68	52·29	55·03	56·16	56·20	55·12	52·82
12	49·66	47·95	47·61	47·50	47·80	49·73	52·37	55·14	56·22	56·20	55·08	52·70
13	49·62	47·90	47·59	47·51	47·80	50·00	52·47	55·21	56·22	56·22	55·06	52·62
14	49·57	47·89	47·54	47·53	47·90	50·09	52·60	55·22	56·21	56·21	55·00	52·41
15	49·47	47·82	47·53	47·57	47·88	50·12	52·72	55·22	56·28	56·20	54·87	52·35
16	49·47	47·84	47·52	47·53	47·98	50·39	52·78	55·33	56·30	56·21	54·77	52·21
17	49·43	47·80	47·49	47·56	48·01	50·57	52·94	55·36	56·38	56·19	54·71	52·12
18	49·40	47·82	47·47	47·62	48·07	50·58	53·02	55·40	56·39	56·18	54·63	52·07
19	49·37	47·80	47·46	47·69	48·14	50·62	53·12	55·38	56·39	56·17	54·57	51·94
20	49·28	47·70	47·44	47·73	48·17	50·81	53·21	55·47	56·44	56·16	54·55	51·78
21	49·26	47·78	47·46	47·73	48·22	50·91	53·36	55·54	56·41	56·14	54·52	51·73
22	49·22	47·80	47·42	47·71	48·30	50·98	53·47	55·60	56·39	56·10	54·41	51·64
23	49·12	47·77	47·42	47·73	48·29	51·06	53·56	55·66	56·38	56·08	54·35	51·57
24	49·07	47·74	47·36	47·73	48·31	51·04	53·67	55·70	56·42	56·02	54·30	51·41
25	49·02	47·73	47·36	47·73	48·32	51·09	53·86	55·71	56·43	55·93	54·21	51·41
26	48·92	47·71	47·35	47·72	48·34	51·12	53·90	55·79	56·36	55·91	54·11	51·24
27	48·83	47·70	47·31	47·71	48·38	51·20	54·01	55·82	56·30	55·86	54·02	51·16
28	48·73	47·66	47·32	47·72	48·46	51·24	54·11	55·86	56·32	55·82	53·90	51·13
29	48·63		47·36	47·72	48·51	51·27	54·18	55·86	56·36	55·85	53·88	51·08
30	48·58		47·35	47·71	48·61	51·31	54·31	55·92	56·31	55·81	53·71	50·92
31	48·51		47·37		48·74		54·37	55·98		55·70		50·91
Means	49·46	47·94	47·51	47·57	48·03	50·18	52·84	55·28	56·25	56·12	54·81	52·26
The mean of the twelve monthly values is 51°·52.												

(III.)—Readings 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.

	1903.											
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	48·46	46·01	46·82	47·64	47·51	52·13	55·40	59·53	59·48	58·50	55·57	51·42
2	48·26	46·09	46·72	47·68	47·72	52·34	55·76	59·46	59·50	58·50	55·47	51·41
3	48·13	46·12	46·68	47·69	47·82	52·61	55·99	59·42	59·51	58·53	55·37	51·26
4	48·06	46·12	46·62	47·78	48·02	52·88	56·27	59·37	59·55	58·50	55·21	50·92
5	47·69	46·10	46·59	47·77	48·11	53·23	56·52	59·30	59·64	58·50	55·13	50·70
6	47·68	46·04	46·62	47·73	48·32	53·41	56·78	59·33	59·66	58·51	55·09	50·56
7	47·62	46·00	46·67	47·72	48·44	53·47	57·01	59·36	59·80	58·54	54·91	50·37
8	47·51	46·04	46·66	47·70	48·52	53·68	57·20	59·41	59·83	58·42	54·84	50·04
9	47·60	46·06	46·64	47·70	48·79	53·82	57·43	59·37	59·82	58·40	54·64	49·89
10	47·79	46·10	46·60	47·80	48·94	53·90	57·59	59·31	59·79	58·30	54·57	49·71
11	47·73	46·20	46·53	47·81	49·02	54·09	57·70	59·36	59·72	58·31	54·40	49·24
12	47·78	46·34	46·46	47·97	49·17	54·21	57·73	59·46	59·72	58·26	54·29	49·17
13	47·76	46·46	46·46	47·98	49·24	54·41	57·90	59·44	59·61	58·06	54·17	49·16
14	47·67	46·56	46·40	48·00	49·38	54·69	58·12	59·52	59·47	57·97	54·07	49·02
15	47·41	46·61	46·36	47·93	49·37	54·91	58·33	59·60	59·36	57·80	53·96	49·00

(III.)—Readings 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.*

1903.

Days of the Month	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
16	47·38	46·72	46·33	47·88	49·50	54·72	58·41	59·63	59·20	57·68	53·88	48·91
17	47·18	46·60	46·34	47·82	49·56	54·66	58·58	59·62	59·09	57·53	53·72	48·87
18	46·97	46·64	46·36	47·70	49·69	54·49	58·63	59·59	58·93	57·31	53·60	48·92
19	46·75	46·68	46·35	47·68	49·80	54·39	58·71	59·62	58·78	57·28	53·42	48·84
20	46·33	46·60	46·39	47·64	49·86	54·43	58·77	59·61	58·66	57·17	53·33	48·78
21	46·28	46·67	46·37	47·63	49·92	54·40	58·92	59·63	58·51	57·00	53·14	48·74
22	46·09	46·73	46·51	47·56	50·04	54·37	58·97	59·62	58·40	56·82	52·81	48·61
23	45·92	46·60	46·51	47·51	50·08	54·29	58·99	59·60	58·34	56·67	52·62	48·63
24	45·66	46·63	46·69	47·49	50·25	54·17	59·27	59·58	58·37	56·58	52·51	48·51
25	45·74	46·72	46·71	47·49	50·42	54·18	59·36	59·59	58·37	56·49	52·38	48·59
26	45·66	46·73	46·96	47·45	50·61	54·28	59·46	59·60	58·35	56·24	52·30	48·46
27	45·65	46·70	47·08	47·41	50·91	54·46	59·52	59·53	58·30	56·11	52·22	48·42
28	45·69	46·68	47·23	47·42	51·10	54·60	59·50	59·46	58·41	55·90	52·04	48·38
29	45·75		47·36	47·48	51·34	54·73	59·62	59·37	58·48	55·82	51·84	48·36
30	45·87		47·46	47·52	51·60	55·00	59·70	59·37	58·45	55·75	51·52	48·18
31	45·99		47·57		51·88		59·57	59·40		55·61		48·12
Means	46·97	46·41	46·68	47·69	49·51	54·03	58·12	59·49	59·10	57·45	53·77	49·33

The mean of the twelve monthly values is 52°·38.

(IV.)—Readings 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.

1903.

Days of the Month	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	44·62	43·56	44·74	46·61	46·61	55·07	59·29	60·61	60·41	58·91	53·00	47·18
2	44·01	43·47	44·30	46·42	47·21	55·51	59·67	60·52	60·67	58·86	52·96	46·70
3	43·83	43·09	44·19	46·21	47·38	55·89	59·97	60·60	60·97	58·81	52·91	46·11
4	44·10	42·71	44·07	46·28	47·72	55·91	60·38	60·69	61·30	58·70	52·87	45·41
5	44·00	42·80	43·90	46·32	47·96	55·80	60·48	60·76	61·28	58·59	52·62	45·12
6	44·67	43·03	44·10	46·10	48·36	55·73	60·59	60·80	61·28	58·52	52·31	45·11
7	44·82	43·09	44·21	46·24	48·61	55·81	60·52	60·82	61·16	58·45	51·97	44·70
8	45·02	43·37	44·01	46·41	48·84	55·93	60·39	60·74	60·70	58·13	51·82	44·32
9	44·96	43·82	43·78	46·32	49·01	55·91	60·31	60·76	60·50	58·10	51·47	44·37
10	45·02	44·18	43·58	46·40	49·09	56·00	60·63	60·92	60·42	57·83	51·30	44·68
11	45·05	44·62	43·51	46·36	48·87	55·95	61·11	61·04	60·06	57·35	51·10	44·74
12	44·82	44·98	43·29	46·58	49·11	55·86	61·50	61·00	59·61	56·82	51·20	44·84
13	44·21	45·01	43·42	46·62	48·95	55·73	61·82	60·91	59·00	56·50	51·30	44·80
14	43·48	44·96	43·44	46·38	48·99	55·29	61·74	60·71	58·48	56·46	51·40	44·67
15	42·67	44·58	43·62	45·98	49·09	54·52	61·70	60·73	58·20	56·13	51·42	44·92
16	42·24	44·70	43·81	45·57	49·45	54·26	61·50	60·71	57·83	56·09	51·04	44·72
17	41·70	44·40	43·79	45·28	49·63	54·13	61·65	60·61	57·68	55·70	50·36	44·58
18	41·22	44·17	43·86	45·13	49·63	54·08	61·54	60·58	57·42	55·32	49·83	44·73
19	40·81	43·88	44·13	44·79	49·58	54·11	61·62	60·53	57·22	55·02	49·29	44·71
20	40·47	43·50	44·39	44·61	49·58	54·23	61·43	60·46	57·37	54·85	48·92	44·56

(IV.)—Readings 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.*

	1903.											
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
21	40·72	43·93	44·62	44·82	49·81	53·97	61·37	60·27	57·52	54·82	48·43	44·62
22	40·90	44·52	45·09	44·77	50·43	53·86	61·16	60·26	57·61	54·70	48·31	44·52
23	41·09	44·80	45·30	45·08	51·00	53·98	61·23	60·18	57·76	54·74	48·40	44·80
24	41·10	45·00	45·77	45·00	51·60	54·29	61·39	60·00	58·05	54·16	48·63	44·76
25	41·50	44·81	45·89	45·00	52·15	54·77	61·54	59·93	58·30	53·83	48·90	44·85
26	41·98	44·67	46·20	45·09	52·38	55·81	61·31	59·70	58·50	53·61	48·70	44·52
27	42·52	44·62	46·54	45·18	52·67	56·22	61·40	59·60	58·50	53·82	48·39	44·38
28	43·08	44·58	46·72	45·51	53·00	57·10	61·22	59·63	58·53	53·63	47·92	44·13
29	43·42		46·75	45·83	53·50	58·00	61·10	59·80	58·65	53·71	47·94	43·90
30	43·41		46·69	46·33	53·90	58·78	61·11	60·03	58·77	53·61	47·65	43·20
31	43·47		46·66		54·38		60·76	60·14		53·32		43·00
Means	43·06	44·10	44·66	45·77	49·95	55·42	61·01	60·45	59·12	56·10	50·41	44·76

The mean of the twelve monthly values is 51°·23.

(V.)—Readings 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.

	1903.											
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	37·7	41·0	47·8	47·9	50·0	61·2	64·2	60·7	63·2	58·7	51·6	39·1
2	42·7	38·0	43·3	45·0	52·0	60·0	65·3	61·3	66·0	57·7	51·2	37·3
3	45·2	40·3	44·2	44·1	50·0	55·8	65·1	61·9	63·0	59·2	51·7	37·8
4	42·8	45·8	43·2	48·0	52·0	56·1	63·4	61·8	62·1	58·0	47·1	42·0
5	46·9	45·0	45·7	45·8	53·0	59·1	62·8	61·0	62·8	58·4	47·2	38·0
6	46·7	46·0	43·0	47·6	52·3	58·0	63·0	60·0	59·0	59·4	48·8	37·0
7	47·1	45·0	43·3	48·1	50·1	57·0	60·0	63·1	58·0	61·0	47·0	39·2
8	43·7	48·5	42·3	46·0	50·0	57·9	60·1	67·0	59·7	58·0	46·9	42·0
9	45·3	48·8	44·8	46·0	52·4	57·8	65·2	62·8	60·0	55·4	48·2	49·6
10	46·1	48·0	43·7	46·1	49·0	56·0	67·0	61·7	56·6	51·2	47·2	44·0
11	41·7	47·1	42·1	48·0	49·1	57·1	68·8	60·0	56·9	52·2	50·0	42·0
12	38·1	46·9	42·2	47·0	48·1	54·3	66·3	60·2	55·7	55·8	48·8	41·0
13	36·2	43·7	44·0	44·0	50·0	54·2	62·0	67·8	53·2	53·9	50·7	43·0
14	34·6	43·0	44·0	43·7	52·1	51·9	62·0	62·6	54·0	57·4	50·6	43·0
15	34·6	45·8	43·5	43·0	52·0	53·0	63·8	60·0	53·3	54·2	46·0	42·2
16	32·4	43·0	45·6	42·8	49·4	53·3	63·0	59·2	54·0	51·0	44·0	41·2
17	33·0	42·0	45·1	45·7	48·0	53·3	63·6	60·7	53·6	51·0	44·0	42·0
18	35·2	40·0	45·5	42·2	49·8	54·0	63·4	60·2	54·2	51·0	43·0	42·0
19	39·7	43·0	47·2	42·8	51·2	53·0	64·0	59·1	56·0	51·2	42·0	42·0
20	40·0	47·1	48·1	45·0	53·9	51·2	60·8	59·0	58·2	52·5	41·1	41·0
21	38·6	49·0	47·4	45·6	55·9	51·8	61·2	59·1	58·2	53·9	45·9	42·4
22	41·2	50·1	50·0	44·0	59·0	53·9	63·6	58·7	58·3	52·3	46·0	45·0
23	40·3	47·0	50·1	45·0	58·8	56·0	64·3	58·7	58·8	50·6	47·8	43·7
24	41·7	43·6	48·4	44·1	56·0	57·0	61·0	58·1	59·3	48·1	48·2	41·1
25	44·9	48·7	50·1	49·0	55·0	58·6	61·5	57·9	61·5	52·0	43·0	42·2

(V.)—Readings 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.*

	1903.											
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
26	46·2	45·1	50·0	45·0	57·0	61·1	62·2	57·8	58·5	53·7	44·2	40·0
27	46·9	47·0	49·0	47·1	57·4	64·5	60·8	60·0	58·0	51·8	46·2	40·0
28	45·7	43·0	50·2	48·2	59·0	66·9	61·0	60·0	59·0	52·0	45·9	38·8
29	43·0		47·6	52·3	58·8	64·8	60·2	60·7	60·9	51·0	44·2	38·0
30	45·2		47·0	52·5	61·1	63·4	60·0	60·0	59·6	50·6	40·0	35·2
31	44·0		47·3		60·9		59·0	61·4		49·0		34·5
Means	41·5	45·1	46·0	46·1	53·3	57·1	62·9	60·7	58·4	53·9	46·6	40·8

The mean of the twelve monthly values is 51°·03.

(VI.)—Readings 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.

	1903.											
Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	35·3	42·1	48·3	48·0	52·3	72·9	71·9	66·0	75·8	64·4	51·7	35·1
2	46·4	37·8	46·0	43·9	54·9	60·4	77·0	65·4	78·8	60·7	53·8	32·2
3	48·1	43·8	43·3	48·3	52·7	53·6	69·0	66·6	65·2	62·8	52·1	39·0
4	45·2	46·2	49·6	50·9	55·1	63·0	67·8	65·8	69·6	61·1	44·9	44·3
5	52·3	46·2	47·8	47·3	57·2	66·8	63·9	63·3	66·9	59·7	47·2	32·0
6	51·6	46·2	43·9	53·7	57·2	59·1	68·7	64·2	58·0	60·4	50·5	33·2
7	48·2	50·0	42·6	51·1	53·3	58·2	62·2	67·4	62·8	62·0	45·2	39·8
8	40·8	52·6	43·2	49·1	52·7	63·3	67·8	72·0	64·9	62·2	46·3	46·1
9	47·7	53·7	48·1	47·1	56·2	57·0	74·0	68·4	62·0	55·1	52·4	50·5
10	46·1	51·0	44·4	53·0	51·3	56·0	79·7	64·7	58·9	51·3	51·0	48·2
11	36·2	49·4	45·0	53·3	48·6	55·8	80·7	64·1	55·9	51·7	51·1	43·3
12	33·8	49·5	49·3	47·7	49·4	53·8	67·0	64·9	55·4	57·0	50·2	41·2
13	30·2	40·7	54·0	44·8	56·2	56·8	62·0	68·0	54·8	54·2	53·0	46·2
14	30·8	45·2	50·3	44·5	56·3	50·1	66·1	62·7	53·7	58·0	51·2	44·2
15	31·1	46·2	47·8	43·6	54·0	50·7	71·1	62·3	55·8	54·8	43·2	43·0
16	29·1	43·4	49·1	44·1	54·1	53·0	64·0	63·0	55·4	52·3	38·0	42·0
17	30·2	43·3	48·3	42·7	48·0	58·9	70·3	65·7	60·7	52·2	41·2	42·4
18	37·2	42·3	47·1	46·1	50·3	57·7	64·8	60·4	60·6	50·9	41·5	41·5
19	39·1	50·3	51·4	45·3	60·0	49·7	65·1	59·3	61·8	53·1	40·2	41·2
20	41·1	53·9	53·3	53·0	55·4	50·1	59·8	62·2	63·0	53·8	41·2	39·0
21	39·1	49·8	52·1	47·0	65·6	53·8	67·2	61·8	63·3	54·4	49·9	42·3
22	43·5	51·8	57·8	46·8	73·3	62·2	67·0	63·7	59·1	53·3	50·1	47·0
23	40·0	47·2	57·3	46·1	66·7	65·0	67·0	64·0	62·4	51·4	51·5	41·0
24	46·0	46·8	49·7	46·2	60·0	62·8	61·7	58·3	62·8	51·7	46·7	39·6
25	47·8	50·0	61·1	52·1	65·0	65·1	69·1	57·3	64·8	55·8	41·8	39·1
26	51·0	43·7	53·3	41·6	66·2	72·0	63·1	64·3	61·7	54·2	44·4	38·2
27	51·0	50·2	49·3	53·6	66·1	79·5	63·2	68·2	62·0	54·8	49·4	37·7
28	45·8	40·0	55·2	54·8	60·8	80·3	63·3	65·1	63·9	49·8	48·3	37·7
29	45·1		51·0	56·2	68·0	71·1	59·0	63·2	67·7	54·2	38·0	32·5
30	47·7		49·1	56·5	73·0	68·3	63·0	63·7	64·4	53·6	35·4	32·6
31	44·7		50·8		68·3		59·0	68·3		49·0		29·7
Means	42·0	46·9	49·7	48·6	58·3	60·9	67·0	64·3	62·4	55·5	46·7	40·1

The mean of the twelve monthly values is 53°·53.

Abstract of the Changes of the Direction of the Wind, as derived from the Records of Osler's Anemometer in the Year 1903.

(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 0ʰ to 24ʰ.

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
January.					
d h	d h				
1. 3	1. 4	W.S.W.	S.W.		22½
1. 16	1. 16½	S.W.	S.S.W.		22½
1. 18	1. 18½	S.S.W.	S.		22½
2. 11	2. 12½	S.	S.W.	45	
2. 21	2. 21½	S.W.	W.S.W.	22½	
3. 2½	3. 3½	W.S.W.	S.W.		22½
3. 12½	3. 13½	S.W.	W.S.W.	22½	
3. 18½	3. 19½	W.S.W.	S.W.		22½
4. 3½	4. 4	S.W.	W.S.W.	22½	
4. 15	4. 15½	W.S.W.	S.W.		22½
4. 19½	4. 20¾	S.W.	E.		135
5. 2	5. 2½	E.	S.E.	45	
5. 6	5. 7½	S.E.	W.S.W.	112½	
5. 12	5. 14	W.S.W.	S.W.		22½
7. 11½	7. 12	S.W.	W.S.W.	22½	
8. 5	8. 5½	W.S.W.	S.W.		22½
8. 10½	8. 11½	S.W.	S.E.		90
8. 13½	8. 14¼	S.E.	E.S.E.		22½
8. 21¾	8. 22	E.S.E.	S.	67½	
9. 15½	9. 16	S.	S.S.W.	22½	
10. 0	10. 0½	S.S.W.	S.W.	22½	
10. 10½	10. 11	S.W.	W.S.W.	22½	
10. 17½	10. 17¾	W.S.W.	S.W.		22½
10. 23	10. 23¼	S.W.	N.E.		180
11. 6¼	11. 6½	N.E.	N.N.E.		22½
12. 10½	12. 11½	N.N.E.	N.E.	22½	
12. 16	12. 17	N.E.	N.N.E.		22½
13. 5	13. 6½	N.N.E.	N.E.	22½	
13. 12	13. 12½	N.E.	E.N.E.	22½	
13. 17	13. 17½	E.N.E.	N.E.		22½
14. 7	14. 9	N.E.	E.	45	
14. 15½	14. 16	E.	E.N.E.		22½
14. 19	14. 20	E.N.E.	E.S.E.	45	
15. 0	15. 0½	E.S.E.	E.		22½
15. 8½	15. 9¼	E.	E.N.E.		22½
15. 10¼	15. 11¾	E.N.E.	E.S.E.	45	
16. 17	16. 19	E.S.E.	E.		22½
17. 11½	17. 12	E.	E.S.E.	22½	
20. 9¼	20. 9¾	E.S.E.	N.E.		67½
20. 11¼	20. 12½	N.E.	E.S.E.	67½	
20. 15½	20. 16	E.S.E.	E.		22½
21. 2	21. 3	E.	E.S.E.	22½	
21. 10½	21. 11¼	E.S.E.	W.S.W.	135	
21. 12¼	21. 12½	W.S.W.	S.W.		22½
21. 13¾	21. 14	S.W.	S.E.		90
21. 23½	21. 23¾	S.E.	S.S.E.	22½	
22. 1½	22. 2	S.S.E.	S.	22½	
22. 6	22. 6½	S.	S.S.W.	22½	
22. 22	22. 23¼	S.S.W.	N.N.W.	135	
23. 1	23. 3	N.N.W.	W.S.W.		90
Jan.—*cont.*					
d h	d h				
23. 9½	23. 10	W.S.W.	W.	22½	
23. 16	23. 17½	W.	S.W.		45
27. 16	27. 16½	S.W.	S.S.W.		22½
27. 20½	27. 21	S.S.W.	W.S.W.	45	
28. 0	28. 0¼	W.S.W.	N.W.	67½	
28. 2¼	28. 2¾	N.W.	S.W.		90
28. 11	28. 11½	S.W.	W.S.W.	22½	
30. 23	30. 23½	W.S.W.	S.W.		22½
31. 4	31. 4½	S.W.	S.S.W.		22½
			Sums	1237½	1282½
February.					
1. 2½	1. 3	S.S.W.	S.W.	22½	
1. 4½	1. 5	S.W.	W.S.W.	22½	
1. 16	1. 16½	W.S.W.	S.W.		22½
1. 21	1. 22	S.W.	W.S.W.	22½	
2. 1	2. 3	W.S.W.	N.N.W.	90	
2. 7	2. 8	N.N.W.	N.	22½	
2. 13¾	2. 14	N.	N.N.W.		22½
2. 18½	2. 19	N.N.W.	N.W.		22½
2. 21¾	2. 22	N.W.	W.N.W.		22½
2. 23	2. 23½	W.N.W.	W.S.W.		45
5. 3	5. 4	W.S.W.	S.W.		22½
5. 15	5. 17	S.W.	S.S.W.		22½
6. 3½	6. 4	S.S.W.	S.		22½
6. 12¼	6. 12½	S.	S.S.W.	22½	
6. 15½	6. 16	S.S.W.	S.W.	22½	
8. 18	8. 20	S.W.	W.S.W.	22½	
9. 10	9. 12	W.S.W.	W.	22½	
9. 15	9. 16	W.	W.S.W.		22½
10. 15	10. 16	W.S.W.	S.W.		22½
11. 7	11. 7½	S.W.	W.S.W.	22½	
11. 20½	11. 21½	W.S.W.	W.	22½	
12. 4	12. 4½	W.	W.S.W.		22½
12. 7½	12. 8½	W.S.W.	W.	22½	
12. 11¼	12. 11½	W.	W.N.W.	22½	
12. 13½	12. 13¾	W.N.W.	N.W.	22½	
12. 16	12. 16¼	N.W.	N.N.W.	22½	
12. 19½	12. 20½	N.N.W.	N.	22½	
13. 2	13. 2¼	N.	N.N.E.	22½	
13. 10	13. 10½	N.N.E.	S.W.		157½
13. 12	13. 12¼	S.W.	W.	45	
13. 15	13. 15¼	W.	W.N.W.	22½	
13. 17	13. 18	W.N.W.	N.W.	22½	
13. 19½	13. 19¾	N.W.	W.S.W.		67½
Feb.—*cont.*					
d h	d h				
14. 8½	14. 9½	W.S.W.	W.	22½	
14. 16½	14. 17	W.	W.N.W.	22½	
14. 21¼	14. 21½	W.N.W.	W.		22½
15. 0½	15. 2	W.	N.W.	45	
15. 6¼	15. 6½	N.W.	W.N.W.		22½
15. 8	15. 8¼	W.N.W.	W.		22½
15. 9¾	15. 10¼	W.	N.W.	45	
15. 12	15. 12¼	N.W.	N.N.W.	22½	
15. 18¼	15. 19	N.N.W.	N.E.	67½	
15. 23	15. 23¼	N.E.	E.N.E.	22½	
16. 2½	16. 3½	E.N.E.	E.	22½	
16. 9¼	16. 9½	E.	E.S.E.	22½	
16. 20	16. 21	E.S.E.	S.E.	22½	
17. 2¼	17. 2½	S.E.	S.S.E.	22½	
17. 4½	17. 5	S.S.E.	S.	22½	
17. 10	17. 11	S.	S.W.	45	
17. 15½	17. 16	S.W.	S.S.W.		22½
18. 2	18. 2½	S.S.W.	S.E.		67½
18. 10¼	18. 10½	S.E.	S.	45	
18. 12	18. 12¼	S.	S.S.W.	22½	
19. 4½	19. 5	S.S.W.	S.W.	22½	
20. 4½	20. 5	S.W.	W.S.W.	22½	
20. 13½	20. 14	W.S.W.	S.W.		22½
20. 22½	20. 23	S.W.	W.S.W.	22½	
21. 17½	21. 18	W.S.W.	W.	22½	
21. 21½	21. 22½	W.	W.S.W.		22½
22. 5	22. 5½	W.S.W.	S.W.		22½
23. 0¼	23. 0½	S.W.	W.S.W.	22½	
23. 2¼	23. 2½	W.S.W.	S.W.		22½
23. 8	23. 9½	S.W.	W.S.W.	22½	
24. 3	24. 5	W.S.W.	S.S.W.		45
24. 11¾	24. 12	S.S.W.	S.W.	22½	
25. 3	25. 3½	S.W.	W.S.W.	22½	
25. 11	25. 11½	W.S.W.	S.W.		22½
25. 16½	25. 17½	S.W.	S.S.W.		22½
26. 6½	26. 8	S.S.W.	W.S.W.	45	
26. 16½	26. 17	W.S.W.	S.W.		22½
26. 19	26. 19½	S.W.	S.S.W.		22½
27. 4½	27. 6½	S.S.W.	W.S.W.	45	
27. 12	27. 13½	W.S.W.	S.W.		22½
27. 23¼	27. 23½	S.W.	E.N.E.		157½
28. 2½	28. 3	E.N.E.	N.E.		22½
28. 5½	28. 6	N.E.	E.N.E.	22½	
28. 8	28. 13½	E.N.E.	W.S.W.		180
28. 16	28. 16¼	W.S.W.	S.W.		22½
28. 18	28. 18¼	S.W.	W.S.W.	22½	
28. 22½	28. 23	W.S.W.	S.W.		22½
			Sums	1327½	1305

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.
				°	°
March.					
d h	d h				
1. 2	1. 2½	S.W.	S.S.W.		22½
1. 16½	1. 17	S.S.W.	N.W.	112½	
1. 17¾	1. 21	N.W.	W.S.W.		67½
2. 2	2. 2½	W.S.W.	S.W.		22½
2. 4½	2. 5½	S.W.	S.		45
2. 8	2. 8¼	S.	S.S.W.	22½	
2. 14½	2. 15½	S.S.W.	S.W.	22½	
2. 18½	2. 19	S.W.	W.S.W.	22½	
3. 7	3. 9¼	W.S.W.	N.N.W.	90	
3. 15¾	3. 16	N.N.W.	N.W.		22½
3. 21	3. 21¼	N.W.	W.		45
4. 0	4. 1½	W.	W.S.W.		22½
4. 5	4. 5½	W.S.W.	S.S.W.		45
4. 10	4. 10½	S.S.W.	S.W.	22½	
4. 14½	4. 15½	S.W.	W.S.W.	22½	
4. 20	4. 20½	W.S.W.	S.W.		22½
5. 1¼	5. 1½	S.W.	S.S.W.		22½
5. 6	5. 8	S.S.W.	W.S.W.	45	
5. 12	5. 13¼	W.S.W.	W.N.W.	45	
5. 14¾	5. 15	W.N.W.	W.		22½
5. 16¾	5. 17	W.	N.W.	45	
5. 18¼	5. 19¼	N.W.	W.S.W.		67½
6. 18¼	6. 18½	W.S.W.	S.W.		22½
7. 0½	7. 1	S.W.	S.S.W.		22½
7. 10¼	7. 10½	S.S.W.	S.W.	22½	
7. 12½	7. 12¾	S.W.	W.S.W.	22½	
7. 14½	7. 16½	W.S.W.	N.W.	67½	
7. 18	7. 20½	N.W.	W.		45
8. 5	8. 5½	W.	W.S.W.		22½
8. 8¾	8. 10¾	W.S.W.	N.N.W.	90	
8. 19	8. 20¾	N.N.W.	S.W.		112½
8. 21½	8. 21¾	S.W.	S.		45
9. 8	9. 9½	S.	S.S.W.	22½	
9. 16	9. 17	S.S.W.	S.		22½
10. 8½	10. 9	S.	S.S.W.	22½	
10. 18¼	10. 18½	S.S.W.	W.S.W.	45	
10. 22½	10. 23	W.S.W.	S.W.		22½
11. 9¾	11. 10¼	S.W.	W.S.W.	22½	
11. 12¼	11. 12½	W.S.W.	S.W.		22½
11. 17	11. 17½	S.W.	S.S.W.		22½
11. 21½	11. 21¾	S.S.W.	S.		22½
12. 9	12. 10½	S.	S.S.W.	22½	
12. 12	12. 12¼	S.S.W.	S.W.	22½	
12. 18½	12. 18¾	S.W.	S.S.W.		22½
12. 20½	12. 21	S.S.W.	S.		22½
12. 22¼	12. 22½	S.	S.S.E.		22½
13. 4	13. 5½	S.S.E.	S.	22½	
13. 9½	13. 10	S.	S.S.W.	22½	
13. 18½	13. 19	S.S.W.	S.S.E.		45
14. 1¾	14. 2½	S.S.E.	E.N.E.		90
14. 11	14. 11¼	E.N.E.	S.S.E.	90	
14. 12	14. 12¼	S.S.E.	S.	22½	
14. 14¼	14. 14¾	S.	W.S.W.	67½	
14. 17¼	14. 17½	W.S.W.	S.W.		22½
15. 4¾	15. 5½	S.W.	S.S.W.		22½
15. 10	15. 10½	S.S.W.	S.W.	22½	
15. 13¾	15. 14	S.W.	S.S.W.		22½
16. 0	16. 0½	S.S.W.	S.		22½
16. 3½	16. 4½	S.	S.S.W.	22½	

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
March—*cont.*					
d h	d h				
16. 7	16. 8½	S.S.W.	W.S.W.	45	
16. 15¼	16. 15½	W.S.W.	W.	22½	
16. 18	16. 19	W.	W.S.W.		22½
16. 21	16. 22½	W.S.W.	S.S.W.		45
18. 4¼	18. 4½	S.S.W.	S.W.	22½	
18. 6	18. 6¼	S.W.	W.	45	
18. 9¼	18. 9½	W.	W.N.W.	22½	
18. 12	18. 12¼	W.N.W.	W.		22½
18. 17	18. 18¼	W.	S.W.		45
19. 12	19. 12¼	S.W.	W.S.W.	22½	
19. 15	19. 15½	W.S.W.	S.W.		22½
19. 21½	19. 23	S.W.	S.S.E.		67½
20. 3	20. 5	S.S.E.	S.W.	67½	
21. 5½	21. 7	S.W.	S.S.W.		22½
22. 9	22. 10½	S.S.W.	S.W.	22½	
22. 17	22. 17½	S.W.	S.S.W.		22½
22. 20	22. 21	S.S.W.	S.W.	22½	
23. 4½	23. 5½	S.W.	S.S.W.		22½
23. 17	23. 17½	S.S.W.	S.W.	22½	
23. 22¼	23. 22¾	S.W.	N.N.W.	112½	
24. 0	24. 6	N.N.W.	S.S.W.		135
24. 9½	24. 10	S.S.W.	S.W.	22½	
24. 13	24. 14	S.W.	S.S.W.		22½
24. 19	24. 20	S.S.W.	S.		22½
25. 1	25. 2	S.	S.S.E.		22½
25. 4	25. 6	S.S.E.	S.	22½	
25. 13½	25. 13¾	S.	S.S.E.		22½
25. 15	25. 15½	S.S.E.	S.	22½	
25. 21	25. 22½	S.	S.S.W.	22½	
26. 12¼	26. 12½	S.S.W.	S.W.	22½	
26. 16	26. 22	S.W.	S.E.		90
27. 3½	27. 4½	S.E.	S.	45	
27. 8	27. 8½	S.	S.W.	45	
27. 10	27. 11¼	S.W.	N.W.	90	
27. 13½	27. 15½	N.W.	W.S.W.		67½
27. 17½	27. 18	W.S.W.	S.W.		22½
27. 23	27. 23½	S.W.	S.S.W.		22½
28. 3½	28. 4	S.S.W.	S.W.	22½	
28. 15¾	28. 16	S.W.	W.S.W.	22½	
29. 9	29. 9¼	W.S.W.	W.	22½	
29. 12½	29. 12¾	W.	W.S.W.		22½
29. 17¾	29. 19	W.S.W.	S.W.		22½
30. 5¾	30. 6¼	S.W.	W.S.W.	22½	
30. 8	30. 8½	W.S.W.	W.	22½	
30. 20½	30. 21½	W.	W.N.W.	22½	
31. 1½	31. 1¾	W.N.W.	W.		22½
31. 3½	31. 4	W.	W.N.W.	22½	
31. 7	31. 8½	W.N.W.	N.N.W.	45	
31. 18¾	31. 21½	N.N.W.	W.S.W.		90
			Sums	2002½	1980

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
April.					
d h	d h				
1. 12	1. 12¼	W.S.W.	S.W.		22½
1. 20½	1. 21	S.W.	W.S.W	22½	
1. 22	1. 23	W.S.W.	N.N.W.	90	
2. 1¾	2. 2	N.N.W.	N.W.		22½
2. 5½	2. 6½	N.W.	N.N.W.	22½	
2. 12	2. 13¼	N.N.W.	N.	22½	
3. 1½	3. 4	N.	N.W.		45
3. 6¼	3. 6½	N.W.	W.S.W.		67½
3. 17	3. 17½	W.S.W.	S.W.		22½
4. 6	4. 6½	S.W.	W.S.W.	22½	
4. 17½	4. 18	W.S.W.	N.N.W.	90	
4. 20	4. 20½	N.N.W.	N.W.		22½
4. 22¾	4. 23	N.W.	W.N.W.		22½
5. 7¾	5. 8	W.N.W.	N.W.	22½	
5. 19	5. 19¼	N.W.	N.N.W.	22½	
5. 20¾	5. 21¼	N.N.W.	W.N.W.		45
5. 23	6. 2½	W.N.W.	S.W.		67½
6. 9	6. 9½	S.W.	W.S.W.	22½	
6. 15	6. 15¼	W.S.W.	S.W.		22½
6. 18¾	6. 20	S.W.	W.	45	
6. 22	6. 22½	W.	W.S.W.		22½
7. 5	7. 6	W.S.W.	W.	22½	
7. 9¼	7. 10	W.	N.W.	45	
7. 11¼	7. 11½	N.W.	W.N.W.		22½
7. 14½	7. 15	W.N.W.	N.W.	22½	
8. 0½	8. 1	N.W.	N.N.W.	22½	
8. 10	8. 11	N.N.W.	N.	22½	
8. 18½	8. 18¾	N.	N.N.E.	22½	
8. 21½	8. 21¾	N.N.E.	N.		22½
9. 8	9. 9	N.	N.N.E.	22½	
9. 20½	9. 20¾	N.N.E.	E.	67½	
9. 23½	9. 23¾	E.	S.E.	45	
10. 0¼	10. 0½	S.E.	S.	45	
10. 8½	10. 9	S.	W.S.W.	67½	
10. 10	10. 12¼	W.S.W.	N.N.W.	90	
10. 16¼	10. 16½	N.N.W.	E.S.E.	135	
10. 18	10. 18½	E.S.E.	S.S.W.	90	
10. 21	10. 21¼	S.S.W.	S.W.	22½	
11. 4½	11. 5	S.W.	W.S.W.	22½	
11. 9½	11. 10	W.S.W.	W.	22½	
11. 22½	12. 0	W.	N.N.W.	67½	
12. 3	12. 3¼	N.N.W.	N.W.		22½
12. 4¾	12. 5	N.W.	W.N.W.		22½
12. 7½	12. 8½	W.N.W.	N.N.W.	45	
12. 10¼	12. 10½	N.N.W.	N.W.		22½
12. 13	12. 13¼	N.W.	W.N.W.		22½
12. 15½	12. 15¾	W.N.W.	N.N.W.	45	
12. 20	12. 20¼	N.N.W.	N.W.		22½
12. 21½	12. 21¾	N.W.	W.N.W.		22½
13. 1¼	13. 1½	W.N.W.	W.		22½
13. 7¼	13. 8½	W.	N.W.	45	
13. 20¼	13. 20½	N.W.	W.N.W.		22½
13. 23	13. 23½	W.N.W.	W.S.W.		45
14. 6½	14. 9	W.S.W.	N.W.	67½	
14. 18	14. 19¼	N.W.	W.S.W.		67½
15. 5	15. 8	W.S.W.	N.N.W.	90	
15. 16	15. 16½	N.N.W.	N.	22½	
16. 0	16. 1	N.	N.N.W.		22½
16. 6	16. 7½	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.
				°	°
April—*cont.*					
d h	d h				
16. 20½	16. 22	N.	N.N.W.		22½
17. 7½	17. 9	N.N.W.	N.	22½	
17. 15	17. 15½	N.	N.N.E.	22½	
17. 20	17. 21	N.N.E.	N.		22½
18. 17½	18. 18	N.	N.N.E.	22½	
19. 4½	19. 5¾	N.N.E.	W.S.W.		135
19. 7½	19. 9½	W.S.W.	N.N.W.	90	
19. 19¼	19. 19½	N.N.W.	E.S.E.	135	
20. 4½	20. 4¾	E.S.E.	N.E.		67½
20. 6	20. 6¼	N.E.	S.S.E.	112½	
20. 10	20. 10½	S.S.E.	S.S.W.	45	
20. 12	20. 12¼	S.S.W.	W.	67½	
20. 13¾	20. 14¼	W.	N.E.	135	
20. 15	20. 15¼	N.E.	S.W.	180	
20. 18	20. 18¼	S.W.	S.S.W.		22½
20. 23½	20. 1	S.S.W.	S.E.		67½
21. 2¼	21. 2½	S.E.	N.E.		90
21. 5½	21. 6	N.E.	E.	45	
21. 7¼	21. 9	E.	E.N.E.		22½
21. 12	21. 12¼	E.N.E.	E.	22½	
21. 20	22. 0	E.	N.E.		45
22. 8	22. 9	N.E.	E.N.E.	22½	
22. 11½	22. 12	E.N.E.	N.E.		22½
22. 21½	22. 22	N.E.	N.N.E.		22½
23. 0½	23. 1¼	N.N.E.	N.		22½
23. 7½	23. 8½	N.	N.N.E.	22½	
23. 21¼	23. 21½	N.N.E.	N.		22½
24. 19½	24. 20½	N.	N.N.W.		22½
25. 1¼	25. 1½	N.N.W.	N.W.		22½
25. 3¾	25. 4½	N.W.	W.S.W.		67½
25. 10	25. 10¼	W.S.W.	W.N.W.	45	
25. 12¾	25. 13	W.N.W.	W.		22½
25. 17¾	25. 18	W.	W.N.W.	22½	
25. 19¼	25. 19¾	W.N.W.	W.S.W.		45
26. 2	26. 3	W.S.W.	S.W.		22½
26. 6½	26. 7½	S.W.	S.S.W.		22½
26. 10	26. 12	S.S.W.	S.S.E.		45
27. 2½	27. 4	S.S.E.	E.S.E.		45
27. 8¾	27. 9	E.S.E.	S.S.W.	90	
27. 20	27. 21	S.S.W.	S.		22½
28. 0¼	28. 0½	S.	S.S.W.	22½	
28. 3	28. 3½	S.S.W.	S.W.	22½	
28. 15	28. 15½	S.W.	S.S.W.		22½
28. 17½	28. 19½	S.S.W.	E.S.E.		90
29. 4½	29. 5	E.S.E.	S.S.W.	90	
29. 8	29. 8½	S.S.W.	S.W.	22½	
29. 12½	29. 13	S.W.	S.S.W.		22½
30. 15½	30. 16½	S.S.W.	S.E.		67½
30. 20½	30. 20¾	S.E.	E.		45
30. 22	30. 22¼	E.	E.S.E.	22½	
			Sums	2857½	1912½
May.					
d h	d h				
1. 0½	1. 1	E.S.E.	S.E.	22½	
1. 9¼	1. 9½	S.E.	S.S.E.	22½	
1. 12½	1. 13	S.S.E.	S.	22½	
1. 14½	1. 16½	S.	S.W.	45	
2. 18	2. 20	S.W.	S.E.		90
3. 1½	3. 2	S.E.	S.S.E.	22½	
3. 19	3. 20	S.S.E.	E.S.E.		45
4. 8	4. 10	E.S.E.	S.W.	112½	
4. 12	4. 12¼	S.W.	S.S.W.		22½
4. 20	4. 22	S.S.W.	S.W.	22½	
5. 0	5. 0¼	S.W.	S.S.W.		22½
5. 2¾	5. 4¼	S.S.W.	S.E.		67½
5. 7½	5. 7¾	S.E.	S.S.E.	22½	
5. 11	5. 12	S.S.E.	S.S.W.	45	
5. 16	5. 17	S.S.W.	S.W.	22½	
6. 9½	6. 10	S.W.	S.S.W.		22½
6. 11¾	6. 12	S.S.W.	S.W.	22½	
7. 1	7. 2	S.W.	W.S.W.	22½	
7. 9¼	7. 9½	W.S.W.	S.W.		22½
7. 18	7. 19½	S.W.	S.S.W.		22½
8. 2¼	8. 4½	S.S.W.	E.		112½
8. 6½	8. 6¾	E.	N.E.		45
8. 9	8. 9¼	N.E.	E.	45	
8. 10½	8. 10¾	E.	E.S.E.	22½	
8. 15½	8. 15¾	E.S.E.	E.N.E.		45
9. 0¾	9. 1¼	E.N.E.	S.E.	67½	
9. 8	9. 8¼	S.E.	E.N.E.		67½
9. 10	9. 10¼	E.N.E.	S.E.	67½	
9. 11¼	9. 14½	S.E.	N.E.	270	
9. 15¾	9. 16	N.E.	S.W.	180	
9. 17	9. 17¼	S.W.	E.S.E.		112½
9. 17¾	9. 19¼	E.S.E.	N.N.W.	225	
10. 0¼	10. 0½	N.N.W.	W.S.W.		90
10. 12	10. 12¼	W.S.W.	W.N.W.	45	
10. 15¼	10. 15½	W.N.W.	N.N.W.	45	
11. 5½	11. 6½	N.N.W.	N.	22½	
11. 19	11. 19½	N.	N.N.E.	22½	
12. 4	12. 4½	N.N.E.	N.		22½
12. 13	12. 13½	N.	N.N.E.	22½	
13. 0¼	13. 2¼	N.N.E.	S.W.		157½
13. 10¼	13. 11	S.W.	W.S.W.	22½	
14. 16¼	14. 16½	W.S.W.	S.W.		22½
15. 21	15. 22¼	S.W.	N.N.W.	112½	
15. 23	16. 0½	N.N.W.	W.S.W.		90
16. 13	16. 13½	W.S.W.	S.W.		22½
17. 6½	17. 8½	S.W.	W.	45	
17. 14	17. 16	W.	N.N.W.	67½	
18. 6¾	18. 7	N.N.W.	N.	22½	
18. 13	18. 15	N.	S.E.	135	
18. 18¾	18. 19½	S.E.	S.S.W.	67½	
19. 0¼	19. 0½	S.S.W.	W.S.W.	45	
19. 3¼	19. 3½	W.S.W.	S.S.W.		45
19. 13½	19. 14	S.S.W.	S.E.		67½
19. 15½	19. 15¾	S.E.	S.S.W.	67½	
19. 20	19. 21	S.S.W.	S.		22½
20. 7¾	20. 8	S.	S.W.	45	
20. 22½	20. 23	S.W.	W.S.W.	22½	
21. 13	21. 14	W.S.W.	S.S.W.		45
21. 20	21. 23	S.S.W.	S.S.E.		45
May—*cont.*					
d h	d h				
22. 7	22. 7½	S.S.E.	S.	22½	
22. 10	22. 10½	S.	S.S.W.	22½	
22. 21½	22. 23½	S.S.W.	W.N.W.	90	
23. 1¼	23. 4	W.N.W.	N.	67½	
23. 6¼	23. 6½	N.	N.N.E.	22½	
23. 10¼	23. 10½	N.N.E.	N.E.	22½	
23. 15	23. 16	N.E.	E.S.E.	67½	
23. 20¼	23. 20½	E.S.E.	E.		22½
23. 22	23. 22½	E.	E.N.E.		22½
24. 10½	24. 11	E.N.E.	E.	22½	
24. 13¾	24. 14	E.	E.N.E.		22½
25. 0	25. 1¼	E.N.E.	N.N.E.		45
25. 10½	25. 11½	N.N.E.	E.N.E.	45	
25. 13¼	25. 14	E.N.E.	E.S.E.	45	
25. 20½	25. 21¼	E.S.E.	N.E.		67½
26. 1	26. 1¾	N.E.	N.N.E.		22½
26. 10	26. 10¼	N.N.E.	N.E.	22½	
26. 12	26. 12¼	N.E.	E.N.E.	22½	
26. 15½	26. 16	E.N.E.	N.E.		22½
27. 0½	27. 1½	N.E.	N.N.E.		22½
27. 5½	27. 6	N.N.E.	N.E.	22½	
27. 8¼	27. 8½	N.E.	E.N.E.	22½	
27. 10½	27. 11	E.N.E.	E.	22½	
27. 16½	27. 17½	E.	E.N.E.		22½
27. 19	27. 20½	E.N.E.	N.E.		22½
28. 5	28. 5¾	N.E.	E.N.E.	22½	
28. 10¾	28. 11¼	E.N.E.	S.E.	67½	
28. 12	28. 13½	S.E.	E.N.E.		67½
28. 15½	28. 17	E.N.E.	E.S.E.	45	
28. 23	28. 23½	E.S.E.	E.		22½
29. 1	29. 2	E.	N.E.		45
29. 4¾	29. 5	N.E.	E.N.E.	22½	
29. 10	29. 11½	E.N.E.	E.S.E.	45	
29. 16½	29. 17	E.S.E.	E.		22½
30. 4¼	30. 4½	E.	N.E.	315	
30. 10	30. 10½	N.E.	E.S.E.	67½	
30. 15½	30. 15¾	E.S.E.	E.N.E.		45
30. 16¾	30. 17	E.N.E.	N.N.E.		45
30. 17¼	30. 17½	N.N.E.	N.N.W.		45
30. 18¼	30. 18½	N.N.W.	S.W.		112½
30. 22¼	30. 22½	S.W.	S.		45
31. 0	31. 3	S.	N.E.	225	
31. 6½	31. 6¾	N.E.	N.N.E.		22½
31. 8¾	31. 9	N.N.E.	N.N.W.		45
31. 11¾	31. 12	N.N.W.	N.N.E.	45	
31. 17½	31. 17¾	N.N.E.	N.E.	22½	
31. 20½	31. 21½	N.E.	N.		45
			Sums	3510	2182½

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.
June.				°	°
d h	d h				
1. 12	1. 12¼	N.	N.N.E.	22½	
2. 4½	2. 5	N.N.E.	N.E.	22½	
2. 12	2. 12¼	N.E.	N.N.E.		22½
2. 20¼	2. 20½	N.N.E.	N.E.	22½	
2. 21¾	2. 22¼	N.E.	N.		45
3. 8	3. 9	N.	N.N.E.	22½	
4. 1¼	4. 1½	N.N.E.	N.		22½
4. 4½	4. 4¾	N.	N.N.E.	22½	
4. 11	4. 11¼	N.N.E.	N.E.	22½	
5. 2½	5. 2¾	N.E.	S.S.E.	112½	
5. 3¼	5. 3½	S.S.E.	N.E.	247½	
5. 10¾	5. 11½	N.E.	E.N.E.	22½	
5. 13¼	5. 13½	E.N.E.	E.	22½	
5. 22¾	5. 23	E.	N.E.		45
6. 2½	6. 3	N.E.	N.N.E.		22½
6. 14½	6. 15½	N.N.E.	N.E.	22½	
6. 17½	6. 18½	N.E.	E.S.E.	67½	
6. 20¾	6. 21¼	E.S.E.	E.		22½
6. (1)	6. (2)	E.	E.N.E.		22½
6. (8)	6. (9)	E.N.E.	N.E.		22½
7. 22¾	7. 23	N.E.	N.N.E.		22½
8. 5	8. 7½	N.N.E.	E.N.E.	45	
8. 15½	8. 16	E.N.E.	N.N.E.		45
8. 23½	9. 0	N.N.E.	N.E.	22½	
9. 7	9. 7¼	N.E.	E.N.E.	22½	
10. 4	10. 4¼	E.N.E.	N.N.E.		45
10. 5	10. 5½	N.N.E.	E.	67½	
10. 7¾	10. 8	E.	S.W.	135	
10. 18¼	10. 18½	S.W.	W.S.W.	22½	
10. 22¾	10. 23½	W.S.W.	S.W.		22½
11. 3¾	11. 4	S.W.	N.E.	180	
11. 6	11. 7	N.E.	N.		45
11. 14½	11. 14¾	N.	N.N.E.	22½	
11. 17	11. 17¼	N.N.E.	N.		22½
12. 3	12. 3½	N.	N.N.W.		22½
12. 8½	12. 9	N.N.W.	N.	22½	
12. 22½	12. 23½	N.	S.	180	
13. 1	13. 2	S.	S.S.W.	22½	
13. 13½	13. 13¾	S.S.W.	N.N.W.	135	
13. 14¾	13. 15	N.N.W.	S.W.		112½
13. 17¾	13. 18	S.W.	N.N.W.	112½	
13. 20¾	13. 22	N.N.W.	E.N.E.	90	
13. 23¾	14. 0	E.N.E.	N.E.		22½
14. 1¾	14. 3	N.E.	N.N.W.		67½
14. 5	14. 6½	N.N.W.	N.E.	67½	
14. 13½	14. 13¾	N.E.	N.N.E.		22½
15. 2	15. 2½	N.N.E.	E.S.E.	90	
15. 8	15. 8¼	E.S.E.	S.E.	22½	
15. 10¾	15. 11	S.E.	W.S.W.	112½	
15. 12	15. 12¼	W.S.W.	S.W.		22½
15. 18½	15. 19	S.W.	S.S.W.		22½
15. 23	15. 23¼	S.S.W.	S.S.E.		45
16. 5¾	16. 6	S.S.E.	N.E.		112½
16. 11¾	16. 12¼	N.E.	S.E.	90	
16. 15	16. 16	S.E.	E.S.E.		22½
16. 20	16. 20¼	E.S.E.	N.N.E.		90
16. 22½	16. 22¾	N.N.E.	N.N.W.		45
17. 0	17. 2	N.N.W.	W.S.W.		90
17. 3¾	17. 4½	W.S.W.	N.W.	67½	

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
June—*cont.*				°	°
d h	d h				
17. 5½	17. 6	N.W.	W.S.W.		67½
17. 12	17. 12¼	W.S.W.	S.W.		22½
17. 17¼	17. 17½	S.W.	N.W.	90	
17. 18	17. 19	N.W.	S.		135
17. 20½	17. 21¼	S.	W.S.W.	67½	
17. 22½	17. 22¾	W.S.W.	N.N.W.	90	
18. 8¾	18. 9½	N.N.W.	N.N.E.	45	
18. 12	18. 12¼	N.N.E.	N.E.	22½	
18. 18	18. 18½	N.E.	E.N.E.	22½	
18. 21	18. 21½	E.N.E.	N.E.		22½
19. 0	19. 1	N.E.	N.N.E.		22½
19. 16½	19. 17	N.N.E.	N.		22½
20. 12½	20. 14½	N.	N.N.W.		22½
21. 14	21. 14¼	N.N.W.	N.	22½	
21. 19	21. 20½	N.	S.E.	135	
22. 0¾	22. 1	S.E.	S.	45	
22. 9¼	22. 9½	S.	N.N.E.		157½
22. 11	22. 12	N.N.E.	S.E.	112½	
22. 12¾	22. 13¾	S.E.	E.S.E.		22½
22. 16¼	22. 16½	E.S.E.	E.		22½
22. 17	22. 20	E.	S.S.E.	67½	
22. 23	23. 0	S.S.E.	S.E.		22½
23. 11¼	23. 12	S.E.	E.S.E.		22½
23. 14¾	23. 15	E.S.E.	E.		22½
24. 7	24. 7½	E.	E.N.E.		22½
24. 12½	24. 12¾	E.N.E.	E.	22½	
24. 20½	24. 21	E.	S.S.E.	67½	
24. 22¾	24. 23¼	S.S.E.	S.S.W.	45	
25. 4	25. 4¼	S.S.W.	S.W.	22½	
25. 18	25. 18½	S.W.	S.S.W.		22½
26. 5½	26. 5¾	S.S.W.	S.S.E.		45
26. 8¾	26. 9	S.S.E.	S.	22½	
26. 11¾	26. 12	S.	S.S.W.	22½	
26. 19	26. 20	S.S.W.	S.S.E.		45
27. 7	27. 8½	S.S.E.	S.S.W.	45	
27. 12¼	27. 12¾	S.S.W.	S.		22½
27. 18½	27. 19½	S.	S.E.		45
27. 22½	27. 23½	S.E.	N.N.E.		112½
28. 0½	28. 2½	N.N.E.	S.S.E.	135	
28. 7	28. 8¼	S.S.E.	S.W.	67½	
28. 16¾	28. 17	S.W.	W.	45	
28. 21½	28. 21¾	W.	W.S.W.		22½
28. 23¾	29. 0	W.S.W.	S.W.		22½
29. 5½	29. 6	S.W.	W.	45	
29. 9½	29. 9¾	W.	W.S.W.		22½
29. 12	29. 12¼	W.S.W.	W.N.W.	45	
29. 15¼	29. 15½	W.N.W.	W.S.W.		45
29. 21½	30. 2	W.S.W.	N.N.W.	90	
30. 13	30. 13½	N.N.W.	W.		67½
30. 15	30. 15¼	W.	N.W.	45	
30. 19	30. 20¼	N.W.	S.W.		90
			Sums	3600	2295

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
July.				°	
d h	d h				
1. 1	1. 2	S.W.	S.S.W.		22½
1. 5	1. 7	S.S.W.	S.W.	22½	
1. 16¾	1. 17	S.W.	S.S.W.		22½
1. 18¾	1. 19½	S.S.W.	S.		22½
2. 1½	2. 3½	S.	E.N.E.		112½
2. 6¼	2. 6¾	E.N.E.	S.E.	67½	
2. 21	3. 0½	S.E.	S.W.	90	
3. 17½	3. 17¾	S.W.	W.S.W.	22½	
3. 20¾	3. 21	W.S.W.	S.W.		22½
4. 11¼	4. 12	S.W.	W.	45	
4. 13½	4. 13¾	W.	W.N.W.	22½	
4. 14¾	4. 15	W.N.W.	W.		22½
4. 17½	4. 18	W.	W.S.W.		22½
5. 11½	5. 11¾	W.S.W.	S.		67½
5. 18	5. 19	S.	S.S.W.	22½	
5. 22	5. 22½	S.S.W.	S.		22½
6. 0½	6. 3	S.	S.W.	45	
6. 4¾	6. 5¼	S.W.	W.	45	
6. 14½	6. 15	W.	W.N.W.	22½	
6. 20¾	6. 21	W.N.W.	W.		22½
7. 3	7. 3½	W.	W.S.W.		22½
7. 5½	7. 8	W.S.W.	N.W.	67½	
7. 11½	7. 11¾	N.W.	W.		45
7. 13½	7. 15	W.	N.W.	45	
7. 19	7. 19¼	N.W.	N.N.W.	22½	
7. 21	7. 22	N.N.W.	N.	22½	
7. 23¾	8. 0	N.	N.N.W.		22½
8. 1½	8. 3	N.N.W.	N.W.		22½
8. 14½	8. 15	N.W.	W.N.W.		22½
8. 19¾	8. 20¼	W.N.W.	N.W.	22½	
8. 22	8. 23	N.W.	W.N.W.		22½
9. 2	9. 3	W.N.W.	N.W.	22½	
9. 6	9. 7	N.W.	N.N.W.	22½	
9. 17½	9. 18½	N.N.W.	E.N.E.	90	
9. 22	10. 1	E.N.E.	S.	112½	
10. 2½	10. 3	S.	S.W.	45	
10. 7	10. 7¼	S.W.	W.S.W.	22½	
10. 9¾	10. 11	W.S.W.	S.W.		22½
10. 16¼	10. 16½	S.W.	S.S.W.		22½
10. 23	11. 0½	S.S.W.	S.W.	22½	
11. 15½	11. 16	S.W.	S.S.W.		22½
11. 21½	11. 22½	S.S.W.	S.W.	22½	
12. 0¼	12. 0½	S.W.	N.N.W.	112½	
12. 19	12. 19¼	N.N.W.	N.N.E.	45	
12. 20¼	12. 21¾	N.N.E.	N.W.		67½
13. 0½	13. 1½	N.W.	W.N.W.		22½
13. 4¼	13. 4½	W.N.W.	N.W.	22½	
13. 22½	13. 23¾	N.W.	S.S.W.		112½
14. 3¼	14. 3½	S.S.W.	N.W.	112½	
14. 4½	14. 5	N.W.	S.S.E.		157½
14. 9	14. 9½	S.S.E.	S.S.W.	45	
15. 8½	15. 8¾	S.S.W.	S.W.	22½	
15. 11	15. 12	S.W.	S.S.W.		22½
15. 19¾	15. 20	S.S.W.	S.		22½
15. 22½	15. 23½	S.	S.E.		45
16. 1½	16. 2½	S.E.	N.E.		90
16. 5½	16. 5¾	N.E.	N.N.E.		22½
16. 7¾	16. 8¾	N.N.E.	S.S.W.	180	
16. 14	16. 14½	S.S.W.	S.		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				
17. 0½	17. 0¾	S.	S.S.W.	22½	
18. 5	18. 5¼	S.S.W.	N.N.W.		225
18. 7¼	18. 9½	N.N.W.	S.S.W.	225	
18. 12	18. 12½	S.S.W.	S.W.	22½	
18. 15½	18. 16	S.W.	N.W.	90	
18. 18½	18. 21	N.W.	N.	45	
19. 1¼	19. 1½	N.	E.S.E.	112½	
19. 5¾	19. 6	E.S.E.	N.		112½
19. 11	19. 11¼	N.	N.N.E.	22½	
19. 12¼	19. 13	N.N.E.	N.E.	22½	
19. 14½	19. 17¼	N.E.	S.W.	180	
19. 19	19. 19¼	S.W.	W.S.W.	22½	
19. 20½	19. 20¾	W.S.W.	S.E.		112½
20. 0	20. 1¼	S.E.	N.		135
20. 12	20. 12½	N.	N.N.E.	22½	
20. 15	20. 15½	N.N.E.	N.		22½
20. 19	20. 19¼	N.	N.N.E.	22½	
21. 2	21. 2¼	N.N.E.	S.E.	112½	
21. 3¾	21. 4½	S.E.	W.S.W.	112½	
21. 5¼	21. 5¾	W.S.W.	S.S.E.		90
21. 8	21. 11½	S.S.E.	S.W.	67½	
21. 12½	21. 13	S.W.	S.S.W.		22½
23. 9¼	23. 9¾	S.S.W.	S.W.	22½	
23. 13½	23. 14½	S.W.	N.N.W.	112½	
23. 18	23. 20	N.N.W.	W.N.W.		45
24. 0½	24. 1¼	W.N.W.	W.		22½
24. 3	24. 3½	W.	W.S.W.		22½
24. 20	24. 21	W.S.W.	S.W.		22½
25. 0½	25. 1	S.W.	S.S.W.		22½
25. 8½	25. 9	S.S.W.	S.		22½
25. 18	25. 20	S.	E.S.E.		67½
25. 22½	25. 23½	E.S.E.	S.S.E.	45	
26. 6	26. 8¾	S.S.E.	S.W.	67½	
26. 15	26. 16¼	S.W.	N.W.	90	
26. 18½	26. 22	N.W.	S.W.		90
27. 0¾	27. 1½	S.W.	S.S.W.		22½
27. 4¼	27. 4½	S.S.W.	S.		22½
27. 9¾	27. 10	S.	S.S.E.		22½
27. 15½	27. 17¼	S.S.E.	S.S.W.	45	
27. 21	27. 22½	S.S.W.	S.W.	22½	
28. 10¼	28. 10½	S.W.	S.S.W.		22½
28. 12	28. 12¼	S.S.W.	S.		22½
28. 14½	28. 14¾	S.	N.N.E.		157½
28. 19½	28. 19¾	N.N.E.	N.W.		67½
28. 22	28. 23½	N.W.	S.W.		90
29. 2½	29. 4	S.W.	W.	45	
29. 5¾	29. 6	W.	W.S.W.		22½
29. 9	29. 9¼	W.S.W.	S.W.		22½
29. 10½	29. 11	S.W.	W.S.W.	22½	
29. 17	29. 17½	W.S.W.	S.S.W.		45
30. 2	30. 2½	S.S.W.	S.W.	22½	
30. 6	30. 6½	S.W.	N.W.	90	
30. 10½	30. 11	N.W.	W.		45
30. 12	30. 12¼	W.	W.N.W.	22½	
30. 17¼	30. 17½	W.N.W.	W.S.W.		45
30. 18½	30. 18¾	W.S.W.	W.	22½	
30. 20½	30. 22½	W.	S.W.		45
31. 2	31. 2½	S.W.	W.S.W.	22½	
31. 7	31. 7½	W.S.W.	W.	22½	
July—*cont.*					
d h	d h				
31. 9½	31. 10	W.	W.S.W.		22½
31. 17½	31. 18	W.S.W.	W.	22½	
31. 19	31. 20½	W.	W.S.W.		22½
			Sums	3285	2902½
August.					
1. 3	1. 4	W.S.W.	S.W.		22½
2. 12	2. 12½	S.W.	W.S.W.	22½	
2. 16½	2. 17	W.S.W.	S.W.		22½
2. 18¾	2. 19¼	S.W.	S.S.W.		22½
3. 6	3. 10	S.S.W.	W.N.W.	90	
3. 13¾	3. 14	W.N.W.	W.		22½
3. 21¼	3. 23½	W.	S.W.		45
4. 5	4. 5½	S.W.	S.S.W.		22½
4. 14	4. 15	S.S.W.	S.W.	22½	
5. 11¼	5. 11¾	S.W.	W.S.W.	22½	
6. 0½	6. 1	W.S.W.	S.W.		22½
6. 6	6. 8¼	S.W.	W.	45	
6. 10	6. 10½	W.	W.S.W.		22½
6. 20	6. 20½	W.S.W.	S.W.		22½
7. 0½	7. 1	S.W.	S.S.W.		22½
7. 5¼	7. 7½	S.S.W.	S.W.	22½	
7. 11	7. 12¼	S.W.	S.S.E.		67½
7. 16¾	7. 17½	S.S.E.	S.	22½	
7. 21	7. 22½	S.	S.E.		45
8. 7	8. 8½	S.E.	S.S.E.	22½	
8. 17½	8. 18¾	S.S.E.	S.S.W.	45	
8. 23	8. 23½	S.S.W.	S.W.	22½	
9. 1½	9. 2	S.W.	S.S.W.		22½
9. 7½	9. 8¼	S.S.W.	S.W.	22½	
9. 9¾	9. 10	S.W.	S.S.W.		22½
9. 20½	9. 21	S.S.W.	S.		22½
10. 3½	10. 4	S.	S.S.W.	22½	
10. 5½	10. 5¾	S.S.W.	S.W.	22½	
10. 23	10. 23¼	S.W.	S.S.W.		22½
11. 4½	11. 4¾	S.S.W.	S.		22½
11. 13¼	11. 13½	S.	S.E.		45
11. 16½	11. 17½	S.E.	N.E.		90
11. 22½	11. 22¾	N.E.	E.N.E.	22½	
12. 0½	12. 1½	E.N.E.	N.W.	247½	
12. 9½	12. 10	N.W.	W.S.W.		67½
12. 12¼	12. 13	W.S.W.	S.S.W.		45
12. 14¼	12. 15	S.S.W.	S.W.	22½	
12. 19	12. 19½	S.W.	S.S.W.		22½
13. 7½	13. 8	S.S.W.	S.W.	22½	
13. 18½	13. 19	S.W.	S.S.E.		67½
13. 21	13. 21½	S.S.E.	S.E.		22½
13. 22¾	13. 23¼	S.E.	E.N.E.		67½
14. 0½	14. 0¾	E.N.E.	N.E.		22½
14. 1¾	14. 2½	N.E.	E.S.E.	67½	
14. 5	14. 5½	E.S.E.	S.E.	22½	
14. 11½	14. 12	S.E.	S.	45	
15. 3	15. 3½	S.	S.S.W.	22½	
Aug.—*cont.*					
d h	d h				
15. 10½	15. 11	S.S.W.	S.W.	22½	
16. 15¾	16. 16	S.W.	S.S.W.		22½
16. 22	16. 23½	S.S.W.	S.		22½
17. 2¼	17. 3	S.	S.E.		45
17. 6	17. 8¼	S.E.	S.W.	90	
17. 12½	17. 12¾	S.W.	W.S.W.	22½	
17. 15½	17. 15¾	W.S.W.	N.N.W.	90	
17. 22½	17. 23¾	N.N.W.	S.S.W.	225	
18. 2	18. 3½	S.S.W.	S.E.		67½
18. 5	18. 6½	S.E.	S.S.W.	67½	
18. 7½	18. 10½	S.S.W.	W.	67½	
18. 16¼	18. 17¼	W.	N.N.W.	67½	
18. 18¾	18. 19	N.N.W.	N.N.E.	45	
18. 20¼	18. 22	N.N.E.	S.E.	112½	
19. 1½	19. 1¾	S.E.	S.S.E.	22½	
19. 3¼	19. 4	S.S.E.	S.W.	67½	
19. 6	19. 6½	S.W.	N.W.	90	
19. 7½	19. 9	N.W.	S.W.		90
19. 12	19. 14½	S.W.	N.W.	90	
19. 16¼	19. 16¾	N.W.	W.		45
19. 19	19. 22	W.	S.S.W.		67½
20. 14¼	20. 14½	S.S.W.	S.		22½
20. 18½	20. 19	S.	S.S.W.	22½	
21. 3½	21. 3¾	S.S.W.	N.W.	112½	
21. 6	21. 7¼	N.W.	S.W.		90
21. 9	21. 9¼	S.W.	W.S.W.	22½	
21. 14¼	21. 14½	W.S.W.	W.N.W.	45	
21. 16¾	21. 17	W.N.W.	W.		22½
21. 19½	21. 19¾	W.	S.W.		45
22. 17¼	22. 17½	S.W.	S.S.E.		67½
22. 18¼	22. 18¾	S.S.E.	S.S.W.	45	
23. 2	23. 3½	S.S.W.	S.W.	22½	
23. 12	23. 12½	S.W.	S.S.E.		67½
23. 15½	23. 17½	S.S.E.	S.S.W.	45	
24. 4½	24. 5	S.S.W.	S.E.		67½
24. 7¾	24. 8½	S.E.	E.S.E.		22½
24. 10	24. 11	E.S.E.	S.S.E.	45	
24. 20	24. 22	S.S.E.	S.	22½	
25. 5	25. 7½	S.	W.	90	
25. 10	25. 10¼	W.	N.W.	45	
25. 23	25. 23¼	N.W.	W.S.W.		67½
26. 1	26. 2	W.S.W.	S.S.W.		45
26. 3½	26. 4	S.S.W.	S.W.	22½	
26. 17	26. 18½	S.W.	S.S.W.		22½
28. 8	28. 8½	S.S.W.	S.W.	22½	
28. 15¼	28. 15½	S.W.	S.S.W.		22½
29. 3½	29. 3¾	S.S.W.	S.W.	22½	
29. 7¼	29. 8½	S.W.	N.W.	90	
29. 10	29. 10½	N.W.	W.		45
29. 19¼	29. 19½	W.	W.S.W.		22½
29. 22½	29. 23	W.S.W.	S.W.		22½
30. 1¼	30. 1½	S.W.	S.S.W.		22½
31. 6	31. 7½	S.S.W.	W.S.W.	45	
31. 16	31. 16¼	W.S.W.	S.W.		22½
31. 19¾	31. 20	S.W.	E.S.E.	247½	
			Sums	2925	1980

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.
				°	°
September.					
d h	d h				
1. 7¼	1. 9½	E.S.E.	S.	67½	
1. 12	1. 12½	S.	S.W.	45	
1. 16½	1. 17	S.W.	W.S.W.	22½	
1. 19¼	1. 19½	W.S.W.	W.N.W.	45	
1. 21	1. 21¼	W.N.W.	N.W.	22½	
1. 22½	1. 22¾	N.W.	N.	45	
2. 0¼	2. 0½	N.	N.E.	45	
2. 6½	2. 7¾	N.E.	E.	45	
2. 9¼	2. 9¾	E.	S.E.	45	
2. 11	2. 12	S.E.	S.	45	
2. 14	2. 14½	S.	S.S.W.	22½	
2. 20¼	2. 20½	S.S.W.	S.W.	22½	
2. 22	2. 22¼	S.W.	W.S.W.	22½	
3. 0¾	3. 1	W.S.W.	S.W.		22½
3. 4½	3. 4¾	S.W.	S.S.W.		22½
3. 9¼	3. 9½	S.S.W.	S.W.	22½	
3. 12	3. 12¼	S.W.	S.S.W.		22½
3. 15½	3. 16	S.S.W.	S.		22½
3. 19½	3. 20	S.	S.S.E.		22½
4. 2½	4. 2¾	S.S.E.	E.S.E.		45
4. 14	4. 15	E.S.E.	E.N.E.		45
4. 18½	4. 19½	E.N.E.	N.N.E.		45
4. 21½	5. 0	N.N.E.	E.S.E.	90	
5. 2½	5. 5	E.S.E.	S.	67½	
5. 11	5. 11½	S.	S.S.W.	22½	
5. 17	5. 17½	S.S.W.	S.W.	22½	
6. 11½	6. 12½	S.W.	N.		225
6. 13¾	6. 14	N.	S.W.	225	
6. 15	6. 16	S.W.	N.		225
6. 18½	6. 20¾	N.	S.S.W.		157½
7. 9	7. 9½	S.S.W.	S.W.	22½	
8. 2	8. 3	S.W.	S.S.W.		22½
8. 6	8. 7½	S.S.W.	S.W.	22½	
8. 15	8. 17	S.W.	S.S.W.		22½
9. 5½	9. 6	S.S.W.	S.W.	22½	
9. 8¾	9. 9	S.W.	W.N.W.	67½	
9. 10¼	9. 10½	W.N.W.	W.		22½
9. 16	9. 16½	W.	W.S.W.		22½
10. 0¼	10. 0½	W.S.W.	S.W.		22½
10. 13	10. 13½	S.W.	S.S.W.		22½
10. 21¼	10. 21½	S.S.W.	S.W.	22½	
11. 1	11. 2¼	S.W.	W.N.W.	67½	
11. 12	11. 12¼	W.N.W.	W.		22½
11. 15½	11. 15¾	W.	W.S.W.		22½
11. 19½	11. 20	W.S.W.	S.W.		22½
12. 6	12. 7¾	S.W.	W.S.W.	22½	
12. 12	12. 12½	W.S.W.	W.N.W.	45	
12. 16¼	12. 16½	W.N.W.	W.S.W.		45
12. 18¼	12. 18½	W.S.W.	N.W.	67½	
12. 19½	12. 20½	N.W.	S.W.		90
13. 4	13. 4¼	S.W.	S.S.E.		67½
13. 5½	13. 5¾	S.S.E.	S.	22½	
13. 6½	13. 6¾	S.	N.E.		135
13. 11¼	13. 11½	N.E.	N.N.E.		22½
13. 13¾	13. 14	N.N.E.	N.		22½
13. 17	13. 18½	N.	N.N.W.		22½
14. 15½	14. 16	N.N.W.	N.	22½	
14. 19½	14. 19¾	N.	N.N.W.		22½
15. 7	15. 8	N.N.W.	N.	22½	
Sept.—*cont.*					
d h	d h				
15. 21	15. 21½	N.	N.N.W.		22½
16. 15¾	16. 16	N.N.W.	N.	22½	
16. 19	16. 19¼	N.	S.S.W.	202½	
17. 5	17. 5¼	S.S.W.	S.S.E.		45
17. 10½	17. 10¾	S.S.E.	S.S.W.	45	
17. 12½	17. 13½	S.S.W.	S.E.		67½
17. 22	17. 22¾	S.E.	E.		45
18. 0¾	18. 1¼	E.	N.E.		45
18. 9	18. 9¼	N.E.	E.N.E.	22½	
18. 13¾	18. 14¼	E.N.E.	E.	22½	
18. 20	18. 21¼	E.	N.N.E.		67½
19. 1¾	19. 3½	N.N.E.	E.N.E.	45	
19. 12¼	19. 12½	E.N.E.	E.	22½	
19. 14	19. 14¼	E.	E.N.E.		22½
21. 13½	21. 14	E.N.E.	E.	22½	
21. 22¾	21. 23	E.	E.N.E.		22½
22. 1	22. 3	E.N.E.	E.	22½	
22. 19	22. 19½	E.	E.S.E.	22½	
23. 12½	23. 13	E.S.E.	S.E.	22½	
23. 15¾	23. 16	S.E.	E.S.E.		22½
23. 17½	23. 18	E.S.E.	E.		22½
24. 10¾	24. 11	E.	N.E.		45
24. 12½	24. 13	N.E.	E.	45	
25. 5	25. 7¼	E.	S.S.W.	112½	
25. 9	25. 10½	S.S.W.	S.W.	22½	
26. 12½	26. 13	S.W.	S.S.E.		67½
26. 20	26. 20¼	S.S.E.	S.E.		22½
26. 22¾	26. 23½	S.E.	E.S.E.		22½
27. 0½	27. 1	E.S.E.	E.		22½
27. 2¼	27. 2½	E.	S.E.	45	
27. 13	27. 16	S.E.	S.S.W.	67½	
28. 2¼	28. 2½	S.S.W.	S.		22½
28. 4½	28. 4¾	S.	S.S.E.		22½
28. 9½	28. 10	S.S.E.	S.	22½	
28. 16¾	28. 19	S.	E.S.E.		67½
28. 21	28. 21½	E.S.E.	S.E.	22½	
29. 0	29. 0½	S.E.	S.S.E.	22½	
29. 8	29. 8¾	S.S.E.	S.S.W.	45	
29. 14¼	29. 15¼	S.S.W.	S.S.E.		45
29. 18¾	29. 19	S.S.E.	S.W.	67½	
29. 21½	29. 21¾	S.W.	S.S.E.		67½
29. 23¼	29. 23½	S.S.E.	S.S.W.	45	
30. 1	30. 1½	S.S.W.	S.		22½
30. 4½	30. 5½	S.	S.S.E.		22½
30. 7	30. 7¼	S.S.E.	S.S.W.	45	
30. 17	30. 17½	S.S.W.	S.		22½
30. 19¾	30. 20	S.	S.S.E.		22½
30. 23	30. 23½	S.S.E.	S.E.		22½
			Sums	2407½	2385
October.					
d h	d h				
1. 15¾	1. 16½	S.E.	S.W.	90	
1. 17½	1. 18¼	S.W.	S.		45
1. 20	1. 20¼	S.	S.S.W.	22½	
1. 23¾	2. 0¾	S.S.W.	S.W.	22½	
2. 15	2. 15½	S.W.	S.S.W.		22½
2. 23	2. 23½	S.S.W.	S.W.	22½	
3. 3¾	3. 5½	S.W.	S.S.W.		22½
3. 10	3. 12	S.S.W.	W.S.W.	45	
3. 18¾	3. 19¾	W.S.W.	S.S.W.		45
4. 1	4. 1½	S.S.W.	S.		22½
4. 4	4. 4¼	S.	S.S.W.	22½	
4. 8	4. 10	S.S.W.	W.S.W.	45	
4. 16	4. 17	W.S.W.	S.S.W.		45
4. 22	4. 22½	S.S.W.	S.		22½
5. 0½	5. 1	S.	S.S.W.	22½	
5. 11½	5. 12	S.S.W.	S.W.	22½	
6. 7½	6. 7¾	S.W.	S.S.W.		22½
6. 9¾	6. 10	S.S.W.	S.		22½
6. 11¼	6. 11½	S.	S.S.W.	22½	
6. 20	6. 20¼	S.S.W.	S.W.	22½	
7. 17	7. 17¼	S.W.	S.		45
7. 19	7. 19¼	S.	S.S.E.		22½
7. 22¼	7. 22½	S.S.E.	E.S.E.		45
8. 0½	8. 1¾	E.S.E.	N.		112½
8. 3	8. 3¼	N.	N.E.	45	
8. 4¾	8. 7	N.E.	S.S.W.	157½	
8. 11¾	8. 12	S.S.W.	S.		22½
8. 17½	8. 18	S.	E.		90
8. 19	8. 19½	E.	E.N.E.		22½
8. 20¼	8. 20½	E.N.E.	E.S.E.	45	
8. 21½	8. 21¾	E.S.E.	W.N.W.	180	
8. 22½	8. 23	W.N.W.	S.W.		67½
9. 11	9. 12	S.W.	W.S.W.	22½	
9. 16	9. 16¼	W.S.W.	W.N.W.	45	
9. 20¼	9. 20½	W.N.W.	W.		22½
9. 23½	10. 0	W.	W.S.W.		22½
10. 5	10. 6½	W.S.W.	S.W.		22½
10. 11	10. 11¾	S.W.	W.	45	
10. 13¼	10. 13½	W.	N.N.W.	67½	
10. 15	10. 16¼	N.N.W.	S.W.		112½
10. 17¾	10. 18	S.W.	S.S.E.		67½
10. 22¼	11. 0	S.S.E.	E.S.E.		45
11. 9	11. 9½	E.S.E.	S.E.	22½	
11. 17½	11. 17¾	S.E.	S.S.E.	22½	
11. 20	11. 20¼	S.S.E.	S.	22½	
12. 11	12. 12	S.	S.S.W.	22½	
12. 18¼	12. 18½	S.S.W.	S.		22½
12. 21	12. 21½	S.	W.S.W.	67½	
13. 0	13. 0¼	W.S.W.	S.W.		22½
13. 1¾	13. 2	S.W.	W.S.W.	22½	
13. 12	13. 12¼	W.S.W.	S.W.		22½
14. 0½	14. 1	S.W.	S.S.W.		22½
14. 14	14. 14½	S.S.W.	S.		22½
15. 5½	15. 7	S.	S.W.	45	
15. 15	15. 16	S.W.	S.S.W.		22½
15. 23½	16. 0	S.S.W.	S.W.	22½	
17. 5½	17. 10	S.W.	N.W.	90	
17. 17½	17. 18	N.W.	W.N.W.		22½
17. 21	17. 22½	W.N.W.	S.W.		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.
				°	°
Oct.—*cont.*					
d h	d h				
18. 0½	18. 0¾	S.W.	W.S.W.	22½	
18. 6	18. 6½	W.S.W.	W.	22½	
18. 9½	18. 10¼	W.	W.N.W.	22½	
18. 16½	18. 17	W.N.W.	N.W.	22½	
18. 19¼	18. 20	N.W.	S.	225	
19. 2½	19. 3	S.	S.S.E.		22½
19. 13	19. 13½	S.S.E.	S.S.W.	45	
19. 22½	19. 23	S.S.W.	S.		22½
20. 2¼	20. 2½	S.	S.S.E.		22½
20. 16	20. 16¼	S.S.E.	S.E.		22½
20. 19¾	20. 20½	S.E.	S.S.E.	22½	
21. 0¾	21. 1½	S.S.E.	S.S.W.	45	
21. 8½	21. 9	S.S.W.	S.W.	22½	
21. 11½	21. 12	S.W.	W.	45	
21. 13¼	21. 13½	W.	E.N.E.	157½	
21. 13¾	21. 14	E.N.E.	S.S.E.	90	
21. 15½	21. 15¾	S.S.E.	S.S.W.	45	
22. 1	22. 1½	S.S.W.	S.		22½
22. 3	22. 3½	S.	S.S.E.		22½
22. 9½	22. 10	S.S.E.	S.S.W.	45	
22. 12	22. 12¼	S.S.W.	S.		22½
22. 14¼	22. 16	S.	S.W.	45	
23. 11½	23. 12¾	S.W.	W.N.W.	67½	
23. 16½	23. 17	W.N.W.	W.		22½
23. 18½	23. 18¾	W.	W.N.W.	22½	
23. 20¾	23. 23¼	W.N.W	S.W.		67½
24. 6¾	24. 7¾	S.W.	S.S.E.		67½
24. 11½	24. 11¾	S.S.E.	S.	22½	
24. 15	24. 15½	S.	S.S.E.		22½
24. 19½	24. 20½	S.S.E.	S.	22½	
25. 1¾	25. 2	S.	S.S.W.	22½	
25. 5	25. 6½	S.S.W.	S.S.E.		45
25. 21¼	25. 22¼	S.S.E.	S.S.W.	45	
26. 0½	26. 4½	S.S.W.	S.S.E.		45
26. 9½	26. 10	S.S.E.	S.	22½	
26. 17¼	26. 17½	S.	S.S.W.	22½	
26. 22	26. 22½	S.S.W.	S.		22½
27. 4	27. 4½	S.	S.S.E.		22½
27. 7	27. 7½	S.S.E.	S.E.		22½
28. 0¼	28. 0½	S.E.	E.S.E.		22½
28. 2	28. 2¼	E.S.E.	S.E.	22½	
28. 8½	28. 8¾	S.E.	S.W.	90	
28. 16¼	28. 17½	S.W.	S.S.E.		67½
29. 1½	29. 3½	S.S.E.	S.E.		22½
29. 7½	29. 7¾	S.E.	S.S.E.	22½	
29. 11½	29. 11¾	S.S.E.	S.	22½	
30. 1	30. 4	S.	S.W.	45	
30. 10½	30. 11	S.W.	W.S.W.	22½	
30. 20	30. 20½	W.S.W.	S.W.		22½
31. 11¼	31. 11½	S.W.	S.S.W.		22½
31. 15¼	31. 16½	S.S.W.	S.S.E.		45
			Sums	2655	1912½
November.					
d h	d h				
1. 0¼	1. 2¼	S.S.E.	S.W.	67½	
1. 4¼	1. 6½	S.W.	N.W.	90	
1. 8¾	1. 9	N.W.	W.N.W.		22½
1. 11½	1. 12	W.N.W.	W.S.W.		45
1. 13¼	1. 14	W.S.W.	W.N.W.	45	
1. 17½	1. 19	W.N.W.	S.S.W.		90
2. 0½	2. 0¾	S.S.W.	S.S.E.		45
2. 9½	2. 10	S.S.E.	S.	22½	
2. 17	2. 17½	S.	S.S.E.		22½
2. 20¾	3. 0	S.S.E.	S.	22½	
3. 3	3. 5	S.	N.N.W.	157½	
3. 10	3. 11½	N.N.W.	N.	22½	
4. 12¼	4. 12¾	N.	N.N.E.	22½	
5. 11½	5. 12	N.N.E.	N.E.	22½	
6. 10½	6. 11	N.E.	E.N.E.	22½	
7. 2¾	7. 3	E.N.E.	N.N.E.		45
7. 4½	7. 4¾	N.N.E.	E.N.E.	45	
7. 11	7. 12½	E.N.E.	E.S.E.	45	
7. 19	7. 19½	E.S.E.	E.		22½
8. 4	8. 6	E.	E.S.E.	22½	
8. 8	8. 9¼	E.S.E.	S.S.E.	45	
8. 11½	8. 12	S.S.E.	S.	22½	
8. 13	8. 13¼	S.	S.S.W.	22½	
8. 16	8. 16¾	S.S.W.	S.E.		67½
8. 18	8. 18¼	S.E.	S.	45	
9. 0	9. 0½	S.	S.W.	45	
9. 2	9. 3½	S.W.	S.		45
9. 8	9. 8½	S.	S.S.W.	22½	
9. 11½	9. 11¾	S.S.W.	S.W.	22½	
9. 13¾	9. 14¼	S.W.	W.	45	
9. 18¼	9. 18½	W.	S.W.		45
10. 11	10. 11½	S.W.	W.S.W.	22½	
10. 16½	10. 17	W.S.W.	S.W.		22½
10. 22	10. 22½	S.W.	W.S.W.	22½	
11. 9½	11. 9¾	W.S.W.	N.W.	67½	
11. 11	11. 11½	N.W.	N.N.W.	22½	
11. 12½	11. 13½	N.N.W.	S.W.		112½
12. 15½	12. 16½	S.W.	S.S.W.		22½
12. 22¼	12. 22½	S.S.W.	S.W.	22½	
13. 1	13. 1½	S.W.	S.S.W.		22½
13. 14	13. 14½	S.S.W.	S.		22½
13. 17¼	13. 20	S.	S.S.E.		22½
14. 0¼	14. 0½	S.S.E.	S.	22½	
14. 4½	14. 4¾	S.	S.S.E.		22½
14. 9½	14. 11¼	S.S.E.	S.W.	67½	
14. 12	14. 12¼	S.W.	S.S.W.		22½
14. 17½	14. 18½	S.S.W.	S.W.	22½	
15. 0½	15. 1	S.W.	S.S.W.		22½
15. 7	15. 8	S.S.W.	S.W.	22½	
15. 12	15. 12¼	S.W.	W.S.W.	22½	
15. 16½	15. 17½	W.S.W.	S.W.		22½
16. 8¼	16. 8½	S.W.	W.S.W.	22½	
16. 10½	16. 10¾	W.S.W.	S.W.		22½
16. 12	16. 13	S.W.	W.N.W.	67½	
16. 15	16. 15½	W.N.W.	W.		22½
16. 17	16. 17½	W.	W.N.W.	22½	
16. 21½	16. 23	W.N.W.	N.N.W.	45	
17. 3½	17. 4	N.N.W.	N.W.		22½
17. 7	17. 7½	N.W.	W.S.W.		67½
Nov.—*cont.*					
d h	d h				
17. 14¼	17. 14¾	W.S.W.	N.N.W.	90	
19. 3	19. 3¼	N.N.W.	N.	22½	
19. 8¾	19. 9	N.	N.N.W.		22½
19. 12	19. 12½	N.N.W.	N.	22½	
19. 19	19. 20½	N.	N.N.W.		22½
19. 22½	19. 23	N.N.W.	S.W.		112½
20. 8	20. 9	S.W.	W.S.W.	22½	
20. 11½	20. 11¾	W.S.W.	S.W.		22½
20. 16¾	20. 17¼	S.W.	W.S.W.	22½	
21. 13	21. 14½	W.S.W.	W.N.W.	45	
21. 21½	21. 22	W.N.W.	W.		22½
22. 0¾	22. 1¾	W.	W.S.W.		22½
22. 23	22. 23½	W.S.W.	S.W.		22½
23. 4	23. 4½	S.W.	W.S.W.	22½	
23. 6	23. 6½	W.S.W.	S.W.		22½
24. 8¼	24. 8½	S.W.	N.N.W.	112½	
24. 15½	24. 16½	N.N.W.	N.W.		22½
24. 22	24. 23	N.W.	S.W.		90
25. 10	25. 10½	S.W.	W.S.W.	22½	
26. 11	26. 12¾	W.S.W.	N.W.	67½	
26. 17½	26. 17¾	N.W.	W.N.W.		22½
26. 19½	26. 20½	W.N.W.	N.W.	22½	
26. 22¾	26. 23	N.W.	S.S.E.		157½
27. 1½	27. 2¼	S.S.E.	S.S.W.	45	
27. 5	27. 6	S.S.W.	S.		22½
27. 8	27. 8½	S.	S.S.W.	22½	
27. 12	27. 14¼	S.S.W.	S.S.E.		45
27. 17¼	27. 18	S.S.E.	W.S.W.	90	
28. 0½	28. 2½	W.S.W.	W.N.W.	45	
28. 5½	28. 6	W.N.W.	W.		22½
28. 8	28. 8¼	W.	W.N.W.	22½	
28. 10	28. 10¼	W.N.W.	W.		22½
28. 13½	28. 13¾	W.	W.S.W.		22½
28. 19¼	28. 21½	W.S.W.	N.E.	157½	
29. 12½	29. 12¾	N.E.	E.N.E.	22½	
29. 14½	29. 14¾	E.N.E.	N.N.E.		45
30. 0½	30. 1	N.N.E.	N.		22½
30. 11½	30. 12	N.	N.N.W.		22½
			Sums	2227½	1687½
December.					
2. 17	2. 17¼	N.N.W.	N.W.		22½
2. 18½	2. 19	N.W.	S.S.W.		112½
3. 1	3. 1½	S.S.W.	S.W.	22½	
3. 4½	3. 5½	S.W.	S.		45
3. 8	3. 9½	S.	S.S.W.	22½	
3. 16½	3. 17½	S.S.W.	S.		22½
4. 6½	4. 7	S.	S.S.W.	22½	
4. 9¾	4. 10	S.S.W.	S.W.	22½	
4. 16¼	4. 16½	S.W.	S.S.W.		22½
4. 21¼	4. 21¾	S.S.W.	S.		22½
5. 1¾	5. 2¾	S.	S.S.E.		22½
5. 5½	5. 5¾	S.S.E.	S.E.		22½

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

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
Dec.—*cont.*					
d h	d h				
5. 7¼	5. 7½	S.E.	S.	45	
5. 9¼	5. 9½	S.	N.E.	225	
5. 10¾	5. 11	N.E.	N.N.W.		67½
5. 20½	5. 21½	N.N.W.	N.W.		22½
6. 3	6. 3¼	N.W.	W.N.W.		22½
6. 4½	6. 5	W.N.W.	N.W.	22½	
6. 16	6. 16¼	N.W.	S.W.		90
6. 21½	6. 23½	S.W.	S.E.		90
7. 0¾	7. 1	S.E.	E.S.E.		22½
7. 4½	7. 5	E.S.E.	S.E.	22½	
7. 10	7. 10½	S.E.	S.S.E.	22½	
7. 14	7. 14½	S.S.E.	S.	22½	
7. 17¾	7. 18	S.	S.S.W.	22½	
9. 2½	9. 3½	S.S.W.	S.		22½
9. 5¾	9. 6	S.	S.E.		45
9. 7½	9. 8	S.E.	S.S.E.	22½	
9. 11	9. 12	S.S.E.	S.W.	67½	
9. 14¼	9. 14½	S.W.	S.S.W.		22½
9. 18	9. 18½	S.S.W.	S.		22½
9. 22¼	9. 23½	S.	S.S.E.		22½
10. 11¾	10. 12	S.S.E.	S.	22½	
10. 13½	10. 15	S.	S.S.E.		22½
10. 16½	10. 16¾	S.S.E.	S.	22½	
10. 21	10. 21½	S.	S.S.W.	22½	
11. 0½	11. 3½	S.S.W.	S.S.E.		45
11. 4½	11. 5½	S.S.E.	S.	22½	
11. 16	11. 16½	S.	S.S.E.		22½
11. 19	11. 19½	S.S.E.	S.E.		22½
12. 3½	12. 3¾	S.E.	E.S.E.		22½
12. 6½	12. 7	E.S.E.	E.		22½
12. 11½	12. 12	E.	E.S.E.	22½	
13. 1	13. 1½	E.S.E.	E.		22½
13. 4½	13. 6½	E.	E.S.E.	22½	
13. 8	13. 8½	E.S.E.	S.E.	22½	
13. 17¼	13. 18	S.E.	S.S.E.	22½	
13. 23½	14. 0	S.S.E.	S.	22½	

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
Dec.—*cont.*					
d h	d h				
14. 1½	14. 2½	S.	S.S.E.		22½
14. 11½	14. 12	S.S.E.	S.	22½	
14. 14½	14. 16	S.	S.E.		45
15. 0	15. 0¼	S.E.	E.S.E.		22½
15. 2¼	15. 2½	E.S.E.	S.E.	22½	
15. 6	15. 6½	S.E.	E.S.E.		22½
15. 9¾	15. 10½	E.S.E.	S.E.	22½	
15. 13¾	15. 14	S.E.	E.S.E.		22½
15. 16½	15. 17	E.S.E.	E.		22½
16. 3	16. 5	E.	E.N.E.		22½
16. 18¾	16. 19¼	E.N.E.	E.	22½	
16. 20½	16. 21	E.	E.S.E.	22½	
17. 9	17. 9½	E.S.E.	S.E.	22½	
17. 13½	17. 14	S.E.	E.S.E.		22½
17. 15¼	17. 15¾	E.S.E.	N.E.		67½
17. 16½	17. 16¾	N.E.	E.S.E.	67½	
18. 0	18. 2½	E.S.E.	E.		22½
18. 6	18. 6½	E.	E.N.E.		22½
19. 12	19. 12¼	E.N.E.	E.	22½	
19. 21	19. 21¼	E.	E.S.E.	22½	
19. 23½	20. 0	E.S.E.	E.		22½
20. 14	20. 14½	E.	N.E.		45
20. 15¾	20. 16	N.E.	E.	45	
20. 19	20. 22	E.	E.S.E.	22½	
21. 3¼	21. 3½	E.S.E.	S.S.E.	45	
21. 5½	21. 6	S.S.E.	N.E.		112½
21. 10½	21. 12½	N.E.	S.E.	90	
21. 16½	21. 18¾	S.E.	S.	45	
22. 1½	22. 2	S.	S.S.E.		22½
22. 6½	22. 6¾	S.S.E.	S.	22½	
22. 13	22. 13¼	S.	S.S.E.		22½
23. 4	23. 4¼	S.S.E.	E.N.E.		90
23. 5½	23. 6¾	E.N.E.	S.S.E.	90	
23. 8	23. 10	S.S.E.	N.E.		112½
23. 15½	23. 15¾	N.E.	N.N.E.		22½
23. 17½	27. 17¾	N.N.E.	N.E.	22½	

Greenwich Civil Time.		Change of Direction.		Amount of Motion.	
From	To	From	To	Direct.	Retrograde.
				°	°
Dec.—*cont.*					
d h	d h				
23. 18¾	23. 19¾	N.E.	N.		45
23. 22½	23. 23½	N.	N.N.W.		22½
24. 9	24. 9¼	N.N.W.	N.	22½	
24. 16	24. 17½	N.	N.N.W.		22½
26. 6¾	26. 7	N.N.W.	N.	22½	
26. 9	26. 10½	N.	E.N.E.	67½	
26. 12½	26. 12¾	E.N.E.	E.	22½	
26. 14	26. 14¼	E.	E.N.E.		22½
26. 16½	26. 17½	E.N.E.	N.E.		22½
26. 21½	26. 23	N.E.	E.	45	
27. 0½	27. 2¾	E.	N.N.E.		67½
27. 4	27. 4½	N.N.E.	E.N.E.	45	
27. 9	27. 9½	E.N.E.	N.E.		22½
27. 20½	27. 21	N.E.	N.N.E.		22½
28. 2	28. 2½	N.N.E.	N.E.	22½	
28. 5	28. 7	N.E.	N.N.E.		22½
28. 10	28. 12	N.N.E.	E.N.E.	45	
28. 13¾	28. 14¼	E.N.E.	N.E.		22½
28. 16¾	28. 17¼	N.E.	E.N.E.	22½	
28. 21½	28. 22	E.N.E.	E.	22½	
29. 3	29. 4	E.	E.N.E.		22½
29. 8½	29. 9	E.N.E.	E.	22½	
29. 11	29. 11¼	E.	E.N.E.		22½
30. 17½	30. 19¼	E.N.E.	E.S.E.	45	
30. 21½	31. 0	E.S.E.	E.		22½
31. 2½	31. 3	E.	E.S.E.	22½	
31. 6½	31. 9½	E.S.E.	E.N.E.		45
31. 10¾	31. 11	E.N.E.	E.S.E.	45	
31. 12½	31. 13¾	E.S.E.	E.N.E.		45
31. 17¼	31. 18	E.N.E.	E.	22½	
			Sums	1890	2137½

Excess of Motion in each Month.

	Direct.	Retrograde.
	°	°
1903.		
January		45
February	22½	
March	22½	
April	945	
May	1327½	
June	1305	

	Direct.	Retrograde.
	°	°
1903.		
July	382½	
August	945	
September	22½	
October	742½	
November	540	
December		247½

The whole excess of direct motion for the year was 5962½°.

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	1903.												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	14·7	17·1	14·9	12·2	9·1	9·0	8·5	10·9	9·1	14·5	12·1	10·6	11·9
2	15·0	17·9	15·4	11·9	8·6	9·3	8·1	10·8	9·4	14·5	12·0	10·4	11·9
3	14·4	17·9	15·4	11·9	8·4	8·9	8·3	11·2	9·6	14·6	11·9	10·4	11·9
4	14·4	19·0	15·5	11·5	8·9	8·3	8·4	10·4	9·8	14·3	11·2	10·9	11·9
5	14·3	18·0	15·7	12·1	9·1	8·3	8·1	10·9	9·5	12·9	11·2	10·1	11·7
6	14·6	17·4	15·9	12·3	8·6	8·2	8·2	10·9	9·8	13·2	11·7	10·6	11·8
7	14·4	16·4	15·9	12·3	9·2	8·3	8·1	11·6	9·5	13·3	12·0	10·8	11·8
8	15·0	16·1	16·6	12·5	10·0	9·5	8·9	12·3	9·7	13·2	11·3	10·6	12·1
9	14·9	17·2	18·2	14·7	10·9	9·7	9·8	13·6	10·2	13·5	11·5	11·5	13·0
10	15·0	17·1	19·5	15·8	11·3	10·9	10·7	15·1	11·1	14·8	12·7	12·1	13·8
11	16·8	17·7	21·0	16·2	12·5	11·8	11·1	15·5	12·4	16·4	13·1	12·7	14·8
Noon.	18·5	19·4	21·3	16·8	13·3	11·8	11·9	16·8	12·8	17·5	14·2	13·1	15·6
13h	18·9	19·9	23·1	16·6	14·1	12·9	12·3	17·2	12·9	18·1	14·8	13·8	16·2
14	19·1	20·1	21·8	16·4	14·0	12·5	12·1	16·5	12·6	17·2	14·5	13·7	15·9
15	18·5	20·4	21·4	16·2	14·3	12·9	13·3	16·1	13·2	17·2	14·8	13·2	16·0
16	18·0	19·4	21·2	16·2	13·7	13·1	13·7	15·8	13·2	16·0	14·4	12·2	15·6
17	17·8	17·7	19·3	15·3	13·1	13·1	12·7	14·3	12·3	15·3	13·0	13·2	14·8
18	16·6	17·2	17·7	14·8	12·2	12·4	11·9	12·9	10·9	14·1	12·5	12·7	13·8
19	16·1	17·9	15·7	13·9	10·5	11·2	11·4	13·4	10·3	14·1	12·9	11·4	13·2
20	16·0	17·3	15·5	12·6	9·4	10·9	10·8	12·8	11·5	14·3	12·5	11·5	12·9
21	15·3	16·3	15·7	12·6	9·6	10·1	9·9	12·2	10·5	15·0	12·0	11·2	12·5
22	14·5	16·5	15·2	12·1	9·9	10·1	9·1	12·1	10·3	15·2	11·9	10·5	12·3
23	14·8	16·4	14·6	12·6	9·6	9·1	9·6	11·1	10·5	15·1	11·9	11·2	12·2
Midnight.	15·0	17·6	14·4	11·8	8·8	9·3	8·8	10·7	9·7	15·1	12·0	10·2	11·9
Means............	15·9	17·8	17·5	13·8	10·8	10·5	10·2	13·1	10·9	15·0	12·6	11·6	13·3
Greatest Hourly Measures........	37	48	45	31	30	30	31	34	43	42	38	37	...
Least Hourly Measures........	1	1	3	0	1	0	0	1	0	1	1	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.)

1903.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d												
1	+1129	+ 631	+ 402	+ 808	+ 254	+ 223	+ 381	+ 170	+ 152	...	+ 387	+1253
2	+ 277	+1065	+ 109	+ 733	+ 449	+ 261	+ 273	+ 205	+ 100	...	+ 516	+1497
3	+ 479	+ 825	+ 793	+ 780	+ 145	+ 271	+ 378	+ 177	+ 293	...	+ 682	+ 935
4	+ 280	+ 579	+ 794	+ 444	+ 353	+ 230	+ 395	+ 195	+ 261	...	+ 844	+ 588
5	+ 123	+ 510	+ 606	+ 796	+ 527	+ 183	+ 242	+ 270	+ 191	...	+ 677	+ 778
6	+ 195	+ 536	+ 926	+ 637	+ 365	+ 254	+ 542	+ 413	+ 344	...	+ 602	+ 660
7	+ 391	+ 345	+ 718	+ 835	+ 422	+ 173	+ 851	+ 402	+ 302	...	+ 602	+ 331
8	+ 595	+ 134	+ 912	+1089	+ 557	+ 152	+ 830	+ 241	+ 234	...	+ 660	+ 557
9	+ 283	+ 225	+ 437	+1176	+ 415	+ 91	+ 434	+ 201	+ 410	...	+ 729	+ 318
10	+ 709	+ 374	− 164	+ 910	+ 638	...	+ 155	+ 243	+ 310	+ 872	+ 663	+ 326
11	+ 613	+ 410	+ 883	+ 464	+ 522	...	+ 190	+ 171	+ 526	+ 195	+ 456	+ 715
12	+1068	+ 527	+ 863	+ 857	+ 960	...	+ 279	+ 178	+ 656	+ 73	+ 423	+ 467
13	+1332	+ 850	+ 806	+1081	+ 813	− 89	+ 855	+ 244	+ 511	+ 406	+ 441	+ 227
14	...	+ 727	+ 656	+1368	+ 527	− 131	+ 424	+ 164	+ 520	+ 427	+ 585	+ 514
15	+ 823	+ 441	+ 736	+1221	+ 505	− 654	+ 377	+ 155	+ 571	+ 471	+1023	+ 634
16	+1000	+ 485	+ 680	+1487	− 183	+ 110	+ 376	+ 176	+ 703	+ 721	+1261	+ 688
17	+ 670	+ 774	+ 374	+1423	+ 348	+ 340	+ 308	+ 256	+ 523	+ 850	+1004	+ 545
18	+ 144	+ 853	+ 753	+1344	+ 904	+ 445	+ 246	+ 280	+ 410	+ 900	+1244	+ 342
19	+ 215	+ 585	+ 456	+1035	+ 584	+ 303	+ 242	+ 312	+ 237	+ 523	+1292	+ 294
20	+ 240	+ 447	+ 507	+1000	+ 577	+ 409	+ 326	+ 201	+ 178	+ 451	+1010	+ 445
21	...	+ 94	+ 642	+ 847	+ 397	+ 443	+ 295	+ 356	+ 195	+ 531	+ 934	+ 246
22	...	+ 232	+ 473	+1168	+ 311	+ 415	+ 204	+ 329	+ 163	+ 427	+ 828	+ 246
23	+ 717	+ 531	+ 373	+1349	+ 580	+ 225	+ 185	+ 324	+ 220	+ 783	+ 626	+ 612
24	+ 299	+ 422	+ 535	+1374	+ 521	+ 297	+ 90	+ 179	+ 183	+ 675	+ 937	+1054
25	+ 293	+ 389	+ 369	+1288	+ 763	+ 358	+ 373	+ 253	+ 140	+ 125	+1425	+1081
26	+ 288	+ 642	+ 363	− 584	+ 883	+ 271	+ 268	+ 289	+ 208	+ 117	+1357	+ 740
27	+ 145	+ 385	+ 572	+ 512	+ 681	+ 185	+ 272	+ 272	+ 98	+ 239	+ 304	+ 675
28	+ 401	+ 25	+ 439	+ 605	+ 48	+ 147	+ 216	+ 223	+ 106	+ 468	− 541	+ 808
29	+ 624		+ 521	+ 227	+ 136	+ 400	+ 197	+ 350	...	+ 563	+ 337	+1012
30	+ 524		+ 474	+ 139	+ 142	+ 697	+ 487	+ 221	...	+ 735	+1006	+1107
31	+ 438		+1209		+ 147		+ 310	+ 211		+ 708		+1015
Means	+ 511	+ 502	+ 588	+ 880	+ 461	+ 223	+ 355	+ 247	+ 312	+ 512	+ 744	+ 668

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.	1903.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Midnight.	+ 466	+ 465	+ 646	+ 884	+ 508	+ 276	+ 328	+ 290	+ 348	+ 477	+ 662	+ 706	+ 505
1h	+ 362	+ 406	+ 528	+ 853	+ 530	+ 264	+ 337	+ 272	+ 319	+ 442	+ 644	+ 639	+ 466
2	+ 363	+ 290	+ 470	+ 711	+ 511	+ 203	+ 307	+ 225	+ 280	+ 385	+ 567	+ 604	+ 410
3	+ 350	+ 227	+ 416	+ 692	+ 447	+ 201	+ 294	+ 217	+ 235	+ 359	+ 513	+ 550	+ 375
4	+ 329	+ 204	+ 393	+ 704	+ 439	+ 182	+ 301	+ 206	+ 220	+ 382	+ 542	+ 543	+ 370
5	+ 335	+ 228	+ 371	+ 732	+ 369	+ 181	+ 294	+ 181	+ 229	+ 388	+ 569	+ 481	+ 363
6	+ 378	+ 281	+ 394	+ 797	+ 426	+ 206	+ 343	+ 176	+ 223	+ 414	+ 566	+ 487	+ 391
7	+ 429	+ 343	+ 473	+ 891	+ 462	+ 235	+ 331	+ 178	+ 217	+ 411	+ 591	+ 566	+ 427
8	+ 464	+ 427	+ 531	+ 832	+ 438	+ 233	+ 322	+ 177	+ 241	+ 516	+ 640	+ 605	+ 452
9	+ 489	+ 545	+ 591	+ 863	+ 479	+ 229	+ 389	+ 194	+ 280	+ 459	+ 678	+ 659	+ 488
10	+ 624	+ 640	+ 620	+1055	+ 592	+ 291	+ 427	+ 260	+ 400	+ 600	+ 835	+ 768	+ 593
11	+ 620	+ 629	+ 606	+ 898	+ 538	+ 312	+ 383	+ 258	+ 380	+ 619	+ 871	+ 771	+ 574
Noon.	+ 592	+ 554	+ 587	+ 834	+ 384	+ 273	+ 349	+ 248	+ 321	+ 550	+ 809	+ 666	+ 514
13h	+ 584	+ 537	+ 469	+ 736	+ 371	+ 151	+ 323	+ 239	+ 324	+ 523	+ 793	+ 628	+ 473
14	+ 572	+ 545	+ 478	+ 825	+ 311	+ 124	+ 277	+ 187	+ 295	+ 519	+ 805	+ 632	+ 464
15	+ 634	+ 578	+ 528	+ 936	+ 369	+ 158	+ 311	+ 201	+ 305	+ 530	+ 888	+ 722	+ 513
16	+ 636	+ 579	+ 586	+ 968	+ 326	+ 104	+ 341	+ 235	+ 368	+ 570	+ 912	+ 809	+ 536
17	+ 593	+ 685	+ 627	+1011	+ 375	+ 133	+ 381	+ 269	+ 373	+ 640	+ 904	+ 765	+ 563
18	+ 640	+ 678	+ 781	+ 999	+ 440	+ 191	+ 402	+ 309	+ 363	+ 654	+ 922	+ 840	+ 602
19	+ 598	+ 697	+ 828	+1032	+ 429	+ 300	+ 414	+ 310	+ 340	+ 613	+ 925	+ 772	+ 605
20	+ 545	+ 674	+ 871	+ 977	+ 563	+ 260	+ 391	+ 296	+ 354	+ 593	+ 871	+ 762	+ 596
21	+ 582	+ 628	+ 819	+1003	+ 662	+ 247	+ 443	+ 374	+ 363	+ 584	+ 799	+ 711	+ 601
22	+ 546	+ 635	+ 757	+ 990	+ 583	+ 289	+ 385	+ 321	+ 365	+ 575	+ 797	+ 701	+ 579
23	+ 522	+ 564	+ 733	+ 902	+ 509	+ 299	+ 445	+ 311	+ 355	+ 483	+ 748	+ 648	+ 543
24	+ 456	+ 486	+ 653	+ 849	+ 515	+ 272	+ 322	+ 291	+ 338	+ 455	+ 688	+ 710	+ 503
Means 0h.–23h.	+ 511	+ 502	+ 588	+ 880	+ 461	+ 223	+ 355	+ 247	+ 312	+ 512	+ 744	+ 668	+ 500
Means 1h.–24h.	+ 510	+ 502	+ 588	+ 879	+ 461	+ 222	+ 355	+ 247	+ 312	+ 511	+ 745	+ 668	+ 500
Number of Days Employed.	28	28	31	30	31	27	31	31	28	22	30	31	...

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$^{\text{in}}$·020. The scale employed is arbitrary: the sign + indicates positive potential.)

Hour, Greenwich Civil Time.	1903.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Midnight.	+ 269	+ 243	+ 475	+ 597	+ 233	+ 60	+ 86	+ 269	+ 277	+ 404	+ 377	+ 560	+ 321
1^h	+ 257	+ 100	+ 336	+ 631	+ 357	+ 123	+ 196	+ 247	+ 258	+ 363	+ 412	+ 480	+ 313
2	+ 232	− 129	+ 319	+ 266	+ 368	− 9	+ 156	+ 173	+ 259	+ 279	+ 271	+ 419	+ 217
3	+ 202	− 169	+ 282	+ 203	+ 278	+ 16	+ 195	+ 185	+ 167	+ 268	+ 209	+ 329	+ 180
4	+ 180	− 193	+ 286	+ 211	+ 307	− 29	+ 176	+ 166	+ 132	+ 309	+ 259	+ 395	+ 183
5	+ 201	− 116	+ 254	+ 220	+ 158	− 16	+ 81	+ 131	+ 166	+ 300	+ 312	+ 213	+ 159
6	+ 235	+ 40	+ 256	+ 224	+ 216	+ 49	+ 279	+ 147	+ 185	+ 302	+ 341	+ 216	+ 208
7	+ 266	+ 108	+ 361	+ 330	+ 305	+ 129	+ 190	+ 147	+ 191	+ 238	+ 400	+ 382	+ 254
8	+ 285	+ 280	+ 406	+ 220	+ 292	+ 117	+ 137	+ 141	+ 201	+ 366	+ 477	+ 381	+ 275
9	+ 293	+ 449	+ 406	+ 390	+ 290	+ 31	+ 345	+ 146	+ 190	+ 272	+ 519	+ 463	+ 316
10	+ 432	+ 584	+ 395	+ 698	+ 395	− 7	+ 231	+ 217	+ 348	+ 412	+ 635	+ 676	+ 418
11	+ 421	+ 684	+ 426	+ 581	+ 379	+ 74	+ 156	+ 258	+ 305	+ 428	+ 675	+ 589	+ 415
Noon.	+ 468	+ 679	+ 463	+ 557	+ 177	+ 121	+ 204	+ 263	+ 265	+ 368	+ 563	+ 317	+ 370
13^h	+ 423	+ 679	+ 339	+ 224	+ 257	− 190	+ 309	+ 257	+ 285	+ 367	+ 515	+ 449	+ 326
14	+ 383	+ 705	+ 332	+ 534	+ 203	− 246	+ 253	+ 171	+ 233	+ 335	+ 624	+ 424	+ 329
15	+ 441	+ 629	+ 368	+ 729	+ 315	− 74	+ 234	+ 219	+ 252	+ 338	+ 766	+ 584	+ 400
16	+ 412	+ 534	+ 439	+ 830	+ 103	− 346	+ 259	+ 279	+ 318	+ 444	+ 766	+ 809	+ 404
17	+ 327	+ 770	+ 474	+ 812	+ 223	− 194	+ 199	+ 311	+ 300	+ 499	+ 739	+ 644	+ 425
18	+ 347	+ 739	+ 656	+ 700	+ 208	− 40	+ 375	+ 381	+ 268	+ 493	+ 785	+ 923	+ 486
19	+ 319	+ 759	+ 658	+ 718	+ 132	+ 333	+ 376	+ 355	+ 228	+ 475	+ 850	+ 809	+ 501
20	+ 214	+ 787	+ 721	+ 656	+ 417	+ 47	+ 244	+ 307	+ 310	+ 472	+ 782	+ 816	+ 481
21	+ 233	+ 730	+ 649	+ 769	+ 541	− 30	+ 285	+ 387	+ 355	+ 485	+ 696	+ 686	+ 482
22	+ 159	+ 723	+ 545	+ 774	+ 358	− 64	+ 156	+ 289	+ 315	+ 467	+ 688	+ 580	+ 416
23	+ 179	+ 500	+ 513	+ 588	+ 216	+ 43	+ 427	+ 279	+ 312	+ 347	+ 586	+ 537	+ 377
24	+ 181	+ 430	+ 444	+ 531	+ 272	+ 24	+ 160	+ 251	+ 296	+ 335	+ 548	+ 674	+ 345
Means $0^h.-23^h.$	+ 299	+ 421	+ 432	+ 519	+ 280	− 4	+ 231	+ 238	+ 255	+ 376	+ 552	+ 528	+ 344
Means $1^h.-24^h.$	+ 295	+ 429	+ 430	+ 517	+ 282	− 6	+ 234	+ 238	+ 256	+ 373	+ 559	+ 533	+ 345
Number of Days employed.	16	8	17	10	12	7	8	15	11	13	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.	1903.												Yearly Means.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	
Midnight.	+ 615	+ 549	+ 878	+1049	+ 704	+ 360	+ 448	+ 328	+ 405	+ 687	+ 868	+ 759	+ 638
1^{h}	+ 540	+ 526	+ 798	+ 982	+ 661	+ 315	+ 420	+ 319	+ 360	+ 720	+ 815	+ 718	+ 598
2	+ 487	+ 466	+ 678	+ 948	+ 633	+ 281	+ 390	+ 296	+ 288	+ 687	+ 784	+ 694	+ 553
3	+ 484	+ 393	+ 603	+ 957	+ 594	+ 268	+ 366	+ 272	+ 286	+ 630	+ 723	+ 647	+ 519
4	+ 454	+ 369	+ 539	+ 961	+ 544	+ 265	+ 399	+ 265	+ 270	+ 633	+ 735	+ 613	+ 504
5	+ 437	+ 377	+ 516	+ 994	+ 502	+ 257	+ 417	+ 250	+ 269	+ 660	+ 732	+ 593	+ 500
6	+ 490	+ 390	+ 572	+1105	+ 564	+ 264	+ 409	+ 231	+ 244	+ 663	+ 688	+ 609	+ 519
7	+ 537	+ 453	+ 627	+1196	+ 564	+ 274	+ 434	+ 229	+ 230	+ 630	+ 668	+ 672	+ 543
8	+ 600	+ 497	+ 703	+1156	+ 551	+ 280	+ 433	+ 226	+ 262	+ 673	+ 701	+ 724	+ 567
9	+ 692	+ 609	+ 848	+1107	+ 631	+ 299	+ 446	+ 249	+ 308	+ 703	+ 721	+ 774	+ 616
10	+ 819	+ 698	+ 916	+1242	+ 740	+ 397	+ 535	+ 324	+ 420	+ 870	+ 940	+ 844	+ 729
11	+ 815	+ 635	+ 814	+1035	+ 647	+ 396	+ 517	+ 272	+ 423	+ 967	+ 982	+ 908	+ 701
Noon.	+ 612	+ 522	+ 734	+ 973	+ 543	+ 323	+ 424	+ 244	+ 391	+ 913	+ 952	+ 856	+ 624
13^{h}	+ 700	+ 496	+ 617	+1006	+ 464	+ 76	+ 350	+ 232	+ 351	+ 933	+ 968	+ 774	+ 597
14	+ 706	+ 499	+ 652	+ 986	+ 399	+ 244	+ 302	+ 213	+ 327	+ 937	+ 902	+ 806	+ 581
15	+ 781	+ 585	+ 714	+1069	+ 420	+ 231	+ 323	+ 189	+ 345	+1070	+ 949	+ 870	+ 629
16	+ 822	+ 622	+ 743	+1062	+ 415	+ 251	+ 375	+ 197	+ 415	+ 970	+ 979	+ 933	+ 649
17	+ 904	+ 681	+ 807	+1152	+ 405	+ 241	+ 427	+ 233	+ 444	+1053	+ 982	+ 903	+ 686
18	+ 957	+ 688	+ 934	+1176	+ 554	+ 264	+ 441	+ 255	+ 446	+1153	+ 945	+ 905	+ 726
19	+ 910	+ 709	+1047	+1208	+ 554	+ 274	+ 451	+ 292	+ 434	+1060	+ 919	+ 879	+ 728
20	+ 910	+ 665	+1095	+1134	+ 602	+ 318	+ 461	+ 300	+ 421	+ 963	+ 893	+ 839	+ 717
21	+ 987	+ 630	+1045	+1122	+ 697	+ 320	+ 516	+ 378	+ 386	+ 933	+ 833	+ 834	+ 723
22	+1011	+ 648	+ 996	+1111	+ 692	+ 384	+ 474	+ 385	+ 418	+ 983	+ 848	+ 869	+ 735
23	+ 935	+ 623	+ 986	+1082	+ 656	+ 365	+ 465	+ 387	+ 404	+ 953	+ 840	+ 812	+ 709
24	+ 767	+ 569	+ 882	+1031	+ 597	+ 338	+ 390	+ 359	+ 371	+ 930	+ 759	+ 851	+ 654
Means 0^{h}.–23^{h}.	+ 717	+ 555	+ 786	+1076	+ 572	+ 298	+ 426	+ 274	+ 356	+ 852	+ 849	+ 785	+ 629
Means 1^{h}.–24^{h}.	+ 723	+ 556	+ 786	+1075	+ 568	+ 297	+ 424	+ 275	+ 355	+ 862	+ 844	+ 789	+ 629
Number of Days employed.	10	18	12	18	14	18	15	12	13	3	13	18	...

AMOUNT of RAIN COLLECTED in each MONTH of the YEAR 1903.

MONTH, 1903.	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.		
							In Magnetic Pavilion Enclosure.	**In Observatory Grounds.**	
		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	18	1·380	1·374	1·713	1·917	2·060	2·128	2·107	2·089
February	10	0·527	0·578	0·869	1·055	1·272	1·366	1·317	1·306
March	18	0·911	0·794	1·329	1·761	2·092	2·200	2·161	2·177
April	11	1·071	1·243	1·561	1·786	1·826	1·855	1·828	1·889
May	15	1·145	1·329	1·668	1·952	1·965	1·946	1·976	2·029
June	10	4·510	4·883	5·374	6·045	6·131	6·073	6·068	6·037
July	13	3·805	3·664	4·282	4·896	5·012	5·271	5·079	5·089
August	17	3·382	3·772	4·272	4·682	4·850	4·822	4·850	4·877
September	15	1·444	1·481	1·837	2·116	2·243	2·238	2·287	2·269
October	24	2·896	2·920	3·649	4·103	4·531	4·441	4·618	4·634
November	16	0·942	0·926	1·243	1·643	1·902	1·928	1·901	1·936
December	12	0·761	0·723	0·951	1·043	1·269	1·275	1·310	1·286
Sums	179	22·774	23·687	28·748	32·999	35·153	35·543	35·502	35·618
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.

1903.

Month and Day, 1903.		Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	No. for Reference.
		h m s				s		°	
January	25	20. 0. 0	S.	1	White	4·5	Brilliant	30	1
April	20	20. 57. 25	B.	1	Yellowish	1·4	Bright	40	2
	,,	22. 1. 44	S.	1	Bluish-white	2·0	None	25	3
	,,	22. 14. 12	S.	1	Bluish-white	0·8	None	12	4
	,,	22. 32. 59	S.	>1	White	1·0	Bright	...	5
August	7	21. 17. 35	S.	1	Bluish-white	1·4	Bright	25	6
	,,	22. 15. 53	B.	2	Bluish-white	0·5	None	4	7
	,,	22. 32. 33	S.	2	Bluish-white	0·6	None	15	8
	,,	22. 39. 29	P.	>1	Bluish-white	1·4	Bright	20	9
	,,	23. 9. 59	S	2	Bluish-white	0·5	None	8	10
	,,	23 41. 29	P.	>1	Blue	0·7	Long: bright	15	11
	,,	23. 50. 25	S.	2	Bluish-white	0·4	None	8	12
	,,	23. 58. 29	S.	>1	White	1·5	Brilliant	30	13
August	8	0. 17. 44	S.&P.	>1	Bluish-white	1·0	Slight	15	14
	,,	0. 31. 48	S.	>1	White	2·2	Brilliant	45	15
	,,	0. 43. 21	P.	2	Bluish-white	1·0	Bright: broken	13	16
	,,	1. 14. 10	S.	1	Bluish-white	1·5	Bright	30	17
	,,	1. 29. 33	S.	2	Bluish-white	1·0	Bright	12	18
	,,	1. 45. 45	P.	2	Bluish-white	0·8	None	10	19
	,,	1. 58. 25	S.	2	Bluish-white	0·4	None	8	20
	,,	2. 0. 29	P.	2	White	1·0	Slight	15	21
August	9	22. 36. 45	B.	>1	Bluish-white	1·0	Bright	20	22
August	10	21. 4. 27	S.	>1	Bluish-white	1·4	Brilliant	20	23
	,,	21. 12. 58	S.	>1	Bluish white	1·5	Brilliant	7	24
	,,	21. 20. 24	P.	2	Bluish white	0·7	Faint	7	25
	,,	21. 21. 4	S.	>1	Bluish-white	1·7	White train	40	26
	,,	21. 47. 50	P.	>1	Bluish-white	1·5	Long : faint	20	27
	,,	21. 54. 10	S.	2	Bluish-white	0·6	None	5	28
	,,	22. 5. 44	P.	1	Blue	1·2	Long : broken	25	29
	,,	22. 14. 56	S.	1	Bluish-white	0·8	Faint	15	30
	,,	22. 19. 51	S.	>1	Bluish-white	1·2	Brilliant	30	31
	,,	22. 41. 10	S.	2	Bluish-white	0·8	Faint	15	32
	,,	22. 57. 41	P.	1	White	1·0	Bright	10	33
	,,	23. 13. 5	S.	>1	Bluish-white	1·2	Bright	12	34
	,,	23. 21. 56	S.	>1	Bluish-white	1·4	Brilliant	18	35
	,,	23. 22. 33	P.	2	White	0·6	None	12	36
	,,	23. 34. 46	S.	>1	Bluish-white	1·2	Bright	20	37
	,,	23. 44. 10	S.	2	White	1·0	Bright	17	38
August	12	21. 16. 38	S.	1	Bluish-white	1·0	None	15	39
	,,	22. 16. 38	S.	>1	Bluish-white	1·4	Bright	25	40
	,,	22. 24. 17	P.	>1	Bluish-white	1·0	Bright	18	41
	,,	22. 29. 2	P.	1	White	0·8	Faint	10	42

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

No. for Reference.	Path of Meteor in the Sky.
1	From β Tauri in the direction of α Pegasi.
2	From η Ursæ Majoris to a point 5° beyond Arcturus.
3	From α Draconis to a point within 5° of θ Ursæ Majoris.
4	From β Herculis to α Serpentis.
5	From β Lyræ fell vertically to the horizon.
6	From α Andromedæ to a point 3° beyond γ Piscium.
7	From a point a little to the South of α Pegasi towards α Andromedæ.
8	From β Andromedæ to a point 5° to the East of γ Pegasi.
9	From α Persei directly towards ο Ursæ Majoris.
10	From a point near τ Piscium towards γ Pegasi.
11	From ε Cassiopeiæ fell vertically.
12	From Capella to a point 3° beyond β Aurigæ.
13	From γ Cassiopeiæ to a point near α Cygni.
14	From a point a little to the North of γ Andromedæ to φ Piscium.
15	From α Persei directly towards α Ursæ Majoris.
16	From θ Pegasi to ν Aquarii.
17	From a point a little to the North of Polaris to ε Draconis.
18	From α Cephei towards ξ Draconis.
19	From γ Andromedæ to a point 5° beyond β Andromedæ.
20	From α Cassiopeiæ to ι Cephei.
21	From α Lyræ to a point 5° North of β Herculis.
22	From Polaris to a point a little to the North of α Draconis.
23	From α Persei to a point about 5° beyond γ Cassiopeiæ.
24	From α Draconis to θ Boötis.
25	From a point 2° East of α Cassiopeiæ towards γ Andromedæ.
26	From γ Cephei towards ι Draconis.
27	From a point a little to the North of Polaris towards ζ Ursæ Majoris.
28	From a point about 2° beyond κ Draconis towards ε Ursæ Majoris.
29	From a point 5° below Polaris towards ε Ursæ Majoris.
30	From a point near γ Andromedæ towards α Piscium.
31	From Polaris towards ι Ursæ Majoris.
32	From α Persei to γ Andromedæ.
33	From a point 5° North of β Andromedæ to γ Pegasi.
34	From β Andromedæ to a point 2° beyond ε Andromedæ.
35	From β Persei towards ε Arietis.
36	From α Draconis to ε Ursæ Majoris.
37	From φ Andromedæ towards β Pegasi.
38	From α Persei to ε Cassiopeiæ.
39	From β Pegasi to a point 5° West of ζ Pegasi.
40	From δ Draconis to a point 10° due North of Polaris.
41	From a point midway between η and ζ Ursæ Majoris towards χ Ursæ Majoris.
42	From a point 3° to the West of η Ursæ Majoris towards β Canum Venaticûm.

Month and Day, 1903.		Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	No. for Reference.
		h m s				s		°	
August	12	22. 34. 24	S.	1	Bluish-white	1·2	Bright	25	1
	,,	22. 37. 21	P.	>1	Bluish-white	1·4	Brilliant	20	2
	,,	22. 41. 28	S.	1	Bluish-white	0·8	Bright	20	3
	,,	22. 55. 14	P.	>1	Bluish-white	1·2	Bright : long	18	4
	,,	22. 57. 38	S.	1	Bluish-white	0·6	None	12	5
August	13	0. 20. 52	P.	1	Bluish-white	1·0	Bright : long	25	6
	,,	21. 12. 29	S.	2	Bluish-white	0·7	Faint	12	7
	,,	21. 32. 38	S.	1	Bluish-white	0·9	None	20	8
	,,	21. 35. 40	S.	>1	White	0·5	Bright	20	9
	,,	21. 40. 33	S.	2	Bluish-white	1·0	Bright	18	10
	,,	21. 41. 43	S.	3	Bluish-white	0·5	None	10	11
	,,	22. 7. 38	S.	2	Bluish-white	0·6	Faint	15	12
	,,	22. 11. 14	S.	1	Bluish-white	0·5	None	12	13
	,,	22. 12. 35	S.	1	Bluish-white	1·0	Bright	45	14
	,,	22. 28. 31	S.	>1	Bluish-white	1·2	Bright	25	15
	,,	22. 28. 40	S.	>1	Bluish-white	1·7	Brilliant	40	16
	,,	22. 43. 9	S.	1	Bluish-white	1·2	Bright	25	17
	,,	23. 1. 16	S.	1	White	0·5	Bright	15	18
	,,	23. 7. 4	S.	>1	Bluish-white	0·8	Bright	25	19
	,,	23. 9. 21	S.	2	Bluish-white	1·0	None	15	20
	,,	23. 17. 5	S.	>1	White	1·5	Brilliant	50	21
	,,	23. 29. 58	S.	1	Bluish-white	0·7	None	20	22
	,,	23. 40. 14	S.	>1	White	0·6	Bright	20	23
November	15	23. 38. 54	P.	2	White	0·5	Bright	4	24
	,,	23. 41. 11	S.	1	Bluish-white	0·4	None	8	25
	,,	23. 43. 19	S.	1	Bluish-white	1·2	Brilliant	35	26
	,,	23. 46. 51	P.	2	White	0·5	None	5	27
	,,	23. 49. 38	P.	>1	Bluish-white	1·7	Long : bright	42	28
	,,	23. 51. 12	S.	1	Bluish-white	1·0	Bright	15	29
	,,	23. 54. 17	S.	>1	White	2·6	Brilliant	50	30
	,,	23. 58. 56	P.	2	Bluish-white	0·8	Short	7	31
November	16	0. 5. 37	S.	2	Bluish-white	1·0	Faint	10	32
	,,	0. 9. 26	S.&P.	>1	White	4·5	Brilliant	80 ±	33
	,,	0. 12. 26	P.	2	White	0·3	Faint	12	34
	,,	0. 21. 54	S.	1	Bluish-white	0·9	Bright	20	35
	,,	0. 24. 56	P.	2	Bluish-white	1·0	None	14	36
	,,	0. 26. 51	S.	1	Bluish-white	0·6	None	10	37
	,,	0. 34. 46	P.	>1	Bluish-white	3·8	Brilliant : long	27	38
	,,	0. 45. 10	P.	>1	White	2·2	Brilliant : long	12	39
	,,	0. 45. 37	S.	2	Bluish-white	1·0	Faint	12	40
	,,	0. 49. 58	S.	1	Bluish-white	1·3	Bright	25	41
	,,	0. 54. 18	S.	2	Bluish-white	0·8	Faint	15	42
	,,	0. 55. 54	P.	1	Bluish-white	1·5	Bright	17	43
	,,	0. 57. 4	S.	1	White	1·0	Bright	15	44
	,,	0. 58. 32	S.	2	Bluish-white	0·6	None	13	45
	,,	0. 59. 19	P.	2	Bluish-white	0·5	None	10	46
	,,	0. 59. 55	P.	3	Bluish-white	1·0	None	17	47
	,,	1. 1. 14	S.	1	White	1·2	Bright	13	48
	,,	1. 11. 49	S.	>1	Bluish-white	2·4	Brilliant	35	49
	,,	1. 23. 28	P.	1	Bluish-white	0·8	None	12	50
	,,	1. 37. 13	S.	>1	White	2·0	Brilliant	20	51
	,,	1. 39. 49	S.	1	Bluish-white	1·5	Bright	30	52
	,,	1. 39. 53	S.	1	Bluish-white	1·5	Bright	12	53
	,,	1. 42. 4	P.	>1	Bluish-white	2·0	Brilliant	20	54
	,,	1. 45. 42	S.	>1	White	1·0	Bright	15	55
	,,	1. 47. 19	S.&P.	>1	Red	0·5	White train	5	56

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

No. for Reference.	Path of Meteor in the Sky.
1	From γ Cephei towards ζ Draconis.
2	From κ Boötis towards γ Boötis.
3	From a point 3° South of α Cephei towards δ Cygni.
4	From γ Boötis towards Arcturus.
5	From β Cassiopeiæ towards ζ Cephei.
6	From Polaris towards α Ursæ Majoris.
7	From a point a little to the East of Polaris towards β Ursæ Minoris.
8	From ζ Cephei towards δ Cygni.
9	From γ Cassiopeiæ towards μ Persei.
10	From α Persei to a point about 5° East of β Camelopardi.
11	From ψ Cassiopeiæ towards β Cephei.
12	From α Persei towards β Camelopardi.
13	From a point midway between α and β Persei towards δ Arietis.
14	From γ Cassiopeiæ towards α Cygni.
15	From γ Cassiopeiæ towards δ Cygni.
16	From α Persei towards o Ursæ Majoris.
17	From γ Andromedæ to δ Andromedæ.
18	From Polaris to a point midway between β and γ Ursæ Majoris.
19	From γ Draconis to a point a little beyond ζ Herculis.
20	From Polaris to a point 5° North of β Ursæ Minoris.
21	From α Cassiopeiæ to ι Lyræ.
22	From β Cephei to o Draconis.
23	From α Persei to a point within 3° of γ Andromedæ.
24	From β Cancri towards Procyon.
25	From Pollux to ε Geminorum.
26	From γ Cancri towards α Orionis.
27	From a point near Pollux towards γ Geminorum.
28	From Castor towards the Pleiades.
29	From γ Geminorum to ε Orionis.
30	From α Ursæ Majoris towards γ Cassiopeiæ.
31	From α Camelopardi towards β Cassiopeiæ.
32	From β Cephei to a point about 3° beyond δ Draconis.
33	From Castor to a point about 5° beyond α Arietis.
34	From θ Ursæ Majoris towards Polaris.
35	From a point a little to the East of γ Cassiopeiæ to a point about 3° beyond o Andromedæ.
36	From a point 8° East of Pollux towards Procyon.
37	From ε Ursæ Majoris towards ι Draconis.
38	From a point near β Aurigæ towards α Ceti.
39	From γ Monocerotis towards Sirius.
40	From θ Geminorum to ι Aurigæ.
41	From α Cancri to a point 5° beyond Procyon.
42	From a point 5° West of θ Ursæ Majoris towards Polaris.
43	From ε Ursæ Majoris towards β Ursæ Minoris.
44	From Regulus to α Lyncis.
45	From β Ursæ Majoris towards α Draconis.
46	From γ Cephei to ι Cephei.
47	From ι Ursæ Majoris towards γ Camelopardi.
48	From Capella to δ Persei.
49	From Procyon towards Rigel.
50	From Pollux to θ Geminorum.
51	From Regulus towards γ Ursæ Majoris.
52	From Regulus to a point 5° beyond ψ Ursæ Majoris.
53	From η Leonis to ψ Ursæ Majoris.
54	From β Aurigæ towards α Persei.
55	From a point a little to the West of Regulus towards γ Ursæ Majoris.
56	From Regulus travelled 5° in a North-easterly direction and then burst.

Month and Day, 1903.	Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	No. for Reference.
	h m s				s		°	
November 16	1.47.33	S.	>1	White	1·2	Bright	20	1
,,	1.51.35	P.	1	White	0·3	None	7	2
,,	1.53.35	S.	2	White	1·5	Bright	20	3
,,	1.56.41	P.	1	Bluish-white	1·0	Bright	25	4
,,	1.58.52	P.	>1	White	4·0	Bright	25	5
,,	2. 0.12	S.	>1	White	1·5	Bright	20	6
,,	2. 2. 1	S.	1	Bluish-white	0·8	Bright	20	7
,,	2. 3.31	S.	>1	White	3·0	Brilliant	45	8
,,	2.11.19	S.&P.	1	White	1·0	Brilliant	15	9
,,	2.12. 4	S.	>1	White	1·5	Bright	35	10
,,	2.12.59	P.	1	Bluish-white	1·2	Bright	15	11
,,	2.21.25	P.	2	White	0·8	Slight	7	12
,,	2.22.25	S.	2	Bluish-white	1·0	Faint	15	13
,,	2.25.23	S.	>1	White	1·5	Brilliant	30	14
,,	2.26.50	P.	1	White	1·2	Bright	10	15
,,	2.27. 9	P.	1	Bluish-white	1·5	Bright	13	16
,,	2.29.31	S.	>1	Bluish-white	2·0	Brilliant	40	17
,,	2.33. 9	P.	>1	Bluish-white	1·0	Brilliant	15	18
,,	2.33. 9	P.	>1	Bluish-white	1·0	Brilliant	18	19
,,	2.34.32	S.	2	White	0·8	Bright	15	20
,,	2.36.52	S.	>1	White	2·0	Brilliant	30	21
,,	2.38.49	P.	>1	White	1·0	Bright	12	22
,,	2.42. 8	S.	2	Bluish-white	0·8	Slight	10	23
,,	2.46.32	S.	2	Bluish-white	0·5	Slight	10	24
,,	2.48.47	P.	1	White	1·5	Bright	8	25
,,	2.50.14	S.	>1	White	1·5	Bright	25	26
,,	2.50.58	S.	2	Bluish-white	1·0	Bright	15	27
,,	2.53.45	P.	1	Bluish-white	1·4	Bright	25	28
,,	2.54.28	S.	>1	White	3·0	Brilliant	60	29
,,	2.58.19	S.	>1	White	2·0	Brilliant	40	30
,,	3. 1. 8	S.	1	Bluish-white	1·5	Bright	20	31
,,	3. 2.25	P.	1	Bluish-white	1·0	Faint	18	32
,,	3. 3. 3	P.	1	Bluish-white	1·5	Bright	20	33
,,	3. 3.16	P.	>1	Bluish-white	2·0	Bright	15	34
,,	3. 5.12	S.	1	White	1·5	Bright	30	35
,,	3. 8.30	S.	>1	White	1·2	Train of sparks	20	36
,,	3.10.58	S.	>1	Bluish-white	1·0	Bright	15 +	37
,,	3.11.39	P.	>1	Bluish-white	0·7	Slight	10	38
,,	3.13.23	S.	2	Bluish-white	0·8	Faint	12	39
,,	3.16.14	S.	1	White	1·0	Bright	15	40
,,	3.19.18	P.	>1	Bluish-white	0·8	Bright	10	41
,,	3.20. 9	P.	1	Bluish-white	0·5	Faint	10	42
,,	3.22.34	S.&P.	>1	White	2·0	Bright	12	43
,,	3.23.17	S.	1	Bluish-white	1·7	Bright	20	44
,,	3.26.54	S.	2	White	0·7	Faint	15	45
,,	3.38.38	S.	2	White	0·8	None	12	46
,,	3.44. 1	P.	1	Bluish-white	1·0	Faint	15	47
,,	3.52.12	S.&P.	>1	Bluish-white	2·5	Brilliant	40	48
,,	3.58.57	P.	2	White	0·5	None	10	49
,,	3.59.38	P.	>1	White	3·5	Brilliant	40	50
,,	5.54.33	S.	>1	White	2·0	Bright	30	51
,,	5.56. 0	S.	>1	Bluish-white	1·0	Bright	20	52
,,	5.56. 3	P.	1	Bluish-white	0·8	Bright	15	53
,,	5.56.15	P.	2	Bluish-white	0·7	Faint	15	54
,,	5.57. 9	S.	2	White	0·7	Brilliant	15	55
,,	5.58.13	P.	2	White	1·0	None	10	56
,,	5.58.27	P.	1	White	0·8	Bright	15	57
,,	5.59.12	P.	2	Bluish-white	0·5	None	10	58
,,	5.59.28	S.	>1	Bluish-white	1·0	Brilliant	20	59
,,	6. 0.45	P.	1	Bluish-white	0·8	Bright	15	60
,,	6. 1.31	S.	1	Bluish-white	1·2	Brilliant	20	61
,,	6. 3.51	S.&P.	>1	Green	2·5	Train of sparks	45	62
,,	6. 4.28	P.	>1	Blue	2·0	Brilliant	20	63
,,	6. 4.36	S.&P.	>1	White	3·0	Brilliant	40	64
,,	6. 6.42	P.	>1	White	2·0	Brilliant	30	65

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

No. for Reference.	Path of Meteor in the Sky.
1	From Regulus to α Hydræ.
2	From θ Ursæ Majoris towards ψ Ursæ Majoris.
3	From β Canis Minoris towards ε Orionis.
4	From Regulus towards α Hydræ.
5	From ψ Ursæ Majoris to η Hydræ.
6	From γ Ursæ Majoris to β Ursæ Minoris.
7	From Procyon towards ζ Orionis.
8	From α Ursæ Majoris towards β Aurigæ.
9	From Procyon towards κ Orionis.
10	From λ Ursæ Majoris towards Polaris.
11	From μ Ursæ Majoris to a point midway between β and γ Ursæ Majoris.
12	From ε Ursæ Majoris towards α Draconis.
13	From α Cancri to δ Geminorum.
14	From γ Cancri to a point 5° beyond β Aurigæ.
15	From γ Monocerotis to a point about 3° South of Sirius.
16	From γ Monocerotis to a point about 3° South of Sirius.
17	From ψ Ursæ Majoris towards γ Cassiopeiæ.
18	From a point a little to the North of γ Monocerotis fell a little to the South of Sirius.
19	Parallel to the above path and about 3° North of it.
20	From ν Ursæ Majoris to β Canum Venaticûm.
21	From γ Cancri to a point 5° beyond ε Geminorum.
22	From ι Cancri to a point midway between Castor and Pollux.
23	From ζ Ursæ Majoris to ι Draconis.
24	From β Tauri to ε Tauri.
25	From a point midway between ε and ζ Ursæ Majoris towards α Draconis.
26	From Castor towards β Aurigæ.
27	From ζ Canis Minoris towards Sirius.
28	From β Ursæ Minoris towards δ Draconis.
29	From α Lyncis towards ε Cassiopeiæ.
30	From δ Cancri towards ε Orionis.
31	From α Lyncis to θ Geminorum.
32	From β Cancri to γ Monocerotis.
33	From γ Monocerotis towards ε Canis Majoris.
34	From β Canis Minoris towards Sirius.
35	From Pollux towards α Hydræ.
36	From Regulus to a point 5° beyond α Lyncis.
37	From α Ursæ Majoris to β Ursæ Minoris.
38	From ζ Ursæ Minoris towards δ Draconis.
39	From a point near β Canis Minoris towards κ Orionis.
40	From β Ursæ Majoris to a point about 3° beyond κ Ursæ Majoris.
41	From β Cancri towards γ Monocerotis.
42	From β Cancri towards γ Geminorum.
43	From α Cancri to Procyon.
44	From μ Leonis towards θ Ursæ Majoris.
45	From β Camelopardi to a point midway between η and τ Persei.
46	From α Ursæ Majoris to a point 5° beyond κ Draconis.
47	From Polaris towards β Cephei.
48	From Aldebaran towards β Camelopardi.
49	From φ Tauri towards ε Arietis.
50	From Regulus to a point 5° East of θ Ursæ Majoris.
51	From Regulus towards Pollux.
52	From θ Geminorum towards ε Persei.
53	From γ Leonis towards ψ Ursæ Majoris.
54	From γ Leonis towards θ Leonis.
55	From γ Ursæ Majoris to θ Ursæ Majoris.
56	From Venus (R.A. = $12^h\ 26^m$, N.P.D. = 91° 44′) towards the Moon (R.A. = $13^h\ 0^m$, N.P.D. = 95° 29).
57	From Pollux to ζ Persei.
58	From Capella to ε Cassiopeiæ.
59	From μ Leonis towards κ Ursæ Majoris.
60	From δ Cancri towards δ Geminorum.
61	From η Canum Venaticûm towards φ Boötis.
62	From γ Leonis towards ζ Ursæ Majoris.
63	From Capella to α Persei.
64	From λ Ursæ Majoris towards Polaris.
65	From ε Leonis to a point a little beyond ι Ursæ Majoris.

Month and Day, 1903.	Greenwich Civil Time.	Observer.	Brightness of Meteor in Star Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	No. for Reference.
	h m s				s		°	
November 16	6. 8. 2	S.	2	White	1·0	Bright	15	1
,,	6. 8. 29	S.	1	White	0·5	Bright	10	2
,,	6. 9. 13	S.	1	White	1·0	Bright	15	3
,,	6. 9. 23	P.	1	Bluish-white	1·0	Bright	20	4
,,	6. 9. 31	S.	>1	Bluish-white	1·5	Brilliant	25	5
,,	6. 10. 0	S.	>1	Bluish-white	1·5	Brilliant	30	6
,,	6. 12. 34	P.	1	Bluish-white	0·6	Bright	15	7
,,	6. 15. 44	P.	>1	White	2·5	Brilliant	40	8
,,	6. 16. 30	S.&P.	1	Bluish-white	1·5	Brilliant	25	9

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

No. for Reference.	Path of Meteor in the Sky.
1	From ξ Cancri towards Castor.
2	From γ Ursæ Majoris towards ζ Ursæ Majoris.
3	From β Aurigæ towards μ Persei.
4	From η Leonis towards β Leonis Minoris.
5	From Regulus towards α Hydræ.
6	From β Ursæ Majoris towards β Ursæ Minoris.
7	From Regulus to δ Leonis.
8	From Capella towards Polaris.
9	From Regulus to ν Leonis.