



# RESULTS OF THE MAGNETIC AND METEOROLOGICAL OBSERVATIONS

*Made at the Abinger Magnetic Station, Surrey,  
and the Royal Observatory, Greenwich  
respectively in the year*

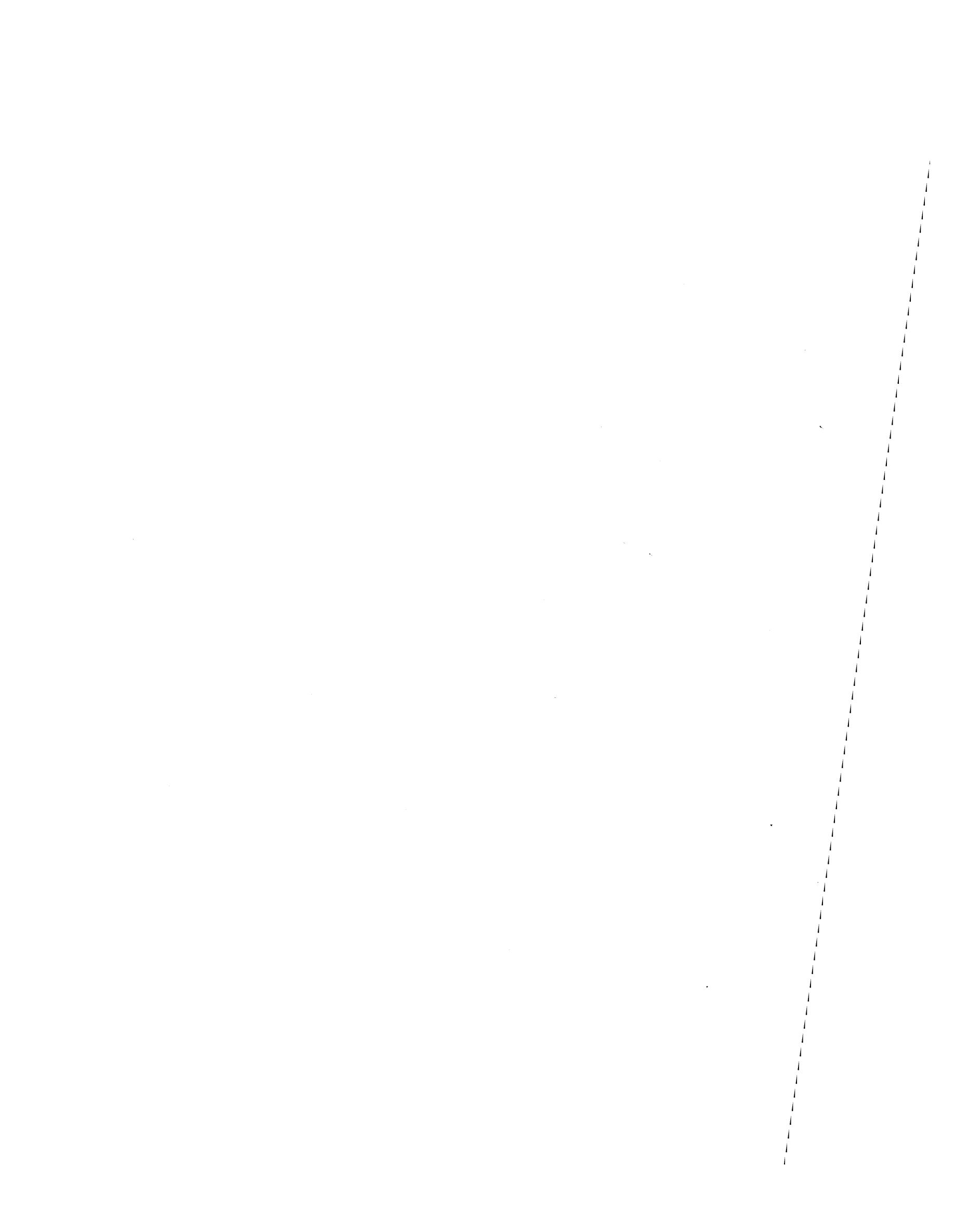
1948

UNDER THE DIRECTION OF  
SIR HAROLD SPENCER JONES, Sc.D., F.R.S.  
ASTRONOMER ROYAL

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THE ROYAL OBSERVATORY, GREENWICH

AND

ABINGER MAGNETIC STATION, SURREY.

MAGNETIC AND METEOROLOGICAL OBSERVATIONS, 1948.

INTRODUCTION

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STAFF

During the year 1948 the staff serving in the Magnetic and Meteorological Department consisted of W. M. Witchell, Superintendent, E. A. Chamberlain, W. Jackson, G. F. Wells, P. L. Rickerby, B. R. Leaton and Miss J. Mounteney. Mr. Chamberlain, resident observer and assistant-in-charge, and his assistant Mr. Rickerby, were employed exclusively at the Abinger Magnetic Station.

Mr. Witchell retired on 26 April from the post of Superintendent after serving in this capacity for a period of 25 years.

ABINGER MAGNETIC OBSERVATIONS

THE MAGNETIC STATION - Site (Lat.  $51^{\circ}11'5''$  N; Long.  $0^{\circ}23'12''$  W). Established in 1924, the station is situated on the northern slope of Leith Hill, Surrey, 800 feet above sea level. It is approximately 26 miles from the former site at Greenwich in a direction a little south of south-west. The nearest railway track lies at a distance of about  $2\frac{1}{2}$  miles.

*The Pavilions.* The absolute observations are made in the main pavilion which is constructed of carefully chosen non-magnetic materials. It is approximately 28 feet long by 15 feet wide and contains four stoutly built hard wood piers embedded into concrete bases which are free from contact with the floor. On the north pier is mounted the declination instrument; on the central pier, the coil magnetometer for measuring horizontal intensity; on the south-east pier, the coil magnetometer for measuring vertical intensity; and on the south-west pier, the Earth-inductor for observing magnetic inclination.

A second pavilion, erected in 1926, for the testing and standardising of magnetic instruments (work formerly undertaken at Kew Observatory), and measuring 16 feet by 12 feet, is situated about 40 feet south-east of the main pavilion and contains three concrete piers passing through the floor without contact.

A third pavilion measuring 20 feet square was added in 1932. More convenient and suitable for comparative observations than the second, this pavilion occupies a corresponding position to the north-east of the main pavilion. It contains three circular wooden piers set into concrete and free from contact with the floor, similar to those in the main pavilion.

The Magnetograph House stands 50 feet east of the main pavilion and is oriented with its principal axis north and south. An inner chamber, designed to house the magnetographs at a uniform temperature, measures 15 feet long by 12 feet wide by 8 feet high and is supported on small concrete piers. The whole structure is contained within an outer chamber whose walls are constructed to have a low thermal conductivity and are nearly two feet thick. Between the walls of the two chambers is an air space of from 2 to 3 feet. The inner chamber is electrically heated by a series of low-temperature non-magnetic metallic resistances distributed along the base of the walls and fed by alternating current drawn from the public mains supply.

The temperature of the magnetograph chamber is controlled by a thermostat placed at the centre of the room at the same level as the magnetic instruments. Daily readings of a thermometer attached to one of the variometers show that the departures from a mean temperature do not exceed 0°.2 C.

Projecting up through the floor are five concrete piers. Two of these, designed originally to support recording mechanisms, occupy the north-west and south-east corners of the room, their longer sides being transverse to the meridian. In 1938 a massive slate slab measuring 8 feet by 2 feet by  $1\frac{1}{4}$  inches was cemented upon the pier occupying the south-east corner. The other three piers are situated at positions 2 feet west and 2 feet 6 inches south of the north-east corner; 5 feet 6 inches west and 5 feet south of the same corner, and 2 feet east and 3 feet north of the south-west corner. Also, in 1938 a heavy wooden table 8 feet by 3 feet was installed near the centre of the room to carry new recording mechanism. The legs of this table pass freely through the floor of the chamber and are cemented into the concrete base of the main building.

LAYOUT OF RECORDING INSTRUMENTS. At the beginning of March 1938 the apparatus used since 1925 to record D and H was superseded by La Cour variometers. These instruments are set up at the south end of the recording chamber in a line running geographically east and west. They occupy the eastern half of the slate slab previously described. The La Cour recording mechanism is mounted upon the table also referred to in the previous paragraph.

Occupying the western halves of the slate slab and wooden table is a "quick-run" magnetograph (see p.vii). On the opposite corner pier is mounted the recording mechanism of a wide-range magnetograph, the declinometer of which is carried by the same pier (see p.vii). The accompanying H variometer is mounted on the south-west pier, formerly occupied by the Watson quartz-fibre Z variometer.

VARIOMETERS - *The La Cour Horizontal Intensity Variometer.* A complete description of this instrument is to be found in *Publikationer fra det Danske Meteorologiske Institut*, No.11 (Copenhagen 1930), but for general information some details are given here. The magnet of cobalt steel is 8 millimetres long and weighs about 25 milligrams, the magnetic moment being 3.2 c.g.s. units. It is suspended at right angles to the Earth's horizontal field by means of a quartz fibre thickened at each end to form a small cone. Each cone fits into a conical brass socket having a fine slit in its side through which the fibre has passed. The focal length of the lens which projects the ray from the mirror attached to the magnet is 160 cms. Compensation for the effect of temperature on the moment of the magnet and the torsional constant of the quartz fibre is attained by optical means in which compensatory deflection of the emergent ray is produced by proportional curving (under temperature changes) of a bi-metallic lamina which supports a prism controlling the ultimate direction of the ray.

A small Helmholtz-Gaugain coil, having a field of 7.43 gamma per milliampere and made to envelop the variometer, is used both to orientate the magnet correctly with respect to the earth's field and to determine the scale-value of the record. The orientation of the magnet was last examined on 1947 December 2 and was then correct within 0°.6. The adopted scale-value during 1948 was 4.35γ per millimetre.

*The La Cour Declination Variometer.* The general features of this instrument correspond closely to those of the variometer just described. The scale-value adopted during 1948 was 0'.92 per millimetre. Expressed as magnetic intensity the scale-value would be 4.98 gamma per millimetre at the present time.

*The La Cour Vertical Intensity Variometer.* This instrument is fully described in *Publikationer fra det Danske Meteorologiske Institut No.8*. The recording magnet, including knife-edges and mirror, is fashioned from a single piece of cobalt steel, with the purpose of eliminating the possibility of relative movements among its parts. It is oriented approximately at right-angles to the magnetic meridian. Compensation for temperature changes is optically effected as in the horizontal intensity variometer. The scale-value, determined by the small Helmholtz-Gaugain coil already mentioned, is 4.35 gamma per millimetre.

*The Quick-run Variometers.* These consist of a set of instruments closely resembling those described above and adapted by La Cour's method to record on a time scale of 3 mm. to one minute, i.e. twelve times as great as the normal scale. This recorder has been in regular use since 1938 November.

*The Wide-range Variometers.* Instruments formerly serving as standard variometers for H and D have been adapted to serve as wide-range recorders capable of registering on a small scale the largest variations in the two elements deemed possible of occurrence at Abinger. The H variometer, which was superseded as the standard by the La Cour recorder, has been "desensitised" by the addition, immediately beneath its base-plate, of a bundle of strongly magnetised needles set at right-angles to the magnetic meridian. The scale-value is 19.5 gamma per millimetre. The D variometer used at Greenwich from 1917 to 1925 is now fitted with a lens of 50 cms. focal length, which gives a scale-value of 3'.7 per millimetre. The two instruments are located as described on p. vi. The present position of the D variometer is such that it is necessary to deflect the recording light rays towards the recording cylinder through a large angle, and an appropriate mirror rigidly supported between the variometer and cylinder forms part of the apparatus. The wide-range variometers have been in regular operation since 1940.

*Recording Mechanism.* The two principal features of the La Cour recorders are: the three elements H, D and Z are recorded on separate strips of a single photographic sheet; the range over which the elements are able to record is greatly extended by the use of prisms in the optical train which furnish a multiple set of images. For each element are formed six secondary images, three on each side of the principal image, the separation being so adjusted that the image from one prism appears at the edge of the record just before the adjacent image passes off the opposite edge. The time-scale is approximately 15 mm. to the hour.

The time-marks are in all cases photographically printed on the sheets by momentary automatic illumination of an electric lamp. In the case of the La Cour magnetograph the original arrangement provides a series of small dots which constitutes a second, interrupted, trace of the element. These marks, however, have been supplemented by thin time lines extending the whole width of each record, these

lines being produced by adjustable long narrow mirrors which reflect light from an auxiliary time signal lamp. In the case of the "quick-run" and "wide-range" recorders, only the thin lines are printed.

The time-signals are derived from a relay connected to a mean solar clock in the computing room. For a period of one second at every tenth minute of Universal Time the clock operates a relay which in turn operates the lamps. Additional signals at the first and fifty-ninth minute of each hour serve to distinguish the hour signals. The error of the clock is observed daily by comparison with a time-signal radiating from one of the official broadcasting stations. The error, which seldom exceeds one second, is eliminated by temporarily adjusting the clock rate electromagnetically over the required period of a minute or two.

**OBSERVING INSTRUMENTS - Declinometer.** A hollow cylindrical magnet with scale and collimating lens is used in conjunction with a small telescope mounted independently on the same pier. The magnet is suspended by tungsten wire of diameter 0.02 mm. Frequent reversals are made to eliminate the collimation error of the magnet from the results, and the position of torsional zero of the suspension wire is also frequently checked.  $90^\circ$  of torsion deflects the magnet about  $3'$ . The telescope has a six-inch circle on which azimuths are read by means of two microscope-micrometers to  $1''$ . An azimuth mark is fixed on the top of a concrete pillar 10 feet high, erected at the northern extremity of the Observatory grounds at a distance of approximately 300 feet from the observing pier. Determinations of the azimuth of this mark are made at intervals by means of observations of Polaris. During each observation both direct and reflected views of the star are taken. The effect of error of level of the telescope is thus entirely eliminated. Reflection is obtained from the surface of mercury contained in a shallow copper dish.

**The Schuster-Smith Coil Magnetometer.** This instrument is on loan to the Observatory from the National Physical Laboratory. It is the second of the type constructed and is rather smaller than the original instrument, a detailed description of which is to be found in *Philosophical Transactions of the Royal Society*. Vol. 223 (1923), pp. 175 - 200. It is erected on a pier in the centre of the absolute observation pavilion and was brought into use as the standard instrument for measurement of horizontal intensity on 1927 February 1. In general eight independent determinations are made each week-day.

The following is a brief description of the instrument and the method employed in measuring horizontal intensity:-

A hollow marble cylinder of 50 cms. diameter rests, with its axis horizontal, on a brass support which can be turned in azimuth. The azimuth may be read to  $10''$  from a graduated circle on the base-plate by the usual vernier attachment. On the periphery of the cylinder, near each end and at a mean distance of 25 cms. from each other, are two windings, in series, of ten turns of bare silver wire, the method of winding in a double spiral being that adopted in the original instrument referred to above. The whole forms a Helmholtz-Gaugain system at the centre of which a very uniform magnetic field parallel to the axis exists when an electric current is passing through the coils.

A chromium steel magnet, 15 mm. long and 2 mm. square in cross section, is supported horizontally in a light vertical aluminium frame; the frame carries also a small concave mirror and a damping vane and is suspended by a single silk fibre in

a suspension tube passing through a hole in the upper surface of the cylinder. A square box with optically-plane glass sides supports the tube and encloses the magnet frame, allowing the mirror to project an image of a source of light during observation. The suspension fibre is adjusted so that the magnet hangs at the centre of the coil system.

To afford an easy means of reading the azimuth of the cylinder and the indications of the magnet, graduated ivorine scales are placed horizontally on stands at a distance of approximately 2 metres from the pier, and spots of light are reflected to them by small concave mirrors in the instrument.

Situated outside the observing pavilion, about 40 feet to the south, is a storage battery of 25 cells which produces the current required for the observation. The amount of current employed is very accurately adjusted to a specific quantity by rheostat according to the indications of a Broca galvanometer in a potentiometer circuit in which the fall of potential across a known resistance is brought to equality with the voltage of a Weston standard cell.

Careful precaution is exercised in arranging the circuits both to eliminate accidental magnetic fields and to secure the highest degree of insulation. The latter has been found, in practice, to be of great importance, especially with regard to insulation of the galvanometer circuit, as any stray current here will lead to a difference of potential between the terminals of the standard cell and the standard resistance. It is desirable that the resistance of the galvanometer should be as low as possible consistent with sensitivity.

#### Theory of the observation:-

If a horizontal magnetic field whose intensity is slightly greater than that of the earth is imposed at an angle of nearly  $180^\circ$  with the earth's field, a precise angle can be found at which the resultant of the two fields becomes directed at right angles to the earth's field. The intensity  $F$  of the imposed field, and its angle  $\alpha$  with the earth's field being known, the horizontal intensity of the earth's field can then be calculated from the simple relation  $H = F \cos \alpha$ .

#### An observation proceeds as follows:-

Torsion having been eliminated from the suspension thread by substituting a copper bar of similar dimensions for the magnet, the magnet is replaced and allowed to hang freely in the earth's field. The position on the appropriate scale of the spot of light reflected by the magnet-mirror is noted. This scale is normally on the west side of the instrument. By optical methods, reference marks on two other scales placed respectively to the magnetic north and south of the instrument are adjusted accurately to points  $90^\circ$  from the spot reflected by the magnet mirror. A current is next passed round the coil in the direction which produces a field augmenting that of the earth, and the coil is turned in azimuth until the addition of the imposed field produces no alteration in the direction of the magnet. The axis of the coil is then accurately parallel to the horizontal component of the earth's field, and the coil-mirror can be adjusted so that it reflects a spot of light to the reference mark, i.e. to the zero graduation of the north scale as already set.

The current is now reversed in the coil by a commutator switch and the coil is turned until the resultant force on the magnet is in a direction at right angles to the earth's field. This is indicated on either the north or south scale by

the magnet-mirror, which is carried round  $90^\circ$  by the magnet. The azimuthal angle through which the coil has been turned is read from the north scale, and the coil is then turned to an approximately equal angle on the opposite side of the magnetic meridian. This reverses the direction of the resultant field and a further small adjustment of the coil brings the spot of light reflected by the magnet-mirror accurately to the reference mark on the opposite scale to that last used. A second reading of the azimuth of the coil completes the observation.

The suspension box and tube are turned by the observer as the magnet turns, so that no torsional change is introduced. The effect of any small error in the assumed direction of the Earth's horizontal field, due, say, to residual torsion on the suspension thread, is eliminated on taking the mean of the two results.

After preliminary details have been gone over, a complete measurement of horizontal intensity is readily obtained in two minutes.

If  $F$  be the factor of the coil and  $i$  be the current passing, in amperes, then the intensity of the field at the centre of the coil, in gamma units, is  $Fi \times 10^4$ . The adopted value of the factor  $F$  of the coil is 3.59570 ( $1 - 0.0000043t$ ),  $t$  being temperature Celsius.

The observed value of horizontal intensity obtained from this instrument is subject to a correction of  $-ly$  for the effect of the field of magnets in instruments placed permanently in the vicinity. The effect is determined experimentally by reversal of the magnets. The correction is applied in the reduction of the observation.

The constants of the coil and of the potentiometer at various standard temperatures have been precisely determined at the National Physical Laboratory and are checked from time to time. The dimensions of the coil were re-examined in November 1931. The electrical constants on which the reduction of observations made in 1948 is based were verified in June 1947. To convert the measure of current from international units to c.g.s. units the factor adopted prior to 1938 January 1 was .99997; but from this date onward the value adopted has been .99988. The change introduces a discontinuity into the deduced values of  $H$  of  $-1.7\gamma$ .

*The Vertical Intensity Coil Magnetometer.* This instrument, designed by D. W. Dye for direct measurement of vertical intensity and constructed under his supervision at the National Physical Laboratory, Teddington, is on loan to the Royal Observatory from the Laboratory. It is erected on the south-east pier of the observing pavilion and was adopted as the standard for measurement of vertical intensity from 1929 January 1.

A full description of the instrument is published in *Proceedings of the Royal Society, Ser.A, Vol.117* (1928), pp.434-458. In brief, the instrument consists of a Helmholtz-Gaugain coil wound on a marble cylinder, the axis of which is vertical as truly as can be determined, together with accessory apparatus for accurately controlling and measuring the current passed through the coil, and for testing the resultant field at its centre.

The observation consists of an adjustment of the current until the artificial field imposed at the centre of the coil exactly annuls the vertical component of the earth's field. The intensity of this component is then easily calculable from a knowledge of the dimensions of the coil and the amount of current indicated by

potentiometer measurement (*cf p.x*). The current is taken from the battery which supplies the *Schuster-Smith* instrument.

The special feature of the instrument is the means adopted for ascertaining when the vertical component of the Earth's field is exactly annulled at the centre of the marble cylinder. This consists of a diamond-shaped vibrating test-coil about 2 cms. long suspended by bronze strip stretched horizontally between two supports and carrying a light plane mirror. The principle of the instrument requires that the axis of rotation of the detector coil should be horizontal and its plane vertical in the equilibrium position. The method of securing these adjustments is included in the full description mentioned above.

A weak alternating current, supplied from a generator at some distance from the instrument, passes through the test-coil. The reaction between the field produced and the surrounding magnetic field subjects the test-coil to a forced oscillation which vanishes only when the vertical field is annulled. The resulting vibration is brought to a maximum by adjustment of the generator frequency to synchronism with the natural frequency of the coil (about 15 per second) and high sensitivity is thus obtained. Microscopic vibration is exhibited by projection from the small mirror on the test-coil of an image of illuminated cross-wires to a screen erected about 2 metres distant.

The adopted value of the factor  $F$  of the coil is  $F = 3.59643 (1 - 0.0000079t)$ ,  $t$  being temperature Celsius. The constants of the potentiometer in use during the year 1948 for the measurement of the current were verified at the National Physical Laboratory in June 1947. The factor adopted for the conversion from international units to c.g.s. units was the same as for the Schuster-Smith coil (see *p.x*). The change on 1938 January 1 introduces a discontinuity of  $-3.9\gamma$  into the deduced values of  $Z$ . On 1948 July 27 the circuit of the coil was rewired with concentric cable with no apparent change in the performance of the instrument.

*The Absolute Inclination Instrument.* An Earth Inductor by the Cambridge Instrument Company, in conjunction with a Broca galvanometer, is used to determine magnetic inclination. About six determinations are made each week. Observations are made in four positions to eliminate any small errors arising from slight asymmetry in the instrument. After the first adjustment the coil support is reversed about a horizontal axis and a second adjustment is obtained; the instrument is then reversed in azimuth and two further adjustments are made. The circle for the measurement of inclination is 8 inches in diameter and is read by means of microscope-micrometers to one second of arc. The levels on the base can likewise be read to one second. A detailed description of the inductor will be found in the volume for 1915. Since 1929 January 1 the observations of inclination have not been used for determination of vertical intensity.

**REDUCTION OF RESULTS - Time** - The system of time used in the reductions is *Universal Time* (U.T.).

*Hourly Values.* The estimated mean ordinates of the photographic traces for each hour are measured from the base-line by the aid of an etched glass scale - the hour being the period of sixty minutes commencing at the time named in the tables. From the tables of these measures are obtained the mean daily and mean monthly values for each hour of the day and the value of the elements for each day of the month.

*Base-lines.* Values of the base-lines are adopted from smooth curves drawn through points plotted upon charts, each point representing the mean of several independently observed values. Ten observations of declination, eight of horizontal intensity and six of vertical intensity are made, on an average, each week-day. Prior to 1929 the base-line values for vertical intensity traces were computed from absolute observations of inclination I, combined with simultaneous values of horizontal intensity H, taken from the magnetograms, in accordance with the relation  $Z = H \tan I$ . From 1929 January 1 the values have been obtained directly from observations of vertical intensity with the coil-magnetometer. The change introduces a discontinuity of about  $30\gamma$  into the definitive values of vertical intensity, corresponding to  $0.9^\circ$  in inclination. The latter is to be attributed to hitherto unsuspected wear in the bearings of the Earth inductor which, at the time of its discovery, made the observed values of inclination too large by this amount.

*Temperature Corrections.* As the magnetograph chamber is maintained at a sensibly constant temperature and, moreover, the temperature compensation in the variometers themselves has been closely attained, in general no temperature corrections are required.

*K - Indices.* In conformity with a resolution passed at the Washington Assembly of the International Association of Terrestrial Magnetism and Electricity in 1939 September, the magnetic character of each day is estimated by means of three-hour-range indices, the index "K" for each three-hour period from  $0^h$  to  $24^h$  U.T. being assigned according to the principles described in an article published in *Terrestrial Magnetism and Atmospheric Electricity*, Vol.44, pp.411 *et seq* (December 1939).

The scale adopted for this purpose is constructed as follows:- The average quiet day variation during a particular three-hour period being reckoned as "0", any excess greater than  $5\gamma$  but less than  $10\gamma$  is reckoned as "1"; an excess between  $10\gamma$  and  $20\gamma$  as "2"; between  $20\gamma$  and  $40\gamma$  as "3"; between  $40\gamma$  and  $70\gamma$  as "4"; between  $70\gamma$  and  $120\gamma$  as "5"; between  $120\gamma$  and  $200\gamma$  as "6"; between  $200\gamma$  and  $330\gamma$  as "7"; between  $330\gamma$  and  $500\gamma$  as "8"; greater than  $500\gamma$  as "9".

The traces of all three elements are examined and the largest variation recorded in the interval is used to give the "K" index for that interval.

**THE TABLES.** Tables I to III contain respectively the hourly mean values of declination, horizontal intensity and vertical intensity.

Table IV gives for each element the mean daily value, the maximum and minimum values with the times of their occurrence and the daily range.

Table IVA contains, for each day of the year, the eight individual K-indices, arranged in succession, together with their sums.

Tables V to VII contain the mean diurnal inequalities obtained from "All" days and from "Quiet" and "Disturbed" days as selected by the International Committee. In addition to monthly and annual values there are given values for the seasons, viz. Winter (January, February, November, December), Equinox (March, April, September, October) and Summer (May, June, July, August). The values in these tables are *not* adjusted for the effect of non-cyclic change.

The figures quoted for the north and west components and the inclination are computed from the corresponding inequalities in declination, horizontal intensity

and vertical intensity, the computations being in general carried out to one significant figure beyond that printed. Extreme values are indicated in heavy type.

Tables VIII and IX contain the harmonic coefficients obtained from an analysis of the inequalities in the north (X), west (-Y) and vertical (Z) components. In the case of the International Quiet and Disturbed days, the inequalities are adjusted for non-cyclic change before analysis, but in analysing the results for "All" days the non-cyclic change is ignored. The phase-angles in Table IX are corrected to refer to Abinger Local Mean Time.

Table X. In the annual volumes from 1926-1931 this table contains the range of the mean diurnal inequalities abstracted from the figures given in Tables V to VII for the months, the year and the seasons. In 1932 a change was made which was inadvertently not noted at the time. Thenceforth the figures given for the *year and the seasons* are derived from Table X itself by meaning the values of the months constituting the particular group.

Table XI gives in similar arrangement the non-cyclic change  $24^{\text{h}}$  minus  $0^{\text{h}}$ . The quantities are computed from Tables I to III, the value of  $0^{\text{h}}$  or  $24^{\text{h}}$  being taken as the mean of the last value on one day and the first value on the day following.

Table XII contains the mean monthly and annual values of the components collected together. In forming this table corrections are applied when necessary, to the values of H and Z taken from Table IV to remove the effect of any small secular changes in potentiometer constants found at the periodical re-measurement of the constants at the National Physical Laboratory.

Tables XIII to XVA contain the daily values of the base-lines of the magnetograms reduced from the absolute observations.

Table XVI. The first part of this table contains mean annual values of magnetic elements determined at the Royal Observatory, Greenwich, over the whole period of observation. Included in the table are results of early observations of declination made from 1818 to 1820. The second part contains corresponding values determined at the Abinger Station since 1925.

**REPRODUCTION OF MAGNETOGrams.** A brief descriptive summary of the more significant movements recorded in the magnetic elements during the year is accompanied by reduced copies of the Abinger Magnetograms illustrating disturbances of special interest.

#### GREENWICH METEOROLOGICAL OBSERVATIONS, 1948.

**GENERAL.** The majority of the meteorological instruments are situated in an enclosure in Greenwich Park, 350 yards to the east of the Astronomical Observatory. In the enclosure (which will be referred to as "The Christie Enclosure") there are the barometer, the thermometers used for ordinary eye observations, the recording wet-bulb and dry-bulb thermometers, thermometers for solar and terrestrial radiation, two earth thermometers and two rain gauges; also the instrument for automatically recording pollution of the air.

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

The observations comprise eye-observations of the ordinary meteorological instruments, including the barometer, dry-bulb and wet-bulb thermometers, radiation and earth thermometers; continuous autographic record of the variations of the barometer, dry-bulb and wet-bulb thermometers; 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 at night of the visibility of stars near the celestial Pole; the general record of ordinary atmospheric changes of weather, including numerical estimation of the amount of cloud and estimations of "visibility"; registration and measurement of the pollution of the air by solid matter.

*Universal Time (U.T.)* - which at the Royal Observatory coincides with local Mean Solar Time - has been employed throughout the meteorological section, except in regard to the sunshine registers (see p.xvii).

**INSTRUMENTS. Standard Barometer.** The standard barometer is Newman No. 64. Its tube is 0.565 inch in diameter, and the depression of the mercury due to capillary action is 0.002 inch, 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 0.05 inch, sub-divided by vernier to 0.002 inch.

The barometer was mounted in 1840 on the southern wall of the western arm of the Upper Magnet Room at a height above mean sea level of 159 feet. On 1917 April 3 it was transferred to the new magnetograph house in the Christie Enclosure, where the height above mean sea level is 152 feet (see also p.xviii).

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

**The Photographic Barometer.** A siphon barometer is employed which, at its open end, operates a plunger resting on the surface of the mercury. On account of the optical magnification associated with a moving mirror at some distance from the recording drum, the motion of the plunger must be mechanically reduced in being transferred to the arm which carries the mirror. In the actual arrangement two levers are used. One is connected to the stem of the plunger resting on the free surface of the mercury and is 12 inches long from plunger to pivot. A pin with a rounded conical point is screwed into this lever at a distance of 1 inch from the pivot. On this pin rests the plane under-surface of a shorter lever, which is 4 inches long from its pivot to the pin and is set at right angles to the first lever. Both levers are approximately horizontal in their mean position. The moving mirror of the instrument is mounted horizontally, in a suitable frame, just above the pivots of, and attached to the short lever. The first lever lies east and west, so that the axis about which the mirror turns is in the same direction. The recording drum is horizontal and the motion of the beam of light is transformed, so as to be horizontal, by a fixed right-angled prism supported above the mirror. A lens of suitable focus is mounted in a vertical plane in front of the prism and brings the beam of light from the straight-filament electric lamp to a focus on the drum. A base-line mirror, similar to the moving mirror, is mounted in a vertical plane below the lower half of this lens. Provision is made for all the necessary adjustments of the directions of the two beams of light. The weight of the plunger and lever mechanism is relieved by a balance-weight on the far side of the pivot, so that the plunger rests on the mercury surface without appreciable depressing it.

The instrument is 12 feet from the recording drum. At this distance the calculated scale-value of the record is 3 inches on the sheet for 1 inch change of height of the standard barometer. (Near the free surfaces of the mercury, both arms of the siphon tube are of the same bore, so that the plunger moves through one half the change of the indication of the standard barometer).

The scale-value of the instrument is, in effect, determined experimentally by comparison with the readings of the standard barometer. The base-line values corresponding to the three daily readings of the standard are represented graphically by points on a chart. The adopted value at any time is read from a smooth curve drawn through the points.

The photographic sheets being  $9\frac{1}{2}$  inches wide, a range of over 3 inches barometric motion can be included and re-adjustment of position of the trace is unnecessary.

*Dry-bulb and Wet-bulb Thermometers.* On 1937 December 31 the standard dry-bulb and wet-bulb thermometers and maximum and minimum self-registering thermometers, both dry- and wet-bulb, were transferred from the revolving open screen, on which hitherto they had been mounted, to a Stevenson screen of large dimensions which had been set up a few yards to the westward. The old screen was subsequently erected in a new position on the north side of the Christie Enclosure, and daily readings, at 9<sup>h</sup>, of maximum and minimum temperature in the open screen were resumed from 1938 May 1.

The corrections to be applied to the thermometers in ordinary use are determined by comparison with the Kew standard thermometer No. 515.

The dry-bulb thermometer used throughout the year was Negretti and Zambra No. 45354. The correction -0°.4 has been applied to the readings of this thermometer. The wet-bulb thermometer used throughout the year was Negretti and Zambra No. 94737. The correction -0°.3 has been applied to the readings of this thermometer.

The dry-bulb and wet-bulb thermometers are read at 9<sup>h</sup>, 12<sup>h</sup> (noon) and 15<sup>h</sup> every day. Readings of the maximum and minimum thermometers are taken at 9<sup>h</sup> and 15<sup>h</sup> every day. The readings are employed to correct the indications of the recording dry-bulb and wet-bulb thermometers.

*Dry-bulb and Wet-bulb Recording Thermometers.* The photographic apparatus which had been in use since 1887 was superseded on 1938 January 1 by a distant-recording thermograph. The action of this instrument depends on the pressure of mercury in a long flexible capillary tube of steel. The pressure alters the curvature of a Bourdon coil which in turn controls the position of a recording pen.

The thermometers exerting the pressure are mounted in the Stevenson screen which contains also the standard thermometers. The recording mechanism is set up in the basement of the building, about 40 feet distant, constructed for the Yapp equatorial telescope, and the steel tube transmitting the pressure is laid in earthenware pipes buried about eighteen inches beneath the surface of the ground. The traces (in ink) showing the variations in temperature are directly visible through a window. The scale-value is approximately 20°F per inch.

*Radiation Thermometers.* These thermometers are placed in an open position in the Christie Enclosure. The thermometer for solar radiation is a mercurial maximum thermometer with its bulb blackened and enclosed in a glass sphere from which the air has been exhausted. The thermometer employed was Negretti and Zambra

No.DB.3544. The thermometer for radiation to the sky is a spirit minimum thermometer, Negretti and Zambra No.DC.30597. The thermometers are laid on short grass, freely exposed to the sky.

*Earth Thermometers.* There are two thermometers in use, the bulbs of which are sunk to depths of 4 feet and 1 foot, respectively, below the surface. Both thermometers are read daily at noon, the readings of the former being given in the daily results.

*Osler Anemometer.* This self-registering instrument, devised for continuous registration of the direction and pressure of the wind together with the amount of rain, is fixed above the north-western turret of the ancient part of the Observatory. The direction of the wind is registered by means of a large vane (9 ft. 2 in. in length), connected by shaft and pinion with a rack-work carrying a pencil; the latter marks on a flat sheet of paper, moving horizontally. 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 near the north-eastern turret in azimuth 90° east, as determined by celestial observation, is used for examining at any time the position of the direction-plate over the registering table to which reference is made by means of a direction pointer when adjusting a new sheet on the travelling board.

A circular pressure plate with an area of 192 square inches is attached 2 feet below the vane; moving with the latter it is always kept directed against the wind. A light wind causes the plate to compress slender springs, the motion being registered on the horizontal sheet by a pencil connected with the plate by a flexible brass chain which is always in tension. Higher wind pressures bring stiffer springs into play behind the plate, and the two sets of springs are adjusted by screws and clamps so as to afford fixed scales on the sheet, the scale for light winds being double that for strong winds. The scale is determined experimentally in pounds per square foot from time to time. The most recent determination was made on 1934 November 20. The recording sheet is changed daily at noon. The time scale is approximately 15 millimetres to the hour. The instrument was brought into use as long ago as 1840.

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

The velocity recorded by the instrument is three times the actual velocity  $v$  of the cups.

After certain structural alterations were carried out in 1941 October, which included the introduction of a ball bearing for the revolving shaft, a series of comparisons was made between wind speed deduced from the pressure recorded by the Osler anemometer and the velocity of the cups, known from the above-mentioned relation. These comparisons established a new empirical formula, valid at all ordinary speeds and very close to  $V = 2.70 v$ . Accordingly, from 1942 January 1, the formula  $V = 2.70 v$  has been adopted to modify the velocity recorded by the instrument.

*Rain Gauges.* During the year 1948 three rain gauges were employed. The gauge No.1 forms part of the Osler anemometer apparatus and is self-registering, the record being made on the sheet on which the direction and pressure of the wind are recorded. The apparatus is fully described in volumes previous to 1914.

Gauge No.6 is an 8 inch circular gauge placed with the receiving surface 5 inches above the ground. No.8 is a newer gauge of the same diameter, but of the modified Snowdon pattern adopted by the Meteorological Office, having its receiving surface 1 foot above the ground. It is fixed about 4 feet north of the standard gauge No.6 which is read daily at 9<sup>h</sup> and 15<sup>h</sup>. No.8 is used as a check on the readings of No.6 and is normally read at 9<sup>h</sup> only. The gauges are also read at midnight on the last day of each calendar month.

The present height of the standard gauge above mean sea-level is 5 feet 9 inches less than in its old position in the Observatory grounds before its removal to the Christie Enclosure in 1899 January.

The monthly amounts of rain collected in gauges Nos. 6 and 8 are given on page D 88 of the Meteorological Results.

*Sunshine Recorder.* The hourly results relate to *apparent* time. The instrument in use is of the Campbell-Stokes pattern with 4 inch glass globe. It was examined at the Meteorological Office in 1926 and found to be in satisfactory condition. It bears the serial number M.O. 113. The recorded durations are those of *bright* sunshine, no register being obtained when the sun shines faintly through fog or cloud or is very near the horizon. Conformity with Meteorological Office standards of measurement is maintained as far as possible.

*Night-Sky Recorder.* The object of this instrument is to supplement the daily sunshine record in so far as it gives an indication of the amount of cloud. It consists of a small camera constructed of wood, mounted on a brick pier in the courtyard to the north of the Transit Pavilion, and permanently directed towards the celestial pole. The lens is of 18.8 inches focal length and 0.8 inch aperture. The actual camera is enclosed in a larger box about twice its length, extending nine inches beyond the lens. The lens itself is further surrounded by a hood. Adequate protection from dew is thus obtained, and also from rain, except when hard driven from the north. The photographic plates used are ordinary quarter-plate ( $3\frac{1}{4}$  by  $4\frac{1}{4}$  inches). Exposure is intended to be made during the period that the sun remains more than 10° below the horizon. The period is thus centred approximately on apparent midnight, but in practice the mean times of commencing and ending the exposure are not varied at intervals of less than seven days.

The traces selected for measurement are those of Polaris and δ Ursae Minoris. The measurement is effected by means of a glass scale on which pairs of concentric circles are photographically imprinted. The radii of these circles are slightly greater and slightly less than the radius of the trace to be measured, and the circles are divided into a time-scale of hour-angle, with ten-minute units. The plate is placed over the scale in a measuring frame and adjusted so that the trace is concentric with the containing circles on the scale. The hour-angle of the star, according to the scale, at the commencement and ending of the various portions of the trace is then read off to the nearest minute of time.

The correction for error of orientation of the plate is made during the computation of mean time corresponding to hour-angle of star in the following manner.

Whenever the sky is seen to be clear at the commencement of exposure, the difference between the hour-angle given by the scale for the beginning of the trace and the corresponding mean time noted by the observer is taken as the quantity to be applied to the scale readings throughout the night, due allowance being made for the acceleration of sidereal time over mean time. When the sky is not clear at commencement, a computed quantity is used which includes an adopted mean value of the error of orientation. Variations in the error of orientation are found seldom to exceed two or three minutes of time and are unimportant to the records.

ARRANGEMENT OF RESULTS. The results given in the Meteorological Section refer to the day commencing at 0<sup>h</sup> U.T., excepting the case of the night-sky record, for which they relate to the period from dusk on the day named to dawn of the following day.

All results in regard to atmospheric pressure, temperature of the air and of evaporation, with deductions therefrom, are derived from the continuous records, excepting that the maximum and minimum values of air temperature are those given by eye observation of the ordinary maximum and minimum thermometers, reference being made, however, to the autographic register, when necessary, to obtain the values corresponding to the limits "midnight to midnight". The hourly readings for the elements mentioned are measured direct from the traces and reduced so as to be based fundamentally, both as regards scale and zero, on the readings of the standard instruments.

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 monthly mean barometer reading is, however, corrected for the effect of the change of site of 1917 April before deducing the deviation from the mean of sixty-five years 1841-1905 (pp.D 56-79). This correction, amounting to -.007 inch, was by oversight omitted in the years 1917-1926.

From 1926 January 1 the mean daily temperature of the dew-point and degree of humidity have been deduced from the mean daily temperatures of the air and of evaporation by use of *Hygrometric Tables*, issued by the Meteorological Office, Air Ministry. In the same way the mean hourly values of the dew-point temperature and degree of humidity in each month (pp.D 83 and 84) have been calculated from the corresponding mean hourly values of air and evaporation temperatures (pp.D 82 and 83).

The excess of the mean temperature of the air on each day above the average of sixty-five years, given in the "Daily Results of the Meteorological Observations" is found by comparing the numbers contained in column 5 with a table of average daily temperatures obtained by smoothing the accidental irregularities of the daily means derived from the observations for sixty-five years 1841-1905. In this series the mean daily temperature from 1841 to 1847 depends usually on 12 observations daily, in 1848 on 6 observations daily and from 1849 to 1905 on 24 hourly readings from the photographic record. The smoothed numbers are given in Table VII, *Reduction of the Greenwich Meteorological Observations*, Part IV, also in the Introduction to *Results for 1910*.

In the case of maximum and minimum temperature the average of sixty-five years has been corrected for the presumed effect of the change of thermometer screen which took place on 1938 January 1. The corrections are given below. They were derived from comparisons between readings on the revolving stand and in a closely adjacent Stevenson screen, recorded daily during the period 1900 April to 1913 December.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Maximum Temp.	° 0.0	° -0.3	° -0.6	° -1.1	° -1.7	° -1.8	° -2.1	° -1.9	° -1.1	° -0.5	° -0.1	° 0.0
Minimum Temp.	+0.5	+0.5	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.5	+0.5

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 (see p. xvii). The continuous record of the Osler self-registering gauge shows whether the amounts measured at 9<sup>h</sup> are to be placed to the same, or to the preceding day; and also gives, in cases in which rain fell both before and after midnight, the means of ascertaining the proper proportion of the 9<sup>h</sup> amount which should be placed to each day. The number of days of rain given in the footnotes and in the abstract tables pages D 81 and D 88, is formed from the records of gauge No. 6. In this numeration only those days are counted on which the fall amounted to, or exceeded 0.005 inch.

It may be understood that the greatest wind pressures usually occur in gusts of short duration. In the "Mean of 24 Hourly Measures" each measure represents the mean hourly value centred at the nominal hour. With regard to "Proportions of wind referred to the cardinal points" in the monthly summary on pages D 56-79, formerly the figures were such that the whole month was represented by the number of days in the month. In the "Results" for 1933 a change was made, and the whole month is now represented by 100, so that the figures are equivalent of "percentages".

The mean amount of cloud given in the footnotes on the right-hand pages D 57 to D 79, and in the abstract table, page D 81, is the mean found from observations made at 9<sup>h</sup>, 12<sup>h</sup> (noon), 15<sup>h</sup> and 21<sup>h</sup> each day.

The following are the symbols which have been adopted for clouds and weather.

#### BEAUFORT WEATHER NOTATION

(modified in conformity with the usage of the British Meteorological Office)

- b blue sky (less than one quarter covered with cloud)
- bc sky partially cloudy (less than three quarters covered)
- c sky generally cloudy, but not completely overcast
- d drizzle
- e wet air without falling rain
- f fog, with objects invisible distant more than 1100 yards
- F fog, with objects invisible distant more than 220 yards
- g gloom
- h hail
- i intermittent
- k storm (in combination with other symbols)
- l lightning
- m mist, with limit of visibility between 1100 and 2200 yards

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- o sky overcast with unbroken cloud
- p passing showers
- q squall
- r rain
- s snow
- rs sleet
- t thunder
- u threatening sky
- v exceptional visibility; i.e. abnormal transparency of air
- w dew
- x hoar frost
- y dry air; i.e. relative humidity less than 60 per cent
- z haze

A capital letter indicates "intense"  
 The suffix . indicates "slight"  
 A letter repeated indicates "continuous"

## CLOUDS FORMS

<i>Acu</i>	Alto-cumulus	<i>Cist</i>	Cirro-stratus	<i>St</i>	Stratus
<i>Ast</i>	Alto-stratus	<i>Cu</i>	Cumulus	<i>Stcu</i>	Strato-cumulus
<i>Ci</i>	Cirrus	<i>Cunb</i>	Cumulo-nimbus	<i>Fr</i>	Fracto-
<i>Cicu</i>	Cirro-cumulus	<i>Nbst</i>	Nimbo-stratus		

## ADDITIONAL SYMBOLS

<i>lu-ha</i> lunar halo	<i>prhn</i> Parhelion	<i>so-ha</i> solar halo
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ROYAL OBSERVATORY, GREENWICH

ABINGER MAGNETIC STATION

*Results of Magnetic Observations*

1948

TABLE I. - HOURLY MEANS OF MAGNETIC DECLINATION

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
January																										
9° + Tabular Quantities																										
1	38.1	38.2	38.6	38.8	38.8	40.5	39.2	38.8	38.9	38.8	40.2	41.4	42.8	43.7	44.4	45.0	42.7	42.1	40.7	40.0	37.5	35.8	33.8	29.7		
2 **	35.2	36.2	38.0	38.0	40.4	40.1	39.7	40.2	39.3	38.9	40.2	41.7	43.1	43.5	42.7	43.9	45.2	44.8	44.1	41.8	37.4	38.8	37.2	35.7		
3 **	36.7	38.7	40.0	38.0	39.4	38.7	38.1	37.8	38.7	38.5	38.9	43.7	45.1	44.6	46.4	43.6	42.0	46.7	41.0	26.7	34.3	35.5	35.6	36.7		
4 *	36.5	36.7	37.5	37.3	37.2	37.2	37.1	36.8	36.7	37.5	38.6	39.5	40.1	40.7	40.7	40.3	39.6	39.1	39.0	38.7	38.5	38.2	37.9	38.2		
5	38.0	38.3	38.7	38.7	39.1	39.2	38.8	38.7	38.2	38.2	38.7	39.9	41.4	42.0	41.9	42.2	41.1	42.1	40.7	36.2	37.2	36.2	37.7	38.0		
6	38.4	38.7	39.1	39.2	39.6	39.7	40.1	39.7	39.4	40.7	41.2	41.6	42.0	43.2	42.2	42.9	43.2	42.8	40.8	40.3	38.7	37.8	37.8	37.2		
7	36.1	36.5	38.2	39.0	39.0	39.0	39.2	39.4	41.4	39.7	40.4	41.9	43.0	41.8	43.7	43.6	43.7	42.2	41.7	39.6	36.7	31.8	33.7	36.1		
8 **	33.4	35.7	37.8	40.9	41.1	40.6	41.1	39.7	38.3	37.8	39.1	40.3	42.5	43.0	43.7	43.6	41.7	40.2	36.3	36.7	38.0	37.7	36.7	33.1		
9 **	36.7	34.4	40.2	37.7	42.1	41.1	40.4	40.1	38.2	38.3	40.1	40.1	41.5	41.0	40.7	40.6	39.7	39.7	39.1	38.3	36.6	35.2	36.5	37.2		
10	37.8	38.2	38.7	39.7	40.8	39.1	38.7	38.3	37.5	36.9	37.8	40.1	40.8	42.3	42.9	40.7	40.1	40.1	39.3	36.8	36.7	37.8	37.2	37.2		
11	37.3	36.5	38.3	37.9	39.7	40.2	38.6	38.3	37.4	35.8	38.2	39.3	41.3	42.4	41.7	39.9	40.2	39.7	39.2	38.7	36.1	37.8	38.0	37.6		
12	38.3	39.3	38.7	38.7	38.7	38.3	38.7	37.7	37.1	37.3	39.4	40.1	41.1	42.3	42.0	41.4	40.7	39.7	40.2	38.8	37.7	33.7	37.7	38.1		
13	38.4	38.8	38.8	38.8	38.8	38.8	38.6	38.6	38.2	37.3	36.7	37.9	40.5	42.3	42.9	42.8	42.0	40.8	39.7	39.0	38.3	36.8	38.1			
14 *	38.8	38.8	38.8	38.8	38.8	38.4	38.5	38.3	37.8	36.9	38.1	40.2	42.2	43.6	42.8	42.2	40.4	39.8	40.2	39.4	38.8	38.3	38.2	37.8		
15	38.2	38.8	38.7	38.8	38.8	38.2	38.2	37.9	37.3	37.3	39.2	39.8	40.3	41.3	41.7	41.8	41.8	40.8	39.9	39.8	39.2	38.8	38.2	34.2	36.0	
16	37.9	38.9	39.1	38.9	39.0	38.8	38.6	38.3	37.5	36.9	38.6	39.9	40.4	42.5	42.1	41.1	40.4	39.9	40.5	40.0	38.9	37.9	37.8	37.9		
17 **	38.0	38.3	38.7	38.9	38.9	38.9	38.6	38.5	37.4	36.9	39.3	41.9	45.4	48.5	50.6	44.9	47.3	45.3	43.4	38.5	27.6	28.9	34.4	35.5		
18	37.2	32.5	33.6	36.0	37.8	37.8	37.7	37.2	36.6	36.8	39.7	41.7	43.3	43.8	43.3	43.1	41.2	40.8	39.9	39.8	37.7	38.2	37.5	37.1		
19	35.2	32.0	33.7	34.8	36.5	37.6	37.3	37.2	37.2	38.2	40.3	43.9	43.6	42.8	42.0	40.8	39.7	39.7	39.6	38.2	38.6	37.2	37.0	37.6		
20	37.9	38.0	36.6	37.0	36.5	36.0	36.0	37.1	36.6	37.3	39.2	42.1	42.9	45.4	44.8	44.0	42.9	43.1	40.7	40.0	38.4	37.4	33.3	37.4		
21	35.0	37.7	37.6	37.4	37.4	37.1	37.9	37.8	37.0	37.5	38.8	41.0	43.8	44.2	45.2	41.7	41.2	35.7	36.4	38.9	36.2	34.6	34.7	28.6		
22	32.9	35.4	35.2	33.1	36.0	36.3	37.0	37.4	37.4	37.8	39.5	41.0	41.5	41.5	41.7	40.5	40.5	40.3	40.2	40.1	39.6	38.0	35.5	36.2		
23	36.9	38.0	38.6	40.0	38.0	36.9	37.1	37.1	36.6	36.9	39.1	41.0	42.4	42.7	41.7	41.4	40.5	41.3	41.7	39.7	37.8	37.8	37.4	38.1		
24 *	39.2	39.3	39.1	38.4	37.8	37.4	37.8	37.8	37.4	36.6	38.9	41.3	42.4	42.3	41.3	40.8	39.7	39.3	38.8	38.9	38.9	38.4	37.8	37.8		
25 *	38.6	38.8	38.5	38.2	38.3	38.3	37.3	36.9	36.3	36.3	37.3	39.2	40.8	42.1	42.3	41.8	41.3	41.4	39.9	40.3	39.7	38.5	38.2	38.3		
26 *	38.4	38.1	38.3	38.3	37.8	37.1	36.8	36.2	36.2	36.2	39.0	41.4	42.8	41.8	41.1	40.8	40.3	40.0	39.0	39.8	39.1	38.2	37.9	37.7		
27	36.9	36.7	36.3	36.9	37.0	37.0	36.8	36.8	36.8	36.8	38.8	41.1	43.8	44.8	45.4	45.2	44.9	44.3	44.3	41.3	38.8	38.3	37.9	37.3		
28	37.5	38.3	38.6	38.8	38.8	38.2	38.4	37.8	36.8	36.3	38.9	41.2	41.8	42.8	42.3	42.8	41.2	39.8	40.3	39.9	38.8	38.3	38.2	38.3		
29	38.2	33.8	33.1	37.7	38.5	38.4	38.8	38.4	37.8	37.2	38.2	41.0	43.4	43.3	44.3	42.8	42.4	41.5	40.6	40.6	38.6	38.8	36.1	30.8	34.4	36.8
30	37.7	38.4	39.1	38.5	37.7	38.1	38.3	38.3	36.7	36.6	38.1	40.3	42.5	44.5	44.2	44.7	40.8	36.6	40.3	38.9	38.9	38.6	37.8	36.7	34.8	
31	35.2	37.7	34.7	37.1	38.0	38.6	37.7	37.7	36.7	35.7	36.6	38.7	41.5	43.6	43.8	42.7	41.7	40.3	39.7	38.7	38.2	38.1	37.7	37.7		
Mean	37.1	37.3	37.8	38.1	38.6	38.4	38.3	38.1	37.5	37.4	39.1	40.9	42.4	43.1	43.1	42.4	41.6	40.9	40.2	38.8	37.5	36.7	36.6	36.6		
Mean *	38.3	38.3	38.4	38.2	38.0	37.7	37.5	37.2	36.7	36.9	38.9	40.6	41.9	42.3	41.7	41.1	40.4	39.7	39.7	39.3	38.8	38.3	38.0	38.0		
Mean **	36.0	36.7	38.9	38.7	40.4	39.9	39.6	39.3	38.4	38.1	39.5	41.5	43.5	44.1	44.8	43.3	43.2	43.3	40.8	36.4	34.8	35.2	36.1	35.6		
February																										
1 *	38.6	36.5	37.1	37.4	38.2	38.1	37.7	37.1	36.7	37.8	39.7	41.7	42.7	42.8	42.2	40.9	40.2	39.9	39.7	38.9	38.5	38.4	38.4			
2	38.7	38.7	38.7	39.6	37.7	37.6	40.2	39.4	38.6	38.1	40.0	41.5	43.7	46.6	46.1	45.3	44.1	44.9	40.3	39.0	36.1	34.6	36.7	37.2		
3 **	37.2	38.2	39.0	37.8	38.2	37.7	38.4	38.2	38.9	40.3	42.2	42.6	44.7	44.2	41.7	42.3	41.7</td									

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE I. - HOURLY MEANS OF MAGNETIC DECLINATION

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>
March																									
9° + Tabular Quantities																									
1 **	30.6	33.3	33.7	36.6	34.6	37.5	41.9	40.1	40.8	39.2	39.7	42.6	42.3	44.6	45.0	40.3	40.0	40.0	38.8	33.7	34.1	31.8	29.2	34.0	
2 **	35.1	36.1	36.6	36.3	38.0	40.1	39.0	37.5	35.6	35.2	37.0	37.6	39.5	41.0	42.1	41.1	39.1	38.0	38.1	35.9	31.1	35.8	36.0	36.5	
3	32.4	35.8	36.3	37.1	41.9	41.1	39.5	37.2	36.1	37.2	39.2	41.7	43.5	43.1	43.0	41.0	40.0	37.0	39.1	39.0	38.7	37.7	35.3	37.6	
4	38.1	36.5	36.0	36.0	37.4	36.2	37.3	36.6	36.0	35.7	37.4	39.8	43.0	44.0	43.4	43.1	41.4	40.6	39.4	39.0	38.6	38.5	37.5	36.7	
5	36.5	37.8	37.9	36.9	37.4	37.7	37.9	37.2	35.9	35.9	36.9	39.5	42.6	43.3	43.3	41.5	38.9	37.3	35.8	34.9	35.9	36.3	38.0	38.3	
6	37.8	37.7	37.3	37.4	36.9	36.8	37.9	37.3	36.4	36.8	38.6	41.5	43.3	44.0	44.2	43.0	38.6	32.5	36.9	37.5	34.5	36.9	36.6	38.3	
7	35.5	37.2	37.5	37.1	38.3	37.5	37.0	36.9	35.4	35.9	38.3	42.7	43.9	44.9	43.4	41.4	37.9	38.9	38.8	38.0	38.4	38.1	38.0	37.9	
8	37.2	36.9	36.8	37.1	37.1	36.8	37.3	35.9	34.0	34.3	36.8	40.0	44.8	44.3	45.1	42.7	42.6	40.4	37.8	38.0	36.3	34.1	36.7	37.4	
9	37.6	37.7	37.0	36.9	36.9	36.7	36.6	35.9	35.9	36.4	38.9	42.8	44.7	44.7	47.7	43.5	41.4	38.8	37.7	38.7	37.7	34.7	36.8	37.6	37.1
10	36.6	37.6	37.2	37.0	37.1	36.6	35.7	34.8	33.2	33.5	36.1	41.1	44.8	45.6	44.5	42.0	40.4	38.2	35.4	33.1	33.2	33.7	36.2	37.2	
11	37.1	36.7	35.8	36.0	36.1	36.2	36.1	35.0	33.0	33.1	35.2	39.7	45.3	46.6	45.2	42.7	40.1	39.3	39.3	38.7	38.7	36.1	27.6	30.6	
12	29.1	36.2	37.2	38.7	34.1	34.7	38.7	39.7	34.6	33.7	35.1	38.8	46.2	46.7	47.1	46.3	43.4	41.1	40.2	39.5	38.6	38.1	37.6	38.1	
13 **	38.1	34.3	28.4	28.6	34.3	35.3	35.7	34.7	34.8	35.4	36.4	40.6	46.9	49.6	53.1	48.7	46.2	41.8	36.7	31.5	35.9	33.1	40.2	34.7	35.1
14 **	35.6	31.7	33.1	39.3	39.6	41.0	35.4	34.1	32.0	33.7	36.7	42.4	44.9	45.7	45.7	43.3	37.7	36.6	33.1	35.6	35.3	33.3	30.7	33.8	
15 **	27.1	32.9	29.0	32.9	32.5	45.6	47.5	54.9	37.6	46.2	39.1	38.5	42.3	44.6	45.2	42.6	47.6	45.3	35.3	35.9	36.0	33.1	35.5	34.7	32.1
16	30.0	34.0	31.6	33.9	33.7	34.5	35.2	33.6	32.4	32.7	34.6	38.2	42.0	43.6	44.0	42.7	40.6	38.6	37.5	37.0	35.3	35.0	36.0	36.3	
17	35.6	34.6	35.0	35.2	33.5	33.4	33.6	33.2	33.3	34.7	37.0	40.1	42.6	42.7	42.8	42.0	39.6	36.6	37.4	37.5	37.0	37.0	36.6	35.6	
18 *	34.7	34.5	35.6	36.8	35.4	35.4	35.1	34.1	32.3	32.7	35.3	38.3	42.8	43.3	43.2	41.7	39.7	37.8	37.7	38.6	38.1	36.3	36.3	36.8	
19	36.2	34.7	33.8	34.3	35.2	36.0	36.3	36.0	35.3	37.3	36.1	36.6	39.7	43.5	44.6	43.6	41.4	41.7	39.6	38.2	37.7	37.6	37.3	36.9	
20	36.8	36.2	36.2	36.4	36.6	36.6	36.4	34.4	33.4	33.8	36.4	40.7	45.3	46.5	45.7	43.1	41.2	39.4	38.5	37.9	37.0	34.1	36.8	36.5	
21	37.5	36.2	37.7	36.7	35.8	35.7	36.3	33.8	31.4	34.2	36.4	39.9	44.0	45.9	45.1	43.1	41.2	39.8	39.3	38.4	36.3	36.5	35.9	36.8	
22	36.8	36.6	36.9	36.7	36.9	35.9	35.3	34.2	32.8	32.8	35.3	39.8	42.4	43.3	43.5	42.0	40.3	39.0	38.7	36.8	33.9	35.1	36.5	36.9	
23 *	38.8	38.2	38.1	37.2	36.1	36.1	35.8	33.8	32.3	33.3	33.3	38.6	42.8	43.9	43.8	42.4	40.8	39.7	38.8	38.3	37.8	37.4	36.9	36.9	
24 *	37.3	36.8	36.4	36.0	35.8	36.5	36.2	35.9	35.5	35.5	35.5	38.9	41.9	42.6	41.2	42.2	41.9	40.8	39.6	38.4	37.9	37.8	37.4	37.5	
25 *	37.4	37.3	37.1	37.0	36.9	36.9	36.9	36.1	34.5	32.9	33.8	35.7	39.6	43.3	45.0	45.3	43.4	42.1	40.8	39.9	38.9	38.4	38.0	37.2	
26	37.0	36.9	36.9	36.9	37.4	37.0	35.5	33.4	32.3	33.0	36.9	40.5	44.2	47.6	47.8	44.9	40.9	40.3	39.5	38.0	37.8	30.2	32.9	33.0	
27	37.9	35.0	35.0	35.8	35.2	35.9	37.1	33.9	32.6	33.6	36.9	40.4	44.7	46.2	45.5	43.6	40.5	39.0	38.7	38.6	37.9	37.1	37.0	37.4	
28	35.6	33.6	34.9	36.4	36.4	36.1	34.6	32.3	32.3	31.4	33.1	37.6	45.3	46.1	45.4	43.0	40.1	38.2	38.0	38.0	37.9	37.1	36.7	36.0	
29 *	34.6	34.6	35.4	35.8	35.5	36.1	35.0	32.5	31.7	33.0	35.5	39.0	42.5	43.7	43.8	42.6	41.1	40.0	39.0	36.5	36.5	37.0	33.0	33.9	
30	35.3	34.3	32.8	33.8	33.9	33.9	33.9	33.2	31.9	31.4	32.2	36.4	40.0	43.2	44.1	43.4	41.0	40.4	39.8	38.8	35.5	32.4	35.4	35.9	
31	36.8	34.9	31.7	32.3	34.8	35.3	34.9	32.9	31.3	34.1	36.6	40.2	43.1	44.4	45.4	44.4	43.9	42.0	40.9	40.0	38.8	38.5	37.2	36.5	
Mean	35.6	35.7	35.3	36.0	36.6	36.9	37.0	35.2	34.3	34.6	36.9	40.5	43.8	44.8	44.5	42.9	40.6	38.7	38.1	37.5	36.4	36.1	35.7	36.1	
Mean *	36.6	36.3	36.5	36.6	35.9	36.2	35.6	34.1	32.5	33.3	35.5	38.9	42.7	43.7	43.8	42.6	41.1	39.8	39.0	38.1	37.7	37.4	36.3	36.4	
Mean **	33.3	33.7	32.2	34.7	38.4	40.3	41.4	36.8	38.0	36.7	38.5	42.4	44.2	45.9	44.8	43.7	40.8	37.3	35.5	33.3	33.1	34.3			
April																									
9° + Tabular Quantities																									
1 **	34.7	29.2	32.5	34.4	40.3	38.3	36.6	34.9	34.3	35.4	37.1	39.5	40.9	43.2	43.5	41.3	39.9	37.8	35.9	36.8	35.9	36.9	34.3	36.6	
2	34.8	34.7	35.9	36.8	38.5	42.5	40.3	32.9	31.1	31.0	34.8	38.4	41.9	43.6	42.6	40.6</td									

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE I. - HOURLY MEANS OF MAGNETIC DECLINATION

U.T.		0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
May																											
		9° + Tabular Quantities																									
1 *		36.6	37.0	37.4	35.4	33.0	31.4	30.0	29.0	29.5	31.1	34.5	38.0	41.6	43.4	42.5	40.3	38.6	37.0	35.0	34.6	37.0	37.4	35.6	35.4	35.4	
2		36.0	36.0	35.8	36.1	37.4	36.0	32.9	32.5	31.6	31.6	35.1	38.5	41.5	45.1	44.6	42.0	39.2	38.9	38.0	32.2	29.6	34.8	37.1	37.6	37.6	
3		37.8	35.0	34.9	33.6	34.2	35.4	30.4	31.0	30.9	33.0	36.1	39.4	43.5	45.3	43.2	41.6	38.8	38.3	37.5	37.3	34.5	38.5	38.3	37.9	37.9	
4		37.5	37.6	37.9	36.0	34.0	30.6	29.1	28.5	28.1	29.0	32.0	36.8	40.9	42.5	44.6	43.3	39.0	38.5	36.6	35.5	37.4	37.1	36.2	32.6	32.6	
5		35.0	36.4	35.0	34.0	33.2	31.0	29.1	28.1	28.1	30.0	33.9	38.9	43.4	44.1	43.1	41.0	39.5	37.1	36.0	35.9	35.4	33.2	35.4	34.3	34.3	
6		33.6	34.0	30.0	32.1	31.8	31.1	28.9	27.8	28.1	32.1	36.2	41.1	44.6	45.1	46.6	42.7	37.7	36.9	34.0	31.6	32.6	34.1	33.2	31.5	31.5	
7 **		31.7	34.6	30.9	31.8	31.6	32.0	35.7	36.1	27.0	29.7	33.7	40.1	41.0	40.1	40.1	39.4	39.6	38.5	32.7	34.1	35.1	36.1	35.5	35.2	35.2	
8		35.7	35.1	34.7	34.2	33.9	32.1	34.1	32.7	29.0	30.4	33.1	36.7	40.1	43.0	44.0	43.7	41.5	39.1	37.5	36.6	36.6	36.9	36.0	35.7	35.7	
9 **		35.1	36.1	36.0	35.9	35.1	33.5	31.5	30.6	30.7	33.5	35.8	40.3	44.2	43.6	42.0	41.1	40.2	38.0	37.9	37.1	37.4	37.9	37.2	36.5	36.5	
10		35.8	35.5	36.1	36.2	35.6	31.6	28.1	27.1	26.6	28.1	30.1	33.2	35.9	39.4	40.8	41.1	40.7	38.1	35.1	34.7	36.1	38.0	37.9	37.1	37.1	
11		36.8	35.0	35.0	35.5	36.7	35.5	32.6	31.4	31.4	32.0	33.6	37.4	39.2	41.0	41.1	40.5	40.0	38.0	36.0	37.0	35.8	37.4	37.9	36.8	36.8	
12		36.4	35.9	35.0	35.9	36.3	35.0	31.3	30.8	28.5	30.1	32.6	37.0	41.0	43.0	43.0	42.3	40.4	38.5	37.0	36.2	36.0	37.5	35.9	35.7	35.7	
13		40.0	39.5	37.0	39.6	42.9	35.4	30.5	28.0	29.8	30.3	34.2	38.0	40.8	42.2	42.7	42.2	40.9	38.9	37.7	36.6	36.1	36.3	35.9	35.3	35.3	
14		34.6	34.0	34.3	34.0	33.9	32.9	31.0	30.0	28.7	29.5	31.9	36.1	41.0	44.4	44.4	45.9	44.5	41.6	39.0	37.0	37.0	35.0	36.0	37.4	38.1	38.1
15 **		38.7	35.4	40.9	39.6	34.2	28.4	32.0	37.8	34.0	34.5	38.7	44.0	46.5	44.8	43.4	41.0	38.0	36.0	36.0	36.7	36.5	32.6	37.0	33.6	33.6	
16 **		31.0	35.0	42.5	34.2	37.4	32.9	34.2	32.5	30.5	31.0	34.2	37.2	41.2	43.8	45.6	38.9	37.8	38.1	37.5	38.8	39.1	39.0	33.2	34.0	34.0	
17		35.0	34.6	33.1	33.0	30.0	28.9	28.7	28.0	27.7	30.1	33.9	36.7	40.0	41.9	41.5	40.3	38.7	37.0	35.9	36.0	37.0	36.0	34.4	33.0	33.0	
18		31.0	31.2	34.5	32.4	32.8	32.1	29.4	28.6	31.5	34.7	37.7	40.4	41.4	42.1	41.1	40.0	38.0	36.4	34.0	36.4	37.5	38.0	35.0	36.5	36.5	
19 *		37.0	36.0	35.0	34.0	32.6	31.5	30.0	29.5	30.5	32.9	36.5	39.2	41.8	41.9	41.6	39.0	38.0	37.1	36.5	37.0	37.1	37.1	36.9	36.9	36.9	
20 *		36.4	36.1	35.0	33.9	32.9	30.6	29.0	28.2	30.0	32.8	36.0	39.6	43.0	43.5	42.4	40.6	39.0	37.6	36.9	37.0	36.0	34.0	33.7	33.7	33.7	
21 **		34.3	31.6	29.4	29.0	28.0	29.0	30.6	32.0	31.0	32.4	36.1	41.9	45.6	45.2	46.5	43.7	43.0	42.1	39.0	30.4	32.2	36.0	34.7	38.1	38.1	
22		31.1	35.7	33.2	34.8	38.6	35.0	33.9	30.4	30.4	32.0	32.0	34.7	37.5	39.0	37.6	39.0	37.0	36.8	36.0	37.3	34.9	34.9	34.0	34.0	34.0	
23		33.4	32.4	31.4	32.0	37.1	31.1	30.6	33.0	31.0	30.5	31.9	34.5	38.1	40.4	44.1	46.6	42.4	40.4	38.8	38.0	37.5	37.1	36.5	35.5	35.8	35.5
24		33.0	30.1	28.0	31.0	31.0	30.4	28.0	29.4	31.9	35.0	39.1	44.0	46.4	46.0	44.5	43.0	40.6	38.1	37.8	38.2	38.0	37.6	36.7	37.1	37.1	
25		33.0	31.0	32.7	31.1	35.0	34.1	29.7	29.4	30.1	31.9	36.0	41.0	45.7	45.9	45.6	43.2	40.6	38.1	36.1	37.0	37.5	37.5	37.1	35.9	35.9	
26 *		36.8	36.6	35.4	35.0	33.1	31.6	31.0	29.9	29.2	30.2	31.9	34.1	37.9	42.2	44.1	45.2	44.0	41.3	39.6	38.1	37.5	38.0	37.3	37.3	37.1	37.1
27		38.4	33.1	34.1	35.2	34.0	31.7	31.1	31.6	31.0	32.8	36.2	39.2	41.1	42.7	43.1	42.1	39.7	37.3	37.0	37.4	37.5	37.7	37.0	37.1	37.1	
28 *		35.0	34.6	35.0	33.6	33.0	31.1	29.2	29.3	30.1	31.4	34.0	38.2	41.5	42.3	42.7	41.6	41.0	39.2	38.8	38.9	37.9	37.6	37.3	36.1	36.1	
29		35.6	36.1	36.3	31.0	32.1	31.6	31.2	30.5	31.1	31.9	35.4	40.2	44.2	46.9	47.1	48.1	46.7	43.9	40.9	39.6	38.2	38.0	39.6	34.4	34.4	
30		35.9	33.0	39.2	37.3	37.7	35.2	30.1	27.2	27.0	28.1	30.6	33.8	37.9	41.0	41.0	41.6	40.5	39.1	37.2	36.5	38.0	37.5	37.5	37.5	36.5	
31		35.7	35.3	35.0	34.5	33.9	32.9	33.7	32.6	33.9	35.3	36.6	40.7	44.1	46.0	45.5	43.1	39.0	38.1	37.6	38.2	38.0	37.1	36.0	34.8	34.8	
Mean		35.3	34.8	34.9	34.3	34.3	32.5	31.0	30.3	30.0	31.6	34.7	38.7	41.9	43.2	43.3	41.7	39.8	38.2	36.7	36.3	36.3	36.7	36.2	35.6	35.6	
Mean *		36.4	36.1	35.6	34.4	32.9	31.2	29.8	29.0	30.1	32.0	35.0	38.6	42.0	43.0	42.9	41.1	39.6	38.1	37.1	37.0	37.4	37.1	36.2	35.8	35.8	
Mean **		34.2	34.5	35.9	34.1	33.3	31.2	32.8	33.8	30.6	32.2	35.7	40.7	43.7	43.5	43.5	40.8	39.7	38.5	36.6	35.4	36.1	36.3	35.5	35.5	35.5	
June																											
1 **		32.6	33.3	29.6	32.4	35.1	34.0	31.9	28.6	25.6	29.5	35.1	37.8	40.5	42.6	44.5	46.4	40.5	38.3	34.8	34.7	36.0	38.0	37.7	37.0	37.0	
2		36.0	35.2	34.5	34.0	33.5	33.8	33.0	30.8	29.1	31.0	35.2	40.0	43.0	43.9	43.3	40.5	38.0	36.9	35.9	36.5	36.7	36.7	36.1	35.0	35.0	
3		34.5	33.1	31.8	31.7	30.1	29.9	29.6	29.2	29.7	30.1	34.0	38.5	42.5	44.5	44.7	41.7	39.5	37.7	36.5	36.6	37.6	37.0	37.2	37.1	37.1	
4 *		36.0	34.6	34.6	33.5	32.1	30.6	28.8	29.1	30.6	32.1	35.7	40.6	44.0	45.7	45.1	43.4	39.2	37.7	38.0	38.1	38.8	37.2	36.1	36.1	36.1	
5		35.6	34.1	32.9	33.2	33.0	30.3	27.9	27.5	29.0	32.4	37.1	40.5	44.3	44.2	43.6	41.6	39.2	39.0	38.2	37.5	38.9	38.1	37.6	37.7	37.7	
6		36.3	36.3	37.0	35.6	33.0	30.1	28.9	30.1	30.9	33.1	37.6	40.1	42.9	45.6	45.1	43.1	40.1	37.7	36.2	36.7	37.1	37.2	37.5	36.6	36.6	
7		37.0	36.5	34.8	34.8	32.1	29.6	27.1	26.5	27.9	30.2	34.6	39.1	42.5	44.6	43.4	42.2	41.1	40.1	38.1	38.1	37.6	37.2	34.4	34.5	36.5	
8		35.6	35.7	35.8	35.1	33.1	33.0	30.0	27.6	27.3	28.1	31.2	36.2	40.9	45.6	46.9	46.8	45.6	43.9	41.2	38.1	36.6	34.5	34.5	35.6	35.6	
9																											

\* International Quiet Day. \*\* International Disturbed Day.

TABLE I. - HOURLY MEANS OF MAGNETIC DECLINATION

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
<b>July</b>																										
1	37.0	36.0	34.7	30.9	31.9	30.6	28.6	28.3	28.7	32.1	34.9	37.6	40.9	42.2	42.8	42.0	40.2	38.3	36.6	36.1	35.7	35.9	34.9	33.7		
2	33.7	32.7	31.1	30.1	29.2	28.9	29.5	29.6	30.8	32.4	35.7	39.4	41.7	43.6	42.8	41.5	39.0	38.2	37.4	36.0	37.1	37.1	36.0	34.6		
3	33.3	32.8	32.3	32.5	31.3	27.6	27.1	27.5	29.6	32.7	35.4	40.4	44.1	47.5	47.9	44.0	42.9	40.6	38.9	38.1	38.3	37.7	37.3	36.0		
4 **	35.7	34.1	34.0	33.1	31.6	29.3	28.5	28.0	31.4	34.9	37.0	40.0	41.9	40.6	41.0	40.0	38.9	39.2	36.4	36.9	35.0	31.0	35.9	32.5		
5	29.6	28.2	29.6	32.3	31.0	29.5	28.4	27.5	28.8	31.4	34.8	39.3	43.6	44.4	45.0	43.9	40.7	39.5	37.4	36.8	36.9	36.9	36.2	37.7		
6	32.6	31.5	32.1	32.5	31.6	30.2	27.9	27.2	27.6	29.7	32.1	35.6	38.0	40.6	41.0	39.9	38.8	37.6	36.1	35.6	35.1	35.3	35.3	35.1		
7	34.7	34.1	33.8	32.6	32.2	29.8	27.7	28.1	29.1	30.7	33.9	37.6	40.6	41.5	42.4	42.1	40.9	38.5	36.6	36.2	36.1	36.0	36.0	36.0		
8	36.2	34.6	33.6	32.5	31.9	32.1	32.7	32.0	31.7	32.1	32.8	37.1	40.6	42.8	44.1	43.2	40.5	36.6	34.6	34.2	35.4	35.7	35.1	35.1		
9	34.7	34.6	33.9	32.8	31.5	29.6	28.2	27.2	27.3	29.1	33.5	37.0	39.6	42.0	44.1	45.6	40.8	38.5	36.2	35.2	35.8	36.0	35.1	35.3		
10	36.1	36.2	36.0	35.1	36.0	35.7	33.2	30.4	29.1	30.8	34.1	38.5	41.5	43.3	42.0	42.0	40.5	38.5	34.8	36.1	36.1	36.6	36.1	35.5		
11	35.0	34.0	33.6	33.1	31.4	30.4	29.6	28.5	28.6	30.6	33.4	37.6	40.9	42.1	42.9	42.3	41.0	38.8	37.0	36.1	35.5	36.1	35.2	34.3	30.9	
12	32.8	32.5	31.9	30.4	30.5	30.0	28.7	28.1	27.6	29.1	32.1	36.1	38.5	41.4	41.6	41.5	40.1	38.0	36.5	35.7	36.0	36.9	36.5	36.0		
13	36.0	35.0	35.0	35.1	35.5	34.5	31.0	28.5	28.5	30.7	34.4	38.1	40.0	39.3	40.4	40.0	38.5	38.5	37.6	36.3	36.0	37.5	37.1	37.5		
14 **	37.5	32.5	28.0	29.7	31.0	28.8	28.8	29.6	28.9	30.4	33.3	36.5	38.0	40.0	41.8	40.7	39.5	39.0	37.6	37.0	36.6	35.3	35.9	35.4		
15	33.0	31.1	31.1	31.0	30.5	27.5	26.5	28.1	29.7	32.5	35.5	38.8	41.0	41.3	41.6	39.5	39.8	39.6	38.1	37.5	36.0	37.4	37.7	35.2		
16	34.0	33.2	31.9	32.9	31.4	29.5	28.2	26.8	26.9	31.9	33.6	37.1	41.8	43.7	42.1	41.8	39.1	37.0	36.4	36.4	36.9	37.1	36.0	35.7		
17	35.0	34.5	33.0	27.9	27.1	27.0	29.0	28.1	28.9	33.0	35.8	40.0	42.2	42.3	41.8	40.7	39.4	39.0	38.1	33.9	34.9	36.5	37.0	36.8		
18	35.0	33.9	33.4	32.0	29.5	29.4	27.8	27.4	29.9	33.0	35.7	40.8	42.5	42.0	40.6	38.6	38.7	38.3	37.0	35.9	36.0	36.5	36.3	35.9		
19 *	35.0	33.5	31.8	31.7	30.4	28.1	26.4	25.5	26.5	30.3	35.0	39.9	43.0	43.4	41.5	39.5	37.5	36.5	35.7	36.0	36.2	36.1	35.7	35.2		
20 *	34.0	33.9	32.3	32.9	32.5	30.8	28.9	28.5	28.1	31.7	36.5	42.5	46.4	46.6	44.0	40.4	38.0	37.8	37.2	37.5	36.9	37.1	36.4	35.6		
21	35.0	31.9	31.5	32.5	31.0	28.5	26.5	28.0	28.9	32.4	35.0	39.5	42.5	43.3	41.8	40.0	39.0	38.1	37.4	36.5	32.7	32.6	34.0	33.4		
22 *	33.4	33.0	33.6	34.1	32.5	29.1	29.4	30.0	29.3	30.2	34.4	40.0	42.2	42.5	42.4	40.5	40.5	37.9	36.4	35.0	35.4	36.1	36.5	36.6		
23 *	36.2	35.0	35.2	34.0	31.5	28.0	25.7	25.2	26.7	31.8	35.6	38.9	41.0	41.6	40.5	39.6	37.1	36.7	37.1	37.5	37.7	37.0	36.8	37.0		
24 *	35.6	34.7	34.4	35.6	32.4	29.3	28.4	28.0	28.4	30.5	35.3	40.1	43.0	43.5	42.9	39.9	36.2	34.7	35.0	36.0	36.7	36.7	36.0	36.4		
25	35.9	35.1	36.4	33.4	31.1	30.0	28.4	28.0	28.5	32.0	36.0	39.9	41.9	40.1	39.1	38.0	37.4	36.8	36.0	36.5	37.1	37.1	37.4	37.0		
26	34.9	33.6	33.9	34.0	33.6	31.9	30.9	31.4	29.3	30.3	33.4	36.0	38.4	39.8	40.7	40.0	37.6	39.0	37.4	36.1	36.0	36.8	34.0	33.8		
27	33.9	33.0	32.5	32.0	30.6	29.0	28.6	28.7	30.5	33.1	36.4	39.4	41.9	43.2	43.5	42.8	40.4	38.3	37.0	36.5	36.5	36.5	36.2	34.1		
28	33.3	32.8	32.8	32.0	30.9	29.9	29.4	29.9	30.1	31.9	34.1	38.4	41.5	41.6	40.4	38.9	38.3	38.5	37.5	37.4	36.9	36.5	34.7	33.0		
29 **	30.9	31.9	33.8	34.4	36.7	35.0	30.9	35.4	34.2	34.5	36.5	42.0	43.8	45.9	46.8	46.3	41.3	40.6	38.5	37.9	38.0	37.4	35.7	34.9		
30 **	34.1	34.4	36.5	35.3	32.8	29.9	32.3	30.7	30.9	30.5	32.9	35.7	38.8	41.4	41.4	40.9	39.5	39.1	38.9	37.6	35.0	28.2	35.5	36.3	35.4	
31 **	33.6	29.3	31.5	33.6	35.8	31.3	29.4	32.9	32.9	34.6	37.0	38.1	38.1	39.9	40.4	38.5	37.4	34.9	34.9	35.3	35.9	37.5	36.9	36.3		
Mean	34.4	33.3	33.1	32.6	31.8	30.0	28.9	28.8	29.3	31.6	34.8	38.6	41.3	42.4	42.3	40.9	39.2	38.1	36.8	36.2	36.0	36.2	35.9	35.2		
Mean *	34.8	34.0	33.5	33.7	31.9	29.1	27.8	27.4	27.8	30.9	35.4	40.3	43.1	43.5	42.3	40.0	37.3	36.4	36.0	36.4	36.6	36.6	36.3	36.2		
Mean **	34.4	32.4	32.8	33.2	33.6	30.9	30.0	31.3	31.7	33.0	35.3	38.5	40.1	41.6	42.2	40.4	39.2	38.5	37.0	36.4	34.7	35.3	36.1	34.9		
<b>August</b>																										
1	34.9	33.3	34.9	32.9	34.6	30.7	30.4	29.5	31.9	32.6	36.0	39.4	40.4	39.6	38.2	36.5	35.4	35.0	35.7	35.0	36.7	35.4	33.0	31.9		
2	34.8	35.3	33.4	32.5	31.4	29.9	35.4	34.5	31.1	33.6	36.5	38.9	43.2	42.9	40.3	38.3	35.9	35.0	35.9	36.4	36.2	35.3	36.0	35.8		
3	35.3	34.6	33.8</																							

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE I. - HOURLY MEANS OF MAGNETIC DECLINATION

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>		
<b>September</b>																											
<b>9° + Tabular Quantities</b>																											
1 **	30.2	26.8	28.0	27.6	30.2	33.6	29.8	27.3	27.5	30.9	34.9	39.4	43.5	44.0	43.6	40.7	37.4	35.1	34.7	32.9	26.4	22.9	32.9	32.9	32.9		
2 **	32.0	36.4	32.4	29.9	31.5	34.6	32.9	31.9	31.7	33.2	33.3	37.4	38.6	38.5	37.1	35.4	34.0	33.4	31.4	32.6	28.9	26.9	32.8	34.0	34.0		
3	33.4	32.9	33.3	33.6	33.3	32.9	31.3	29.3	29.9	31.6	33.9	37.6	39.6	41.0	39.9	36.9	36.0	32.3	32.7	34.4	33.9	32.4	30.4	33.9	33.9		
4	34.4	35.2	36.5	35.9	34.9	34.0	33.4	34.1	34.5	36.0	36.6	39.6	41.0	41.0	41.8	39.8	31.3	33.4	31.6	31.9	32.5	30.9	32.5	31.1	31.1		
5 *	32.5	32.3	32.1	31.6	31.4	31.5	31.8	31.0	30.4	31.3	33.4	36.5	39.4	39.9	39.4	37.9	35.9	34.9	34.9	34.4	33.5	33.4	33.4	33.4	33.4		
6 *	33.0	32.9	32.9	32.8	32.5	33.2	33.3	32.9	31.9	32.4	34.7	37.3	39.9	38.9	38.4	37.4	35.9	36.0	34.8	34.2	34.4	30.9	30.9	31.8	31.8	31.8	
7	32.0	31.4	32.1	31.7	31.4	38.8	33.2	30.7	29.7	30.0	31.9	35.1	38.0	38.9	38.3	37.5	37.0	36.6	35.9	35.9	35.8	34.9	34.7	34.4	34.4	33.2	
8	32.8	30.8	31.4	31.8	29.7	30.9	30.4	29.9	30.4	32.0	36.1	39.4	39.4	41.1	40.4	37.7	36.6	35.6	34.9	34.9	34.8	34.0	33.0	32.4	32.4	32.4	
9	31.5	30.6	29.9	31.9	31.6	30.7	31.4	29.9	30.1	30.9	32.9	37.6	40.1	41.8	41.0	39.5	38.1	35.9	34.4	34.7	34.0	33.9	33.3	32.8	32.8	32.8	
10	33.4	32.8	32.8	32.0	31.5	29.8	29.0	28.3	29.3	32.1	36.5	41.4	43.1	44.0	41.0	41.7	36.8	36.9	36.9	36.2	35.1	34.7	33.2	33.2	33.2		
11	32.8	32.1	32.5	31.6	31.2	30.1	30.5	28.8	28.1	30.4	33.3	37.0	41.2	43.4	43.8	41.1	37.1	34.4	32.5	30.4	33.4	31.0	31.8	30.2	30.2	30.2	
12	31.5	32.8	32.4	28.2	25.9	27.1	29.2	28.0	28.9	30.8	33.4	37.4	40.4	42.5	45.9	42.5	39.0	38.4	36.9	35.1	35.1	34.4	34.0	33.0	33.0	33.0	
13	32.1	34.7	32.4	32.6	31.9	31.1	31.3	30.7	30.8	32.9	36.0	39.8	40.9	40.7	39.2	37.9	36.8	35.9	35.1	34.9	34.4	33.1	33.9	33.8	33.8	33.8	
14	33.4	32.9	32.4	32.0	30.9	32.1	30.9	28.4	27.8	30.5	35.5	39.6	40.9	40.7	39.1	37.4	36.0	35.4	34.9	35.2	34.7	34.0	33.4	33.1	33.9	33.9	
15	33.0	32.8	32.1	31.9	30.4	31.3	29.7	28.6	27.5	29.7	33.3	38.1	40.5	40.0	38.2	37.4	36.8	36.8	36.6	34.9	33.0	22.1	20.5	20.5	20.5		
16	17.0	21.4	22.9	16.6	22.6	27.4	26.1	25.9	29.3	30.8	34.4	38.9	41.4	42.6	40.6	38.0	36.8	36.0	35.9	35.7	33.9	34.5	33.2	29.9	29.9	29.9	
17	30.9	31.8	31.6	31.2	31.4	31.1	30.6	30.0	30.9	33.4	36.6	43.4	44.9	41.5	39.7	37.3	35.3	35.0	34.9	34.8	34.0	34.3	33.9	33.4	33.4	33.4	
18	33.2	32.7	30.9	30.5	30.5	30.6	29.9	28.6	28.9	30.9	34.9	39.6	41.6	41.3	39.4	36.9	34.9	34.7	34.7	33.3	34.1	33.7	30.6	27.9	27.9	27.9	
19	28.4	31.0	31.9	29.7	28.9	29.6	27.9	26.8	28.1	30.1	34.6	38.0	41.9	41.9	40.7	38.0	36.4	36.0	36.0	35.0	33.5	33.9	34.2	33.3	33.8	33.8	
20 *	33.9	33.4	33.0	32.7	31.9	31.3	29.7	27.2	27.7	29.9	34.1	37.9	40.4	41.7	39.8	36.8	35.5	35.4	34.9	35.3	34.9	33.0	31.9	30.8	30.8	30.8	
21	32.4	33.2	33.0	32.9	32.2	31.7	30.8	30.9	29.0	29.8	31.7	36.0	39.9	41.0	41.2	39.9	37.6	35.9	35.4	36.4	34.9	34.1	33.4	32.3	32.3	32.3	
22	31.6	29.8	29.6	30.7	31.3	30.4	30.8	29.8	28.8	29.5	31.1	34.5	37.8	40.1	40.8	39.6	38.8	37.8	36.7	36.3	35.7	35.2	34.2	27.3	27.3	27.3	
23	31.8	30.9	32.8	27.9	29.8	30.9	30.8	30.5	29.3	28.2	30.8	35.1	39.5	41.6	42.9	42.0	40.3	36.7	34.4	34.8	34.1	31.9	30.4	28.0	28.0	28.0	
24 **	25.6	27.9	24.9	27.8	30.1	31.0	30.8	28.8	29.4	30.9	34.7	37.8	39.6	41.7	40.8	36.8	34.2	37.8	36.0	29.9	32.3	27.2	29.4	28.1	28.1	28.1	
25 **	32.5	33.8	32.8	32.3	32.7	33.1	35.8	41.3	36.0	33.4	35.0	35.2	38.9	42.3	41.2	38.4	38.4	37.2	32.2	29.3	30.3	29.8	28.8	27.7	27.8	27.8	
26	27.7	30.7	31.6	31.4	34.9	32.3	30.8	29.8	29.8	30.7	33.3	36.2	38.7	38.9	39.0	37.8	35.8	34.2	32.6	32.4	31.4	31.7	32.9	34.3	34.3	34.3	
27 *	31.8	31.7	32.3	32.4	32.5	32.7	31.9	31.0	29.8	30.2	32.4	35.2	39.3	40.1	40.8	38.4	37.8	36.3	34.8	34.2	34.3	34.1	33.7	33.6	33.6	33.6	
28 *	33.4	33.1	32.8	32.7	32.4	32.4	31.8	30.5	29.4	30.0	32.5	35.3	37.8	38.9	39.5	38.8	37.0	35.7	35.0	34.7	34.7	34.3	34.2	34.3	34.3	34.3	
29 **	33.4	33.0	34.2	29.8	29.7	33.8	35.1	35.8	34.3	33.3	34.4	37.3	37.3	39.7	39.2	41.0	35.1	33.8	33.4	32.3	31.3	32.5	33.5	28.8	28.8	28.8	
30	24.6	31.3	32.4	32.0	32.8	32.7	32.7	32.5	32.4	31.3	33.7	35.4	38.3	38.8	41.7	39.2	33.7	34.5	33.8	33.8	33.2	33.2	33.3	32.8	32.8	32.8	
Mean	31.2	31.8	31.7	30.9	31.1	31.9	31.3	30.2	29.9	31.1	33.7	37.5	40.1	40.8	40.5	38.6	36.5	35.4	34.5	34.1	33.5	32.5	32.3	31.4	31.4	31.4	
Mean *	32.9	32.7	32.6	32.4	32.1	32.2	31.7	30.5	29.8	30.8	33.4	36.4	38.8	39.5	39.1	37.7	36.1	35.4	34.8	34.6	34.3	33.1	32.8	32.8	32.8	32.8	
Mean **	30.7	31.6	30.5	29.6	30.9	33.8	34.0	32.0	31.3	32.7	34.5	38.2	40.3	41.0	39.8	38.5	35.6	34.5	33.0	31.6	29.7	27.7	31.3	30.3	30.3	30.3	
<b>October</b>																											
1 **	33.2	32.9	30.5	27.8	26.6	41.1	32.2	33.3	30.8	35.3	37.2	39.2	42.0	39.6	38.7	38.2	36.3	35.3	34.3	34.0	33.8	32.8	32.3	32.3	32.3	32.3	32.3
2	30.8	31.3	32.2	31.9	31.7	33.4																					

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE I. - HOURLY MEANS OF MAGNETIC DECLINATION

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
November																										
1	32.5	32.6	32.6	32.6	32.3	31.8	31.4	30.7	30.0	29.9	32.3	34.8	36.9	38.5	38.6	38.0	37.6	36.5	34.5	31.4	31.0	30.8	23.5	15.1		
2 **	25.6	24.4	25.0	30.0	32.1	36.5	38.7	35.0	35.0	36.2	36.9	35.0	37.1	39.0	39.4	37.5	34.6	38.3	37.0	29.6	26.6	20.3	21.0	22.0		
3	21.0	21.5	28.2	26.9	28.1	28.3	28.2	27.0	27.0	28.0	31.8	33.3	37.0	38.0	39.0	39.0	39.2	39.9	40.4	38.7	33.7	30.0	30.0	29.3	27.7	
4 *	29.0	30.0	31.8	32.0	32.4	31.7	32.0	31.5	30.0	29.9	31.5	33.3	35.8	36.4	36.9	36.4	35.9	34.5	33.9	33.0	32.2	32.0	31.0	31.8	31.8	
5 *	32.1	32.6	32.9	33.0	33.0	32.3	31.7	31.0	29.8	30.8	33.5	36.0	38.4	38.5	38.3	37.1	36.3	35.1	34.0	31.4	30.5	31.9	31.8	31.5		
6	32.0	32.3	32.4	32.7	31.3	31.1	31.0	30.6	29.6	30.9	33.0	35.6	37.5	38.0	38.0	37.2	36.3	35.4	35.0	34.6	33.5	33.0	33.0	29.7		
7	26.9	29.1	29.9	31.5	32.0	32.0	31.1	31.0	29.3	30.3	32.3	36.4	37.3	37.0	37.9	37.1	36.0	35.1	34.6	34.0	33.1	31.5	26.4	26.7		
8	25.9	28.1	26.2	26.9	30.7	31.6	31.6	30.9	31.0	31.3	34.0	37.0	35.5	36.6	36.4	37.1	36.0	37.6	36.8	34.3	29.6	30.1	30.7	29.6		
9	26.3	29.5	30.8	31.5	31.7	31.0	32.2	32.0	31.1	32.0	34.3	35.0	37.4	35.9	36.1	36.4	32.6	32.6	34.0	33.9	31.2	32.0	31.5	30.3		
10	31.0	30.0	30.0	31.0	31.6	31.0	31.9	31.1	30.5	30.7	33.4	34.5	36.2	36.9	36.6	36.0	34.9	34.4	34.9	33.9	33.0	32.5	31.5	30.5		
11	27.9	30.7	31.8	31.7	31.6	31.3	31.5	30.7	29.3	29.1	31.0	34.6	35.9	36.6	36.0	36.0	35.2	35.0	34.8	33.4	32.5	32.0	31.9	31.9		
12 *	31.5	32.0	31.8	32.5	32.5	32.0	32.0	31.0	30.2	31.0	33.0	34.6	36.5	37.0	35.0	34.8	34.0	34.0	33.6	33.0	32.2	32.2	32.2	32.5		
13	32.5	32.1	32.0	31.9	31.5	31.0	30.7	30.3	29.5	29.5	32.1	34.0	36.0	38.0	37.9	38.1	37.0	34.9	33.0	31.6	26.5	28.0	29.5	31.4		
14	32.5	32.1	31.6	32.0	32.6	31.9	31.5	30.1	28.9	29.6	31.6	34.3	36.0	37.0	36.8	35.6	34.7	33.8	33.9	33.5	31.9	32.4	32.1			
15	32.0	32.0	32.0	31.9	31.0	30.8	30.7	30.3	29.0	30.0	32.2	34.1	36.1	37.4	37.1	36.3	35.5	35.0	36.3	32.5	31.3	30.0	23.4	25.1		
16	29.0	31.9	31.6	32.8	32.5	32.9	33.0	31.4	31.4	29.1	29.0	31.0	33.0	35.6	37.5	37.2	37.3	36.0	35.4	36.0	33.8	32.6	30.9	30.4		
17	30.2	29.8	31.9	33.0	34.3	34.6	33.8	34.5	32.5	32.1	33.6	36.8	36.7	37.8	35.8	35.3	32.9	31.5	33.4	30.0	24.9	29.2	30.6	30.9		
18	31.8	31.8	32.9	33.9	32.5	35.4	32.9	33.3	31.0	30.9	33.9	34.5	36.9	34.9	33.9	33.9	32.1	33.8	32.5	30.9	31.9	27.1	29.4	28.9		
19	30.6	31.4	31.1	32.8	34.3	34.7	37.0	34.9	33.8	33.4	33.4	35.3	35.4	36.3	36.4	36.4	32.9	33.3	33.8	31.9	25.9	28.5	29.5	28.2		
20 **	29.4	28.9	30.5	32.9	34.3	34.9	34.9	35.5	33.9	32.7	34.0	34.9	40.4	36.0	37.4	33.7	30.0	25.6	25.5	30.7	27.4	20.7	19.0	20.4		
21 **	23.0	26.2	25.0	30.7	29.6	34.9	36.1	36.2	32.8	30.6	29.6	32.4	33.0	33.9	34.2	32.9	32.5	32.2	31.4	30.4	27.8	28.7	29.9	30.9		
22	31.9	30.9	30.3	31.0	31.5	31.8	31.4	32.4	32.2	32.9	31.5	35.3	36.9	33.7	35.7	33.9	26.4	29.4	29.9	25.0	30.7	30.9	29.5	26.3		
23	26.5	26.4	29.5	33.0	29.2	31.4	31.6	30.4	28.9	29.3	31.4	33.0	35.2	35.2	35.9	33.5	31.8	33.6	33.0	30.9	27.9	28.9	28.8	28.6		
24 **	28.2	29.5	31.8	32.3	31.9	31.8	31.0	31.4	31.0	31.4	31.4	33.7	35.9	36.4	36.4	35.4	34.1	32.9	27.9	27.9	29.6	21.4	24.3	27.4	25.4	
25 **	28.0	31.0	31.1	31.5	31.9	32.6	32.0	31.8	31.0	30.9	31.9	34.4	37.8	36.4	34.9	30.8	33.9	32.9	32.4	32.6	24.9	24.1	28.4	30.1		
26	30.9	31.7	31.8	31.9	31.5	31.4	31.2	30.6	29.6	29.9	31.1	34.0	35.4	37.5	37.9	37.9	36.9	34.8	32.9	31.9	31.8	31.3	31.2	31.8		
27	32.1	32.1	32.0	32.1	32.1	31.8	31.3	31.1	31.6	31.0	31.4	36.9	39.1	38.8	38.5	37.4	36.4	32.9	31.6	31.1	30.9	30.9	31.5	31.9		
28	32.1	32.2	31.9	33.6	30.6	30.8	31.3	31.0	29.9	30.3	31.4	34.9	34.6	35.9	34.9	34.4	33.4	32.2	32.5	30.9	27.9	28.9	31.2	31.2		
29 *	31.7	31.0	31.9	32.0	31.8	30.7	30.0	31.0	29.9	30.5	32.8	34.7	36.3	36.1	36.1	35.5	34.9	34.6	33.9	32.0	31.9	31.1	30.8	29.9		
30 *	29.7	29.8	30.2	30.8	30.9	30.7	30.8	31.2	30.9	30.9	32.4	33.4	34.7	34.7	34.9	34.4	33.0	32.5	32.4	31.9	31.9	31.8	31.8	31.8		
Mean	29.5	30.1	30.8	31.7	31.8	32.1	32.2	31.7	30.6	31.0	32.8	34.7	36.6	36.8	36.6	35.6	34.3	33.7	33.2	31.5	29.9	29.6	29.2	28.8		
Mean *	30.8	31.1	31.7	32.1	32.1	31.5	31.5	31.3	31.1	30.2	30.6	32.6	34.4	36.3	36.6	36.0	35.5	34.8	34.0	33.2	32.2	31.6	31.8	31.5		
Mean **	26.8	28.0	28.7	31.5	32.0	34.1	34.5	34.0	32.7	32.6	33.1	34.1	36.8	36.4	36.3	33.8	32.8	31.4	36.8	30.5	25.6	23.6	25.1	25.8		
December																										
1 *	31.9	31.8	32.3	32.5	32.3	31.8	31.2	31.4	30.9	30.9	33.4	33.8	34.9	35.0	34.8	34.5	34.1	33.7	32.9	32.4	32.0	31.6	31.9			
2	31.9	30.8	31.3	31.5	32.1	32.0	31.7	31.4	30.7	30.8	32.6	33.8	34.6	34.6	34.6	33.7	33.9	33.1	32.5	32.4	31.9	30.4	25.7	27.1	27.4	
3 *	30.9	32.2	32.9	33.9	30.9	30.7	30.3	31.5	31.5	31.7	31.1	32.5	33.7	33.9	34.4	34.4	34.1	34.0	33.1	32.5	31.9	31.4	31.0	31.4		
4	31.4	31.7	32.0	32.3	31.9	31.6	31.6	31.3	30.5	30.8	31.9	33.2	34.3	34.3	34.4	33.4	32.9	33.4	33.1	31.						

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE II. - HOURLY MEANS OF HORIZONTAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
<b>January</b>																										
1	600	598	601	605	607	611	612	603	596	589	583	582	591	595	590	566	570	580	578	561	573	592	581	561		
2 **	571	576	576	579	590	612	597	589	586	572	566	566	568	571	572	576	572	548	556	530	573	580	570	569		
3 **	576	576	583	600	615	603	582	581	584	580	573	563	542	551	537	550	535	532	490	490	518	530	539	546		
4 *	543	545	548	547	552	553	555	556	555	547	542	541	546	548	552	557	563	566	567	572	582	581	580	576		
5	575	575	577	576	583	587	586	586	582	575	566	559	564	558	549	558	566	566	573	579	582	572	582	581		
6	582	581	582	586	589	585	600	600	581	573	577	575	572	567	565	572	573	562	569	586	586	587	586	582		
7	604	584	586	586	591	598	603	600	586	587	580	576	559	565	576	582	576	579	573	581	567	565	566	577		
8 **	580	574	576	582	603	608	600	590	582	579	572	562	546	570	574	563	565	567	562	553	580	581	586	606		
9 **	590	585	586	582	590	580	586	582	573	568	563	561	569	570	579	582	585	582	581	584	606	599	588			
10	588	586	586	589	595	601	600	597	588	582	571	567	572	583	573	556	574	585	585	588	594	590	590	598		
11	601	592	586	593	591	596	602	598	584	576	569	560	565	568	572	572	578	586	589	587	584	588	590	591		
12	593	601	594	590	592	600	599	600	596	592	579	562	570	580	581	590	592	587	582	586	602	592	592			
13	591	591	591	592	598	600	602	600	593	589	574	570	575	580	582	582	578	589	592	593	591	594	592			
14 *	591	593	596	596	600	603	606	606	605	599	586	580	576	581	582	587	582	592	599	600	600	596				
15	591	596	596	597	600	602	605	605	601	591	577	577	576	582	582	585	593	595	603	602	597	605	590			
16	592	596	598	600	600	609	606	609	604	588	576	577	581	586	582	592	592	592	592	591	597	598	596	599		
17 **	598	596	597	601	604	610	612	612	620	610	599	594	596	581	540	562	580	546	550	562	571	577	567	566		
18	572	575	573	566	570	576	581	576	574	562	568	571	571	570	572	572	579	585	588	589	577	586	588	581		
19	582	578	578	577	579	585	591	592	596	583	582	582	572	572	588	593	589	587	578	595	591	592	590			
20	588	588	588	590	592	597	598	594	590	582	581	581	577	580	572	586	579	575	581	582	576	581	591	598		
21	580	573	582	584	589	588	583	584	586	580	573	573	571	570	572	578	585	579	578	562	576	586	575	587		
22	574	574	578	596	581	586	586	589	588	583	579	582	583	577	570	583	587	590	589	579	574	583	597	592		
23	588	586	588	589	589	591	596	592	590	582	572	575	579	586	590	589	591	593	591	584	584	591	584	591		
24 *	590	591	592	593	596	598	598	597	595	582	571	570	580	590	593	592	589	593	596	597	592	592	591	593		
25 *	594	592	592	593	596	601	605	605	599	590	586	587	581	581	587	586	588	589	596	600	601	603	601	601		
26 *	601	598	596	600	595	598	600	599	595	586	581	585	586	591	592	596	593	593	598	596	596	596	599			
27	594	594	596	595	598	602	610	615	610	602	601	601	599	588	577	586	588	590	589	589	594	597	599	598		
28	597	595	594	596	597	602	605	606	603	592	589	590	581	582	584	587	583	590	601	602	602	603	603			
29	593	602	588	590	592	598	600	604	602	592	582	577	576	574	585	580	547	580	592	592	585	597	588	589		
30	589	592	598	606	605	603	602	591	588	581	576	575	566	560	568	567	576	571	577	590	598	596	589	602		
31	587	610	591	587	592	596	603	600	597	592	585	579	576	578	576	576	586	593	596	600	600	597	597	596		
Mean	587	587	587	589	593	596	597	595	591	583	577	574	573	576	575	577	578	579	580	580	584	588	588	588		
Mean *	584	584	585	586	588	591	593	591	588	580	573	571	574	579	581	584	583	587	591	593	595	594	594	593		
Mean **	583	581	584	589	600	603	595	591	589	582	575	569	564	569	560	566	567	556	548	543	565	575	572	575		
<b>February</b>																										
1 *	602	596	591	596	601	603	606	602	599	590	582	570	569	569	589	597	599	602	606	607	609	609	606	606		
2	605	604	603	604	612	613	613	612	596	582	569	555	544	555	560	569	574	560	581	586	578	578	594	595		
3 **	593	595	611	609	613	619	625	609	577	558	560	564	549	534	564	568	576	591	591	590	596	606	604	598		
4	592	586	592	589	597	597	598	589	596	591	577	574	562	566	560	570	563	580	593	584	584	588	592			
5	596	586	586	598	592	593	597	597	595	589	578	566	566	567	570	560	572	584	580	579	589	589	602			
6	596	595	593	593	594	596	601	602	600	592	581	571	558	562	568	576	582	597	600	599	598	592	595	595		
7	580	586	591	594	596	601	601	596	597	595	587	578	559	563	572	571	585	586	590	600	602	597	594	593		
8	608	596	596	593	590	591	596	599																		

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE II. - HOURLY MEANS OF HORIZONTAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
March																										
18000 $\gamma$ + Tabular Quantities (in $\gamma$ )																										
1 **	598	589	597	577	607	600	597	625	594	571	561	551	532	555	551	561	583	588	591	589	593	574	596	570		
2 **	600	582	577	582	590	585	595	601	592	590	558	532	551	573	571	569	573	582	593	584	601	604	603	604		
3	581	578	579	590	615	603	602	596	590	556	530	539	551	568	570	575	575	582	592	596	596	595	602	601	601	
4	600	592	590	589	592	595	600	607	602	584	585	582	573	566	569	576	581	592	598	600	602	602	601	610		
5	601	599	599	599	601	606	609	610	608	594	591	585	585	579	579	581	586	583	599	604	603	607	605	605		
6	601	601	602	601	602	608	610	611	605	591	583	592	579	581	591	582	569	584	591	585	606	600	595	621		
7	597	596	595	595	599	599	600	601	602	594	585	584	590	590	588	580	582	585	592	600	602	605	605	606		
8	604	601	602	602	604	607	605	606	599	586	579	580	589	576	586	585	579	575	572	586	586	582	594	599	599	
9	600	597	597	599	600	602	607	610	594	586	579	579	588	590	595	595	584	584	594	600	618	604	603	602		
10	601	600	600	604	607	611	612	605	590	574	566	569	579	584	589	589	591	583	594	598	609	611	601	604		
11	602	600	599	599	604	605	609	608	601	591	583	579	575	587	597	598	598	604	606	608	608	614	620	580		
12	584	590	591	615	619	618	612	604	612	594	582	574	570	558	558	561	568	593	599	598	593	596	598	621		
13 **	602	614	604	596	585	598	603	597	591	584	550	538	544	557	559	569	555	544	559	564	568	589	570	583		
14 **	609	606	561	575	593	590	583	571	568	556	551	553	551	567	563	570	567	583	584	595	590	577	594	575		
15 **	582	575	573	601	626	541	461	458	424	422	440	459	511	534	533	519	518	541	551	525	520	549	548	546		
16	541	542	557	551	551	549	548	546	542	534	522	521	525	537	547	555	560	561	567	578	579	577	584	574		
17	577	567	571	577	576	577	581	575	566	548	528	531	539	549	556	564	567	566	581	584	584	581	579			
18 *	579	576	572	577	584	588	590	581	574	564	562	558	561	559	570	584	580	584	589	593	595	588	588	588		
19	590	601	578	581	586	595	590	579	578	576	573	563	564	569	575	583	584	588	584	590	590	594	597	590		
20	593	591	590	590	593	595	599	598	588	584	574	570	561	560	558	561	574	581	594	595	602	600	595	595		
21	599	594	593	594	590	589	591	590	595	598	574	570	571	577	577	587	588	591	600	601	598	605	596	594		
22	602	597	600	598	599	600	599	598	594	582	579	573	566	566	574	575	587	594	598	604	620	607	600	600		
23 *	602	600	595	595	595	599	600	599	592	582	577	572	572	576	585	591	596	599	602	605	610	605	609	604		
24 *	605	608	605	605	601	602	602	598	591	585	581	581	590	585	585	588	591	599	601	605	607	608	606	606		
25 *	606	607	603	601	605	607	610	608	599	587	575	573	580	583	595	604	611	612	612	617	613	610	609	609		
31	601	612	596	589	603	614	619	610	604	593	572	574	583	592	602	603	613	614	614	613	607	613	622	620		
Mean	596	594	591	593	598	597	595	593	586	575	566	563	567	573	578	580	581	587	593	594	597	596	597	596		
Mean *	598	598	595	596	596	599	600	597	591	583	577	574	578	579	586	592	594	599	602	603	605	603	602	600		
Mean **	598	593	582	586	600	583	568	570	554	545	532	527	538	557	555	558	559	568	576	571	574	579	582	576		
April																										
18000 $\gamma$ + Tabular Quantities (in $\gamma$ )																										
1 **	639	601	605	611	621	619	615	595	595	575	577	579	575	579	589	588	595	599	600	601	595	601	614	615		
2	592	591	595	595	604	610	617	611	599	597	565	577	583	591	589	591	602	607	608	610	609	615	606	612		
3	604	604	601	615	607	600	603	603	595	587	563	564	571	584	587	586	600	595	607	606	610	606	606	605		
4	605	604	600	599	600	609	607	603	584	579	565	561	565	575	581	590	592	605	602	605	606	608	609	606		
5 *	603	602	601	602	599	601	601	596	586	575	567	578	584	584	589	594	599	607	609	608	610	609	611	609		
6 **	605	605	605	605	625	629	622	625	609	598	588	588	592	590	591	595	609	661	597	606	605	611	624	617		
7	614	606	616	609	611	616	611	603	588	571	567	568	578	587	592	596	599	601	603	610	611	595	589	599		
8 *	607	595	594	594	599	601	603	599	589	574	566	562	564	573	588	592	595	599	600	601	601	605	607			
9 *	605	605	605	605	611	611	611	604	590	575	566	570	569	578	588	602	609	607	607	618	618	605	608			
10	618	611	602	598	601	605	604	599	591	579	568	570	580	589	591	598	610	620	604	600	603	603	602	615		

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE II. - HOURLY MEANS OF HORIZONTAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>
May	18000 $\gamma$ + Tabular Quantities (in $\gamma$ )																								
1 *	604	608	604	604	605	607	604	597	588	580	574	570	581	586	590	601	609	621	631	612	608	612	612	601	601
2	599	604	602	604	594	603	602	593	578	579	578	574	568	607	594	604	611	621	626	623	619	617	614	614	615
3	613	604	607	604	593	598	590	579	573	567	559	566	589	594	596	609	609	628	618	628	638	617	614	612	604
4	611	612	616	609	613	605	604	595	585	577	573	580	585	585	607	620	609	635	624	615	613	612	612	616	594
5	582	596	594	595	598	599	595	586	583	580	583	585	589	595	607	613	624	618	618	614	606	601	599	593	593
6	590	605	598	588	592	591	593	586	574	553	553	566	566	564	597	604	597	633	634	612	597	593	607	600	600
7 **	597	603	589	589	586	587	547	547	543	550	527	518	527	543	549	543	570	597	623	610	595	597	600	600	592
8	587	583	583	587	593	593	587	581	577	571	557	539	547	549	543	575	588	599	607	607	607	606	603	603	603
9 **	600	598	593	593	595	596	595	587	569	577	569	559	549	554	567	570	581	602	627	623	623	609	606	602	602
10	595	598	593	597	599	598	593	577	566	559	557	543	539	549	553	584	614	643	653	617	603	597	599	594	594
11	597	597	588	596	596	593	593	587	567	559	557	560	574	583	589	593	613	638	637	627	614	603	601	617	617
12	600	596	598	605	589	601	603	595	586	573	577	571	559	568	579	603	607	623	623	619	618	628	613	603	603
13	619	607	603	587	593	593	594	588	583	569	556	558	552	562	581	591	602	609	615	612	606	599	596	596	596
14	595	596	596	599	603	606	602	595	586	573	560	556	560	579	592	606	612	618	633	613	602	608	603	607	607
15 **	603	590	599	618	588	579	557	568	573	557	545	543	544	567	583	588	598	599	607	618	592	623	579	579	579
16 **	591	602	596	619	562	565	546	541	538	522	516	514	535	544	558	530	573	589	604	609	603	617	609	613	613
17	593	587	589	589	588	583	573	565	555	548	544	538	547	557	567	576	589	602	608	607	603	612	610	597	597
18	583	581	593	593	587	587	583	576	563	566	571	573	577	577	578	589	598	606	623	607	603	613	607	607	607
19 *	600	597	594	593	593	593	589	583	583	579	577	583	596	592	598	597	604	603	607	609	609	612	609	609	609
20 *	606	612	605	602	602	605	607	603	594	586	583	587	594	599	609	613	617	619	623	618	613	609	597	593	593
21 **	597	599	612	615	620	607	579	591	584	577	583	573	573	563	581	583	618	640	610	608	628	600	589	593	593
22	574	593	588	595	597	608	593	576	557	565	559	559	553	555	567	589	599	613	613	619	599	606	583	577	577
23	575	589	596	602	593	605	586	566	553	546	543	543	545	559	586	582	605	614	612	616	607	603	606	606	606
24	606	620	590	590	590	591	577	556	550	542	545	555	561	566	578	595	606	613	609	610	614	612	620	620	620
25	606	588	599	585	591	598	583	572	566	555	553	548	556	565	582	584	598	604	598	597	601	604	607	612	612
26 *	602	598	595	597	596	590	581	568	553	549	545	556	561	567	585	605	609	621	619	612	612	612	609	608	608
27	619	613	613	613	611	607	594	580	575	573	567	566	559	566	571	594	609	627	633	628	618	616	615	608	608
28 *	608	596	601	606	609	609	603	594	584	572	565	570	579	591	601	611	623	622	624	627	629	628	627	627	627
29	617	622	626	609	616	614	607	593	580	570	567	582	566	608	624	624	600	626	635	628	627	627	632	632	632
30	617	605	616	615	610	616	613	602	584	571	566	569	577	585	596	618	639	631	606	618	619	619	617	615	615
31	610	608	607	608	616	615	613	607	602	592	585	588	589	592	602	606	608	636	642	640	638	636	617	603	603
Mean	600	600	599	600	597	598	590	582	573	566	561	561	564	573	584	594	604	617	621	616	613	610	608	604	604
Mean *	604	602	600	600	601	601	597	589	580	573	569	573	582	587	597	605	612	617	621	616	614	615	611	608	608
Mean **	598	598	598	607	590	587	565	567	561	557	548	541	546	554	568	563	588	605	612	611	613	603	605	596	596
June	18000 $\gamma$ + Tabular Quantities (in $\gamma$ )																								
1 **	593	608	611	608	588	586	566	579	577	546	527	543	557	564	578	622	621	615	608	601	599	603	603	603	603
2	596	595	596	596	596	587	581	584	574	568	572	573	566	568	579	588	596	602	603	608	612	612	614	622	622
3	606	606	598	598	602	598	598	592	582	576	574	579	592	592	598	611	624	619	617	612	616	609	608	611	611
4 *	610	606	601	602	606	602	588	578	566	558	561	572	582	579	599	611	619	622	623	628	627	622	616	612	612
5	607	609	609	612	607	607	599	586	574	574	573	586	609	597	609	614	607	625	636	633	625	626	626	625	625
6	620	622	622	620	618	613	602	591	584	582	580	58													

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE II. - HOURLY MEANS OF HORIZONTAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
<b>July</b>																										
18000 $\gamma$ + Tabular Quantities (in $\gamma$ )																										
1	621	611	605	615	621	616	609	605	595	591	590	587	586	591	600	618	627	634	637	631	620	616	613	606		
2	605	609	610	604	607	610	613	609	599	586	581	591	597	604	601	615	611	622	635	640	635	626	617	617	612	
3	609	614	621	621	621	618	613	605	596	587	586	594	605	605	620	619	620	625	624	627	626	631	628			
4 **	624	617	614	620	621	618	607	585	566	582	600	615	622	608	603	609	612	627	621	643	648	622	624	616		
5	604	604	605	606	610	607	597	585	581	578	574	582	601	591	604	617	618	616	615	622	624	625	628	628		
6	599	601	606	609	611	606	589	576	569	582	594	596	588	588	595	617	630	631	634	624	621	617	616	615		
7	614	611	613	615	619	627	623	618	611	605	599	598	591	597	603	628	631	625	634	617	620	617	617	620		
8	623	617	616	616	623	616	605	593	577	571	570	564	561	571	584	605	618	634	614	612	609	611	611	608		
9	606	606	604	606	610	611	604	597	587	578	565	561	574	578	597	611	611	610	611	625	624	628	627	616		
10	616	615	617	620	624	615	613	617	605	590	591	580	582	585	575	585	604	615	625	634	631	627	626	622		
11	616	615	614	620	626	624	618	610	599	591	583	581	591	599	606	616	628	633	640	640	625	621	616	607		
12	604	605	613	615	623	618	605	591	589	586	576	579	574	590	593	610	619	620	615	615	623	620	621	617		
13	617	615	607	611	611	615	616	608	603	599	595	591	580	582	609	617	614	615	626	626	630	629	623	623		
14 **	624	624	616	613	623	620	603	604	596	584	573	575	566	578	592	590	605	614	628	631	625	627	623	608		
15	610	607	613	617	615	612	604	599	601	595	594	588	586	586	599	612	614	623	620	634	636	634	624			
16	616	620	620	624	626	613	604	597	584	584	584	584	584	572	576	609	614	633	633	634	630	632	623	619		
17	606	620	618	616	609	602	594	580	567	560	566	574	579	586	594	607	596	616	640	641	617	614	615	610		
18	610	609	608	617	607	604	592	584	580	584	582	591	599	596	606	598	615	628	628	626	620	620	616			
19 *	615	620	621	611	613	610	601	592	590	587	581	577	579	586	593	604	607	618	621	622	624	625	624	624		
20 *	620	621	620	616	617	617	614	603	588	569	566	579	595	605	612	620	630	643	640	641	631	631	630	620		
21	632	620	614	616	618	613	605	590	580	577	587	596	598	599	606	618	625	635	639	644	641	625	620	611		
22 *	610	616	614	618	616	614	598	594	592	580	576	573	570	581	597	619	622	629	623	623	625	625	622	621		
23 *	621	618	616	616	619	615	602	587	571	564	570	583	593	595	605	615	609	618	625	629	629	626	625	625		
24 *	616	615	615	619	626	623	614	600	585	575	573	577	593	603	608	619	619	617	620	623	627	625	624	623		
25	620	622	623	621	617	616	615	610	603	597	594	595	595	599	601	598	617	609	618	618	619	618	619	618		
31 **	614	615	606	605	613	610	602	587	572	580	577	558	585	583	591	589	601	594	606	613	619	609	613	610		
Mean	614	613	613	615	617	615	606	598	589	584	581	583	587	591	598	610	615	623	626	629	626	623	622	617		
Mean *	616	618	617	616	618	616	606	595	585	575	573	578	586	594	603	615	617	625	626	628	627	627	625	623		
Mean **	615	613	612	614	618	617	602	594	580	578	575	576	580	588	588	593	607	611	620	631	626	620	620	615		
<b>August</b>																										
18000 $\gamma$ + Tabular Quantities (in $\gamma$ )																										
1	604	609	611	601	615	599	588	577	562	566	552	569	576	585	588	594	601	604	612	623	623	619	611	603		
2	609	616	613	605	607	609	581	581	582	575	566	581	596	569	587	594	595	603	606	618	622	619	615	614		
3	615	610	610	611	610	611	603	585	584	592	588	596	588	592	597	585	597	609	612	614	616	612	614	611		
4	610	613	617	611	610	611	606	593	579	570	550	577	559	595	614	598	609	620	623	605	607	608	605	605		
5	606	605	604	611	613	602	589	579	578	580	573	580	580	583	595	599	610	616	615	613	613	614				
6	614	615	614	615	610	605	604	595	585	570	573	575	580	589	609	614	614	613	614	614	614	615	615	615		
7	615	616	615	633	650	639	619	608	596	584	583	589	593	583	573	590	598	599	606	613	617	623	622	650		
8 **	627	633	616	640	663	575	519	449	437	453	451	493	515	581	550	533	532	549	567	597	589	519	564	502		
9 **	562	559	540	550	565	555	548	525	514	509	512	519	519	570	550	575	579	609	625	632	631	596	589	589		
10 **	568	596	585	595	599	587	533	519	485	528	544	53														

TABLE II. - HOURLY MEANS OF HORIZONTAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>
September																									
18000 $\gamma$ + Tabular Quantities (in $\gamma$ )																									
1 **	615	609	617	633	609	621	602	586	578	560	552	559	548	544	575	576	597	599	596	604	603	563	581	598	598
2 **	610	604	605	615	580	599	598	583	558	552	548	539	543	558	578	583	590	592	606	590	586	587	595	596	596
3	593	583	583	584	585	586	585	578	574	570	570	573	570	583	571	573	594	594	587	589	594	596	605	594	594
4	597	600	598	598	604	597	597	583	544	535	570	565	593	591	593	597	599	600	600	604	598	606	611	597	597
5 *	596	593	597	594	592	587	591	584	571	577	584	587	590	589	591	591	593	596	601	603	605	607	605	607	607
6 *	602	604	603	604	602	600	595	594	593	591	587	586	587	582	586	588	600	604	610	608	611	610	607	609	609
7	611	609	604	607	608	614	624	616	602	582	574	572	575	577	583	593	601	609	619	613	609	612	613	606	606
8	608	606	599	609	606	605	605	600	584	576	564	569	579	587	592	596	603	608	608	610	607	607	599	609	609
9	610	614	603	599	604	603	603	598	588	577	567	572	571	582	591	603	609	608	608	613	612	611	610	609	609
10	604	604	603	601	603	602	603	598	590	579	572	577	602	598	610	608	627	609	617	617	617	612	610	607	607
11	603	606	611	609	607	606	602	608	604	591	579	582	587	585	593	587	591	593	600	607	603	617	608	600	600
12	597	604	612	612	608	597	586	583	582	573	571	583	590	611	607	570	579	604	592	584	595	600	606	607	607
13	604	617	609	605	604	606	606	603	596	583	574	580	574	578	580	586	592	599	604	609	612	614	613	611	611
14	609	609	608	610	605	604	616	604	593	583	578	572	582	583	591	595	600	603	607	610	613	611	610	609	609
15	608	608	611	613	611	611	608	600	591	587	595	594	599	599	602	583	604	614	619	618	598	581	595	586	586
16	574	572	589	595	582	578	574	556	557	558	551	558	566	576	573	585	594	591	596	592	596	608	604	600	600
17	592	593	598	598	593	591	583	574	568	566	558	564	568	589	601	598	592	599	598	604	604	604	602	602	602
18	604	607	604	602	600	599	593	583	574	572	577	592	604	605	602	602	604	602	609	612	603	595	625	612	612
19	594	608	614	604	594	591	582	575	565	555	561	570	588	603	610	606	604	617	606	608	610	608	610	608	608
20 *	611	610	610	609	610	605	601	591	576	576	573	571	578	588	588	594	601	614	609	610	608	606	623	623	623
21	606	607	609	610	609	605	598	589	581	578	571	570	573	583	598	609	608	606	608	624	618	620	618	615	615
22	621	618	612	609	608	607	602	600	594	587	580	579	576	586	595	598	610	618	621	632	636	638	628	628	628
23	607	617	641	622	618	619	613	614	598	585	585	581	574	578	584	588	604	602	604	609	610	608	615	613	636
24 **	602	593	605	597	609	596	600	598	585	570	558	547	558	582	581	582	589	605	585	594	605	611	596	588	588
25 **	595	612	592	595	603	612	608	606	592	570	553	558	541	548	572	573	569	558	577	578	578	582	584	574	574
26	567	583	581	581	603	603	588	583	567	539	542	538	544	548	564	563	574	590	594	590	593	603	610	610	610
27 *	606	595	597	598	598	599	597	591	584	575	564	561	563	571	574	577	584	592	601	603	607	607	604	602	602
28 *	603	602	603	603	606	607	605	601	593	584	581	577	581	582	587	590	598	607	611	614	613	617	617	613	613
29 **	614	614	631	623	611	606	621	612	583	568	551	542	548	555	543	551	551	566	581	581	581	597	581	581	581
30	580	583	596	583	581	591	599	590	577	582	582	565	551	567	582	575	557	585	591	594	598	601	601	603	603
Mean	601	603	605	604	602	601	600	593	581	573	569	569	573	580	587	587	594	599	603	604	604	605	606	604	604
Mean *	604	601	602	602	602	600	598	592	583	581	578	576	580	582	585	588	595	603	606	607	609	610	608	611	611
Mean **	607	606	610	613	602	607	606	597	579	564	552	549	548	557	570	573	579	584	589	589	591	587	591	587	587
October																									
1 **	603	623	627	611	606	587	626	611	599	548	533	537	541	544	553	557	563	577	583	587	601	590	604	607	607
2	602	590	593	592	598	571	607	603	556	528	521	520	509	520	524	542	552	563	573	577	577	592	587	591	591
3	583	583	588	593	587	590	603	592	576	560	553	550	547	553	556	557	559	561	593	564	569	577	581	573	573
4	586	586	587	587	591	591	591	591	597	581	571	567	571	577	583	590	584	598	601	598	571	570	572	586	561
5	571	574	577	601	601	584	601	598	581	563	557	557	556	571	593	597	599	591	594	602	599	597	593	593	593
6 *	597	595	602	600	596	595	593	587	580	567	562	561	561	566	577	587	593	597	601	601	602	605	605	601	601
7	600	601	607	606	608	611	609	603	592	577	568	576	585	59											

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

D 13

TABLE II. - HOURLY MEANS OF HORIZONTAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
<b>November</b>																										
1	599	601	601	603	603	606	603	598	593	583	579	578	572	571	584	583	575	570	562	577	587	587	574	533		
2 **	607	585	591	594	598	575	564	554	543	542	530	532	532	548	552	538	549	564	525	538	537	583	542	543		
3	543	544	574	568	572	574	574	572	564	554	556	555	558	563	571	577	578	584	564	550	567	571	578	574		
4 *	576	585	588	588	589	593	598	601	593	583	578	573	574	579	585	592	599	603	606	604	603	601	600	600		
5 *	599	598	600	603	607	608	608	605	593	579	579	576	578	579	586	592	601	605	604	604	605	602	604	603		
6	601	600	601	607	609	612	614	611	597	588	580	582	589	595	604	612	613	613	616	613	615	614	641			
7	612	604	599	603	607	612	612	612	605	600	588	582	579	589	602	599	604	605	608	608	607	600	612	603		
8	594	593	617	600	596	600	602	602	594	601	602	596	594	598	598	604	599	611	603	600	615	596	594	596		
9	591	604	598	600	602	604	601	607	600	588	586	582	578	587	594	591	594	608	599	602	601	609	612	605		
10	600	598	601	594	598	602	603	602	594	585	584	583	585	588	590	598	600	608	609	611	612	609	612	613		
11	603	598	597	594	597	600	604	601	591	582	582	583	585	591	596	598	602	609	611	614	611	613	611	610		
12 *	606	607	604	606	609	613	619	613	601	592	585	583	587	584	577	592	599	604	608	610	610	611	611	612		
13	609	606	605	603	604	604	603	600	594	584	575	574	579	589	598	583	595	603	614	625	624	610	604			
14	615	608	605	606	609	609	609	609	596	583	578	585	591	598	599	601	608	604	608	609	612	618	611			
15	609	610	617	613	614	611	610	608	605	598	588	586	587	590	596	595	605	617	603	593	579	599	610	598		
16	580	594	610	595	600	600	591	599	595	584	574	571	573	585	592	599	602	601	604	600	603	599	603	610		
17	603	601	604	607	604	602	621	613	598	573	562	566	564	547	563	564	561	569	575	560	586	589	590	595		
18	595	599	592	606	601	601	597	584	588	590	583	569	566	559	551	581	573	576	575	576	583	591	588	592		
19	594	594	597	614	618	615	608	598	583	567	577	584	579	579	573	561	567	587	585	580	577	582	590	595		
20 **	608	592	591	594	604	608	608	586	588	575	563	530	534	542	574	532	518	540	501	502	517	516	530	521		
21 **	553	563	570	548	580	578	548	558	557	551	548	552	544	548	566	571	576	582	586	583	569	576	582	584		
22	602	587	585	590	593	594	593	585	572	562	558	568	544	559	572	561	563	577	585	583	584	590	595	607		
23	586	581	578	586	588	588	592	588	579	580	575	570	572	569	573	576	594	598	590	603	598	588	609	609		
24 **	594	585	587	591	590	598	603	595	579	579	568	573	579	579	575	596	591	582	588	567	595	568	559	573		
25 **	564	570	576	579	582	580	587	594	573	564	553	543	559	548	544	566	580	599	602	597	582	588	583	580		
26	590	587	588	590	591	593	595	591	583	555	549	545	534	568	565	578	587	595	598	600	599	597	592	596		
27	593	594	596	599	602	600	600	595	598	595	583	559	565	573	576	579	576	591	594	596	597	598	598	598		
28	598	599	601	603	608	613	609	608	608	588	570	579	592	591	588	596	598	601	594	602	598	594	602	599		
29 *	599	599	598	598	593	596	603	605	605	608	608	602	598	597	598	600	600	603	601	602	605	607	605	602		
30 *	600	602	601	600	600	603	605	606	610	610	608	602	600	600	601	601	605	608	610	610	608	606	607	605		
Mean	594	593	596	596	599	600	599	597	589	580	575	572	572	576	581	584	586	593	591	590	593	595	594	594		
Mean *	596	598	598	599	600	603	607	606	600	594	592	587	587	588	589	595	601	605	606	606	606	606	606	604		
Mean **	585	579	583	581	591	588	582	577	568	562	552	546	550	553	562	561	563	573	560	557	560	566	559	560		
<b>December</b>																										
1 *	606	606	607	609	611	610	609	606	603	599	598	596	599	606	611	617	620	624	623	620	621	620	619	619		
2	616	611	604	610	612	616	622	614	610	603	598	594	593	597	598	603	609	612	609	605	588	588	588	588		
3 *	597	601	603	609	610	603	605	608	609	595	592	585	588	592	593	595	606	611	613	612	611	610	607	608		
4	607	608	608	611	613	615	615	615	608	601	595	595	596	600	601	603	606	602	592	591	593	597	590			
5 *	604	605	604	608	611	613	614	614	612	605	603	600	595	591	593	598	603	610	606	602	599	597	590	590		
6 **	607	606	608	615	623	633	617	619	619	621	608	608	602	606	613	601	577	550	568	589	606	597	584	576		
7	578	589	582	587	592	594	594	599	596	588	583	574	553	578	585	576	580	598	603	582	603	591	591			
8	583	583	590	593	597	601	604	603	594	594	591	588	588	593	599	602	603	606	607	605	604	646	593			
9	590	596	599	5																						

TABLE III. - HOURLY MEANS OF VERTICAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
January	43000 $\gamma$ + Tabular Quantities (in $\gamma$ )																									
1	244	244	244	244	244	244	245	243	242	241	237	237	238	239	238	243	248	254	254	259	260	261	255	249	249	
2 **	249	247	247	247	247	246	241	237	241	241	241	241	241	241	242	245	252	257	266	279	281	277	265	259	256	
3 **	254	251	248	240	227	220	225	237	241	245	253	252	252	261	277	318	315	313	330	328	302	284	277	273		
4 *	268	265	264	264	264	265	265	265	266	262	261	260	258	261	262	261	261	262	262	264	264	261	260	259		
5	258	258	258	258	258	260	258	257	258	256	256	255	253	262	268	266	265	266	266	262	262	262	262	262	259	
6	258	255	255	253	253	253	252	252	250	248	248	252	255	253	253	256	262	262	264	263	262	259	258	256		
7	252	243	246	246	248	252	249	250	248	243	246	248	252	250	252	252	255	256	260	261	262	271	268	264		
8 **	252	250	252	248	242	241	242	246	247	245	248	252	252	248	252	256	259	259	268	266	264	261	258	253		
9 **	247	239	237	242	243	241	246	248	252	248	248	252	255	255	255	257	257	257	257	258	255	248	251			
10	252	252	252	252	251	250	249	249	249	249	248	252	254	256	257	267	266	261	257	257	255	253	252	255	252	
11	246	246	248	249	248	247	245	247	252	248	250	250	251	251	254	258	258	260	257	255	254	255	252	251	251	
12	251	248	247	249	249	251	249	247	245	239	238	242	241	242	248	252	252	256	256	256	256	252	252	251		
13	248	249	248	249	250	252	252	252	251	247	241	243	243	248	251	254	255	257	258	254	253	252	253	249		
14 *	248	249	250	249	251	252	248	247	246	247	243	243	237	238	246	252	254	254	254	253	252	248	248	247		
15	246	247	248	248	250	252	250	250	246	246	246	241	236	241	242	242	249	252	252	252	251	250	248	249		
16	243	245	246	246	246	248	248	246	246	246	240	245	245	242	243	251	256	255	256	253	252	252	252	249	249	
17 **	246	246	247	247	247	248	248	246	246	242	235	228	230	229	236	251	256	258	267	277	277	275	266	258	258	
18	255	252	249	250	252	252	252	252	252	252	245	243	240	238	242	249	256	259	258	257	258	257	256	256	256	
19	256	256	256	255	255	256	255	255	254	252	246	242	242	242	245	248	249	252	255	261	257	256	254	252	252	
20	249	248	248	248	246	248	248	246	247	246	245	246	245	242	242	248	256	255	262	267	265	265	264	262	252	
21	252	254	254	252	252	255	255	255	252	251	251	250	252	248	251	254	257	261	266	271	271	268	265	256	256	
22	252	252	255	252	250	253	252	252	251	247	247	250	252	252	251	252	254	256	256	259	264	263	260	259		
23	255	253	252	248	246	249	249	249	249	249	250	248	247	247	251	252	252	252	252	257	256	257	255			
24 *	255	253	252	251	249	251	251	250	248	247	241	242	245	247	250	253	249	252	252	252	252	253	253	254		
25 *	255	253	253	253	250	249	246	246	246	243	237	240	247	249	252	253	253	253	253	253	253	249	249	249		
26 *	252	250	252	250	248	249	247	246	247	243	239	240	239	243	248	249	248	249	249	249	249	250	249	251		
27	249	250	250	250	248	249	247	242	238	233	232	232	232	232	231	241	250	253	253	256	256	257	253	252	250	
28	248	248	248	248	248	248	248	246	246	245	240	234	233	239	241	248	252	259	257	257	253	249	249	248		
29	247	242	243	244	249	253	252	249	247	243	243	239	243	243	244	244	252	259	266	263	259	257	250	248	248	
30	247	247	249	243	244	246	247	247	247	243	237	242	242	243	244	244	253	258	267	266	264	258	253	252	252	
31	248	243	233	243	246	249	250	249	248	243	238	235	233	233	243	252	253	253	253	252	249	248	246	245		
Mean	251	250	249	249	248	249	249	249	248	248	244	244	244	245	245	247	252	252	259	260	262	262	260	257	255	253
Mean *	256	254	254	253	252	253	251	251	250	250	246	245	247	246	246	249	252	253	254	254	254	252	252	252	252	
Mean **	250	247	246	245	241	238	240	244	245	243	244	245	246	246	248	256	268	269	272	282	282	275	266	260	258	
February	43000 $\gamma$ + Tabular Quantities (in $\gamma$ )																									
1 *	244	237	242	247	247	247	247	246	247	244	244	242	242	242	244	248	248	248	250	249	248	248	246	246	245	245
2	243	243	244	245	243	243	242	242	242	243	244	247	247	250	257	264	267	267	268	265	263	263	258	258	254	
3 **	250	248	246	244	244	244	243	244	244	247	246	252	253	252	262	258	257	258	256	257	256	256	254	253	253	
4	252	252	251	251	251	251	252	248	243	243	237	235	234	234	238	245	248	254	264	260	260	262	258	258	254	
5	247	246	249	243	243	248	249	248	249	248	246	240	241	242	241	247	253	260	267	268	264	263	260	259	254	

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE III. - HOURLY MEANS OF VERTICAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>		
March																											
	43000γ + Tabular Quantities (in γ)																										
1 **	245	243	234	234	238	236	234	234	235	238	238	239	238	240	250	260	261	265	263	263	260	258	238	238	238		
2 **	236	236	244	249	251	249	250	253	250	250	245	246	250	254	258	259	264	263	262	263	266	258	251	233	233		
3	234	244	248	252	248	236	237	244	246	241	243	244	245	253	253	259	261	264	262	258	258	257	257	254	254	254	
4	245	248	251	251	252	255	251	254	250	245	239	231	228	230	235	239	245	248	254	252	254	254	254	251	251	251	
5	249	247	244	246	246	247	246	248	246	241	236	231	228	231	237	246	255	259	261	256	255	254	254	250	250	250	
6	249	250	247	245	246	249	247	246	245	240	236	235	232	238	243	258	264	274	268	265	261	256	255	250	250	250	
7	244	249	249	249	250	248	247	249	250	244	236	231	230	237	247	257	266	261	258	257	256	255	255	255	255	255	
8	256	256	256	256	254	254	252	252	251	238	232	225	225	231	243	251	258	262	266	265	262	260	256	256	256	256	
9	254	254	254	254	251	251	251	252	252	248	241	236	232	231	240	246	251	253	252	254	254	250	250	250	250	250	
10	248	249	251	251	251	252	250	250	250	245	234	226	229	239	250	255	259	257	258	262	258	249	249	249	249	249	
11	249	250	251	251	251	251	250	251	250	242	234	226	226	235	246	252	252	252	250	250	250	252	249	248	248	248	
12	255	252	251	245	235	239	240	239	239	236	230	228	226	232	244	252	259	260	257	258	259	260	258	252	252	252	
13 **	242	236	228	231	239	245	248	252	253	246	231	232	237	251	267	281	292	302	309	293	286	264	250	246	246	246	
14 **	234	224	225	225	235	226	217	225	239	246	245	239	227	227	241	254	271	288	292	292	285	262	261	258	254	254	
15 **	250	237	224	221	184	160	155	175	192	198	219	242	258	291	310	315	356	391	364	295	297	287	275	264	264	264	
16	262	269	271	271	272	272	271	268	266	261	252	243	240	247	251	258	263	265	268	271	269	268	265	260	260	260	
17	258	257	258	258	257	257	259	258	253	244	239	234	236	244	251	263	276	276	274	270	268	266	266	265	265	265	
18 *	262	260	259	259	261	261	264	264	264	260	250	243	244	249	255	260	264	264	263	260	261	259	258	258	258	258	
19	255	249	248	251	256	255	258	255	251	245	239	231	230	237	245	250	253	262	263	264	260	259	258	258	258	258	
20	257	256	257	256	257	258	259	262	260	258	250	245	244	252	262	273	277	272	268	266	264	263	260	260	260	260	
21	257	256	255	254	254	255	258	260	256	244	236	234	234	244	250	257	258	260	260	261	262	261	261	263	263	263	
22	260	259	258	257	256	254	254	254	253	247	243	236	235	241	248	254	260	261	260	259	257	251	251	253	253	253	
23 *	253	250	250	250	253	251	253	254	254	249	241	236	232	234	240	245	251	254	253	251	252	254	254	254	254	254	
24 *	254	254	254	254	253	250	250	248	244	238	233	229	230	238	245	250	250	253	250	250	248	253	250	250	250	250	
25 *	253	253	251	252	252	250	250	250	249	244	239	232	224	225	230	239	247	249	247	246	244	248	248	248	248	248	
26	248	249	249	248	247	247	248	250	243	235	226	220	223	230	243	254	255	255	255	256	256	256	256	256	256	256	
27	247	237	247	252	254	252	252	252	247	239	233	232	234	242	250	262	263	263	263	263	252	250	251	253	249	249	
28	244	243	247	248	249	249	253	253	247	239	228	229	229	237	247	261	263	266	259	257	257	253	253	253	253	253	
29 *	253	249	250	252	251	252	253	253	247	239	234	227	225	232	241	252	253	254	257	258	258	255	256	256	256	256	
30	253	253	249	249	249	246	246	249	247	238	227	221	223	230	241	248	254	255	255	257	258	263	263	263	257	257	
+31	253	253	247	247	249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	249	248
Mean (30 days)	250	249	249	249	248	247	247	249	247	242	236	233	233	241	250	258	264	267	265	262	260	258	255	253	253	253	
Mean *	255	253	253	253	254	253	254	254	250	243	237	231	232	238	245	252	254	254	253	253	253	253	253	253	253	253	
Mean **	241	234	231	234	228	221	222	231	235	235	234	237	242	255	268	277	292	303	298	280	274	266	254	247	247	247	247
April																											
1 **	242	233	235	237	236	226	237	239	239	236	231	229	227	233	240	248	257	257	261	257	257	256	253	242	242	242	242
2	242	247	247	248	247	242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	240	233	227	230	231	238	243	246	243	233	226	223	223	228	239	248	255	258	256	253	253	251	251	249	249	249	249
4	248	248	248	248	247	249	253	253	247	239	230	226	229	238	247	254	258	262	255	253	250	249	249	249	249	249	
5 *	250	252	252	250	250	249	254	258	253	241	230	224															

TABLE III. - HOURLY MEANS OF VERTICAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>		
May		43000 $\gamma$ + Tabular Quantities (in $\gamma$ )																									
1 *	250	250	248	249	253	258	254	249	242	233	226	221	221	230	238	243	249	258	264	264	258	254	252	249			
2	248	248	248	248	248	246	250	250	245	240	231	229	227	238	240	254	260	260	259	265	268	259	257	254			
3	254	248	246	243	242	240	242	244	244	236	234	232	235	244	249	259	260	269	269	265	259	250	250	249			
4	252	251	246	245	248	249	251	248	242	232	224	216	209	223	235	248	254	261	263	260	256	254	251	247			
5	246	246	248	252	255	255	253	243	236	231	225	211	207	220	229	243	251	258	261	263	261	262	256	256			
6	253	253	244	245	247	251	246	243	235	226	216	213	218	229	248	267	273	280	286	283	273	268	256	249			
7 **	249	239	239	244	249	248	233	223	221	222	216	216	223	241	243	244	257	269	287	284	278	277	269	257			
8	257	259	260	262	264	264	262	254	253	247	243	232	227	229	239	248	258	266	263	260	258	257	257	257			
9 **	256	258	257	256	257	257	258	255	242	238	231	223	223	242	261	271	283	289	287	277	270	264	263	262			
10	263	263	263	263	263	257	257	249	241	234	229	220	223	232	243	253	266	281	287	278	268	263	257	256			
+ 11	256	249	253	257	255	257	257	253	247	233	226	218	222	228	237	246	255	269	277	273	-	-	-	-	-		
+ 12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
+ 13	252	242	230	237	238	245	257	256	252	240	-	-	-	-	-	-	-	-	-	-	266	259	258	257	257		
14	257	257	257	258	259	262	260	257	255	245	232	224	223	227	237	247	257	263	273	270	267	259	255	254			
15 **	247	239	243	233	237	243	249	255	256	247	231	224	229	243	253	259	269	272	268	267	267	260	238				
+ 16 **	243	243	-	-	-	-	-	-	-	237	243	-	-	-	-	247	248	258	274	284	281	280	277	273	271	263	252
17	259	263	265	268	268	268	267	263	262	253	239	228	232	240	246	251	257	260	264	266	263	263	257	252			
18	251	251	247	244	249	250	254	253	247	238	223	217	223	237	247	257	266	272	277	269	263	260	260	258			
19 *	253	253	255	257	259	259	256	250	244	234	230	224	223	228	237	245	252	256	254	253	253	253	255	254			
20 *	253	253	253	253	256	259	259	253	248	239	237	232	230	242	252	259	263	264	265	263	262	260	259	257			
21 **	255	250	243	237	233	232	231	224	217	208	205	196	212	238	266	280	298	313	308	303	272	249	257	227			
22	244	243	232	247	250	242	243	243	243	249	248	250	257	267	273	283	297	303	299	287	277	266	259	259			
23	258	251	248	247	245	236	242	245	239	237	233	232	234	238	248	255	259	263	263	260	264	259	258	258			
24	244	230	239	248	249	247	254	254	246	233	222	219	224	239	254	264	270	270	268	260	258	256	253	253			
25	246	244	243	240	243	246	252	255	249	242	239	233	236	254	268	276	281	286	284	274	265	261	260	257			
26 *	251	249	253	258	265	267	269	266	263	255	248	234	233	242	251	264	269	274	274	269	264	260	257	255			
27	252	244	244	247	255	259	258	249	241	234	230	224	226	239	246	255	262	269	270	265	259	257	256	251			
28 *	249	250	252	255	260	261	262	257	254	244	234	224	223	229	235	246	251	251	253	254	253	251	250	248			
29	248	246	234	222	238	245	248	252	251	244	235	226	219	231	248	263	260	263	264	263	259	256	255	246			
30	239	239	244	243	246	251	256	258	249	237	228	223	222	232	242	253	264	272	282	276	265	259	255	253			
31	253	254	254	255	259	260	258	256	254	242	229	223	224	229	243	252	262	268	270	268	264	261	258	255			
Mean (27 days)	251	249	248	249	252	252	253	250	245	238	230	224	225	236	247	257	265	271	273	269	264	259	257	252			
Mean *	251	251	252	254	259	261	260	255	250	241	235	227	226	234	243	251	257	261	262	261	258	256	255	253			
Mean ** (4 days)	252	247	246	243	244	245	243	239	234	229	221	215	222	241	256	264	277	286	288	283	272	264	262	246			
June		43000 $\gamma$ + Tabular Quantities (in $\gamma$ )																									
1 **	250	242	230	224	224	226	234	248	251	244	234	224	218	224	235	258	279	285	287	279	270	264	261	259			
2	258	258	257	257	260	256	249	249	247	234	224	220	218	227	238	248	259	261	266	264	259	258	256	248			
3	244	244	244	249	254	254	253	254	255	250	241	234	233	236	243	257	267	271	268	261	258	256	254	254			
4 *	255	253	255	258	261	259	253	245	239	227	213	206	205	211	225	237	245	256	260	260	261	258	256	255			
5	254	254	254	255	258	256	251	244	233	222	218	218	218	224	240	251	256	259	260	259	255	252	252	252			
6	251	253	253	253	258	258	255	250	237	234	225	215	212	220	235	245	253	264	266	264	260	255	255	255			
7	255	255	258	260	263	262	260	258	255	243	232	228	231	235	242	246	256	259	263	265	260	258	258	255			
8	251	254	255	256	260	260	257	251	245	243	229	225	225	231	242	251	259	261									

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE III. - HOURLY MEANS OF VERTICAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
<b>July</b>																										
1	251	249	248	244	244	245	249	249	247	240	234	228	227	234	242	252	256	264	266	268	264	264	261	258	256	
2	254	253	249	249	254	255	253	248	243	239	230	222	220	227	234	240	248	257	262	264	263	258	252	252	253	
3	252	253	250	252	255	258	256	250	245	240	231	219	224	234	249	256	259	266	263	257	251	250	253	252	252	
4 **	248	248	249	250	254	253	253	253	248	241	230	225	221	221	228	244	253	262	263	263	257	254	254	244	244	
5	237	237	243	250	256	259	257	250	243	239	236	227	228	239	246	255	263	265	263	259	255	254	253	247	247	
6	239	244	249	255	260	262	259	254	246	243	238	234	236	239	248	260	264	264	265	260	256	254	253	253	253	
7	253	254	254	255	259	257	248	242	234	225	225	222	225	232	239	253	259	264	266	258	257	256	253	254	254	
8	252	250	246	251	255	255	254	250	245	241	235	233	233	240	252	266	277	284	280	270	263	258	256	254	254	
9	252	254	254	256	260	261	259	255	249	244	240	235	229	226	235	247	255	265	267	264	259	255	251	250	250	
10	249	249	251	255	259	261	256	250	241	235	229	226	229	239	251	264	271	277	286	276	263	255	255	254	254	
11	252	251	251	253	253	251	251	250	244	235	227	225	228	237	246	255	260	266	269	269	265	260	255	253	253	
12	249	245	245	242	245	247	250	252	250	245	240	235	234	241	245	252	254	258	261	261	259	257	255	252	252	
13	251	248	248	250	251	249	248	245	245	242	239	237	235	240	249	256	258	260	264	262	260	256	252	252	252	
14 **	250	235	235	240	244	247	250	252	251	246	239	231	228	235	243	253	258	260	264	262	259	257	251	250	250	
15	247	245	245	246	248	249	242	237	228	220	221	222	227	237	245	255	259	261	261	260	259	256	249	245	245	
16	245	245	245	248	249	250	246	245	245	245	239	235	235	238	243	251	255	263	260	259	256	255	253	252	252	
17	251	250	245	239	241	241	242	245	240	239	238	239	241	249	255	259	262	269	271	261	255	255	255	255	255	
18	254	255	254	249	245	249	247	249	241	235	233	231	230	235	246	255	260	259	258	260	258	255	253	254	254	
19 *	254	250	245	247	250	250	248	244	239	229	225	226	229	234	239	249	250	254	255	255	252	251	251	251	251	
20 *	250	251	246	248	249	251	251	245	234	220	211	210	215	225	241	251	255	255	258	257	255	252	250	249	249	
21	245	243	246	250	255	257	255	247	243	233	224	219	224	232	241	250	251	254	255	258	260	255	253	251	251	
22 *	250	250	248	248	253	255	255	252	245	235	230	232	235	239	244	253	256	261	260	258	255	250	248	248	248	
23 *	249	249	249	252	257	258	257	254	240	230	227	225	227	239	248	255	257	255	250	251	249	249	248	248	248	
24 *	246	245	246	248	248	249	251	249	247	239	231	230	228	234	245	255	256	255	253	250	249	247	247	245	245	
25	247	249	249	247	251	251	246	245	240	236	228	223	227	233	238	252	259	265	263	260	256	252	250	250	250	
26	250	251	251	252	256	252	248	245	239	229	227	229	225	231	240	248	252	254	256	260	256	253	250	249	249	
27	248	248	249	249	254	250	242	234	227	221	219	218	220	225	233	241	248	255	257	257	251	249	247	246	246	
28	247	247	247	249	251	251	250	248	247	235	231	223	217	221	227	234	241	249	249	247	247	246	246	246	246	
29 **	244	247	247	247	246	243	238	235	238	237	233	227	232	237	240	249	263	272	277	273	269	262	257	255	255	
30 **	254	254	253	247	249	253	249	247	246	240	234	228	233	238	242	249	251	253	257	264	260	256	256	256	256	
31 **	236	232	223	230	233	233	242	247	244	247	242	244	253	254	256	267	274	281	283	273	267	262	259	256	256	
Mean	249	248	247	248	251	252	250	248	243	236	231	228	229	235	243	253	258	262	263	261	258	254	252	251	251	
Mean *	250	249	247	249	251	253	252	249	241	231	225	225	227	234	243	253	255	256	255	254	252	249	249	248	248	
Mean **	246	243	241	243	245	245	246	247	245	241	234	232	234	238	244	255	262	266	267	267	263	258	255	251	251	
<b>August</b>																										
1	254	252	250	251	256	253	258	258	255	251	249	249	247	255	265	270	270	268	263	263	265	263	260	256	255	
2	254	247	246	249	257	256	254	254	254	246	236	234	234	243	243	260	267	271	269	264	261	259	258	258	258	
3	257	257	257	257	255	255	253	250	249	238	236	233	234	241	246	258	264	269	266	265	265	265	264	264	254	
4	254	254	250	244	254	254	254	254	254	252	243	230	238	238	248	261	273	278	283	290	284	272	265	261	259	
5	259	259	258	256	255	255	255	255	251	248	241	235	244	253	261	266	265	265	259	255	255	255	255	255	255	
6	255	255	255	255	255	259	257	254	246	241	232	225	227	227	231	240	248	256	272	271	271	268	265	255	254	
7	254	252	255																							

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE III. - HOURLY MEANS OF VERTICAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>
September		43000 $\gamma$ + Tabular Quantities (in $\gamma$ )																							
1 **	256	235	235	227	226	229	232	243	246	244	240	241	245	259	275	276	277	275	268	270	271	262	267	267	267
2 **	261	252	245	241	241	245	251	252	257	259	259	249	254	266	275	277	279	275	275	277	275	270	265	265	265
3	258	257	259	262	268	269	269	265	255	251	249	255	269	280	285	286	288	277	271	267	266	265	265	260	260
4 *	261	264	264	262	263	261	265	266	261	263	259	249	259	261	271	279	292	289	281	273	269	265	259	258	258
5 *	259	261	261	262	264	263	265	265	255	251	243	240	240	245	253	260	261	260	258	259	258	258	257	259	259
6 *	259	260	262	262	261	259	260	260	255	247	240	237	241	245	250	260	267	266	266	264	262	258	256	256	256
7	256	254	256	256	258	253	240	248	245	241	237	236	236	240	246	250	256	258	261	262	260	260	259	258	258
8	258	256	256	256	257	260	258	254	248	243	238	237	241	245	251	256	259	260	262	259	258	259	259	259	259
9	257	255	246	253	258	258	262	264	260	251	246	243	240	246	250	256	264	269	268	266	262	261	261	256	256
10	256	256	256	258	259	261	262	257	252	243	240	236	235	243	248	261	263	266	266	263	262	262	261	260	260
11	257	257	256	256	256	256	258	258	256	245	238	236	235	237	244	258	273	276	276	275	268	264	257	258	258
12	257	256	250	242	244	248	254	256	255	251	245	241	242	248	260	262	261	268	276	276	273	266	264	261	261
13	261	258	251	256	256	256	259	258	251	243	238	236	239	242	248	251	255	257	258	260	258	259	258	258	258
14	257	257	258	256	256	257	256	253	248	243	238	236	241	246	251	256	259	257	257	257	258	258	257	257	257
15	256	257	257	256	255	255	255	254	250	244	238	235	235	242	252	257	259	261	261	266	270	276	272	256	256
16	250	257	258	245	250	255	259	255	253	247	242	241	245	253	260	264	270	271	275	275	272	267	260	262	262
17	262	262	262	261	260	260	260	260	256	252	246	243	250	259	264	269	270	269	265	265	261	261	261	261	261
18	261	260	259	259	259	259	260	259	255	251	249	241	243	248	255	261	269	265	265	267	265	265	261	254	254
19	255	255	252	249	253	257	259	261	256	249	236	232	234	243	251	255	255	258	260	260	259	258	258	258	258
20 *	258	259	260	259	259	258	259	258	250	244	237	233	235	241	250	261	262	261	261	258	258	259	259	254	254
21	251	255	255	257	258	257	257	255	249	242	240	235	236	240	248	257	262	263	261	260	258	257	256	255	255
22	255	251	252	252	253	255	257	256	255	248	242	234	229	235	239	245	252	251	253	254	251	250	253	254	254
23	257	255	245	240	245	247	249	252	251	248	245	239	234	232	237	250	261	265	267	266	264	263	261	247	247
24 **	239	245	245	246	245	246	250	252	251	248	245	240	238	244	251	273	287	288	291	292	275	268	259	255	255
25 **	251	241	249	257	261	261	259	255	258	256	250	249	261	262	267	272	271	271	271	271	271	271	271	271	259
26	240	241	249	247	249	246	255	262	260	265	264	260	261	261	262	270	273	275	275	276	274	270	260	254	254
27 *	249	255	259	259	261	261	266	267	266	264	259	249	244	242	245	254	262	265	265	263	261	261	260	259	259
28 *	260	260	259	258	258	258	260	262	260	255	250	245	240	240	243	251	255	257	259	260	260	260	259	259	259
29 **	256	256	252	246	247	249	246	246	246	250	252	250	257	262	270	282	290	280	277	275	273	270	265	265	265
30	260	255	250	252	259	260	262	260	264	263	261	253	256	256	263	276	276	280	273	269	266	266	262	262	261
Mean	256	255	254	253	255	255	257	258	255	251	246	242	243	249	256	263	269	269	268	268	265	263	261	258	258
Mean *	257	259	260	260	261	260	262	262	257	252	246	241	240	243	248	257	261	262	262	262	260	260	259	257	257
Mean **	253	246	245	243	244	246	248	250	252	251	251	248	251	263	274	281	288	285	282	281	276	270	266	266	262
October		43000 $\gamma$ + Tabular Quantities (in $\gamma$ )																							
1 **	260	257	247	247	242	239	227	236	246	246	251	260	270	288	296	289	280	276	272	270	269	270	270	262	262
2	265	264	263	262	266	258	256	240	240	242	250	257	260	277	296	300	286	282	276	272	270	270	266	264	264
3	263	266	263	258	257	261	261	263	257	253	243	243	255	265	276	291	302	306	298	283	281	278	272	267	267
4	269	270	271	270	268	267	267	263	257	257	253	252	253	257	266	271	270	268	270	275	277	270	259	241	241
5	243	250	253	252	257	257	258	261	259	256	252	248	251	257	264	272	272	271	271	267	266	264	263	261	261
6 *	261	263	261	259	262	262	263	267	264	260	254	247	244	247	253	262	267	266	266	265	264	262	260	260	260
7	261	261	261	260	261	260	261	263	259	253	247	239	235	237	244	252	257	258	261	263	261	262	260	250	250
8 *	251	256	258	259	260	260	260	258	256	25															

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE III. - HOURLY MEANS OF VERTICAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER

U.T.	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	24 <sup>h</sup>	
<b>November</b>																										
1	265	268	268	268	264	264	262	262	263	258	258	262	263	264	271	272	278	283	290	292	282	281	264	252		
2 **	231	227	238	247	250	248	248	252	259	262	268	284	293	294	302	309	333	320	318	320	317	279	275	282		
3	283	282	264	259	268	274	276	277	273	265	259	257	258	267	272	280	287	290	300	308	308	299	292	290		
4 *	284	281	278	276	275	274	272	272	272	269	267	263	260	261	265	269	272	273	273	271	271	269	268	267		
5 *	268	268	268	268	268	268	268	268	268	262	258	254	257	260	267	269	273	273	271	271	272	269	268	268		
6	266	264	264	265	263	265	263	264	267	262	259	258	257	259	262	263	264	262	263	264	264	263	262	257		
7	253	254	258	259	260	259	258	258	262	257	252	252	254	255	258	261	264	265	264	264	268	268	269	263		
8	263	265	262	258	259	262	260	262	266	267	262	258	258	263	267	269	270	270	271	272	274	270	271	268		
9	272	268	264	264	263	262	263	265	264	261	259	261	262	264	263	265	272	272	272	275	272	269	265			
10	264	264	262	263	262	264	264	268	272	267	262	260	256	260	264	266	268	268	268	269	267	265	264	264		
11	263	263	263	263	264	265	263	263	264	260	258	260	261	263	264	264	265	265	264	264	264	264	264	265		
12 *	264	262	261	261	261	261	261	263	262	258	254	254	257	259	263	267	269	268	267	266	265	265	263	263		
13	263	262	262	262	262	263	263	264	264	258	254	254	256	261	265	267	268	268	268	266	260	258	260			
14	260	258	260	260	260	260	259	260	262	258	258	256	257	259	262	262	262	261	262	263	263	260	261			
15	262	264	263	262	260	259	259	259	259	253	250	253	254	257	263	268	266	267	275	278	278	278	278	266		
16	266	264	256	253	257	260	260	263	266	262	259	256	255	257	265	268	268	268	268	270	268	268	265			
17	263	262	260	253	253	253	252	252	257	258	258	263	272	276	292	293	297	291	287	285	282	274	271	270		
18	268	264	262	258	258	256	258	259	261	259	254	258	262	275	290	298	289	286	287	281	280	275	270	268		
19	267	266	266	263	245	248	248	250	256	258	260	259	261	269	277	282	287	286	282	283	279	277	272	270		
20 **	262	258	261	261	259	258	258	260	260	259	261	271	278	291	308	338	344	330	328	330	313	303	292	282		
21 **	263	261	243	235	239	252	258	266	268	267	272	276	278	282	285	285	283	281	280	279	281	280	278	273		
22	269	260	268	270	271	273	271	271	268	268	267	267	269	281	280	283	293	294	290	287	280	276	274	264		
23	259	259	258	263	268	268	271	271	269	261	259	259	264	271	274	283	278	274	278	276	269	270	264			
24 **	258	260	262	261	263	266	266	266	265	265	264	254	257	262	269	273	278	288	288	286	286	270	268	268		
25 **	269	271	272	272	270	270	270	270	272	274	271	271	275	283	291	302	294	283	278	278	278	278	278	274		
26	273	271	271	270	269	270	270	270	270	266	269	271	281	290	281	281	278	277	277	275	275	272	271	271		
27	269	268	268	267	265	265	263	264	266	265	263	266	270	275	278	281	280	278	273	271	271	271	271	270		
28	269	268	268	263	261	260	259	261	264	264	263	262	260	265	267	270	270	269	268	268	269	270	269	269		
29 *	268	268	267	264	261	261	261	260	260	259	255	254	253	257	261	265	269	268	269	268	268	267	268	268		
30 *	268	268	268	267	265	265	263	260	260	259	258	256	258	260	265	265	267	267	266	267	264	263	263	263		
Mean	265	264	263	262	261	262	262	263	265	262	260	261	263	268	273	277	280	278	278	278	277	273	270	268		
Mean *	270	269	268	267	266	266	265	265	264	261	258	256	257	259	264	267	270	270	268	268	269	267	266	266		
Mean **	257	255	255	255	256	259	260	260	263	265	264	265	271	276	282	291	301	306	300	298	299	295	282	279	276	
<b>December</b>																										
1 *	265	263	263	263	262	261	261	262	263	261	258	260	259	261	263	262	264	263	263	261	259	260	258	258		
2	258	258	261	261	260	258	256	257	256	256	256	257	258	262	264	264	268	268	265	264	263	263	263	264		
3 *	263	262	263	262	262	259	260	260	256	259	265	264	266	268	268	270	268	268	265	264	264	262	261	263		
4 *	262	261	262	262	263	263	261	262	262	253	249	254	256	261	264	267	267	268	268	268	271	268	267	264		
5 *	264	261	261	259	259	260	259	258	258	253	253	253	256	257	258	260	261	261	264	264	264	265	263	259		
6 **	258	258	258	258	256	252	251	252	251	251	254	255	253	254	257	262	277	290	298	300	281	268	263	266		
7	268	260	255	262	261	260	260	262	264	263	263	264	268	272	270	273	277	278	275	276	278	270	268	268		
8	269	269	269	267	267	268	265	264	266	266	268	265	263													

TABLE IV. - DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS AS RECORDED BY THE MAGNETOGRAPHS

Date	DECLINATION WEST						HORIZONTAL INTENSITY						VERTICAL INTENSITY					
	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum
January	9°+ ,	U.T. h m	9°+ ,	U.T. h m	,	18000 Y +	U.T. h m	18000 Y +	18000 Y +	U.T. h m	43000 Y +	U.T. h m	43000 Y +	43000 Y +	U.T. h m	43000 Y +	U.T. h m	Y
1	39.5	15 26	46.7	26.2	23 12	20.5	589	5 53	621	546	19 20	75	246	18 29	265	232	9 35	33
2 **	40.3	19 3	52.6	33.3	23 16	19.3	574	6 2	621	497	19 15	124	252	19 39	288	232	6 18	56
3 **	39.4	18 1	57.0	13.4	19 35	43.6	557	4 32	627	446	19 28	181	268	15 32	351	215	5 8	136
4 *	38.3	13 23	41.4	35.8	1 7	5.6	557	21 59	586	538	11 20	48	263	0 10	273	257	11 56	16
5	39.2	15 31	44.0	33.0	19 37	11.0	573	19 57	602	544	14 21	58	260	16 16	275	251	13 16	24
6	40.3	13 14	45.2	36.3	24 0	8.9	580	6 53	607	554	18 10	53	256	18 41	271	245	9 26	26
7	39.5	14 46	45.4	29.9	21 59	15.5	581	0 20	620	544	20 48	76	253	21 39	278	242	1 7	36
8 **	39.1	14 7	45.5	30.7	23 40	14.8	578	23 45	641	531	19 0	110	253	18 30	278	239	5 22	39
9 **	39.0	4 40	45.6	31.5	21 10	14.1	581	21 11	619	549	11 2	70	250	19 26	263	234	2 40	29
10	39.0	14 5	44.6	34.4	20 8	10.2	585	23 55	617	549	15 14	68	254	15 30	273	245	9 57	28
11	38.8	13 19	43.7	34.1	20 30	9.6	584	0 9	616	554	11 21	62	251	16 30	264	242	0 45	22
12	39.0	13 43	43.3	28.0	21 2	15.3	589	21 5	620	554	11 38	66	249	19 27	261	233	10 10	28
13	39.2	13 59	44.5	35.2	22 9	9.3	588	6 20	610	566	10 49	44	250	18 31	266	238	10 43	28
14 *	39.4	13 18	44.7	36.4	9 36	8.3	594	8 8	612	569	12 20	43	248	17 40	259	233	13 1	26
15	38.9	15 39	43.0	31.9	22 30	11.1	594	22 26	625	571	11 55	54	247	16 20	258	233	10 46	25
16	39.2	13 54	43.5	36.0	9 26	7.5	594	7 43	615	571	10 15	44	248	16 43	260	234	9 41	26
17 **	39.8	14 26	55.9	23.1	20 53	32.8	585	8 44	626	523	14 40	103	251	18 37	283	223	12 11	60
18	38.8	13 10	45.7	29.5	1 50	16.2	576	19 8	594	553	9 27	41	252	18 38	262	235	12 21	27
19	38.6	11 28	45.2	30.3	1 28	14.9	585	8 24	604	561	18 30	43	252	19 13	267	234	10 56	33
20	39.2	13 36	47.0	30.7	22 36	16.3	585	23 2	625	564	14 30	61	253	19 11	272	239	12 22	33
21	38.1	13 47	46.9	23.9	23 14	23.0	579	23 17	620	551	19 28	69	257	19 28	278	245	10 1	33
22	38.1	12 31	44.3	29.6	0 11	14.7	583	3 23	605	562	20 11	43	254	20 38	266	245	10 3	21
23	39.1	13 42	43.3	35.6	9 6	7.7	587	6 40	600	567	10 40	33	251	22 33	263	243	11 6	20
24 *	39.0	12 52	43.8	35.4	8 56	8.4	590	19 7	604	567	11 15	37	250	17 30	260	236	9 33	24
25 *	39.2	12 32	42.9	35.6	8 29	7.3	593	6 22	607	578	12 11	29	250	0 25	257	232	9 48	25
26 *	39.0	13 5	43.5	35.2	8 49	8.3	595	20 34	604	577	10 48	27	247	18 30	259	235	12 5	24
27	39.8	14 1	46.7	35.5	9 4	11.2	596	7 1	623	572	14 15	51	246	18 30	261	226	11 4	35
28	39.3	13 42	43.7	35.4	9 11	8.3	595	19 7	610	577	12 53	33	247	17 26	266	228	11 18	38
29	38.6	14 8	45.5	28.7	21 14	16.8	588	21 25	612	534	16 8	78	251	16 37	271	237	1 50	34
30	39.0	14 59	46.7	32.1	17 44	14.6	586	3 8	614	544	13 16	70	251	17 38	272	234	11 6	38
31	38.7	14 46	45.0	32.9	2 20	12.1	591	1 49	621	567	14 59	54	245	16 35	257	228	2 12	29
Mean	39.1	-	45.7	31.6	-	14.1	584	-	614	551	-	62.8	252	-	270	236	-	33.9
Mean *	39.0	-	43.3	35.7	-	7.6	586	-	603	566	-	36.8	252	-	262	239	-	23.0
Mean **	39.5	-	51.3	26.4	-	24.9	575	-	627	509	-	117.6	255	-	293	229	-	64.0
February	9°+ ,	U.T. h m	9°+ ,	U.T. h m	,	18000 Y +	U.T. h m	18000 Y +	18000 Y +	U.T. h m	43000 Y +	U.T. h m	43000 Y +	43000 Y +	U.T. h m	43000 Y +	U.T. h m	Y
1 *	39.1	14 2	43.6	35.5	1 32	8.1	596	0 56	628	564	12 21	64	246	16 42	253	233	1 25	20
2	40.1	13 49	48.3	33.6	20 54	14.7	585	6 46	621	538	12 13	83	252	16 40	274	235	6 58	39
3 **	39.8	12 46	48.2	35.7	9 9	12.5	588	6 30	634	497	13 12	137	252	13 25	271	237	6 53	34
4	39.3	12 53	45.6	34.9	22 15	10.7	583	6 3	606	551	12 16	55	250	17 19	269	227	12 4	42
5	38.7	14 1	47.5	31.7	20 11	15.8	583	23 15	613	542	16 30	71	252	16 46	272	235	12 6	37
6	38.7	12 59	45.3	24.6	22 48	20.7	589	22 57	615	549	12 10	66	251	17 28	264	234	12 5	30
7	38.6	14 29	44.5	30.6	24 0	13.9	588	20 23	609	548	12 30	61	251	15 35	263	237	12 2	26
8	38.2	13 24	45.3	28.3	22 39	17.0	594	0 17	615	578	15 13	37	247	16 38	257	231	12 20	26
9 *	38.8	14 26	44.1	35.6	1 6	8.5	595	0 32	619	577	14 15	42	246	14 48	255	234	12 1	21
10	39.2	6 52	43.8	34.5	9 10	9.3	600	7 14	639	564	16 39	75	243	16 20	257	229	12 0	28
11	38.2	14 2	43.0	34.3	21 25	8.7	591	1 41	619	570	15 38	49	247	15 10	262	230	10 45	32
12	38.4	12 35	43.7	33.0	24 0	10.7	597	23 55	617	563	13 36	54	246	18 30	257	232	13 1	25
13	38.5	13 27	46.4	30.8	0 40	15.6	596	0 2	617	560	11 20	57	246	18 30	261	226	11 2	35
14	38.6	13 28	46.0	30.6	23 15	15.4	582	5 54	614	550	11 52	64	253	19 37	278	227	11 49	51
15 **	38.9	13 4	47.5	26.1	22 20	21.4	577	24 0	624	521	19 40	103	253	19 56	285	235	11 42	50
16 **	37.5	14 1	45.0	27.9	23 55	17.1	575	0 4	640	534	10 30	106	249	16 46	275	219	0 30	56
17	37.7	14 0	45.7	28.4	0 0	17.3	578	5 39	611	541	12 54	70	249	17 13	269	232	9 53	37
18 **	37.4	13 28	45.4	31.5	2 48	13.9	586	19 45	648	541	15 16	107	249	16 12	271	233	9 27	38
19	37.9	14 18	45.5	28.5	22 6	17.0	584	20 52	628	562	13 48	66	250	16 28	263	237	10 41	26
20 *	38.2	13 30	43															

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE IV. - DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS AS RECORDED BY THE MAGNETOGRAPHS

Date	DECLINATION WEST						HORIZONTAL INTENSITY						VERTICAL INTENSITY					
	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum
March	9°+ ,	U.T. h m	9°+ ,	U.T. h m	,	18000 Y+	U.T. h m	18000 Y+	18000 Y+	U.T. h m	43000 Y+	U.T. h m	43000 Y+	43000 Y+	U.T. h m	43000 Y+	U.T. h m	43000 Y+
1 **	37.7	14 8	47.4	24.5	22 20	22.9	581	7 31	643	515	12 8	128	245	17 20	271	224	2 49	47
2 **	37.4	14 5	44.3	28.2	20 15	16.1	583	22 49	628	508	11 12	120	252	20 30	271	229	23 56	42
3	38.8	6 9	44.8	30.7	0 16	14.1	582	4 50	647	526	10 37	121	250	17 36	270	229	0 12	41
4	38.7	13 28	45.6	34.8	9 40	10.8	591	0 2	620	551	13 56	69	247	18 30	260	223	11 59	37
5	38.1	12 56	44.5	32.8	18 52	11.7	597	18 55	624	571	17 41	53	246	18 50	265	225	12 30	40
6	38.3	15 2	46.1	30.5	{ 17 9 9 28	15.6	595	23 29	635	547	16 58	88	250	17 36	279	229	12 32	50
7	38.7	13 16	46.1	34.6	{ 17 9 9 28	11.5	595	0 0	612	569	16 0	43	249	16 35	270	228	12 20	42
8	38.4	14 33	47.0	32.9	21 20	14.1	591	7 26	609	564	18 2	45	251	18 25	273	219	11 40	54
9	38.4	12 21	46.0	33.5	20 12	12.5	596	20 22	633	566	10 53	67	248	20 18	260	229	13 11	31
10	37.5	12 37	47.2	28.0	20 44	19.2	595	20 51	656	562	10 41	94	249	19 22	265	222	12 17	43
11	37.5	13 1	48.0	20.2	23 57	27.8	599	21 51	648	563	23 53	85	247	17 28	257	225	11 57	32
12	38.9	13 46	50.8	20.4	0 0	30.4	592	3 50	633	539	13 6	94	246	17 13	264	221	12 22	43
13 **	38.1	13 18	54.8	26.5	18 2	28.3	576	1 51	635	510	17 50	125	257	18 7	318	223	10 56	95
14 **	37.1	13 42	47.6	22.4	21 59	25.2	576	19 38	644	531	9 58	113	249	19 36	298	216	5 15	82
15 **	39.2	6 35	63.3	22.5	0 49	40.8	523	18 55	686	394	9 24	292	257	16 55	400	137	5 12	263
16	36.4	14 31	44.5	27.3	0 24	17.2	552	22 25	593	517	11 21	76	263	5 0	274	237	12 3	37
17	36.9	12 42	44.7	32.3	7 50	12.4	567	20 8	588	517	10 21	71	258	16 44	279	230	11 43	49
18 *	37.2	12 59	45.0	31.9	8 32	13.1	579	20 40	597	554	11 20	43	259	16 26	271	242	11 40	29
19	37.8	13 26	54.6	32.7	1 54	21.9	583	1 23	608	559	11 29	49	251	18 27	267	228	11 46	39
20	38.1	12 32	47.7	31.9	21 8	15.8	585	20 44	609	531	12 27	78	260	16 26	280	238	12 29	42
21	38.1	13 12	47.4	28.7	8 26	18.7	590	8 20	615	562	8 22	53	254	23 2	266	231	11 49	35
22	37.4	13 31	45.3	32.4	8 12	12.9	592	20 43	631	552	13 16	79	253	17 34	265	231	12 2	34
23 *	38.1	13 54	44.7	31.8	8 57	12.9	594	22 29	619	567	11 53	52	248	7 7	259	226	11 17	33
24 *	38.0	14 8	44.5	31.9	8 44	12.6	597	1 10	614	578	11 23	36	247	17 31	255	228	10 59	27
25 *	38.6	13 56	46.4	32.6	8 46	13.8	602	20 42	624	572	11 0	52	244	7 1	257	223	11 50	34
26	38.0	13 41	49.4	29.3	21 29	20.1	597	17 59	619	572	11 25	47	246	21 40	258	217	11 28	41
27	38.1	13 29	46.9	32.1	8 15	14.8	595	0 50	624	554	11 15	70	248	16 36	267	227	11 53	40
28	37.8	13 23	47.1	30.2	8 10	16.9	592	1 6	611	563	11 57	48	249	17 26	268	225	12 1	43
29 *	37.0	13 59	44.7	31.2	8 34	13.5	596	18 26	611	584	11 53	27	248	19 20	263	222	12 18	41
30	36.8	14 42	44.9	28.8	21 0	16.1	594	18 4	624	566	11 16	58	247	21 7	267	218	11 19	49
31	37.9	14 2	46.4	30.6	2 42	15.8	603	22 14	635	571	10 42	64	-	-	-	-	-	-
Mean	37.9	-	47.3	29.6	-	17.7	587	-	625	546	-	78.7	250	-	274	223	-	50.5
Mean *	37.8	-	45.1	31.9	-	13.2	594	-	613	571	-	42.0	249	-	261	228	-	32.8
Mean **	37.9	-	51.5	24.8	-	26.7	568	-	647	492	-	155.6	252	-	312	206	-	105.8
April	9°+ ,	U.T. h m	9°+ ,	U.T. h m	,	18000 Y+	U.T. h m	18000 Y+	18000 Y+	U.T. h m	43000 Y+	U.T. h m	43000 Y+	43000 Y+	U.T. h m	43000 Y+	U.T. h m	43000 Y+
1 **	37.1	14 40	45.4	25.8	1 10	19.6	599	0 26	653	561	9 43	92	242	18 24	263	221	5 20	42
2	37.5	5 50	46.2	29.4	9 18	16.8	599	6 20	627	554	10 45	73	-	16 36	261	225	11 40	36
3	38.0	13 31	45.8	30.8	8 7	15.0	597	3 43	626	556	10 34	70	241	17 36	263	220	11 40	43
4	38.2	13 42	46.1	34.0	9 12	12.1	594	5 52	616	558	12 1	58	247	17 10	267	224	11 38	43
5 *	37.2	13 31	45.0	30.2	8 15	14.8	597	20 22	616	560	10 38	56	246	7 40	262	223	11 54	39
6 **	37.6	17 32	47.0	28.4	20 6	18.6	608	18 0	690	541	18 20	149	241	19 45	268	209	11 0	59
7	36.6	14 22	45.4	28.0	8 34	17.4	598	20 10	633	555	11 16	78	243	20 10	259	215	12 36	44
8 *	37.4	13 32	47.0	30.1	8 36	16.9	592	0 26	613	561	11 16	52	241	19 34	253	212	11 58	41
9 *	37.2	14 22	46.5	28.3	8 45	18.2	598	19 33	628	564	10 17	64	243	19 28	259	211	11 3	48
10	37.2	13 28	48.6	29.7	8 40	18.9	598	17 25	631	561	10 20	70	243	17 25	269	207	11 40	62
11	36.1	14 5	45.6	27.5	8 26	18.1	594	22 3	620	556	10 16	64	241	19 36	257	208	12 33	49
12	37.3	14 39	47.1	30.1	8 57	17.0	595	1 41	634	548	12 57	86	250	16 25	283	221	12 28	62
13	36.7	14 31	47.0	27.6	8 56	19.4	595	18 30	627	554	11 54	73	-	19 10	267	218	12 40	49
14	36.1	14 8	44.6	28.3	8 36	16.3	593	1 35	649	542	12 47	107	-	-	-	-	-	-
15	39.0	14 44	48.1	31.0	6 49	17.1	596	16 24	631	563	18 11	68	254	17 40	307	217	12 17	90
16 *	36.6	13 50	43.3	28.3	8 20	15.0	593	19 42	621	545	12 16	76	251	7 3	270	229	12 16	41
17	36.5	13 21	42.8	29.0	8 40	13.8	597	18 24	625	561	12 30	64	244	7 23	261	220	12 53	41
18	37.4	13 32	44.2	30.7	7 40	13.5	599	22 28	629	561	10 58	68	242	17 44	257	209	12 3	48
19 *	37.3	13 14	45.8	28.3	8 2	17.5	607	21 54	635	584	14 16	51	239	6 48	254	201	11 33	53
20																		

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE IV. - DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS AS RECORDED BY THE MAGNETOGRAPHS

Date	DECLINATION WEST						HORIZONTAL INTENSITY						VERTICAL INTENSITY					
	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum
May	9°+ ,	U.T. h m	9°+ ,	9°+ ,	U.T. h m	,	18000 Y +	U.T. h m	18000 Y +	18000 Y +	U.T. h m	Y	43000 Y +	U.T. h m	43000 Y +	43000 Y +	U.T. h m	Y
1 *	35.9	14 6	44.9	27.8	7 55	17.1	600	18 49	645	565	11 17	80	246	19 18	270	221	12 10	49
2	36.7	13 41	47.2	24.7	19 53	22.5	599	19 17	641	554	12 21	87	249	19 53	277	223	12 21	54
3	36.9	12 30	45.6	28.6	6 58	17.0	600	20 14	662	551	10 15	111	248	17 44	281	228	11 45	53
4	35.9	14 4	46.2	27.2	8 40	19.0	604	17 35	645	571	10 19	74	244	18 35	269	205	12 19	64
5	35.5	12 52	45.2	27.3	7 45	17.9	598	16 43	637	574	0 10	63	244	21 19	266	202	11 54	64
6	34.9	14 21	47.7	26.6	22 52	21.1	591	17 56	658	544	10 20	114	250	17 52	290	210	11 29	80
7 **	35.1	12 10	42.5	25.3	8 16	17.2	572	18 24	636	504	12 1	132	247	18 22	292	211	11 59	81
8	36.4	13 59	46.0	27.4	8 55	18.6	582	21 32	622	531	14 21	91	253	17 18	270	223	12 56	47
9 **	37.0	12 28	47.5	20.4	7 24	27.1	589	7 24	707	507	8 55	200	258	17 49	296	214	12 2	82
10	35.0	15 48	43.0	24.6	8 41	18.4	588	17 42	679	534	11 37	145	255	17 45	291	217	11 37	74
11	36.4	14 4	42.2	28.2	6 57	14.0	595	18 2	648	551	10 24	97	-	18 22	281	214	11 40	67
12	36.2	14 55	43.9	27.8	8 6	16.1	597	21 25	651	551	12 42	100	-	17 44	272	223	11 51	49
13	37.1	1 19	45.8	26.4	7 47	19.4	591	0 38	643	537	12 37	106	-	-	271	226	2 43	45
14	36.2	14 5	46.3	28.2	8 10	18.1	596	18 22	645	551	11 54	94	252	19 15	279	218	12 31	61
15 **	37.5	12 48	49.3	23.1	5 43	26.2	584	22 41	646	510	7 0	136	250	16 35	274	218	12 3	56
16 **	36.7	2 13	56.7	22.6	0 3	34.1	571	21 34	670	499	11 8	171	-	16 12	291	162	2 42	129
17	34.6	13 1	42.8	26.3	5 19	16.5	580	22 40	620	531	11 30	89	256	5 1	272	227	11 21	45
18	35.5	13 45	42.4	27.4	7 28	15.0	589	18 52	631	556	8 40	75	251	18 20	280	216	11 45	64
19 *	36.1	12 42	43.6	28.9	7 13	14.7	596	21 53	617	575	10 18	42	247	5 0	265	222	12 3	43
20 *	35.9	13 9	44.7	27.3	7 23	17.4	604	18 46	629	579	9 58	50	253	17 26	271	229	12 10	42
21 **	35.9	14 19	49.0	22.6	19 53	26.4	597	17 9	691	516	13 33	175	248	17 10	326	189	11 40	137
22	35.1	4 35	41.6	28.8	8 28	12.8	585	19 25	640	536	8 32	104	261	17 23	309	222	1 56	87
23	35.9	4 55	43.5	30.2	8 30	13.3	584	20 12	629	539	11 50	90	249	20 12	273	227	11 24	46
24	36.5	13 14	47.3	24.3	2 7	23.0	588	23 27	634	538	10 56	96	248	16 26	277	215	11 46	62
25	36.5	12 30	47.0	27.4	6 44	19.6	586	23 43	630	546	12 2	84	256	18 12	292	229	12 3	63
26 *	36.9	14 41	46.3	28.1	7 29	18.2	590	17 49	628	537	10 22	91	258	18 7	279	228	12 4	51
27	36.6	13 53	44.3	29.8	8 19	14.5	599	0 57	638	558	12 31	80	250	17 48	275	222	12 3	53
28 *	36.2	14 6	43.4	28.4	6 56	15.0	604	19 6	640	563	10 55	77	248	6 26	267	219	12 20	48
29	37.9	15 31	50.5	28.9	3 50	21.6	610	15 29	660	550	12 47	110	247	15 27	273	216	12 33	57
30	35.5	14 2	42.6	26.3	8 32	16.3	605	16 58	658	565	10 14	93	250	18 36	288	219	12 18	69
31	37.4	13 24	47.2	32.1	5 28	15.1	611	19 10	660	577	10 23	83	252	18 38	275	218	11 55	57
Mean	36.2	-	45.7	26.9	-	18.8	593	-	646	545	-	101.3	251	-	280	217	-	63.8
Mean *	36.2	-	44.6	28.1	-	16.5	599	-	632	564	-	68.0	250	-	270	224	-	46.6
Mean **	36.4	-	49.0	22.8	-	26.2	583	-	670	507	-	162.8	-	-	296	199	-	97.0
June	9°+ ,	U.T. h m	9°+ ,	9°+ ,	U.T. h m	,	18000 Y +	U.T. h m	18000 Y +	18000 Y +	U.T. h m	Y	43000 Y +	U.T. h m	43000 Y +	43000 Y +	U.T. h m	Y
1 **	35.7	15 1	48.5	20.5	7 42	28.0	588	15 46	663	518	10 22	145	248	18 25	292	213	12 45	79
2	36.2	13 28	44.8	28.4	8 8	16.4	591	23 19	642	560	9 32	82	249	18 52	271	214	12 50	57
3	35.6	14 22	45.8	28.5	7 0	17.3	601	16 55	636	567	10 38	69	251	17 26	279	231	12 32	48
4 *	36.7	12 58	46.8	28.1	5 28	18.7	600	20 32	637	555	9 22	82	244	20 30	266	202	11 59	64
5	36.4	12 48	46.3	26.3	7 23	20.0	607	18 38	643	561	10 45	82	246	18 34	268	214	11 58	54
6	36.9	13 32	46.8	28.0	6 39	18.8	611	18 53	643	575	10 58	68	247	18 52	271	207	12 16	64
7	35.9	13 24	46.0	26.0	6 56	20.0	613	16 24	655	580	9 39	75	252	19 24	268	225	11 34	43
8	36.7	13 58	48.0	26.1	7 23	21.9	604	19 25	650	560	13 22	90	251	19 19	275	222	12 45	53
9	36.1	13 31	44.2	27.0	7 2	17.2	608	18 37	643	570	11 40	73	252	18 25	273	230	11 5	43
10	36.6	14 20	44.8	28.9	8 46	15.9	605	18 47	636	559	10 22	77	251	6 57	268	225	12 2	43
11	37.6	13 21	46.5	29.3	6 55	17.2	614	19 5	672	568	10 16	104	249	19 5	273	219	11 56	54
12	35.6	13 47	42.5	25.7	7 46	16.8	615	19 49	652	565	10 14	87	246	18 36	271	209	12 22	62
13	37.0	13 47	45.0	29.8	7 32	15.2	609	18 49	662	568	12 48	94	250	18 48	282	223	12 14	59
14	36.0	13 31	43.7	27.6	7 46	16.1	607	16 35	657	577	10 20	80	251	18 10	270	216	11 33	54
15 *	35.7	14 53	41.5	29.4	7 23	12.1	608	17 6	633	581	11 59	52	251	7 43	264	231	11 26	33
16 *	36.6	14 21	42.4	30.8	7 22	11.6	614	22 31	640	590	10 34	50	246	5 27	261	222	1 58	39
17	36.3	14 20	44.6	26.4	6 25	18.2	618	16 32	668	585	10 40	83	251	18 40	279	223	12 24	56
18 **	35.5	14 52	46.6	24.5	5 35	22.1	606	19 4	664	553	10 38	111	250	17 45	279	214	11 40	65
19 **	35.3	12 33	44.9	22.6	1 28	22.3	590	20 59	629	541	9 16	88	250	16 34	270	227	10 57	43

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE IV. - DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS AS RECORDED BY THE MAGNETOGRAPHS

Date	DECLINATION WEST					HORIZONTAL INTENSITY					VERTICAL INTENSITY							
	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum			
July	9°+ ,	U.T. h m	9°+ ,	U.T. h m	,	18000 Y+	U.T. h m	18000 Y+	U.T. h m	Y	43000 Y+	U.T. h m	43000 Y+	43000 Y+	U.T. h m			
1	35.4	14 5	44.2	27.0	6 34	17.2	610	18 41	646	581	13 8	65	249	19 6	273	224	12 45	49
2	35.3	13 48	44.4	27.9	5 26	16.5	610	19 35	646	578	10 16	68	247	19 35	267	216	12 14	51
3	36.5	14 1	49.3	26.0	7 57	23.3	614	15 3	638	580	10 34	58	249	17 41	272	215	11 51	57
4 **	35.3	12 22	44.2	27.1	7 33	17.1	614	20 6	662	556	8 30	106	247	18 35	268	215	12 41	53
5	35.4	15 10	45.9	26.1	1 58	19.8	605	23 34	643	569	10 19	74	248	17 35	275	222	12 5	53
6	34.1	13 20	41.8	24.9	7 54	16.9	605	16 44	642	559	8 10	83	251	18 34	270	230	11 36	40
7	35.3	15 12	43.1	26.1	6 28	17.0	615	18 30	647	584	12 40	63	248	18 25	273	220	11 20	53
8	35.7	14 31	45.2	30.8	4 40	14.4	601	17 22	643	554	12 17	89	255	17 19	293	230	12 38	63
9	35.1	14 50	44.8	26.5	7 40	18.3	602	22 15	646	553	10 54	93	251	18 25	272	222	13 20	50
10	36.4	13 30	44.8	28.5	8 16	16.3	609	19 30	644	563	14 21	81	253	18 12	294	224	10 32	70
11	35.2	14 58	43.6	27.2	8 11	16.4	613	18 6	650	579	11 11	71	250	18 27	274	223	11 3	51
12	34.5	14 21	42.5	26.6	8 38	15.9	605	20 9	628	567	12 26	61	249	18 40	267	229	12 20	38
13	35.9	14 40	41.4	27.3	8 7	14.1	611	19 40	640	570	13 4	70	250	18 12	268	231	12 16	37
14 **	34.7	14 34	43.1	26.5	2 55	16.6	606	1 20	648	556	12 50	92	247	19 25	269	225	12 8	44
15	35.0	14 27	42.5	25.2	6 31	17.3	611	19 53	650	582	13 15	68	244	17 44	268	216	10 4	52
16	35.1	13 25	45.1	24.9	8 16	20.2	609	17 37	643	551	14 1	92	248	17 41	268	229	12 47	39
17	35.1	12 43	43.5	25.3	5 36	18.2	602	19 31	651	556	9 43	95	249	19 36	276	233	11 52	43
18	35.3	12 23	43.8	26.4	7 25	17.4	606	18 40	641	577	8 28	64	249	19 28	264	227	10 47	37
19 *	34.6	13 21	44.4	24.7	7 18	19.7	606	21 50	629	573	11 55	56	245	18 35	259	222	11 2	37
20 *	36.1	13 16	47.7	27.4	8 15	20.3	614	17 6	658	561	10 15	97	243	18 12	263	206	10 57	57
21	34.7	13 22	44.6	25.8	6 45	18.8	613	20 17	665	574	9 26	91	246	20 12	267	216	11 3	51
22 *	35.2	12 44	43.4	28.0	5 31	15.4	607	17 22	634	565	11 33	69	248	17 26	268	228	10 32	40
23 *	35.1	12 59	43.0	24.4	7 13	18.6	608	20 40	634	560	9 39	74	247	16 35	264	221	11 38	43
24 *	35.4	13 57	44.3	27.2	6 52	17.1	610	20 10	633	569	10 48	64	245	16 26	262	224	12 12	38
25	35.4	12 16	42.7	26.4	8 10	16.3	610	0 54	628	585	11 3	43	247	17 45	270	219	11 47	51
26	35.1	14 51	41.8	28.3	8 45	13.5	614	17 13	659	582	11 9	77	246	19 15	267	221	12 30	46
27	35.5	14 20	44.7	25.2	6 28	19.5	612	18 1	644	583	9 21	61	242	18 41	263	215	11 10	48
28	35.0	13 5	42.7	28.4	5 50	14.3	613	17 37	684	585	10 22	99	242	17 36	262	215	12 39	47
29 **	37.5	14 6	48.0	27.1	6 36	20.9	596	18 44	640	530	12 12	110	249	17 19	283	225	10 49	58
30 **	35.1	13 50	42.4	24.7	20 18	17.7	606	19 5	652	558	15 1	94	249	20 35	274	225	11 29	49
31 **	35.3	14 56	43.4	25.0	1 57	18.4	598	0 2	641	539	11 16	102	252	18 1	291	215	2 50	76
Mean	35.3	-	44.1	26.5	-	17.5	611	-	645	567	-	78.4	248	-	271	222	-	49.1
Mean *	35.3	-	44.6	26.3	-	18.2	609	-	638	566	-	72.0	246	-	263	220	-	43.0
Mean **	35.6	-	44.2	26.1	-	18.1	604	-	649	548	-	100.8	249	-	277	221	-	56.0
August	9°+ ,	U.T. h m	9°+ ,	U.T. h m	,	18000 Y+	U.T. h m	18000 Y+	U.T. h m	Y	43000 Y+	U.T. h m	43000 Y+	43000 Y+	U.T. h m			
1	34.7	12 58	41.7	27.4	22 44	14.3	596	19 49	631	544	10 34	87	257	15 13	274	243	12 2	31
2	35.8	12 50	44.5	28.8	5 27	15.7	598	20 38	630	560	10 50	70	254	16 26	278	230	12 47	48
3	35.2	13 53	40.8	30.8	6 10	10.0	603	18 3	630	572	8 1	58	253	17 19	275	231	11 30	44
4	35.1	12 21	47.3	27.5	6 54	19.8	600	18 46	636	530	10 18	106	258	18 46	296	226	10 18	70
5	34.3	13 43	41.4	25.5	7 57	15.9	599	18 0	625	563	11 28	62	254	15 36	272	232	11 21	40
6	36.2	14 21	46.2	29.0	7 36	17.2	601	15 9	625	557	16 15	68	253	15 36	279	220	12 2	59
7	35.5	12 28	42.4	29.2	8 9	13.2	609	23 3	693	558	14 11	135	249	23 2	271	223	10 0	48
8 **	36.4	20 9	54.7	7.7	22 8	47.0	548	20 5	713	370	8 30	343	256	15 34	416	145	7 16	271
9 **	32.1	15 32	46.4	10.5	0 0	35.9	565	21 57	719	501	8 33	218	252	18 52	312	205	0 37	107
10 **	36.3	7 27	54.3	26.8	0 44	27.5	570	18 30	721	445	8 39	276	267	17 52	369	206	8 40	163
11 **	33.9	13 2	41.1	23.2	7 14	17.9	574	6 3	625	539	0 7	96	267	18 38	288	239	12 1	49
12	34.5	14 27	42.4	26.1	23 56	16.3	577	20 1	679	510	7 25	169	268	17 38	310	242	7 18	68
13	33.2	14 39	41.4	24.5	0 59	16.9	581	18 41	617	554	10 2	63	255	18 27	280	232	12 4	48
14	34.1	11 42	43.3	27.3	6 17	16.0	590	17 31	636	549	12 17	87	263	16 35	289	229	11 51	60
15	34.0	13 41	42.5	26.8	6 40	15.7	592	18 55	627	566	11 16	61	258	17 35	276	232	12 20	44
16 *	33.7	13 50	41.4	26.3	6 26	15.1	591	21 25	612	565	11 11	47	258	16 35	270	237	12 45	33
17 *	34.8	12 1	42.9	29.5	6 8	13.4	601	17 38	623	585	9 0	38	254	18 43	273	226	11 40	47
18 *	34.4	13 59	42.6	27.2	7 52	15.4	601	18 52	625	567	9 16	58	253	18 36	265	231	11 59	34
19	34.6	12 55	43.4	26.4	23 6	17.0	606	19 40	690	570	10 21	120	248	19 40	270	217	11 28	53
20 **	35.1	13 16	50.4	16.7	1 37	33.7	589	1 22	643	539	14 15	104	246	16 38	2			

TABLE IV. - DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS AS RECORDED BY THE MAGNETOGRAPHS

Date	DECLINATION WEST						HORIZONTAL INTENSITY						VERTICAL INTENSITY					
	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum
September	9°+	U.T. h m	9°+	9°+	U.T. h m	18000 Y +	U.T. h m	18000 Y +	18000 Y +	U.T. h m	43000 Y +	U.T. h m	43000 Y +	43000 Y +	U.T. h m	43000 Y +	U.T. h m	43000 Y +
1 **	33.1	13 3	45.3	19.9	21 14	589	3 14	644	534	12 43	253	14 42	283	220	1 40	63		
2 **	33.4	1 28	42.1	22.8	21 8	583	18 55	631	527	11 42	261	16 26	283	234	4 5	49		
3	34.0	13 10	43.6	27.4	22 17	584	22 28	621	561	12 17	267	17 25	294	247	11 1	47		
4	35.2	12 19	43.5	28.3	16 30	591	22 4	637	502	9 4	266	16 35	305	246	11 30	59		
5 *	34.0	13 16	41.2	30.0	8 6	593	23 28	615	557	8 50	257	6 49	272	237	11 22	35		
6 *	34.3	12 58	40.6	28.1	21 48	598	22 2	620	578	13 15	257	16 25	274	234	11 4	40		
7	34.3	5 32	42.5	28.5	8 20	601	5 54	650	568	10 34	251	19 14	267	233	11 5	34		
8	33.8	13 51	42.5	28.2	7 28	597	19 7	618	560	10 19	254	19 35	265	234	11 30	31		
9	34.1	13 8	42.7	28.9	1 4	599	1 51	632	562	10 40	256	17 27	274	238	12 29	36		
10	35.1	14 7	45.8	27.8	8 20	603	16 15	640	569	10 29	255	11 50	271	230	13 4	41		
11	33.7	13 19	44.9	27.5	7 56	599	21 42	635	568	10 45	256	18 5	283	232	13 1	51		
12	34.3	13 52	47.6	24.5	4 49	594	13 40	640	558	15 47	257	18 39	282	238	12 2	44		
13	34.7	12 50	42.8	29.6	8 23	598	1 42	634	563	12 10	253	18 36	266	233	11 41	33		
14	34.3	12 21	42.2	25.9	8 9	600	6 26	625	562	11 38	253	16 28	263	234	11 36	29		
15	33.2	14 27	43.0	17.5	23 6	601	18 50	631	569	21 55	255	21 40	284	232	11 4	52		
16	31.3	13 42	43.7	12.6	3 12	580	2 54	622	545	7 37	258	18 13	281	238	10 59	43		
17	34.7	12 8	47.0	28.8	7 40	589	20 5	614	552	10 27	260	16 37	273	239	11 28	34		
18	33.5	13 3	43.4	27.3	23 42	599	22 25	642	563	9 37	258	16 35	274	237	12 0	37		
19	33.5	13 0	43.2	25.7	6 50	595	2 44	629	553	9 44	253	19 54	266	229	11 59	37		
20 *	33.9	13 20	42.4	26.0	7 34	599	23 12	633	569	11 35	254	15 35	267	231	11 4	36		
21	34.4	14 3	42.1	28.0	8 59	601	19 0	659	566	9 59	253	19 0	273	232	11 40	41		
22	33.7	14 31	41.7	22.7	23 33	608	20 48	675	572	12 22	249	23 11	263	224	12 23	39		
23	33.6	14 4	44.0	25.3	3 17	605	2 29	658	566	10 36	251	17 44	272	230	13 2	42		
24 **	32.2	13 20	43.6	21.7	2 50	589	21 36	634	535	11 41	257	19 15	300	236	12 40	64		
25 **	34.3	12 30	44.2	24.9	24 0	580	1 11	627	531	12 25	270	17 56	309	237	1 39	72		
26	33.3	12 31	39.9	24.5	0 2	577	22 47	637	532	9 17	260	17 35	279	233	0 40	46		
27 *	33.7	14 42	39.3	29.1	8 18	590	0 0	615	558	11 55	258	7 40	272	240	13 12	32		
28 *	34.2	15 1	40.0	28.9	8 43	600	21 22	621	574	11 33	255	7 23	267	238	13 4	29		
29 **	34.3	15 50	42.6	24.4	23 48	583	2 30	636	523	11 32	263	16 22	313	240	8 16	73		
30	33.7	14 26	43.6	23.6	0 38	584	23 25	608	538	16 6	263	16 37	290	247	2 48	43		
Mean	33.9	-	43.0	25.6	-	594	-	633	554	-	257	-	279	235	-	43.7		
Mean *	34.0	-	40.7	28.4	-	596	-	621	567	-	256	-	270	236	-	34.4		
Mean **	33.5	-	43.6	22.7	-	585	-	634	530	-	261	-	298	233	-	64.2		
October	9°+	U.T. h m	9°+	9°+	U.T. h m	18000 Y +	U.T. h m	18000 Y +	18000 Y +	U.T. h m	43000 Y +	U.T. h m	43000 Y +	43000 Y +	U.T. h m	43000 Y +		
1 **	34.5	5 39	47.6	24.5	4 19	584	1 17	658	518	11 55	261	14 10	301	220	6 6	81		
2	34.0	6 25	46.3	26.1	21 10	566	6 44	637	501	12 32	266	15 19	313	237	7 59	76		
3	33.4	14 12	42.6	20.6	21 38	573	18 5	621	538	12 49	269	17 58	327	240	11 20	87		
4	32.9	13 17	39.7	21.7	22 58	583	18 21	619	552	19 48	264	19 59	283	235	23 10	48		
5	33.1	13 31	42.1	27.0	4 1	586	6 37	612	548	12 41	259	16 26	276	241	0 11	35		
6 *	33.3	14 6	39.7	28.3	8 36	591	18 52	611	560	11 21	260	16 43	271	242	12 32	29		
7	33.0	12 44	39.7	27.3	21 45	600	22 58	652	564	10 20	255	20 30	269	231	12 40	.38		
8 *	33.4	14 30	41.2	28.4	7 59	600	23 11	621	571	10 21	255	6 57	265	239	13 32	26		
9 *	33.6	13 29	39.4	28.5	8 56	600	21 38	621	562	12 18	258	19 19	266	243	12 0	23		
10	35.7	6 45	53.2	27.7	9 12	590	5 14	635	529	12 2	256	21 34	269	235	7 6	34		
11	33.6	14 5	46.7	27.1	19 36	589	23 29	625	524	12 21	267	16 28	292	253	11 50	39		
12	33.4	12 35	45.8	27.3	8 45	592	22 56	621	529	11 8	261	16 18	279	244	11 3	35		
13	34.5	13 53	46.6	27.7	8 39	596	23 58	622	562	10 16	258	18 33	278	236	11 3	42		
14	33.1	13 1	45.5	13.0	23 20	588	21 44	642	514	24 0	264	16 35	299	232	24 0	67		
15 **	31.8	12 20	45.5	16.6	2 21	550	20 9	635	467	12 38	271	15 54	337	214	1 33	123		
16 *	32.5	12 50	40.3	27.5	7 55	573	22 59	598	541	10 39	272	18 27	286	256	11 3	30		
17	31.7	13 33	39.2	3.5	23 52	589	22 45	819	415	23 50	260	22 12	288	109	23 47	179		
18 **	29.3	23 29	53.8	6.5	1 16	544	23 6	635	400	0 37	260	22 54	321	51	1 2	270		
19 **	32.7	6 1	55.7	11.1	1 1	521	3 24	619	383	8 43	263	15 43	342	172	5 11	170		
20	31.4	13 17	40.2	23.7	18 44	559	18 3	609	516	18 20	279	16 45	325	256	11 4	69		
21 **	32.6	5 0	48.1	9.2	20 31	552	5 12	629	475	11 52	274	17 52	335	226	6 6	109		
22	31.7	13 34	50.1	15.9	19 16	557	13 34	606	474	10 50	279	13 35	321	252	21 27	69		
23	31.6	14 3	42.0	19.2	20 13	561	20 20	640	515	10 30	281	16 28	336	255	1 27	81		
24	31.4	13 40	41.3	18.7	19 12	567	19 24	621	516	14 14	277	14 39	319	251	1 10	68		
25	32.8	13 8	41.8	23.2	21 46	578	6 57	605	541	14 29	274	17 28	308	254	11 21	54		
26	31.6	12 21	38.9	23.6	2 17	582	22 35	634	539	16 0	271	15 39	307</td					

TABLE IV. - DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS AS RECORDED BY THE MAGNETOGRAPHS

Date	DECLINATION WEST					HORIZONTAL INTENSITY					VERTICAL INTENSITY							
	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range	Mean Daily Value	Maximum	Minimum	Range		
November																		
1	9°+	U.T. h m	9°+	U.T. h m	,	18000 Y +	U.T. h m	18000 Y +	18000 Y +	U.T. h m	Y	43000 Y +	U.T. h m	43000 Y +	43000 Y +	U.T. h m		
2 **	32.3	14 13	39.7	9.9	23 6	29.8	584	19 50	628	525	23 2	103	269	19 48	302	245	23 2	57
3	32.2	13 43	44.9	5.5	20 59	39.4	557	21 9	678	510	18 43	168	277	16 24	345	222	1 21	123
4 *	31.3	17 51	42.8	20.0	1 17	22.8	566	2 27	601	539	0 36	62	279	19 34	315	245	2 47	70
5 *	32.7	14 27	38.2	28.0	0 59	10.2	591	17 53	611	569	12 40	42	271	0 0	288	257	12 41	31
6	33.5	14 25	39.7	29.1	20 20	10.6	597	6 41	612	570	11 27	42	267	17 22	276	251	10 59	25
7	33.5	14 48	39.0	24.5	24 0	14.5	604	23 15	654	574	10 40	80	263	8 13	270	244	23 57	26
8	32.4	12 49	40.3	24.3	0 2	16.0	602	0 38	626	569	11 48	57	260	22 22	273	245	0 0	28
9	32.3	17 45	40.1	24.7	3 2	15.4	600	2 25	631	579	21 52	52	265	20 20	281	252	12 4	29
10	32.6	12 46	39.1	24.9	0 20	14.2	598	0 58	619	569	12 55	50	266	20 33	279	255	10 55	24
11	32.8	13 20	37.8	28.5	2 52	9.3	599	23 10	623	576	11 12	47	265	8 35	277	253	12 20	24
12 *	32.6	13 40	37.8	26.4	0 26	11.4	599	19 32	618	576	10 20	42	263	16 44	267	256	10 59	11
13	33.0	13 6	38.1	29.0	8 22	9.1	602	6 34	623	569	14 20	54	262	16 18	271	249	10 57	22
14	32.5	15 53	39.2	24.1	20 12	15.1	599	21 40	635	568	10 55	67	262	15 53	272	248	10 57	24
15	32.8	12 58	37.8	28.1	8 51	9.7	604	21 55	627	571	10 30	56	260	20 36	266	253	11 20	13
16	31.9	13 26	38.3	20.5	19 45	17.8	602	22 58	631	563	20 32	68	263	21 40	283	246	10 6	37
17	32.9	14 5	38.5	26.3	8 44	12.2	594	16 52	622	565	12 2	57	263	20 13	275	249	3 20	26
18	32.6	13 27	40.1	22.0	20 37	18.1	584	6 15	628	529	13 39	99	270	16 45	302	248	6 54	54
19	32.3	14 25	38.2	25.2	20 49	13.0	584	3 37	613	534	14 27	79	270	15 1	309	249	10 55	60
20 **	32.7	11 50	39.0	21.2	19 35	17.8	588	3 49	638	552	15 44	86	267	16 50	292	242	4 45	50
21 **	31.0	12 40	44.8	16.7	23 6	28.1	557	6 7	619	482	18 20	137	286	16 54	354	253	6 52	101
22	31.0	7 14	40.1	20.8	0 34	19.3	566	18 36	591	515	0 5	76	269	15 54	289	226	3 6	63
23	31.3	11 48	39.3	19.3	19 25	20.0	580	22 56	627	515	12 56	112	275	16 46	299	258	1 12	41
24 **	31.0	13 58	37.8	23.7	0 51	14.1	585	23 3	628	560	11 31	68	268	16 35	288	255	3 31	33
25 **	30.6	12 33	37.5	17.4	20 7	20.1	583	18 6	621	541	21 1	80	268	20 11	299	250	11 21	49
26	31.7	12 20	40.5	17.5	20 27	23.0	575	19 24	622	526	11 21	96	277	15 53	310	266	1 1	44
27	32.9	13 44	40.6	28.5	8 55	12.1	582	18 51	606	517	12 46	89	274	13 10	297	262	10 4	35
28	33.3	12 54	40.2	30.0	9 21	10.2	590	5 8	606	551	11 36	55	270	15 38	285	258	10 4	27
29 *	32.4	12 11	37.9	26.8	21 48	11.1	597	5 39	617	561	9 50	56	265	22 53	275	258	13 28	17
30 *	32.3	12 10	37.5	29.1	6 26	8.4	601	21 55	615	588	4 41	27	263	18 59	274	247	12 4	27
31 *	32.0	13 18	36.6	29.2	0 46	7.4	605	19 9	617	596	0 10	21	263	20 16	272	251	11 4	21
Mean	32.3	-	39.4	23.4	-	16.0	589	-	623	552	-	70.9	268	-	290	250	-	39.7
Mean *	32.7	-	38.0	28.9	-	9.1	599	-	616	578	-	37.2	265	-	276	251	-	25.2
Mean **	31.3	-	41.6	15.6	-	26.0	568	-	626	515	-	111.4	275	-	319	243	-	76.0
December																		
1 *	9°+	U.T. h m	9°+	U.T. h m	,	18000 Y +	U.T. h m	18000 Y +	18000 Y +	U.T. h m	Y	43000 Y +	U.T. h m	43000 Y +	43000 Y +	U.T. h m	Y	
2	32.7	12 21	37.4	30.2	9 0	7.2	611	17 58	629	593	11 20	36	261	0 51	269	255	12 22	14
3 *	31.6	13 12	36.4	23.6	21 36	12.8	604	6 10	626	580	23 29	46	261	16 36	271	250	10 4	21
4 *	32.3	15 20	35.9	28.6	9 35	7.3	603	17 56	617	579	11 29	38	263	16 17	275	252	8 59	23
5 *	31.8	13 27	35.2	26.2	23 40	9.0	603	7 6	620	579	23 25	41	263	20 34	274	246	10 30	28
6 **	32.1	13 11	36.1	26.3	0 3	9.8	605	7 56	618	586	13 30	32	260	0 11	269	249	9 56	20
7 **	31.9	16 59	45.2	20.2	19 55	25.0	602	5 2	640	516	17 6	124	263	19 36	307	245	8 38	62
8	31.3	15 21	38.4	14.8	20 15	23.6	587	20 27	633	534	12 42	99	267	20 33	286	253	2 5	33
9	31.5	13 46	35.9	22.2	22 10	13.7	599	22 22	672	577	0 46	95	267	20 25	276	254	23 21	22
10	32.0	11 58	37.3	29.1	2 15	8.2	599	21 22	615	572	11 55	43	266	19 11	277	252	10 59	25
11	31.9	13 33	37.1	21.3	20 30	15.8	599	20 43	629	580	18 47	49	265	20 35	280	250	10 59	30
12 *	31.5	12 52	38.4	23.7	17 11	14.7	596	1 18	648	561	10 34	87	265	17 11	283	246	1 57	37
13	32.0	13 15	35.4	29.1	9 6	6.3	600	22 4	614	579	11 47	35	263	13 51	270	257	11 45	13
14	31.9	18 43	38.4	20.4	23 10	18.0	599	21 0	633	542	18 58	91	268	19 19	301	251	12 52	50
15	31.3	12 39	39.0	20.3	19 33	18.7	585	4 5	649	539	19 16	110	269	19 42	300	236	4 41	64
16	31.5	13 58	36.5	21.4	23 25	15.1	597	23 32	624	559	14 27	65	266	15 19	282	257	10 55	25
17	31.0	16 16	37.5	23.4	23 33	14.1	588	23 20	629	559	18 40	70	269	17 38	295	257	12 54	38
18	31.3	13 40	35.8	22.9	2 9	12.9	596	23 49	622	578	11 21	44	262	16 44	276	251	3 41	25
19	31.9	13 30	36.9	28.2	9 35	8.7	597	5 26	619	557	14 29	62	265	17 30	281	256	12 23	25
20	32.0	12 57	37.5	29.2	8 56	8.3	598	1 39	623	564	10 45	59	264	15 51	276	253	10 41	23
21 **	32.2	15 58	42.3	24.2	21 25	18.1	578	6 28	629	516	15 8	113	272	17 12</				

TABLE IV(A). - THREE-HOUR-RANGE INDICES "K" FOR THE YEAR 1948.\* (SEE INTRODUCTION PAGE XII).

Date	January		February		March		April		May		June	
	Indices	Sum										
1	0221 3344	19	4102 2101	11	4444 4345	32	5433 3334	28	2322 3343	22	4453 5532	31
2	3332 1453	24	0233 3333	20	3345 4344	30	2443 2233	23	2334 5443	28	1232 1223	16
3	3333 3673	31	3344 5334	29	3544 3313	26	3333 2311	19	3323 3443	25	2111 3311	13
4	1011 1130	8	3123 3332	20	3232 3302	18	1232 2211	14	2312 3444	23	1122 3221	14
5	0113 3232	15	3313 3443	24	3122 3333	20	0113 1211	10	3112 2332	17	1223 3322	18
6	1232 3333	20	1013 3314	16	1122 3434	20	1332 3564	27	3323 3444	26	1322 2322	17
7	4233 3343	25	3212 3323	19	2222 3320	16	3233 3333	23	3354 4443	30	1212 2433	18
8	4333 4344	28	3222 2114	17	0011 3333	14	2122 2110	11	1234 4423	23	1223 3333	20
9	4423 3223	23	3110 2120	10	1133 2332	18	0032 3133	15	3265 4422	28	3222 3322	19
10	1222 3333	19	2132 3310	15	1132 2243	18	3222 3323	20	1333 3543	25	1212 3311	14
11	3332 2231	19	3122 2233	18	1112 2105	13	2223 2231	17	3233 2433	23	1211 1241	13
12	2113 2144	18	1122 3112	13	5343 4323	27	3122 4332	20	2232 3324	21	2332 1233	19
13	0112 1222	11	4122 3223	19	4434 3545	32	1323 3333	21	4432 3111	19	3323 3442	24
14	1012 1210	8	1123 3232	17	5433 3454	31	4323 3412	22	1123 3343	20	0011 1420	9
15	1112 1213	12	3334 3355	29	4765 5674	44	2233 3431	21	4554 4235	32	1111 2200	8
16	1213 2110	11	5433 3443	29	3311 2223	17	2113 3321	16	6643 5655	40	0121 2211	10
17	0123 5454	24	3333 3323	23	3223 2301	16	2112 1321	13	3313 2323	20	2322 3443	23
18	4313 2132	19	3333 4344	27	2221 2211	13	1033 2312	15	3222 2233	19	2313 4343	23
19	3333 3231	21	2323 3234	22	3333 0311	17	1022 3213	14	1011 3111	9	4333 2332	23
20	1123 3334	20	1212 1111	10	0122 4333	18	3223 3214	20	1121 2123	13	3322 3333	22
21	3121 3434	21	0011 1111	6	2243 3123	20	6333 2313	24	3344 5655	35	2424 4444	28
22	3322 3133	20	3211 1100	9	2133 3233	20	4554 4432	31	5343 3344	29	4423 3322	23
23	2212 1222	14	2334 4433	26	2112 1013	11	2223 3311	17	3431 3333	23	1123 3232	17
24	1012 2121	10	3122 2255	22	1111 3100	8	2222 2324	19	4233 3313	22	3231 3233	20
25	0121 1110	7	0212 1122	11	1112 2212	12	3332 3342	23	3432 3213	21	2213 3244	21
26	1112 1111	9	1111 1131	10	1113 3333	18	1123 4422	19	1123 3232	17	3223 3543	25
27	1122 3130	13	3312 3134	20	3332 3313	21	2333 2331	20	3112 1332	16	2233 3412	20
28	1011 1211	8	4332 3213	21	2123 2201	13	1312 3313	17	3101 2332	15	0113 2210	10
29	4222 2443	23	4322 3323	22	1111 2123	12	2353 4413	25	3323 5534	28	0132 1121	11
30	3223 3433	23			2212 1343	18	2132 2232	17	4330 2431	20	1111 3321	13
31	4212 3311	17			3322 2233	20			0112 3334	17		

\* Corresponding figures for the years 1929-1939 are given in an Appendix to the Magnetic and Meteorological Results for 1940.

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE IV (A). - THREE-HOUR-RANGE INDICES "K" FOR THE YEAR 1948.\* (SEE INTRODUCTION PAGE XII).

Date	July		August		September		October		November		December	
	Indices	Sum										
1	3211 2232	16	2323 3224	21	4433 4345	30	4544 4344	32	0002 2355	17	0101 2111	7
2	1211 2213	13	3233 4332	23	4433 4244	28	3553 3433	29	4544 4466	37	3101 1133	13
3	2332 3321	19	1132 3332	18	2111 4323	17	3332 2544	26	5312 2343	23	3323 1201	15
4	2144 4444	27	2224 4430	21	2255 4434	29	1131 2244	18	2122 1110	10	0011 0233	10
5	3112 3324	19	1313 2210	13	1133 2001	11	3331 3321	19	0111 1231	10	3110 1123	12
6	2134 3320	18	0122 3511	15	0111 2213	11	2101 1121	9	0111 1014	9	3333 3554	29
7	1321 2331	16	0432 4125	21	2431 1232	18	1112 1134	14	3223 3123	19	3332 4352	25
8	2233 3320	18	5666 6566	46	2222 3212	16	2222 2112	14	4413 2343	24	3111 1015	13
9	1113 3333	18	5443 5446	35	3112 2320	14	2112 2221	13	4222 3332	21	2212 2221	14
10	1233 3431	20	5364 5664	39	0011 3422	13	2454 4323	27	3311 1112	13	0011 1343	13
11	1121 1333	15	4554 3433	31	2233 2333	21	3324 4433	26	3022 1111	11	4223 2433	23
12	2222 3121	15	3343 3454	29	3323 4433	25	2134 3303	19	1121 3200	10	0001 1001	3
13	2232 3221	17	4313 2231	19	3222 2110	13	2222 3433	21	1011 3343	16	1112 3455	22
14	4333 3323	24	1122 3333	18	0222 2210	11	3233 4446	29	2123 2212	15	3533 2243	25
15	2232 3233	20	3222 2232	18	0113 3345	20	5444 5553	35	2112 1354	19	3112 3314	18
16	2332 4322	21	1111 0101	6	4531 3333	25	1211 1331	13	4332 3322	22	2322 3344	23
17	2333 2332	21	1123 2323	17	2223 3221	17	0031 2128	17	2233 4443	25	3311 1113	14
18	1221 2320	13	2223 1221	15	2123 3224	19	6553 4457	39	3323 4432	24	2212 3301	14
19	2112 1211	11	1111 1354	17	3333 3231	21	5765 4453	39	2443 3344	27	2323 1311	16
20	2123 2322	17	5333 5332	27	0121 2323	14	2131 3453	22	3344 5554	33	0013 2323	14
21	3222 2343	21	2333 4433	25	1112 3141	14	4555 5464	38	4543 3233	27	3244 5443	29
22	1223 3111	14	0123 2234	17	2112 2345	20	0235 5354	27	3133 4443	25	2033 3312	17
23	0322 1212	13	4413 3322	22	5434 3324	28	3334 4554	31	3322 2334	22	1021 2142	13
24	1322 1221	14	2323 3322	20	3423 3444	27	4334 4453	30	3133 2454	25	3542 2123	22
25	2212 3320	15	2211 2132	14	4433 3423	26	3322 4414	23	3133 4454	27	2233 5555	30
26	1123 3433	20	1002 2221	10	4333 3324	25	4323 3424	25	2022 5312	17	5320 1052	18
27	1132 2332	17	0000 2213	8	3112 2100	10	4234 5344	29	0124 3311	15	1323 1233	18
28	1121 1443	17	1122 2324	17	0001 1201	5	1332 2224	19	1233 2233	19	0011 2122	9
29	3344 4431	26	4224 4443	27	3434 3414	26	2213 2123	16	1221 1011	9	2112 2333	17
30	3322 4443	25	4433 3332	25	4224 4411	22	1312 2111	12	1021 1011	7	1111 3555	22
31	4444 4432	29	2223 3323	20			2422 2133	19			3135 4511	23

\* Corresponding figures for the years 1929-1939 are given in Appendix to the Magnetic and Meteorological Results for 1940.

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE V. - MEAN DIURNAL INEQUALITIES OF THE MAGNETIC ELEMENTS  
DECLINATION, INCLINATION AND HORIZONTAL INTENSITY

All Days

## DECLINATION WEST (Unit 0'.01)

Month and Season, 1948	Universal Time. Hour commencing.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
January	-198	-182	-133	-103	-051	-066	-084	-102	-156	-166	-004	+182	+326	+401	+401	+326	+254	+183	+113	-035	-160	-240	-247	-253
February	-199	-197	-155	-112	-069	-118	-106	-136	-237	-228	-065	+153	+369	+513	+487	+384	+240	+192	+125	+026	-106	-195	-281	-282
March	-233	-220	-258	-193	-131	-104	-091	-271	-362	-327	-103	+262	+586	+695	+658	+503	+273	+082	+016	-044	-153	-176	-221	-175
April	-126	-186	-190	-177	-173	-206	-386	-569	-638	-520	-194	+228	+606	+760	+697	+540	+351	+175	+071	+025	+008	+016	-033	-079
May	-089	-136	-132	-193	-189	-372	-521	-592	-620	-453	-152	+247	+573	+702	+710	+557	+363	+206	+051	+015	+016	+048	+007	-057
June	-073	-134	-181	-230	-377	-554	-689	-743	-682	-446	-034	+367	+672	+784	+785	+642	+423	+254	+111	+070	+048	+030	-027	-027
July	-089	-199	-226	-268	-349	-532	-647	-652	-606	-369	-056	+331	+596	+704	+695	+558	+391	+276	+144	+092	+066	+091	+061	-011
August	-231	-249	-245	-263	-261	-369	-432	-426	-474	-277	+049	+440	+706	+750	+708	+543	+296	+141	+058	-043	-015	-072	-148	-183
September	-264	-208	-219	-295	-275	-195	-252	-369	-393	-271	-014	+363	+623	+696	+667	+479	+265	+153	+063	+022	-037	-138	-151	-241
October	-306	-276	-204	-163	-102	+043	+050	-118	-274	-181	+069	+393	+620	+654	+551	+388	+125	+078	-047	-135	-221	-299	-332	-303
November	-282	-216	-153	-053	-050	-014	-013	-060	-168	-132	+053	+241	+429	+447	+432	+329	+200	+145	+092	-075	-241	-263	-303	-346
December	-194	-135	-077	-028	-023	-045	-021	-037	-094	-115	-013	+132	+286	+351	+339	+310	+243	+145	+115	-068	-227	-256	-287	-289
Year	-190	-195	-181	-173	-171	-211	-266	-340	-392	-290	-039	+278	+533	+621	+594	+463	+285	+169	+076	-013	-085	-121	-164	-187
Winter	-218	-183	-130	-074	-048	-061	-056	-084	-164	-160	-007	+177	+353	+428	+415	+337	+234	+166	+111	-038	-184	-239	-280	-293
Equinox	-232	-223	-218	-207	-170	-116	-170	-332	-417	-325	-061	+312	+609	+701	+643	+478	+254	+122	+026	-033	-101	-149	-184	-200
Summer	-121	-180	-196	-239	-294	-457	-572	-603	-596	-386	-048	+346	+637	+735	+725	+575	+368	+219	+091	+034	+029	+024	-027	-070

## INCLINATION (Unit 0'.01)

January	-019	-023	-024	-040	-066	-086	-095	-083	-056	-014	+026	+049	+055	+044	+066	+061	+060	+056	+054	+053	+023	-011	-011	-020
February	-042	-040	-049	-047	-062	-090	-114	-104	-054	+007	+061	+088	+103	+106	+096	+094	+082	+049	+004	-006	-006	-021	-027	-030
March	-063	-053	-032	-044	-082	-077	-062	-047	-002	+053	+102	+109	+084	+064	+060	+076	+076	+046	+003	-019	-040	-043	-051	-053
April	-070	-054	-030	-037	-055	-055	-047	+006	+056	+109	+150	+122	+103	+086	+071	+028	-009	-028	-034	-052	-060	-059	-068	-078
May	-044	-052	-050	-053	-026	-029	+027	+074	+122	+147	+156	+138	+120	+092	+050	+015	-032	-104	-122	-099	-094	-088	-081	-066
June	-035	-041	-038	-043	-031	-005	+042	+095	+142	+170	+164	+110	+065	+057	+008	-044	-065	-071	-082	-103	-103	-078	-066	-049
July	-038	-035	-036	-043	-049	-033	+020	+067	+114	+130	+130	+109	+089	+077	+052	+004	-019	-059	-079	-101	-092	-084	-078	-054
August	-053	-068	-062	-073	-086	-048	+011	+090	+145	+163	+150	+089	+076	+047	+050	+055	+027	-027	-069	-088	-108	-074	-079	-062
September	-055	-068	-083	-081	-061	-055	-040	+008	+077	+123	+134	+120	+097	+066	+045	+060	+033	-001	-026	-038	-046	-053	-074	-069
October	-057	-072	-085	-106	-106	-129	-118	-050	+028	+096	+154	+177	+170	+139	+113	+091	+058	+025	-014	-031	-046	-039	-116	-085
November	-042	-037	-059	-065	-085	-087	-087	-065	-007	+043	+070	+091	+100	+086	+066	+060	+054	000	+017	+024	000	-024	-025	-032
December	-019	-033	-041	-058	-086	-093	-104	-099	-059	+005	+045	+065	+050	+040	+044	+061	+059	+048	+049	+061	+034	+031	+008	-008
Year	-045	-048	-049	-058	-066	-066	-047	-009	+042	+086	+112	+106	+093	+075	+060	+046	+027	-006	-025	-033	-045	-045	-056	-051
Winter	-031	-033	-043	-053	-075	-089	-100	-088	-044	+010	+051	+073	+077	+069	+068	+069	+064	+038	+031	+033	+013	-006	-014	-023
Equinox	-061	-062	-058	-067	-076	-079	-067	-021	+040	+095	+135	+132	+114	+089	+072	+062	+040	+011	-018	-035	-048	-049	-077	-071
Summer	-043	-049	-047	-053	-048	-029	+025	+082	+131	+153	+150	+112	+088	+068	+040	+008	-022	-065	-088	-098	-099	-081	-076	-058

## HORIZONTAL INTENSITY (Unit 0.1Y)

January	+ 26	+ 26	+ 26	+ 48	+ 83	+ 118	+ 128	+ 109	+ 67	- 10	- 74	- 103	- 112	- 88	- 97	- 70	- 59	- 50	- 38	- 38	+ 02	+ 40	+ 32	+ 38
February	+ 60	+ 51	+ 64	+ 60	+ 85	+ 128	+ 162	+ 143	+ 64	- 44	- 133	- 174	- 195	- 180	- 138	- 116	- 87	- 34	+ 32	+ 44	+ 42	+ 60	+ 59	+ 55
March	+ 92	+ 73	+ 40	+ 61	+ 112	+ 98	+ 78	+ 63	- 10	- 116	- 213	- 240	- 199	- 136	- 92	- 72	- 55	+ 01	+ 60	+ 77	+ 102	+ 95	+ 97	+ 90
April	+ 112	+ 79	+ 47	+ 62	+ 89	+ 89	+ 86	+ 08	- 88	- 202	- 298	- 283	- 253	- 192	- 127	- 26	+ 57	+ 100	+ 104	+ 127	+ 129	+ 122	+ 129	+ 137
May	+ 68	+ 71	+ 64	+ 71	+ 43	+ 50	- 32	- 114	- 205	- 274	- 320	- 321	- 287	- 198	- 89	+ 04	+ 108	+ 241	+ 275	+ 226	+ 196	+ 168	+ 148	+ 104
June	+ 63	+ 67	+ 60	+ 70	+ 65	+ 32	- 45	- 134	- 225	- 298	- 324	- 269	- 203	- 167	- 50	+ 70	+ 134	+ 169	+ 195	+ 220	+ 202	+ 152	+ 125	+ 92
July	+ 59	+ 52	+ 51	+ 66	+ 86	+ 64	- 21	- 102	- 193	- 243	- 266	- 249	- 213	- 172	- 99	+ 15	+ 70	+ 150	+ 182	+ 208	+ 180	+ 154	+ 135	+ 92
August	+ 70	+ 85	+ 74	+ 89	+ 114	+ 56	- 33	- 160																

TABLE V. - MEAN DIURNAL INEQUALITIES OF GEOGRAPHICAL  
COMPONENTS OF MAGNETIC INTENSITY

All days

## NORTH COMPONENT (Unit 0.1γ)

Month and Season, 1948	Universal Time. Hour commencing.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
January	+ 44	+ 42	+ 38	+ 57	+ 86	+ 122	+ 134	+ 117	+ 80	+ 05	- 73	- 118	- 140	- 123	- 132	- 99	- 81	- 66	- 48	- 34	+ 17	+ 61	+ 54	+ 61
February	+ 77	+ 68	+ 77	+ 69	+ 90	+ 137	+ 169	+ 153	+ 85	- 23	- 126	- 186	- 226	- 224	- 180	- 149	- 108	- 51	+ 20	+ 41	+ 51	+ 77	+ 84	+ 80
March	+ 112	+ 92	+ 63	+ 78	+ 122	+ 106	+ 85	+ 87	+ 23	- 85	- 201	- 260	- 249	- 197	- 150	- 117	- 79	- 06	+ 58	+ 80	+ 115	+ 110	+ 116	+ 105
April	+ 122	+ 95	+ 64	+ 77	+ 104	+ 107	+ 120	+ 60	- 29	- 152	- 276	- 300	- 305	- 258	- 189	- 75	+ 24	+ 83	+ 96	+ 123	+ 127	+ 119	+ 130	+ 142
May	+ 75	+ 82	+ 75	+ 88	+ 60	+ 83	+ 16	- 59	- 146	- 229	- 302	- 339	- 335	- 259	- 152	- 47	+ 74	+ 219	+ 269	+ 221	+ 192	+ 161	+ 145	+ 108
June	+ 69	+ 78	+ 76	+ 90	+ 98	+ 82	+ 18	- 65	- 160	- 253	- 316	- 299	- 261	- 236	- 121	+ 11	+ 94	+ 144	+ 182	+ 211	+ 195	+ 147	+ 126	+ 93
July	+ 66	+ 69	+ 71	+ 89	+ 117	+ 111	+ 38	- 41	- 135	- 206	- 257	- 276	- 264	- 234	- 161	- 36	+ 34	+ 123	+ 166	+ 197	+ 172	+ 144	+ 128	+ 92
August	+ 90	+ 106	+ 95	+ 112	+ 136	+ 89	+ 07	- 119	- 206	- 260	- 289	- 247	- 242	- 164	- 128	- 76	+ 13	+ 109	+ 173	+ 201	+ 202	+ 141	+ 140	+ 106
September	+ 100	+ 109	+ 128	+ 128	+ 105	+ 92	+ 80	+ 24	- 87	- 183	- 241	- 273	- 257	- 195	- 131	- 107	- 22	+ 38	+ 81	+ 100	+ 106	+ 119	+ 140	+ 127
October	+ 67	+ 96	+ 116	+ 139	+ 136	+ 151	+ 139	+ 66	- 34	- 154	- 275	- 339	- 332	- 255	- 172	- 98	- 19	+ 25	+ 81	+ 103	+ 116	+ 105	+ 213	+ 127
November	+ 75	+ 57	+ 79	+ 74	+ 101	+ 106	+ 104	+ 80	+ 10	- 76	- 142	- 186	- 207	- 169	- 115	- 79	- 48	+ 29	+ 07	+ 15	+ 60	+ 78	+ 74	+ 77
December	+ 38	+ 48	+ 51	+ 70	+ 107	+ 120	+ 128	+ 78	- 21	- 90	- 131	- 123	- 103	- 91	- 97	- 71	- 41	- 42	- 40	+ 09	- 01	+ 25	+ 43	
Year	+ 78	+ 79	+ 78	+ 89	+ 105	+ 109	+ 87	+ 36	- 43	- 136	- 216	- 246	- 245	- 201	- 144	- 81	- 16	+ 51	+ 87	+ 102	+ 114	+ 105	+ 115	+ 97
Winter	+ 59	+ 54	+ 61	+ 68	+ 96	+ 121	+ 135	+ 120	+ 63	- 29	- 108	- 155	- 174	- 155	- 130	- 106	- 77	- 32	- 16	- 05	+ 34	+ 54	+ 59	+ 65
Equinox	+ 100	+ 98	+ 93	+ 106	+ 117	+ 114	+ 106	+ 59	- 32	- 144	- 248	- 293	- 286	- 226	- 161	- 99	- 24	+ 35	+ 79	+ 102	+ 116	+ 113	+ 150	+ 125
Summer	+ 75	+ 84	+ 79	+ 95	+ 103	+ 91	+ 20	- 71	- 162	- 237	- 291	- 290	- 276	- 223	- 141	- 37	+ 54	+ 149	+ 197	+ 208	+ 190	+ 148	+ 135	+ 100

## WEST COMPONENT (Unit 0.1γ)

January	- 101	- 93	- 67	- 47	- 13	- 16	- 23	- 36	- 72	- 90	- 15	+ 80	+ 155	+ 199	+ 198	+ 162	+ 126	+ 89	+ 54	- 25	- 85	- 121	- 126	- 129
February	- 96	- 97	- 72	- 50	- 23	- 42	- 29	- 49	- 116	- 129	- 57	+ 52	+ 164	+ 243	+ 237	+ 185	+ 113	+ 97	+ 72	+ 21	- 50	- 94	- 140	- 141
March	- 109	- 105	- 131	- 93	- 51	- 39	- 36	- 134	- 195	- 194	- 91	+ 100	+ 279	+ 348	+ 335	+ 256	+ 136	+ 44	+ 19	- 11	- 65	- 78	- 102	- 78
April	- 49	- 86	- 94	- 84	- 77	- 95	- 191	- 302	- 355	- 311	- 153	+ 74	+ 281	+ 373	+ 350	+ 284	+ 197	+ 110	+ 55	+ 35	+ 26	+ 29	+ 04	+ 19
May	- 36	- 61	- 60	- 91	- 94	- 190	- 283	- 335	- 365	- 287	- 134	+ 78	+ 258	+ 341	+ 364	+ 298	+ 212	+ 150	+ 73	+ 46	+ 41	+ 54	+ 28	+ 13
June	- 28	- 60	- 87	- 111	- 190	- 290	- 375	- 418	- 401	- 288	- 72	+ 151	+ 324	+ 390	+ 410	+ 354	+ 248	+ 164	+ 92	+ 74	+ 59	+ 41	+ 07	+ 01
July	- 38	- 97	- 112	- 132	- 172	- 273	- 348	- 365	- 355	- 237	- 74	+ 135	+ 282	+ 347	+ 354	+ 300	+ 220	+ 172	+ 107	+ 84	+ 65	+ 74	+ 55	+ 10
August	- 111	- 119	- 118	- 125	- 120	- 187	- 236	- 254	- 295	- 196	- 22	+ 199	+ 346	+ 384	+ 367	+ 285	+ 165	+ 96	+ 61	+ 11	+ 26	- 16	- 58	- 82
September	- 128	- 96	- 98	- 140	- 133	- 91	- 125	- 198	- 230	- 180	- 49	+ 153	+ 298	+ 349	+ 344	+ 245	+ 142	+ 90	+ 48	+ 29	- 02	- 56	- 59	- 111
October	- 156	- 135	- 92	- 66	- 33	+ 49	+ 51	- 54	- 156	- 125	- 08	+ 158	+ 284	+ 316	+ 273	+ 196	+ 65	+ 47	- 12	- 57	- 102	- 146	- 145	
November	- 142	- 109	- 71	- 17	- 10	+ 10	+ 11	- 19	- 90	- 85	+ 05	+ 101	+ 200	+ 217	+ 217	+ 167	+ 102	+ 85	+ 52	- 39	- 122	- 131	- 154	- 177
December	- 100	- 66	- 34	- 04	+ 05	- 04	+ 11	+ 01	- 38	- 67	- 22	+ 50	+ 136	+ 175	+ 171	+ 154	+ 121	+ 73	+ 56	- 44	- 123	- 140	- 153	- 151
Year	- 91	- 94	- 86	- 80	- 76	- 97	- 131	- 180	- 222	- 182	- 58	+ 111	+ 251	+ 307	+ 302	+ 241	+ 154	+ 101	+ 56	+ 10	- 28	- 49	- 70	- 86
Winter	- 110	- 91	- 61	- 30	- 10	- 13	- 08	- 26	- 79	- 93	- 22	+ 71	+ 164	+ 209	+ 206	+ 167	+ 116	+ 86	+ 59	- 22	- 95	- 122	- 143	- 150
Equinox	- 111	- 106	- 104	- 96	- 74	- 44	- 75	- 172	- 234	- 203	- 75	+ 121	+ 286	+ 347	+ 326	+ 245	+ 135	+ 73	+ 28	- 01	- 36	- 63	- 76	- 88
Summer	- 53	- 84	- 94	- 115	- 144	- 235	- 311	- 343	- 354	- 252	- 76	+ 141	+ 303	+ 366	+ 374	+ 309	+ 211	+ 146	+ 83	+ 54	+ 48	+ 38	+ 08	- 21

## VERTICAL COMPONENT (Unit 0.1γ)

January	- 07	- 22	- 23	- 27	- 33	- 25	- 32	- 34	- 37	- 73	- 82	- 69	- 68	- 51	+ 02	+ 49	+ 70	+ 78	+ 100	+ 98	+ 84	+ 57	+ 33	+ 17
February	- 06	- 21	- 20	- 23	- 19	- 13	- 19	- 27	- 39	- 81	- 97	- 101	- 97	- 53	+ 11	+ 55	+ 83	+ 92	+ 87	+ 82	+ 77	+ 66	+ 45	+ 25
March	- 03	- 15	- 18	- 11	- 24	- 30	- 34	- 16	- 31	- 86	- 143	- 180	- 173	- 95	- 08	+ 75	+ 136	+ 163	+ 148	+ 115	+ 96	+ 73	+ 48	+ 23
April	+ 18	- 02	+ 08	+ 16	+ 19	+ 18	+ 37	+ 37	- 09	- 94	- 175	- 236	- 234	- 148	- 50	+ 37	+ 102	+ 137	+ 125	+ 113	+ 94	+ 79	+ 66	+ 47
May	+ 07	- 14	- 24	- 18	+ 10	+ 16	+ 20	- 08	- 56	- 129	- 204	- 268	- 254	- 143	- 36	+ 63	+ 140	+ 200	+ 220	+ 184	+ 132	+ 87	+ 62	+ 15
June	+ 26	+ 14	+ 08	+ 15	+ 46	+ 54	+ 40	+ 16	- 31	- 103	- 184	- 244	- 245	- 190	- 91	+								

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE VI. - MEAN DIURNAL INEQUALITIES OF THE MAGNETIC ELEMENTS  
DECLINATION, INCLINATION AND HORIZONTAL INTENSITY

International Quiet Days

DECLINATION WEST (Unit 0'.01)

Month and Season, 1948	Universal Time. Hour commencing.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
January	- 69	- 65	- 55	- 79	- 101	- 131	- 149	- 175	- 233	- 205	- 7	+ 165	+ 293	+ 335	+ 269	+ 215	+ 139	+ 69	+ 67	+ 31	- 23	- 73	- 99	- 103
February	- 145	- 239	- 189	- 165	- 115	- 141	- 155	- 193	- 293	- 281	- 93	+ 147	+ 325	+ 445	+ 433	+ 319	+ 173	+ 109	+ 67	+ 51	+ 17	- 21	- 25	- 37
March	- 122	- 150	- 126	- 122	- 184	- 158	- 220	- 370	- 528	- 452	- 226	+ 110	+ 488	+ 592	+ 606	+ 486	+ 334	+ 204	+ 122	+ 36	- 4	- 38	- 152	- 136
April	- 14	- 52	- 58	- 78	- 128	- 214	- 408	- 646	- 750	- 626	- 346	+ 102	+ 546	+ 714	+ 656	+ 522	+ 318	+ 154	+ 84	+ 64	+ 42	+ 62	+ 36	+ 12
May	+ 18	- 12	- 62	- 180	- 326	- 494	- 634	- 714	- 612	- 416	- 116	+ 240	+ 584	+ 686	+ 670	+ 492	+ 340	+ 192	+ 88	+ 80	+ 122	+ 90	+ 4	- 34
June	- 43	- 111	- 167	- 249	- 331	- 449	- 563	- 605	- 567	- 407	- 73	+ 291	+ 519	+ 607	+ 591	+ 441	+ 325	+ 207	+ 121	+ 137	+ 95	+ 97	+ 87	+ 41
July	- 46	- 128	- 184	- 164	- 344	- 624	- 754	- 786	- 750	- 440	+ 6	+ 498	+ 782	+ 822	+ 698	+ 470	+ 204	+ 112	+ 74	+ 110	+ 128	+ 130	+ 98	+ 86
August	- 165	- 149	- 169	- 203	- 287	- 395	- 483	- 533	- 525	- 341	- 53	+ 343	+ 591	+ 659	+ 631	+ 497	+ 323	+ 173	+ 89	+ 67	+ 73	+ 37	- 89	- 101
September	- 111	- 135	- 141	- 159	- 189	- 181	- 233	- 351	- 419	- 327	- 61	+ 241	+ 473	+ 543	+ 507	+ 371	+ 209	+ 133	+ 73	+ 55	+ 31	- 89	- 121	- 125
October	- 167	- 101	- 71	- 135	- 105	- 123	- 205	- 353	- 429	- 359	- 163	+ 191	+ 441	+ 519	+ 475	+ 343	+ 195	+ 117	+ 53	+ 55	+ 43	- 7	- 81	- 129
November	- 190	- 162	- 98	- 64	- 58	- 122	- 140	- 156	- 254	- 208	- 6	+ 170	+ 364	+ 388	+ 332	+ 280	+ 206	+ 130	+ 48	- 46	- 112	- 94	- 96	- 120
December	- 141	- 63	- 23	+ 7	- 51	- 73	- 93	- 135	- 135	+ 5	+ 137	+ 237	+ 265	+ 217	+ 211	+ 141	+ 87	+ 29	- 25	- 95	- 185	- 141	- 101	
Year	- 100	- 114	- 112	- 133	- 185	- 259	- 336	- 413	- 458	- 350	- 94	+ 220	+ 470	+ 548	+ 507	+ 387	+ 242	+ 141	+ 76	+ 51	+ 26	- 8	- 48	- 62
Winter	- 136	- 132	- 91	- 75	- 81	- 117	- 134	- 151	- 229	- 207	- 25	+ 155	+ 305	+ 358	+ 313	+ 256	+ 165	+ 99	+ 53	+ 3	- 53	- 93	- 90	- 90
Equinox	- 104	- 110	- 99	- 124	- 152	- 169	- 267	- 430	- 532	- 441	- 199	+ 161	+ 487	+ 592	+ 561	+ 431	+ 264	+ 152	+ 83	+ 53	+ 28	- 18	- 80	- 95
Summer	- 59	- 100	- 146	- 199	- 322	- 491	- 609	- 660	- 614	- 401	- 59	+ 343	+ 619	+ 694	+ 648	+ 475	+ 298	+ 171	+ 93	+ 99	+ 105	+ 89	+ 25	- 2

INCLINATION (Unit 0'.01)

January	+ 26	+ 21	+ 14	+ 6	- 11	- 27	- 47	- 40	- 19	+ 24	+ 65	+ 84	+ 65	+ 36	+ 35	+ 16	+ 28	+ 1	- 29	- 41	- 54	- 56	- 51	- 47
February	- 44	- 19	+ 1	- 10	- 16	- 34	- 46	- 41	+ 5	+ 50	+ 83	+ 110	+ 117	+ 112	+ 73	+ 34	+ 10	- 16	- 35	- 60	- 66	- 72	- 64	- 71
March	- 15	- 17	+ 3	- 1	- 3	- 24	- 30	- 13	+ 17	+ 55	+ 76	+ 77	+ 52	+ 68	+ 40	+ 20	+ 11	- 22	- 44	- 48	- 66	- 51	- 43	- 32
April	- 30	- 16	- 1	- 1	- 16	- 26	- 28	+ 2	+ 37	+ 91	+ 124	+ 92	+ 89	+ 90	+ 55	+ 11	- 15	- 34	- 82	- 66	- 70	- 68	- 90	
May	- 32	- 21	- 1	+ 1	+ 9	+ 17	+ 41	+ 79	+ 123	+ 145	+ 157	+ 104	+ 48	+ 33	- 8	- 41	- 73	- 94	- 114	- 83	- 78	- 92	- 69	- 52
June	- 10	- 3	+ 2	- 4	- 6	- 3	+ 29	+ 79	+ 115	+ 146	+ 125	+ 68	+ 50	+ 48	- 7	- 30	- 75	- 82	- 67	- 87	- 83	- 78	- 78	- 52
July	- 39	- 52	- 53	- 40	- 47	- 27	+ 39	+ 100	+ 144	+ 184	+ 179	+ 147	+ 99	+ 66	+ 32	- 24	- 32	- 79	- 87	- 102	- 105	- 111	- 101	- 86
August	0	- 5	- 10	- 14	+ 4	+ 23	+ 37	+ 69	+ 99	+ 120	+ 108	+ 68	+ 15	+ 2	- 7	- 9	- 52	- 55	- 67	- 65	- 79	- 71	- 70	- 51
September	- 50	- 25	- 29	- 27	- 25	- 15	+ 4	+ 43	+ 87	+ 91	+ 91	+ 87	+ 61	+ 52	+ 49	+ 56	+ 19	- 28	- 54	- 61	- 77	- 83	- 73	- 97
October	- 2	- 9	- 25	- 42	- 47	- 52	- 45	- 9	+ 29	+ 101	+ 139	+ 141	+ 128	+ 96	+ 54	+ 21	- 15	- 34	- 31	- 63	- 79	- 86	- 79	- 90
November	+ 35	+ 18	+ 15	+ 6	- 1	- 22	- 51	- 48	- 12	+ 20	+ 30	+ 54	+ 55	+ 59	+ 62	+ 30	+ 2	- 25	- 36	- 38	- 40	- 43	- 35	
December	+ 22	+ 10	+ 9	- 9	- 25	- 24	- 36	- 33	- 13	+ 38	+ 51	+ 76	+ 68	+ 62	+ 49	+ 18	- 14	- 41	- 24	- 22	- 26	- 36	- 54	
Year	- 12	- 10	- 6	- 11	- 15	- 18	- 11	+ 16	+ 51	+ 89	+ 102	+ 92	+ 71	+ 60	+ 36	+ 9	- 17	- 42	- 55	- 63	- 68	- 70	- 64	- 63
Winter	+ 10	+ 8	+ 10	- 2	- 13	- 27	- 45	- 41	- 10	+ 33	+ 57	+ 81	+ 76	+ 67	+ 55	+ 25	+ 7	- 20	- 35	- 41	- 45	- 49	- 49	- 52
Equinox	- 24	- 17	- 13	- 18	- 23	- 29	- 25	+ 6	+ 43	+ 85	+ 108	+ 99	+ 83	+ 77	+ 50	+ 27	0	- 30	- 46	- 64	- 72	- 73	- 66	- 77
Summer	- 20	- 20	- 16	- 14	- 10	+ 3	+ 37	+ 82	+ 120	+ 149	+ 147	+ 97	+ 53	+ 37	+ 3	- 26	- 58	- 78	- 84	- 84	- 86	- 88	- 78	- 60

HORIZONTAL INTENSITY (Unit 0.1Y)

January	- 21	- 21	- 11	- 1	+ 19	+ 47	+ 69	+ 55	+ 21	- 59	- 125	- 145	- 121	- 65	- 49	- 19	- 33	+ 7	+ 53	+ 71	+ 91	+ 85	+ 77	+ 71
February	+ 68	+ 24	0	+ 18	+ 30	+ 56	+ 72	+ 64	+ 2	- 86	- 150	- 192	- 200	- 186	- 112	- 46	0	+ 38	+ 66	+ 100	+ 108	+ 116	+ 100	+ 110
March	+ 46	+ 42	+ 10	+ 20	+ 26	+ 50	+ 66	+ 38	- 24	- 108	- 166	- 194	- 154	- 150	- 78	- 18	+ 4	+ 54	+ 84	+ 92	+ 114	+ 92	+ 80	+ 64
April	+ 67	+ 51	+ 31	+ 31	+ 57	+ 71	+ 83	+ 33	- 51	- 173	- 245	- 239	- 207	- 125	- 29	+ 35	+ 77	+ 107	+ 151	+ 127	+ 133	+ 125	+ 155	
May	+ 51	+ 33	+ 9	+ 15	+ 21	+ 19	- 21	- 99	- 185	- 257	- 301	- 257	- 177	- 119	- 23	+ 65	+ 135	+ 183	+ 219	+ 167	+ 149	+ 159	+ 121	+ 87
June	+ 37	+ 29	+ 21	+ 35	+ 49	+ 47	- 9	- 101	- 183	- 261	- 261	- 201	- 177	- 151	- 33	+ 35	+ 119	+ 157	+ 141	+ 169	+ 159	+ 143	+ 129	+ 99
July	+ 76	+ 92	+ 84	+ 72	+ 94	+ 70	- 30	- 136	- 236	- 338	- 356	- 310	-											

TABLE VI. - MEAN DIURNAL INEQUALITIES OF THE GEOGRAPHICAL  
COMPONENTS OF MAGNETIC INTENSITY

International Quiet Days

## NORTH COMPONENT (Unit 0.1γ)

Month and Season, 1948	Universal Time. Hour commencing.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
January	- 14	- 15	- 6	+ 6	+ 28	+ 58	+ 82	+ 70	+ 42	- 40	- 123	- 158	- 146	- 95	- 73	- 38	- 45	+ 1	+ 46	+ 67	+ 92	+ 90	+ 85	+ 79
February	+ 80	+ 45	+ 17	+ 33	+ 40	+ 68	+ 85	+ 81	+ 29	- 59	- 140	- 203	- 227	- 224	- 150	- 74	- 16	+ 28	+ 59	+ 94	+ 105	+ 116	+ 101	+ 112
March	+ 57	+ 55	+ 21	+ 31	+ 42	+ 64	+ 85	+ 71	+ 24	- 66	- 143	- 201	- 196	- 202	- 132	- 62	- 26	+ 35	+ 72	+ 87	+ 113	+ 94	+ 93	+ 75
April	+ 67	+ 55	+ 36	+ 38	+ 68	+ 89	+ 119	+ 91	+ 18	- 114	- 226	- 251	- 285	- 269	- 183	- 76	+ 6	+ 62	+ 98	+ 143	+ 121	+ 126	+ 120	+ 152
May	+ 49	+ 34	+ 15	+ 31	+ 50	+ 64	+ 37	- 33	- 127	- 216	- 286	- 275	- 228	- 180	- 84	+ 19	+ 102	+ 163	+ 208	+ 157	+ 136	+ 149	+ 119	+ 89
June	+ 40	+ 39	+ 36	+ 57	+ 78	+ 87	+ 42	- 45	- 129	- 220	- 251	- 225	- 222	- 204	- 86	- 6	+ 88	+ 136	+ 128	+ 154	+ 148	+ 132	+ 119	+ 94
July	+ 79	+ 102	+ 100	+ 86	+ 124	+ 126	+ 39	- 63	- 165	- 293	- 352	- 351	- 296	- 221	- 121	+ 22	+ 66	+ 150	+ 161	+ 175	+ 170	+ 168	+ 155	+ 128
August	+ 33	+ 37	+ 43	+ 54	+ 48	+ 28	+ 3	- 48	- 104	- 166	- 204	- 205	- 154	- 123	- 83	- 33	+ 71	+ 95	+ 124	+ 118	+ 130	+ 121	+ 128	+ 98
September	+ 86	+ 61	+ 73	+ 71	+ 73	+ 53	+ 40	- 5	- 85	- 121	- 173	- 214	- 202	- 182	- 152	- 112	- 26	+ 54	+ 97	+ 108	+ 128	+ 145	+ 128	+ 158
October	+ 20	+ 30	+ 51	+ 76	+ 84	+ 91	+ 97	+ 65	+ 8	- 122	- 217	- 269	- 272	- 224	- 139	- 56	+ 21	+ 57	+ 61	+ 106	+ 119	+ 134	+ 131	+ 145
November	- 13	+ 6	- 0	+ 5	+ 10	+ 46	+ 87	+ 82	+ 36	- 27	- 74	- 133	- 149	- 147	- 126	- 62	- 2	+ 42	+ 62	+ 72	+ 80	+ 75	+ 73	+ 63
December	- 11	- 6	- 10	+ 11	+ 34	+ 34	+ 52	+ 49	+ 26	- 55	- 87	- 133	- 130	- 115	- 83	- 37	+ 25	+ 63	+ 66	+ 44	+ 48	+ 58	+ 64	+ 84
Year	+ 39	+ 37	+ 31	+ 42	+ 57	+ 67	+ 64	+ 26	- 36	- 125	- 190	- 218	- 209	- 182	- 118	- 43	+ 22	+ 74	+ 99	+ 110	+ 116	+ 117	+ 110	+ 106
Winter	+ 11	+ 8	0	+ 14	+ 28	+ 52	+ 77	+ 71	+ 33	- 45	- 106	- 157	- 163	- 145	- 108	- 53	- 10	+ 34	+ 58	+ 69	+ 81	+ 85	+ 81	+ 85
Equinox	+ 58	+ 50	+ 45	+ 54	+ 67	+ 74	+ 85	+ 56	- 9	- 106	- 190	- 234	- 239	- 219	- 152	- 77	- 6	+ 52	+ 82	+ 111	+ 120	+ 125	+ 118	+ 133
Summer	+ 50	+ 53	+ 49	+ 57	+ 75	+ 76	+ 30	- 47	- 131	- 224	- 273	- 264	- 225	- 182	- 94	+ 1	+ 82	+ 136	+ 155	+ 151	+ 146	+ 143	+ 130	+ 102

## WEST COMPONENT (Unit 0.1γ)

January	- 40	- 38	- 31	- 42	- 51	- 62	- 68	- 84	- 121	- 119	- 25	+ 64	+ 136	+ 168	+ 135	+ 111	+ 69	+ 38	+ 45	+ 28	+ 3	- 25	- 40	- 43
February	- 66	- 123	- 101	- 85	- 56	- 66	- 71	- 92	- 156	- 164	- 75	+ 46	+ 140	+ 206	+ 212	+ 162	+ 92	+ 64	+ 47	+ 44	+ 27	+ 8	+ 3	- 1
March	- 57	- 73	- 66	- 62	- 94	- 76	- 106	- 191	- 285	- 259	- 148	+ 26	+ 234	+ 290	+ 310	+ 256	+ 179	+ 118	+ 79	+ 35	+ 17	- 5	- 68	- 62
April	+ 4	- 19	- 26	- 36	- 59	- 102	- 204	- 339	- 408	- 363	- 228	+ 14	+ 251	+ 346	+ 329	+ 273	+ 175	+ 95	+ 63	+ 59	+ 44	+ 55	+ 40	+ 32
May	+ 18	- 1	- 32	- 93	- 170	- 260	- 341	- 397	- 357	- 265	- 112	+ 85	+ 282	+ 346	+ 353	+ 273	+ 204	+ 133	+ 84	+ 71	+ 00	+ 75	+ 22	- 4
June	- 17	- 54	- 86	- 127	- 168	- 232	- 302	- 339	- 333	- 261	- 83	+ 122	+ 247	+ 298	+ 310	+ 241	+ 193	+ 137	+ 88	+ 101	+ 77	+ 76	+ 68	+ 38
July	- 12	- 53	- 84	- 75	- 168	- 321	- 407	- 442	- 439	- 291	- 56	+ 214	+ 379	+ 413	+ 362	+ 262	+ 123	+ 87	+ 68	+ 90	+ 99	+ 100	+ 80	+ 69
August	- 85	- 75	- 85	- 102	- 149	- 212	- 264	- 301	- 306	- 215	- 64	+ 153	+ 298	+ 341	+ 332	+ 267	+ 189	+ 111	+ 70	+ 57	+ 62	+ 41	- 27	- 39
September	- 46	- 64	- 65	- 75	- 91	- 90	- 121	- 193	- 244	- 200	- 63	+ 96	+ 225	+ 267	+ 252	+ 185	+ 110	+ 82	+ 56	+ 49	+ 39	- 24	- 45	- 42
October	- 88	- 50	- 30	- 61	- 44	- 52	- 96	- 183	- 234	- 218	- 126	+ 59	+ 196	+ 247	+ 237	+ 179	+ 110	+ 74	+ 39	+ 48	+ 44	+ 19	- 22	- 46
November	- 107	- 88	- 54	- 34	- 30	- 59	- 62	- 72	- 133	- 119	- 16	+ 71	+ 175	+ 188	+ 161	+ 143	+ 113	+ 79	+ 37	- 13	- 48	- 39	- 40	- 55
December	- 79	- 36	- 14	+ 6	- 22	- 34	- 42	- 35	- 70	- 83	- 12	+ 53	+ 108	+ 126	+ 105	+ 110	+ 82	+ 58	+ 27	- 6	- 44	- 92	- 67	- 41
Year	- 48	- 56	- 56	- 66	- 92	- 131	- 174	- 222	- 257	- 213	- 84	+ 84	+ 223	+ 270	+ 258	+ 205	+ 137	+ 90	+ 59	+ 47	+ 34	+ 16	- 8	- 16
Winter	- 73	- 71	- 50	- 39	- 40	- 55	- 61	- 71	- 120	- 121	- 32	+ 59	+ 140	+ 172	+ 153	+ 132	+ 89	+ 60	+ 39	+ 13	- 16	- 37	- 36	- 35
Equinox	- 47	- 52	- 47	- 59	- 72	- 80	- 132	- 227	- 293	- 260	- 141	+ 49	+ 227	+ 288	+ 282	+ 223	+ 144	+ 92	+ 59	+ 48	+ 36	+ 11	- 24	- 30
Summer	- 24	- 46	- 72	- 90	- 164	- 256	- 329	- 370	- 359	- 258	- 79	+ 144	+ 302	+ 350	+ 339	+ 261	+ 177	+ 117	+ 78	+ 80	+ 82	+ 73	+ 36	+ 16

## VERTICAL COMPONENT (Unit 0.1γ)

January	+ 40	+ 24	+ 26	+ 18	+ 8	+ 16	- 4	- 12	- 18	- 56	- 66	- 46	- 56	- 28	+ 8	+ 12	+ 20	+ 22	+ 24	+ 26	+ 26	+ 4	+ 2	+ 4
February	+ 6	- 12	+ 4	+ 6	+ 14	+ 14	+ 8	+ 8	+ 20	- 28	- 62	- 66	- 58	- 44	- 6	+ 10	+ 34	+ 32	+ 32	+ 24	+ 20	+ 22	+ 10	+ 12
March	+ 57	+ 39	+ 35	+ 41	+ 47	+ 35	+ 47	+ 43	+ 3	- 59	- 123	- 183	- 177	- 115	- 43	+ 27	+ 47	+ 49	+ 41	+ 49	+ 33	+ 37	+ 37	+ 39
April	+ 53	+ 63	+ 69	+ 69	+ 75	+ 75	+ 97	+ 83	+ 11	- 87	- 177	- 249	- 245	- 169	- 101	- 27	+ 29	+ 63	+ 67	+ 65	+ 65	+ 55	+ 49	+ 49
May	+ 7	+ 5	+ 17	+ 39	+ 81	+ 103	+ 95	+ 45	- 3	- 95	- 155	- 235	- 245	- 163	- 79	+ 9	+ 63	+ 101	+ 115	+ 101	+ 75	+ 51	+ 41	+ 21
June	+ 53	+ 55	+ 55	+ 67	+ 95	+ 101	+ 81	+ 39	- 27	- 103	- 173	- 231	- 239	- 183	- 101	- 23	+ 17	+ 79	+ 97	+ 89	+ 83	+ 61	+ 59	+ 47
July	+ 41	+ 33	+ 11	+ 29	+ 57	+ 69	+ 67	+ 31																

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE VII. - MEAN DIURNAL INEQUALITIES OF THE MAGNETIC ELEMENTS  
DECLINATION, INCLINATION AND HORIZONTAL INTENSITY

International Disturbed Days

## DECLINATION WEST (Unit 0'.1)

Month and Season, 1948	Universal Time. Hour commencing.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
January	-351	-285	-57	-81	+ 87	+ 37	+ 7	- 25	-113	-143	+ 1	+ 203	+ 401	+ 461	+ 531	+ 381	+ 367	+ 383	+ 127	-311	-473	-429	-343	-387
February	-192	-306	-218	-144	- 16	-150	- 86	- 74	-128	- 74	+ 70	+ 218	+ 504	+ 584	+ 510	+ 466	+ 200	+ 120	+ 92	- 22	-190	-378	-410	-378
March	-461	-425	-575	-317	+ 51	+ 237	+ 347	-109	+ 9	-119	+ 55	+ 445	+ 627	+ 801	+ 691	+ 579	+ 287	- 59	-243	-249	-457	-259	-485	-361
April	-462	-688	-486	-388	-124	- 98	-354	-462	-466	-318	+ 26	+ 376	+ 698	+ 848	+ 774	+ 616	+ 454	+ 324	+ 6	- 20	-138	-28	- 60	- 38
May	-227	-189	-49	-233	-317	-527	-363	-263	-579	-421	- 73	+ 427	+ 727	+ 707	+ 709	+ 439	+ 329	+ 211	+ 19	-101	- 37	- 11	- 91	- 95
June	-125	-313	-363	-397	-515	-615	-653	-749	-725	-389	+ 61	+ 449	+ 791	+ 829	+ 923	+ 857	+ 503	+ 323	+ 103	+ 29	- 31	+ 31	+ 15	- 31
July	-120	-312	-280	-234	-198	-470	-558	-424	-390	-258	- 22	+ 290	+ 456	+ 600	+ 662	+ 484	+ 368	+ 296	+ 144	+ 86	- 82	- 22	+ 58	- 66
August	-395	-565	-777	-495	-239	-385	-371	-11	-505	-315	+ 115	+ 547	+ 813	+ 937	+ 861	+ 807	+ 431	+ 247	+ 171	- 107	+ 33	-249	-207	-331
September	-271	-187	-299	-389	-253	+ 31	+ 53	-149	-219	- 79	+ 105	+ 471	+ 681	+ 757	+ 637	+ 501	+ 213	+ 101	- 49	-185	-371	-579	-219	-313
October	-803	-881	-707	-659	- 73	+ 615	+ 399	+ 87	- 89	+ 183	+ 347	+ 595	+ 797	+ 673	+ 591	+ 401	+ 49	+ 23	-215	-173	-429	-445	-281	- 13
November	-445	-329	-261	+ 19	+ 67	+ 285	+ 325	+ 269	+ 143	+ 127	+ 177	+ 279	+ 555	+ 507	+ 497	+ 251	+ 149	+ 9	- 45	- 75	-567	-767	-615	-553
December	-223	-157	-63	+ 29	- 35	-111	- 45	+ 23	- 51	- 43	+ 89	+ 143	+ 289	+ 383	+ 519	+ 517	+ 543	+ 257	+ 333	-199	-545	-627	-611	-409
Year	-340	-386	-345	-274	-130	- 96	-108	-157	-259	-154	+ 79	+ 370	+ 612	+ 674	+ 659	+ 525	+ 324	+ 186	+ 37	-111	-274	-314	-271	-248
Winter	-303	-269	-150	- 44	+ 26	+ 15	+ 50	+ 48	- 37	- 33	+ 84	+ 211	+ 437	+ 484	+ 514	+ 404	+ 315	+ 192	+ 127	-152	-444	-550	-495	-432
Equinox	-499	-545	-517	-438	-100	+ 196	+ 111	-158	-191	- 83	+ 133	+ 472	+ 701	+ 770	+ 673	+ 524	+ 251	+ 97	-125	-157	-349	-328	-261	-181
Summer	-217	-345	-367	-340	-317	-499	-486	-362	-550	-346	+ 20	+ 428	+ 697	+ 768	+ 789	+ 647	+ 408	+ 269	+ 109	- 23	- 29	- 63	- 56	-131

## INCLINATION (Unit 0'.1)

January	- 68	- 66	- 82	- 121	- 209	- 232	- 180	- 138	- 123	- 80	- 29	+ 13	+ 47	+ 25	+ 102	+ 98	+ 97	+ 181	+ 260	+ 291	+ 125	+ 34	+ 35	+ 10
February	- 79	- 116	- 115	- 102	- 134	- 187	- 225	- 181	- 103	+ 11	+ 95	+ 117	+ 148	+ 178	+ 169	+ 205	+ 186	+ 108	+ 29	+ 36	+ 20	- 11	- 25	- 29
March	-233	-217	-157	-173	-286	-187	- 84	- 77	+ 47	+ 110	+ 192	+ 236	+ 175	+ 82	+ 131	+ 143	+ 175	+ 149	+ 82	+ 58	+ 22	- 31	- 88	- 65
April	-112	- 48	- 17	- 67	- 98	- 98	- 105	+ 7	+ 17	+ 91	+ 127	+ 99	+ 89	+ 117	+ 135	+ 82	+ 24	- 60	+ 13	- 24	- 22	- 26	- 81	- 51
May	- 98	- 118	- 117	- 185	- 70	- 44	+ 97	+ 73	+ 94	+ 111	+ 146	+ 173	+ 165	+ 163	+ 116	+ 170	+ 39	- 52	- 94	- 100	- 146	- 98	- 119	- 102
June	- 31	- 73	- 85	- 103	- 76	- 37	+ 53	+ 90	+ 130	+ 193	+ 229	+ 122	+ 51	+ 83	+ 3	- 75	- 9	- 61	- 72	- 108	- 86	- 42	- 44	- 44
July	- 78	- 78	- 79	- 83	- 106	- 100	+ 3	+ 65	+ 147	+ 151	+ 154	+ 136	+ 121	+ 74	+ 92	+ 90	+ 16	- 1	- 55	- 129	- 112	- 79	- 86	- 69
August	-155	-213	-104	-167	-248	-111	+ 34	+ 202	+ 303	+ 264	+ 214	+ 147	+ 119	+ 52	+ 147	+ 131	+ 90	- 75	- 141	- 149	- 159	- 63	- 115	- 6
September	-173	-187	-213	-236	-165	-189	-178	-113	+ 15	+ 113	+ 191	+ 204	+ 222	+ 190	+ 139	+ 138	+ 117	+ 77	+ 34	+ 28	+ 5	+ 15	- 22	- 13
October	- 18	- 131	- 179	- 198	- 127	- 274	- 240	- 23	+ 109	+ 175	+ 205	+ 297	+ 258	+ 175	+ 134	+ 82	+ 102	+ 12	- 69	- 13	- 70	- 5	- 74	- 126
November	-173	-135	-162	-150	-212	-184	-142	-103	- 34	+ 4	+ 71	+ 132	+ 122	+ 117	+ 81	+ 121	+ 121	+ 32	+ 114	+ 136	+ 107	+ 27	+ 65	+ 50
December	-110	-105	-110	-145	-173	-199	-214	-212	-162	- 74	- 27	- 23	- 64	- 68	- 23	+ 136	+ 231	+ 263	+ 247	+ 242	+ 204	+ 187	+ 113	+ 93
Year	-111	-124	-118	-144	-159	-154	- 98	- 34	+ 37	+ 89	+ 131	+ 138	+ 121	+ 99	+ 102	+ 110	+ 99	+ 48	+ 29	+ 22	- 9	- 8	- 37	- 29
Winter	-108	-106	-117	-130	-182	-201	-190	-159	-106	- 35	+ 28	+ 60	+ 63	+ 63	+ 82	+ 140	+ 159	+ 146	+ 163	+ 176	+ 114	+ 59	+ 47	+ 31
Equinox	-134	-146	-142	-169	-169	-187	-152	- 52	+ 47	+ 122	+ 179	+ 209	+ 186	+ 141	+ 135	+ 111	+ 105	+ 45	+ 15	+ 12	- 16	- 12	- 66	- 64
Summer	- 91	-121	- 96	-135	-125	- 73	+ 47	+ 108	+ 169	+ 180	+ 186	+ 145	+ 114	+ 93	+ 90	+ 79	+ 34	- 47	- 91	-122	-126	- 71	- 91	- 55

## HORIZONTAL INTENSITY (Unit 0.1Y)

January	+ 80	+ 64	+ 86	+ 138	+ 254	+ 276	+ 204	+ 158	+ 140	+ 68	- 4	- 58	- 108	- 64	- 146	- 90	- 82	- 194	- 270	- 318	- 98	- 2	- 28	0
February	+ 97	+ 149	+ 135	+ 117	+ 167	+ 249	+ 299	+ 225	+ 109	- 71	- 191	- 217	- 259	- 271	- 225	- 247	- 203	- 81	+ 23	+ 9	+ 21	+ 55	+ 61	+ 51
March	+ 302	+ 252	+ 144	+ 182	+ 322	+ 148	- 2	+ 24	- 142	- 234	- 360	- 414	- 302	- 108	- 126	- 104	- 88	- 4	+ 76	+ 34	+ 64	+ 106	+ 142	+ 76
April	+ 164	+ 28	+ 0	+ 86	+ 126	+ 118	+ 132	- 28	- 52	- 200	- 268	- 234	- 214	- 206	- 188	- 76	+ 34	+ 164	+ 56	+ 108	+ 94	+ 92	+ 166	+ 106
May	+ 150	+ 158	+ 152	+ 242	+ 76	+ 42	- 178	- 158	- 212	- 260	- 346	- 412	- 370	- 284	- 150	- 198	+ 54	+ 228	+ 298	+ 288	+ 308	+ 204	+ 228	+ 132
June	+ 60	+ 94	+ 94	+ 114	+ 84	+ 34	- 96	- 142	- 218	- 340	- 428	- 286	- 174	- 200	- 30	+ 142	+ 84	+ 190	+ 218	+ 262	+ 208	+ 122	+ 104	+ 96</td

TABLE VII. - MEAN DIURNAL INEQUALITIES OF GEOGRAPHICAL  
COMPONENTS OF MAGNETIC INTENSITY  
International Disturbed Days

## NORTH COMPONENT (Unit 0.1γ)

Month and Season, 1948	Universal Time. Hour commencing.																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
January	+ 111	+ 89	+ 90	+ 144	+ 243	+ 269	+ 201	+ 158	+ 148	+ 80	- 4	- 76	- 143	- 105	- 192	- 123	- 114	- 226	- 278	- 285	- 54	+ 37	+ 4	+ 35
February	+ 113	+ 175	+ 153	+ 129	+ 166	+ 259	+ 303	+ 229	+ 119	- 63	- 195	- 234	- 301	- 320	- 268	- 286	- 218	- 91	+ 14	+ 11	+ 38	+ 89	+ 97	+ 85
March	+ 340	+ 287	+ 194	+ 208	+ 313	+ 124	- 34	+ 34	- 141	- 220	- 360	- 449	- 355	- 179	- 188	- 155	- 113	+ 2	+ 97	+ 56	+ 105	+ 128	+ 184	+ 108
April	+ 204	+ 90	+ 44	+ 120	+ 136	+ 125	+ 162	+ 14	- 9	- 168	- 267	- 265	- 274	- 280	- 256	- 131	- 8	+ 132	+ 55	+ 108	+ 105	+ 93	+ 169	+ 108
May	+ 169	+ 173	+ 154	+ 260	+ 104	+ 89	- 143	- 132	- 156	- 218	- 335	- 445	- 431	- 344	- 212	- 235	+ 23	+ 206	+ 292	+ 293	+ 307	+ 202	+ 233	+ 139
June	+ 71	+ 121	+ 126	+ 148	+ 130	+ 89	- 35	- 72	- 149	- 300	- 428	- 323	- 243	- 273	- 113	+ 62	+ 37	+ 158	+ 206	+ 256	+ 208	+ 108	+ 101	+ 98
July	+ 117	+ 119	+ 110	+ 118	+ 156	+ 173	+ 35	- 62	- 195	- 229	- 284	- 297	- 280	- 210	- 216	- 148	- 2	+ 48	+ 145	+ 256	+ 232	+ 158	+ 151	+ 116
August	+ 190	+ 260	+ 128	+ 215	+ 284	+ 98	- 106	- 411	- 518	- 439	- 401	- 344	- 297	- 113	- 193	- 89	+ 26	+ 285	+ 383	+ 402	+ 318	+ 145	+ 177	+ 6
September	+ 245	+ 229	+ 275	+ 308	+ 196	+ 213	+ 201	+ 133	- 40	- 199	- 330	- 397	- 430	- 340	- 207	- 163	- 76	- 18	+ 45	+ 61	+ 90	+ 71	+ 76	+ 53
October	- 97	+ 135	+ 238	+ 251	+ 86	+ 203	+ 169	- 65	- 213	- 314	- 363	- 494	- 431	- 239	- 125	+ 9	+ 13	+ 132	+ 236	+ 132	+ 207	+ 115	+ 215	+ 195
November	+ 215	+ 143	+ 177	+ 133	+ 224	+ 174	+ 114	+ 73	- 8	- 64	- 165	- 237	- 227	- 189	- 97	- 91	- 60	+ 57	- 66	- 93	- 23	+ 57	- 26	- 22
December	+ 143	+ 131	+ 132	+ 173	+ 216	+ 270	+ 258	+ 192	+ 49	- 22	- 33	+ 13	+ 24	- 23	- 219	- 302	- 288	- 277	- 221	- 150	- 154	- 92	- 89	
Year	+ 152	+ 163	+ 152	+ 184	+ 188	+ 173	+ 95	+ 13	- 81	- 174	- 263	- 300	- 283	- 214	- 174	- 131	- 66	+ 33	+ 71	+ 81	+ 115	+ 87	+ 107	+ 69
Winter	+ 146	+ 135	+ 138	+ 145	+ 212	+ 241	+ 222	+ 180	+ 113	+ 1	- 97	- 145	- 165	- 148	- 145	- 180	- 174	- 137	- 152	- 147	- 47	+ 7	- 4	+ 2
Equinox	+ 173	+ 185	+ 188	+ 222	+ 183	+ 166	+ 125	+ 29	- 101	- 225	- 330	- 401	- 373	- 260	- 194	- 110	- 46	+ 62	+ 108	+ 89	+ 127	+ 102	+ 161	+ 116
Summer	+ 137	+ 168	+ 130	+ 185	+ 169	+ 112	- 62	- 169	- 255	- 297	- 362	- 352	- 313	- 235	- 184	- 103	+ 21	+ 174	+ 257	+ 302	+ 266	+ 153	+ 166	+ 90

## WEST COMPONENT (Unit 0.1γ)

January	- 174	- 141	- 16	- 20	+ 89	+ 66	+ 38	+ 13	- 37	- 65	- 0	+ 99	+ 196	+ 235	+ 259	+ 188	+ 182	+ 172	+ 23	- 219	- 269	- 229	- 188	- 206
February	- 86	- 138	- 94	- 57	+ 19	- 38	+ 4	- 2	- 50	- 51	+ 5	+ 80	+ 225	+ 266	+ 234	+ 207	+ 73	+ 51	+ 53	- 10	- 98	- 192	- 208	- 193
March	- 195	- 184	- 283	- 139	+ 81	+ 151	+ 185	- 54	- 19	- 103	- 31	+ 168	+ 284	+ 409	+ 351	+ 291	+ 138	- 32	- 117	- 127	- 233	- 120	- 235	- 180
April	- 219	- 362	- 259	- 192	- 45	- 33	- 167	- 251	- 257	- 203	- 31	+ 161	+ 336	+ 418	+ 381	+ 316	+ 248	+ 200	+ 13	+ 7	- 58	+ 1	- 4	- 3
May	- 96	- 74	- 1	- 84	- 156	- 274	- 223	- 167	- 344	- 268	- 97	+ 159	+ 326	+ 329	+ 353	+ 201	+ 184	+ 151	+ 60	- 6	+ 32	+ 28	- 10	- 29
June	- 57	- 151	- 178	- 193	- 261	- 322	- 364	- 423	- 423	- 264	- 39	+ 192	+ 393	+ 409	+ 487	+ 481	+ 282	+ 204	+ 91	+ 59	+ 18	+ 37	+ 25	- 1
July	- 46	- 151	- 135	- 108	- 82	- 229	- 300	- 243	- 247	- 180	- 60	+ 109	+ 203	+ 293	+ 326	+ 240	+ 201	+ 171	+ 104	+ 91	- 6	+ 15	+ 57	- 17
August	- 184	- 266	- 404	- 235	- 83	- 195	- 221	- 76	- 365	- 247	- 5	+ 242	+ 396	+ 495	+ 440	+ 427	+ 241	+ 184	+ 159	+ 10	+ 72	- 112	- 84	- 180
September	- 107	- 64	- 118	- 161	- 106	+ 53	+ 63	- 59	- 127	- 77	+ 2	+ 191	+ 301	+ 358	+ 314	+ 247	+ 104	+ 52	- 19	- 91	- 188	- 305	- 107	- 163
October	- 457	- 460	- 347	- 319	- 26	+ 372	+ 247	+ 37	- 85	+ 47	+ 129	+ 243	+ 364	+ 329	+ 303	+ 221	+ 29	+ 35	- 78	- 73	- 200	- 225	- 118	+ 26
November	- 208	- 156	- 113	+ 33	+ 75	+ 186	+ 197	+ 160	+ 77	+ 59	+ 69	+ 113	+ 266	+ 246	+ 256	+ 122	+ 72	+ 15	- 36	- 57	- 315	- 411	- 342	- 307
December	- 98	- 64	- 12	+ 45	+ 17	- 17	+ 21	+ 56	+ 5	- 15	+ 45	+ 73	+ 161	+ 214	+ 281	+ 247	+ 247	+ 92	+ 136	- 147	- 324	- 370	- 351	- 239
Year	- 161	- 184	- 163	- 119	- 40	- 23	- 43	- 84	- 156	- 114	- 1	+ 153	+ 288	+ 333	+ 332	+ 266	+ 167	+ 108	+ 32	- 47	- 132	- 157	- 130	- 124
Winter	- 142	- 125	- 59	+ 0	+ 50	+ 49	+ 65	+ 57	- 1	- 18	+ 30	+ 91	+ 212	+ 240	+ 258	+ 191	+ 144	+ 83	+ 44	- 108	- 252	- 301	- 272	- 236
Equinox	- 245	- 268	- 252	- 203	- 24	+ 136	+ 82	- 82	- 122	- 84	+ 17	+ 191	+ 321	+ 379	+ 337	+ 269	+ 130	+ 64	- 50	- 71	- 170	- 162	- 116	- 80
Summer	- 96	- 161	- 180	- 155	- 146	- 255	- 277	- 227	- 345	- 240	- 50	+ 176	+ 321	+ 382	+ 402	+ 337	+ 227	+ 178	+ 104	+ 39	+ 27	- 8	- 3	- 57

## VERTICAL COMPONENT (Unit 0.1γ)

January	- 50	- 80	- 84	- 98	- 136	- 164	- 150	- 110	- 100	- 118	- 110	- 92	- 88	- 62	+ 14	+ 132	+ 146	+ 178	+ 276	+ 272	+ 206	+ 116	+ 54	+ 36
February	- 47	- 57	- 83	- 81	- 77	- 71	- 83	- 103	- 103	- 127	- 115	- 99	- 89	- 13	+ 61	+ 135	+ 175	+ 187	+ 153	+ 145	+ 117	+ 91	+ 55	+ 17
March	- 104	- 166	- 208	- 178	- 242	- 304	- 294	- 212	- 166	- 164	- 174	- 146	- 98	+ 36	+ 160	+ 254	+ 404	+ 508	+ 462	+ 280	+ 224	+ 138	+ 26	- 48
April	- 8	- 102	- 58	- 30	- 46	- 66	- 54	- 42	- 62	- 150	- 184	- 200	- 190	- 74	+ 30	+ 108	+ 162	+ 174	+ 178	+ 168	+ 144	+ 126	+ 104	+ 70
May	+ 12	- 41	- 51	- 81	- 66	- 56	- 78	- 113	- 166	- 218	- 298	- 358	- 288	- 96	+ 52	+ 129	+ 262	+ 352	+ 369	+ 322	+ 212	+ 137	+ 117	- 46
June	+ 30																							

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE VIII. - HARMONIC COMPONENTS OF THE DIURNAL INEQUALITY OF MAGNETIC INTENSITY

Values of  $a_n$ ,  $b_n$  in the series  $\Sigma (a_n \cos nt + b_n \sin nt)$ ,  $t$  being reckoned in hours from 0<sup>h</sup> U.T. and converted into arc at the rate of 15° to each hour.

Month and Season	NORTH COMPONENT							WEST COMPONENT							VERTICAL COMPONENT									
	$a_1$	$b_1$	$a_2$	$b_2$	$a_3$	$b_3$	$a_4$	$b_4$	$a_1$	$b_1$	$a_2$	$b_2$	$a_3$	$b_3$	$a_4$	$b_4$	$a_1$	$b_1$	$a_2$	$b_2$	$a_3$	$b_3$	$a_4$	$b_4$
All Days																								
1948	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Jan.	+ 7.3	+7.7	- 3.7	-3.4	+2.2	-2.0	-0.3	0.0	-10.5	-5.8	-1.4	+7.7	-1.1	-2.1	+1.7	+1.2	+3.4	-6.1	-3.5	-0.6	+0.6	0.0	-0.3	+0.1
Feb.	+12.2	+7.9	- 6.7	-5.3	+2.7	-0.8	+0.1	+1.3	-9.9	-8.2	-1.7	+8.6	-2.0	-3.3	+1.2	+2.8	+4.1	-5.9	-4.3	-0.1	+1.5	-0.7	-0.6	-0.4
March	+15.5	+3.4	- 7.0	-3.2	+2.3	-1.5	-0.6	+1.4	-11.9	-11.3	+2.4	+11.5	-2.5	-8.0	+2.5	+2.5	+6.3	-8.1	-7.4	-0.1	+3.2	+0.9	-1.3	-0.4
April	+18.5	+0.2	- 10.2	-2.1	+4.0	-1.0	+0.9	+0.3	-6.2	-19.6	+5.2	+14.2	-4.6	-8.5	+2.3	+0.6	+9.3	-4.7	-9.4	-1.0	+4.1	-0.0	-1.2	-0.2
May	+20.6	-8.0	-12.9	-0.4	+1.1	+1.1	+1.1	-0.2	-5.2	-22.2	+6.8	+14.0	-4.2	-5.9	+0.6	-0.2	+9.8	-8.9	-11.9	-0.7	+3.4	+0.4	-0.5	+0.3
June	+18.9	-7.3	-11.3	+1.6	+0.2	-1.0	+0.3	-0.2	-7.9	-27.0	+10.5	+14.6	-4.9	-4.0	+0.5	-0.2	+11.1	-4.7	-10.7	-1.6	+2.8	+0.8	-0.1	-0.2
July	+18.3	-4.5	-10.5	-1.0	-0.5	-0.7	+0.9	-0.6	-7.0	-25.5	+9.1	+11.0	-4.3	-4.1	+0.7	-0.9	+8.4	-5.9	-9.1	-0.1	+2.2	-0.0	+0.0	-0.2
Aug.	+19.8	-5.9	- 8.4	+2.0	-3.0	-1.3	+1.5	+0.3	-12.8	-18.9	+7.6	+11.3	-5.6	-5.4	+1.2	+0.8	+4.9	-11.1	-8.5	+1.3	+2.7	+0.6	-0.6	-0.4
Sept.	+18.1	+0.6	- 7.3	+0.3	+1.2	-1.5	+0.1	+0.8	-12.3	-15.3	+4.4	+10.2	-4.2	-5.9	+1.8	+2.4	+4.6	-6.5	-6.6	-1.0	+2.9	+0.2	-0.8	-0.2
Oct.	+19.9	+2.7	-10.5	-1.5	+2.9	-2.6	-0.7	-0.3	-14.7	-5.2	+0.8	+10.0	-3.8	-6.7	+3.6	+2.1	-1.2	-11.4	-5.8	+1.4	+2.2	-0.6	-2.4	-0.5
Nov.	+11.5	+4.0	- 6.1	-1.4	+2.4	-1.2	-0.2	-0.1	-12.6	-4.5	-1.9	+8.6	-2.5	-2.7	+2.0	+1.3	+1.0	-8.5	-3.3	+0.1	+1.4	-0.2	-1.0	+0.2
Dec.	+ 6.4	+7.7	- 4.5	-1.3	+2.1	-1.8	-0.0	+1.0	-10.1	-3.1	-2.6	+8.2	-0.5	-1.0	+1.1	+1.7	+2.1	-7.2	-3.1	-0.8	+0.5	+0.6	-0.4	-0.2
Year	+15.6	+0.7	- 8.3	-1.3	+1.5	-1.2	+0.3	+0.3	-10.1	-13.9	+3.3	+10.8	-3.3	-4.8	+1.6	+1.2	+5.3	-7.4	-7.0	-0.3	+2.3	+0.2	-0.8	-0.2
Winter	+ 9.3	+6.9	- 5.2	-2.8	+2.3	-1.5	-0.1	+0.6	-10.8	-5.4	-1.9	+8.3	-1.5	-2.3	+1.5	+1.8	+2.6	-7.0	-3.5	-0.4	+1.0	-0.1	-0.6	-0.1
Equinox	+18.0	+1.7	- 8.8	-1.6	+2.6	-1.6	-0.1	+0.6	-11.3	-12.8	+3.2	+11.5	-3.8	-7.3	+2.6	+1.9	+4.7	-7.7	-7.3	-0.2	+3.1	+0.1	-1.4	-0.3
Summer	+19.4	-6.4	-10.8	+0.7	-0.5	-0.5	+1.0	-0.2	-8.2	-23.4	+8.5	+12.8	-4.8	-4.8	+0.7	-0.1	+8.6	-7.7	-10.1	-0.3	+2.8	+0.4	-0.3	-0.1
INTERNATIONAL QUIET DAYS																								
Year	+12.9	-0.1	- 7.7	-1.2	+2.0	-0.7	+0.3	+0.3	-5.3	-14.7	+4.9	+10.0	-3.9	-4.3	+1.2	+1.2	+6.5	-1.5	-5.8	-0.1	+2.3	-0.2	-0.6	0.0
Winter	+ 8.3	+2.9	- 5.8	-2.8	+2.4	-0.2	-0.1	+0.6	-5.7	-6.1	+1.1	+6.5	-1.9	-2.5	+1.2	+1.1	+2.6	-2.5	-2.0	+0.3	+1.1	-0.1	-0.4	+0.1
Equinox	+14.5	+2.0	- 7.8	-2.6	+2.5	-0.3	+0.1	+0.5	-4.6	-15.0	+3.3	+11.9	-4.1	-6.2	+1.8	+2.0	+7.3	-0.3	-6.4	-0.6	+3.1	+0.2	-1.1	+0.2
Summer	+16.0	-5.2	- 9.5	+1.6	+1.1	-1.5	+0.8	-0.2	-5.6	-23.0	+10.3	+11.7	-5.7	-4.2	+0.6	+0.6	+9.6	-1.8	-8.9	+0.0	+2.7	-0.5	-0.2	-0.3
INTERNATIONAL DISTURBED DAYS																								
Year	+20.0	+1.3	- 8.8	+0.4	+0.3	-2.6	+0.2	+0.4	-17.0	-9.8	+0.9	+10.8	-1.7	-5.9	+2.7	-0.1	+2.4	-18.4	-8.3	+0.3	+1.9	+1.2	-1.0	-0.4
Winter	+ 9.6	+13.7	- 3.9	-1.8	+2.1	-3.6	-0.2	+0.6	-17.9	-0.1	-4.3	+11.6	+0.1	-1.0	+2.5	+1.9	+2.0	-15.7	-6.4	-0.6	+0.4	+1.2	-0.4	-0.1
Equinox	+24.5	+0.6	-11.1	+1.2	+2.1	-1.9	-0.2	+0.5	-20.5	-5.1	+0.1	+9.5	-1.5	-10.6	+5.8	-0.9	+0.9	-20.4	-6.9	+1.5	+2.5	+1.1	-2.2	-1.3
Summer	+26.0	-10.3	-11.5	+1.7	-4.4	+0.5	+1.1	+0.1	-12.6	-24.2	+6.7	+11.1	-3.6	-6.1	+1.9	-0.2	+6.1	-18.9	-11.6	-0.1	+2.8	+1.2	-0.4	+0.2

TABLE IX. - HARMONIC COMPONENTS OF THE DIURNAL INEQUALITY OF MAGNETIC INTENSITY

Values of  $c_n$ ,  $\alpha_n$  in the series  $\Sigma c_n \sin(nT + \alpha_n)$ , T being reckoned in hours from midnight, Abinger Local Mean Time, and converted into arc at the rate of 15° to each hour. New phase-angles expressing the inequalities relative to Local Apparent Time may be obtained from the tabulated angles by applying corrections  $\alpha$ ,  $2\alpha$ ,  $3\alpha$ ,  $4\alpha$  respectively, where  $\alpha$  has the following values:-

January	+2°19'	April	+0°4'	July	+1°22'	October	-3°28'	Winter	+0°12'
February	+3°28	May	-0°51	August	+0°59	November	-3°42	Equinox	-0°36
March	+2°12	June	+0°5	September	-1°12	December	-1°6	Summer	+0°24

Month and Season	NORTH COMPONENT							WEST COMPONENT							VERTICAL COMPONENT											
	$c_1$	$\alpha_1$	$c_2$	$\alpha_2$	$c_3$	$\alpha_3$	$c_4$	$\alpha_4$	$c_1$	$\alpha_1$	$c_2$	$\alpha_2$	$c_3$	$\alpha_3$	$c_4$	$\alpha_4$	$c_1$	$\alpha_1$	$c_2$	$\alpha_2$	$c_3$	$\alpha_3$	$c_4$	$\alpha_4$		
All Days																										
1948	Y	o	Y	o	Y	o	Y	o	Y	o	Y	o	Y	o	Y	o	Y	o	Y	o	Y	o	Y	o	Y	o
Jan.	10.6	44	5.0	228	2.9	134	0.3	272	12.0	242	7.9	351	2.4	210	2.0	57	7.0	152	3.6	261	0.6	91	0.3	286		
Feb.	14.5	57	8.5	233	2.8	108	1.3	255	12.9	231	8.8	350	3.9	213	3.1	24	7.3	146	4.3	269	1.6	115	0.7	239		
March	15.9	78	7.7	246	2.7	125	1.5	338	16.4	227	11.8	12	8.4	198	3.5	47	10.2	143	7.4	270	3.4	75	1.4	255		
April	18.5	90	10.4	260	4.1	106	1.0	71	20.5	198	15.1	21	9.7	210	2.4	78	10.4	117	9.4	265	4.1	91	1.2			

TABLE X. - RANGE OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS, YEAR AND SEASONS OF 1948

Month and Season	All Days			Quiet Days			Disturbed Days			All Days			Quiet Days			Disturbed Days		
	D	I	H	D	I	H	D	I	H	X	Y	Z	X	Y	Z	X	Y	Z
January	'	'	Y	'	'	Y	'	'	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
February	6.54	1.61	24.0	5.68	1.40	23.6	10.04	5.23	59.4	27.4	32.8	18.2	25.0	28.9	10.6	55.4	52.8	44.0
March	7.95	2.20	35.7	7.38	1.89	31.6	9.94	4.30	57.0	39.5	38.4	19.3	34.3	37.6	10.0	62.3	47.4	31.4
April	10.57	1.91	35.2	11.34	1.43	30.8	13.76	5.22	73.6	38.2	54.3	34.3	31.5	59.5	24.0	78.9	69.2	81.2
May	13.98	2.28	43.5	14.64	2.14	41.6	15.36	2.47	43.4	44.7	72.8	37.3	43.7	75.4	34.6	48.4	78.0	37.8
June	13.30	2.78	59.6	14.00	2.71	52.0	13.06	3.58	72.0	60.6	72.9	48.8	49.4	75.0	36.0	75.2	69.7	72.7
July	15.28	2.73	54.4	12.12	2.33	43.0	16.72	3.37	69.0	52.7	82.8	41.4	40.5	64.9	34.0	68.4	91.0	50.0
August	13.56	2.31	47.4	16.08	2.95	54.4	12.20	2.83	55.8	47.3	71.9	35.0	52.7	85.5	31.4	55.3	62.6	34.6
September	12.24	2.71	49.2	11.92	1.99	35.0	17.14	5.51	97.6	49.1	67.9	37.5	33.5	64.7	26.2	92.0	89.9	74.6
October	10.89	2.17	37.4	9.62	1.88	34.4	13.36	4.58	65.0	40.1	57.9	27.2	37.2	51.1	22.4	73.8	66.3	44.8
November	9.86	3.06	49.3	9.48	2.31	39.0	16.78	5.71	70.8	55.2	47.2	28.8	41.7	48.1	15.2	74.5	83.2	85.8
December	7.93	1.87	27.6	6.42	1.13	19.4	13.22	3.48	44.8	31.3	39.4	19.7	23.6	32.1	14.2	46.1	66.7	51.2
Year	6.40	1.69	25.5	4.50	1.30	19.8	11.70	4.77	53.8	26.5	32.8	15.9	21.7	21.8	6.6	57.2	65.1	43.6
Winter	10.71	2.28	40.7	10.27	1.96	35.4	13.61	4.25	63.5	42.7	55.9	30.3	36.2	53.7	22.1	65.6	70.2	54.3
Equinox	11.33	2.36	41.4	11.27	1.94	36.5	14.82	4.50	63.2	44.6	58.1	31.9	38.5	58.5	24.1	68.9	74.2	62.4
Summer	13.60	2.63	52.7	13.53	2.50	46.1	14.78	3.82	73.6	52.4	73.9	40.7	44.0	72.5	31.9	72.7	78.3	58.0

TABLE XI. - NON-CYCCLIC CHANGE ( $24^{\text{h}}$  minus  $0^{\text{h}}$ )

Month 1948	All Days			Quiet Days			Disturbed Days		
	Declination	Horizontal Intensity	Vertical Intensity	Declination	Horizontal Intensity	Vertical Intensity	Declination	Horizontal Intensity	Vertical Intensity
January	'	Y	Y	'	Y	Y	'	Y	Y
February	-0.01	-0.0	+0.0	-0.08	+7.8	-3.8	+1.04	-8.4	+5.0
March	-0.23	-0.0	+0.1	+0.72	+6.2	-0.6	-0.48	-5.0	+0.8
April	+0.14	+1.0	-0.1	-0.06	+2.6	-2.0	-0.78	-14.6	+0.4
May	+0.02	-0.8	+0.2	+0.20	+8.2	-2.0	+2.26	-9.2	+5.2
June	-0.08	-0.3	+0.1	-0.42	+2.2	-0.8	+0.28	-5.0	-4.0
July	+0.11	+0.8	0.0	+0.20	+3.0	-1.2	+0.18	+2.2	+1.6
August	-0.05	-0.5	+0.1	+0.52	+4.2	-2.4	-0.90	-6.4	-0.2
September	-0.15	+0.3	+0.1	+0.20	+6.0	-1.8	-0.28	-17.8	+9.0
October	+0.07	-0.4	+0.1	-0.28	+4.8	-0.4	-0.70	-20.2	+3.2
November	-0.02	-0.1	+0.1	+0.56	+9.8	-0.6	+4.38	+15.6	+36.4
December	-0.01	+0.2	-0.0	+0.92	+7.4	-5.4	+1.16	-10.6	+11.8
Year 1948	-0.10	-0.5	+0.3	+0.86	+12.4	-3.8	-1.54	-18.6	+7.6

TABLE XII. - MEAN MONTHLY AND ANNUAL VALUES OF GEOMAGNETIC ELEMENTS

Month 1948	Declination West	Inclination	Intensity				
			Horizontal	North	West	Vertical	Total
January	o ,	o ,	c.g.s.	c.g.s.	c.g.s.	c.g.s.	c.g.s.
February	9 39.1	66 44.9	.18584	.18321	.03116	.43252	.47075
March	9 38.4	66 44.5	.18588	.18326	.03113	.43249	.47072
April	9 37.9	66 44.6	.18587	.18325	.03110	.43250	.47073
May	9 36.9	66 44.0	.18595	.18334	.03106	.43246	.47074
June	9 36.2	66 44.3	.18593	.18332	.03102	.43251	.47078
July	9 36.0	66 43.4	.18606	.18345	.03103	.43249	.47082
August	9 35.3	66 43.0	.18611	.18351	.03100	.43248	.47083
September	9 34.6	66 44.6	.18591	.18332	.03093	.43257	.47084
October	9 33.9	66 44.4	.18594	.18336	.03089	.43257	.47084
November	9 32.8	66 45.8	.18577	.18320	.03081	.43267	.47087
December	9 32.3	66 45.0	.18589	.18332	.03080	.43268	.47092
Year 1948	9 31.7	66 44.6	.18595	.18337	.03078	.43266	.47093
	9 35.4	66 44.4	.18593	.18333	.03098	.43255	.47082

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE XIII. - DAILY MEAN VALUE OF THE BASE-LINE OF THE DECLINATION MAGNETOGRAMS

Day	January	February	March	April	May	June	July	August	September	October	November	December
1	o / 9 19.7	o / 9 19.7	o / 9 20.2	o / 9 19.8	o / 9 20.0	o / 9 20.0	o / 9 20.1	o / 9 19.9	o / 9 19.9	o / 9 19.9	o / 9 20.0	o / 9 19.9
2	19.7	19.7	20.2	19.8	20.0	20.0	20.0	19.9	19.9	19.9	20.0	20.0
3	19.7	19.7	20.1	19.9	20.0	20.1	19.9	19.8	19.9	19.8	19.9	20.0
4	19.7	19.7	20.0	19.9	20.0	20.1	20.0	19.8	19.8	19.9	20.0	19.9
5	19.7	19.6	19.8	19.9	20.1	20.2	20.0	19.9	19.9	19.9	20.0	19.8
6	19.7	19.7	19.9	19.9	20.1	20.1	20.1	19.9	19.9	19.9	20.0	19.9
7	19.7	19.7	19.9	20.0	20.1	20.1	20.1	19.9	19.9	19.9	20.0	19.9
8	19.7	19.7	18.9†	20.1	20.1	20.0	20.1	20.0	19.9	19.9	20.0	19.9
9	19.7	19.7	19.7	20.1	20.0	20.1	20.1	20.0	19.9	20.0	20.0	20.0
10	19.7	19.7	19.7	20.1	20.1	20.1	20.1	19.9	19.9	19.9	20.0	19.9
11	19.9	19.7	19.2 } †	20.0	20.0	20.2	20.0	19.9	19.9	19.8	20.0	19.9
12	19.7	19.7	19.7	20.0	19.9	20.2	20.0	19.9	19.9	19.9	19.9	19.9
13	19.8	19.7	19.7	20.0	20.1	20.0	20.0	19.9	19.9	19.8	20.0	19.9
14	19.8	19.7	19.7	20.0	20.0	20.0	20.1	19.9	19.9	19.8	20.0	19.9
15	19.8	19.8	19.6	20.0	20.1	20.0	20.0	19.9	19.9	19.9	20.0	19.9
16	19.9	19.8	19.6	20.0	20.0	20.0	20.0	19.9	19.9	19.9	20.0	19.9
17	19.9	19.8	19.6	20.0	20.0	20.2	20.1	19.9	19.9	19.9	19.9	19.9
18	19.8	19.9	19.8	20.0	20.0	20.1	20.0	19.9	19.9	19.8	19.9	19.9
19	19.6*	19.9	19.7	20.0	19.9	20.1	20.0	19.9	19.9	19.9	19.9	20.0
20	19.4*	19.9	19.8	19.9	20.0	20.2	19.9	19.9	19.9	19.9	19.9	20.0
21	19.2*	20.0	19.8	20.0	19.9	20.0	20.0	19.9	19.9	20.0	19.9	19.9
22	19.5*	20.0	19.8	19.8	20.0	20.1	19.9	19.9	19.8	19.9	19.9	19.9
23	19.7*	20.1	19.8	19.8	20.0	20.1	19.9	19.9	19.8	20.0	19.9	20.0
24	19.8*	20.1	20.0	19.8	20.0	20.1	20.0	19.9	19.8	20.0	19.9	20.0
25	19.9	20.2	19.9	20.0	20.1	20.1	20.0	19.9	19.8	19.9	19.9	19.9
26	19.9	20.1	19.9	20.1	20.1	20.1	20.0	19.9	19.8	20.0	19.9	19.9
27	19.8	20.1	20.0	20.1	20.0	20.1	19.9	19.9	19.8	20.0	19.9	19.9
28	19.8	20.2	20.0	20.1	20.1	20.1	19.9	19.9	19.8	20.0	19.9	20.0
29	19.8	20.2	20.0	20.0	20.1	20.0	19.9	19.9	19.7	20.0	19.9	20.0
30	19.7		19.9	20.0	20.0	20.1	19.9	19.9	19.8	20.0	19.9	19.9
31	19.7		19.9		20.0		19.9	19.9		20.0		19.9

Jan. 20 - Recording-Room temperature lowered from 16°.0 C to 11°.0 C.  
 Apr. 24 - " " " raised " 11°.0 C " 16°.0 C.  
 May 19 - " " " " 16°.0 C " 21°.0 C.  
 Oct. 16 - " " " lowered " 21°.0 C " 16°.0 C.

\* Building repair work in progress near Recording Building - Jan. 19 to Jan. 24.

† Lorry near Recording Building during local works - Mar. 8 (9<sup>h</sup>-18<sup>h</sup>) and Mar. 10 (16<sup>h</sup>) - Mar. 11 (12<sup>h</sup>).

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE XIV. - RESULTS OF THE DETERMINATIONS OF THE ABSOLUTE VALUE OF HORIZONTAL INTENSITY FROM OBSERVATIONS MADE WITH THE SCHUSTER-SMITH COIL MAGNETOMETER IN THE MAGNETIC PAVILION AT ABINGER, WITH THE DEDUCED VALUES OF THE BASE-LINE OF THE HORIZONTAL INTENSITY MAGNETOGRAMS

Universal Time		No. of Obs.	Observed Horizontal Intensity	Deduced Value of Base-line	Universal Time		No. of Obs.	Observed Horizontal Intensity	Deduced Value of Base-line	Universal Time		No. of Obs.	Observed Horizontal Intensity	Deduced Value of Base-line			
					h	m	h	m		h	m	h	m				
Jan.	1	10 16 - 10 27	8	18582	18336	Mar.	20	9 3 - 9 10	8	18589	18335	June	17	8 35 - 8 49	7	18603	18331
	2	16 31 - 16 44	8	18569	18335		22	9 20 - 9 28	8	18581	18335		18	9 8 - 9 20	8	18584	18331
	5	12 17 - 12 27	8	18564	18337		24	8 58 - 9 6	8	18594	18337		19	8 49 - 9 2	8	18547	18331
	6	10 14 - 10 22	8	18578	18337		25	9 10 - 9 18	8	18592	18336		21	9 1 - 9 13	8	18576	18330
	7	11 47 - 11 58	8	18569	18336		27	9 24 - 9 32	8	18577	18335		22	9 5 - 9 19	8	18564	18331
	9	10 14 - 10 22	8	18563	18336		30	9 19 - 9 30	8	18577	18335		23	8 59 - 9 12	8	18563	18331
	10	9 57 - 10 6	8	18577	18336								24	8 49 - 9 0	8	18581	18331
	12	11 28 - 11 40	8	18555	18335								25	9 17 - 9 25	8	18591	18331
	13	10 10 - 10 22	8	18577	18335	Apr.	1	9 24 - 9 32	8	18579	18336		26	9 3 - 9 12	8	18579	18331
	14	9 57 - 10 9	8	18597	18337		3	9 10 - 9 18	8	18589	18336		28	9 16 - 9 24	8	18589	18331
	15	9 55 - 10 8	8	18588	18336		6	9 15 - 9 23	8	18597	18334		29	9 8½ - 9 20	8	18571	18330
	16	11 25 - 11 43	8	18577	18335		7	9 28 - 9 37	8	18568	18335		30	9 12 - 9 20	8	18589	18332
	17	10 3 - 10 13	8	18603	18337		10	8 59 - 9 9	8	18589	18336						
	19	16 2 - 16 10	8	18591	18337		12	9 29 - 9 40	8	18570	18336						
	21	12 3 - 12 15	8	18575	18336		15	9 17 - 9 25	8	18589	18335	July	1	9 25 - 9 32	8	18591	18331
	22	10 30 - 10 41	8	18580	18339		16	10 46 - 10 54	8	18561	18334		2	9 21 - 9 32	8	18588	18332
	23	10 37 - 10 47	8	18569	18336		17	9 20 - 9 29	8	18583	18335		3	9 29 - 9 38	8	18588	18332
	24	10 14 - 10 26	8	18571	18337		19	13 54 - 14 3	8	18588	18334		5	10 29 - 10 38	8	18574	18330
	26	10 28 - 10 35	8	18581	18337		20	9 34 - 9 42	8	18587	18335		6	9 5 - 9 13	8	18580	18331
	27	10 18 - 10 27	8	18600	18337		21	9 13 - 9 20	8	18573	18335		7	9 9 - 9 18	8	18610	18331
	28	10 17 - 10 30	8	18591	18336		22	9 22 - 9 32	8	18502	18334		8	9 20 - 9 28	8	18570	18330
	29	10 15 - 10 24	8	18586	18337		23	9 29 - 9 38	8	18547	18334		9	9 26 - 9 33	8	18577	18331
	30	9 59 - 10 14	8	18580	18336		26	9 24 - 9 32	8	18546	18333		10	9 1 - 9 10	8	18595	18330
	31	10 21 - 10 29	8	18586	18337		27	9 3 - 9 11	8	18561	18334		12	9 15 - 9 23	5	18587	18330
							28	9 14 - 9 23	8	18582	18334		14	13 54 - 14 2	8	18581	18330
							29	9 25 - 9 33	8	18601	18334		15	9 30 - 9 40	8	18591	18331
Feb.	2	10 29 - 10 36	8	18565	18335		30	9 24 - 9 32	8	18573	18333		16	9 11 - 9 19	8	18585	18330
	3	10 24 - 10 32	8	18557	18335								17	9 6 - 9 14	8	18561	18329
	4	10 25 - 10 34	8	18575	18336								19	9 23 - 9 30	8	18588	18330
	5	10 23 - 10 31	8	18585	18336	May	1	9 18 - 9 27	8	18581	18335		20	9 28 - 9 37	8	18566	18329
	6	10 22 - 10 30	8	18582	18335		3	9 20 - 9 28	8	18563	18333		21	10 51 - 11 1	8	18591	18330
	7	10 29 - 10 37	8	18588	18337		4	8 56 - 9 5	8	18583	18333		22	9 34 - 9 44	8	18575	18329
	9	10 22 - 10 30	8	18594	18336		5	9 7 - 9 16	8	18583	18333		23	9 27 - 9 36	8	18562	18329
	10	10 15 - 10 23	8	18593	18337		6	9 21 - 9 28	8	18553	18332		24	9 4 - 9 17	8	18575	18329
	11	10 4 - 10 13	8	18582	18336		7	9 16 - 9 23	8	18543	18332		26	9 27 - 9 35	8	18605	18329
	12	10 19 - 10 27	8	18587	18336		10	9 28 - 9 36	8	18558	18334		28	9 11 - 9 26	8	18594	18328
	13	10 21 - 10 30	8	18581	18335		11	8 52 - 9 0	8	18562	18333		29	9 14 - 9 22	8	18573	18328
	14	10 20 - 10 29	8	18571	18335		12	9 31 - 9 42	8	18571	18331		30	9 19 - 9 28	8	18576	18329
	16	11 40 - 11 51	8	18548	18336		13	9 10 - 9 24	8	18574	18333		31	9 13 - 9 23	8	18575	18329
	17	11 29 - 11 36	8	18560	18337		14	9 8 - 9 16	8	18574	18333						
	18	10 33 - 10 41	8	18563	18337		18	9 9 - 9 17	8	18563	18333						
	19	11 25 - 11 33	8	18572	18336		20	9 18 - 9 26	8	18586	18332	Aug.	3	9 16 - 9 24	8	18586	18328
	20	11 32 - 11 46	8	18572	18336		21	9 28 - 9 36	8	18576	18333		4	9 21 - 9 34	8	18566	18328
	21	11 37 - 11 47	8	18564	18338		22	9 37 - 9 47	8	18562	18333		5	9 24 - 9 31	8	18577	18329
	23	10 21 - 10 34	8	18573	18336		24	10 5 - 10 17	8	18542	18331		6	9 24 - 9 31	8	18565	18328
	24	11 29 - 11 46	8	18575	18338		25	10 37 - 10 50	8	18554	18331		7	9 18 - 9 30	8	18580	18328
	25	10 31 - 10 39	8	18575	18337		26	9 28 - 9 40	8	18547	18332		9	8 44 - 8 53	8	18507	18329
	26	10 28 - 10 37	8	18583	18338		27	10 32 - 10 44	8	18565	18331		10	9 6 - 9 18	8	18518	18329
	27	10 24 - 10 32	8	18586	18338		28	10 33 - 10 46	8	18564	18332		11	8 43 - 8 51	8	18550	18329
	28	11 51 - 11 59	8	18562	18337		29	9 35 - 9 46	8	18568	18333		12	8 52 - 9 2	8	18544	18328
							31	9 30 - 9 39	8	18589	18332		13	9 28 - 9 35	5	18558	18329
													14	9 28 - 9 36	8	18562	18328
Mar.	1	10 21 - 10 29	8	18564	18337								16	9 28 - 9 36	8	18573	18328
	2	10 24 - 10 32	8	18566	18337	June	1	9 0 - 9 9	8	18563	18332		17	9 5 - 9 13	8	18589	18329
	5	11 52 - 12 5	8	18586	18336		2	13 36 - 13 44	8	18570	18332		18	9 28 - 9 39	8	18570	18328
	6	10 8 - 10 17	8	18581	18335		3	9 17 - 9 33	8	18579	18333		19	9 23 - 9 32	8	18575	18328
	8	10 29 - 10 39	8	18578	18334		4	9 6 - 9 23	8	18558	18331		20	9 17 - 9 25	8	18559	18328
	9	10 24 - 10 35	8	18584	18334		5	9 34 - 9 44	8	18576	18332		21	8 55 - 9 2	8	18557	18329
	10	10 23 - 10 32	8	18568	18335		8	9 21 - 9 31	8	18575	18332		23	9 28 - 9 39	8	18564	18328
	11	10 20 - 10 30	8	18582	18335		9	9 11									

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE XIV. - RESULTS OF THE DETERMINATIONS OF THE ABSOLUTE VALUE OF HORIZONTAL INTENSITY FROM OBSERVATIONS MADE WITH THE SCHUSTER-SMITH COIL MAGNETOMETER IN THE MAGNETIC PAVILION AT ABINGER, WITH THE DEDUCED VALUES OF THE BASE-LINE OF THE HORIZONTAL INTENSITY MAGNETOGrams

Universal Time		No. of Obs.	Observed Horizontal Intensity	Deduced Value of Base-line	Universal Time		No. of Obs.	Observed Horizontal Intensity	Deduced Value of Base-line	Universal Time		No. of Obs.	Observed Horizontal Intensity	Deduced Value of Base-line						
h	m	h	m	Y	Y	h	m	h	m	Y	Y	h	m	Y	Y					
Sept. 1	9 23	-	9 35	8	18555	18326	Oct. 12	9 16	-	9 26	8	18575	18328	Nov. 22	10 22	-	10 34	8	18560	18329
	9 28	-	9 36	8	18547	18326		9 42	-	9 50	8	18573	18326		10 19	-	10 33	8	18577	18328
	9 21	-	9 31	8	18570	18328		9 8	-	9 17	8	18568	18326		10 13	-	10 29	8	18566	18329
4	8 59	-	9 7	8	18507	18327		9 19	-	9 27	8	18527	18326		10 17	-	10 37	8	18552	18328
6	9 21	-	9 29	8	18592	18328		9 11	-	9 19	8	18544	18329		10 21	-	10 34	8	18555	18327
7	9 12	-	9 23	8	18584	18328		9 6	-	9 14	8	18498	18328		10 21	-	10 33	8	18585	18329
8	9 6	-	9 19	8	18580	18327		9 29	-	9 38	8	18536	18327		10 25	-	10 38	8	18611	18329
9	9 21	-	9 32	8	18580	18327		9 13	-	9 21	8	18568	18327		10 12	-	10 26	8	18610	18329
10	9 8	-	9 20	8	18581	18327		10 32	-	10 41	8	18559	18326		11 42	-	12 1	8	18596	18328
11	9 16	-	9 28	8	18595	18327		8 55	-	9 11	8	18583	18327		10 1	-	10 12	8	18600	18329
13	9 22	-	9 33	8	18584	18328		9 2	-	9 17	8	18562	18328		10 25	-	10 34	8	18594	18328
14	9 17	-	9 29	8	18578	18327		8 56	-	9 9	8	18583	18327		10 19	-	10 27	8	18596	18328
15	9 12	-	9 21	8	18584	18328		8 38	-	8 51	8	18593	18328		10 20	-	10 30	8	18608	18328
16	8 59	-	9 7	8	18557	18328		10 17	-	10 17	8	18581	18328		10 10	-	10 18	8	18586	18328
17	9 24	-	9 32	8	18568	18328		10 1	-	10 17	8	18533	18327		10 24	-	10 35	8	18592	18328
18	9 9	-	9 17	8	18579	18328		10 21	-	10 29	8	18578	18327		10 26	-	10 35	8	18591	18327
20	9 6	-	9 17	8	18576	18328		10 19	-	10 28	8	18579	18328		10 14	-	10 23	8	18573	18328
23	9 30	-	9 42	8	18582	18327		10 7	-	10 15	8	18580	18328		11 23	-	11 32	8	18597	18328
24	9 17	-	9 25	8	18574	18327		10 28	-	10 36	8	18608	18331		10 19	-	10 28	8	18563	18328
25	8 59	-	9 32	8	18573	18327		10 24	-	10 33	8	18590	18329		11 36	-	11 47	8	18577	18328
27	9 28	-	9 37	8	18572	18326		10 11	-	10 23	8	18587	18328		10 29	-	10 41	8	18579	18328
30	8 55	-	9 3	8	18584	18328		10 32	-	10 40	8	18583	18329		10 13	-	10 24	8	18588	18328
Oct. 1	9 4	-	9 11	8	18571	18327		10 15	-	10 32	8	18587	18329		10 17	-	10 26	8	18576	18329
	9 24	-	9 31	8	18528	18327		10 3	-	10 26	8	18576	18328		10 22	-	10 31	8	18605	18329
	9 25	-	9 33	8	18569	18327		10 22	-	10 35	8	18588	18328		10 36	-	10 47	8	18561	18328
	9 17	-	9 24	8	18566	18328		10 19	-	10 31	8	18574	18328		10 15	-	10 25	8	18570	18328
	9 26	-	9 34	8	18568	18328		10 14	-	10 24	8	18562	18327		10 2	-	10 16	8	18586	18328
	9 12	-	9 21	8	18581	18328		10 13	-	10 26	8	18585	18327		10 26	-	10 39	8	18579	18328
	9 19	-	9 30	8	18588	18328		10 19	-	10 29	8	18576	18328		10 23	-	10 31	8	18582	18327
	9 16	-	9 24	8	18585	18326		10 15	-	10 26	8	18569	18328		10 4	-	10 13	8	18600	18328
	9 17	-	9 24	8	18587	18326		10 32	-	10 40	8	18583	18329		10 19	-	10 27	8	18549	18328

Jan. 20 - Recording-Room temperature lowered from 16° C to 14° C.

Apr. 24 - " " " raised " 11.0 C " 16.0 C

May 19 - " " " " 16.0 C " 21.0 C.

Oct. 16 - " " " lowered " 21.0 C " 16.0 C.

TABLE XV. - RESULTS OF THE DETERMINATIONS OF THE ABSOLUTE VALUE OF VERTICAL INTENSITY FROM OBSERVATIONS MADE WITH THE DYE COIL MAGNETOMETER IN THE MAGNETIC PAVILION AT ABINGER, WITH THE DEDUCED VALUES OF THE BASE-LINE OF THE VERTICAL INTENSITY MAGNETOGRAMS

Universal Time		No. of Obs.	Observed Vertical Intensity	Deduced Value of Base-line	Universal Time		No. of Obs.	Observed Vertical Intensity	Deduced Value of Base-line	Universal Time		No. of Obs.	Observed Vertical Intensity	Deduced Value of Base-line			
					h	m	h	m	Y	h	m	h	m	Y			
Jan.	1	9 28 - 10 4	8	43235	43030	Mar.	16	8 50 - 9 15	8	43263	43035	June	9	8 46 - 9 4	8	43247	43035
	2	12 19 - 12 23	2	43243	43031		17	9 6 - 9 40	8	43245	43034		10	8 41 - 8 58	8	43249	43035
	3	10 30 - 10 43	2	43254	43031		18	8 51 - 9 11	8	43259	43033		11	8 34 - 8 56	8	43241	43035
	3	11 28 - 11 56	8	43253	43032		19	9 1 - 9 21	8	43250	43034		12	8 21 - 8 47	8	43246	43034
	5	11 27 - 12 9	8	43255	43030		20	8 41 - 8 58	8	43259	43032		14	8 22 - 8 57	8	43245	43035
	6	9 39 - 10 6	8	43242	43026		22	8 51 - 9 16	8	43249	43034		15	7 51 - 8 15	8	43257	43034
	7	10 10 - 10 52	8	43252	43035		24	8 21 - 8 53	8	43242	43033		16	7 56 - 8 15	8	43240	43034
	8	12 28 - 12 56	4	43254	43034		25	8 41 - 9 5	8	43242	43034		17	8 3 - 8 27	8	43245	43036
	9	9 46 - 10 6	8	43249	43033		30	8 39 - 9 7	8	43240	43031		18	8 28 - 9 1	8	43242	43036
	10	9 31 - 9 51	8	43247	43032								19	8 17 - 8 41	8	43238	43036
	12	9 50 - 10 26	8	43239	43034								21	8 25 - 8 51	8	43237	43033
	13	9 31 - 9 59	8	43245	43032								22	8 25 - 8 55	8	43239	43035
	14	9 23 - 9 50	8	43246	43031								23	8 21 - 8 51	8	43250	43035
	15	9 12 - 9 42	8	43239	43032								24	8 18 - 8 39	8	43249	43035
	16	9 45 - 10 12	8	43239	43032								25	8 47 - 9 11	8	43246	43034
	17	9 42 - 9 58	8	43231	43033								26	8 40 - 8 55	8	43252	43033
	19	9 56 - 10 32	8	43246	43033								28	8 49 - 9 8	8	43235	43033
	21	10 6 - 10 50	8	43248	43031								29	8 50 - 9 3	8	43244	43035
	22	9 47 - 10 16	8	43246	43032								30	8 50 - 9 8	8	43243	43035
	23	9 47 - 10 27	8	43247	43032												
	24	9 42 - 10 6	8	43238	43031												
	26	10 5 - 10 24	8	43239	43033												
	27	9 44 - 10 11	8	43233	43034												
	28	9 36 - 10 6	8	43238	43033												
	29	9 49 - 10 11	8	43241	43033												
	30	9 23 - 9 51	8	43242	43034												
	31	9 56 - 10 15	8	43239	43033												
Feb.	2	10 6 - 10 22	8	43245	43033	May	1	8 54 - 9 13	8	43239	43035	July	1	8 55 - 9 18	8	43243	43034
	3	9 55 - 10 17	8	43248	43032		27	8 37 - 8 58	8	43235	43033		2	8 39 - 9 11	8	43240	43033
	4	9 53 - 10 17	8	43236	43034		28	8 47 - 9 10	8	43243	43035		12	8 53 - 9 11	8	43242	43033
	5	10 2 - 10 19	8	43241	43032		29	8 49 - 9 21	8	43237	43033		15	8 40 - 9 11	8	43224	43033
	6	9 59 - 10 18	8	43249	43034		30	8 52 - 9 17	8	43238	43034		16	8 48 - 9 7	8	43246	43036
	7	9 58 - 10 23	8	43241	43032								17	8 47 - 9 1	8	43238	43035
	9	10 2 - 10 17	8	43238	43033								19	8 52 - 9 18	8	43233	43035
	10	9 53 - 10 9	8	43232	43034								20	9 2 - 9 20	8	43226	43036
	11	9 37 - 9 59	8	43237	43033								21	9 8 - 9 34	8	43235	43035
	12	9 54 - 10 15	8	43235	43033								22	9 0 - 9 27	8	43236	43034
	13	9 59 - 10 17	8	43235	43033								23	8 55 - 9 20	8	43232	43035
	14	9 58 - 10 16	8	43234	43032								24	8 40 - 8 59	8	43246	43036
	16	10 8 - 10 35	8	43240	43034								26	8 52 - 9 21	8	43231	43034
	17	10 25 - 10 39	6	43238	43035								28	8 53 - 9 4	8	43241	43033
	18	10 2 - 10 26	8	43239	43034								29	8 54 - 9 8	8	43234	43032
	19	10 10 - 10 37	8	43242	43034								30	8 48 - 9 13	8	43244	43033
	20	10 15 - 10 34	8	43244	43035								31	8 55 - 9 9	8	43244	43033
	21	9 59 - 10 31	8	43246	43032												
	23	9 53 - 10 16	8	43234	43034												
	24	10 7 - 10 30	8	43246	43033												
	25	10 0 - 10 25	8	43245	43032												
	26	9 58 - 10 23	8	43245	43035												
	27	9 55 - 10 19	8	43242	43033												
	28	10 6 - 10 27	8	43240	43034												
Mar.	1	9 45 - 10 15	8	43238	43034	June	29	8 45 - 9 28	8	43246	43034	Aug.	3	8 47 - 9 11	8	43246	43036
	2	9 57 - 10 19	8	43247	43033		31	8 54 - 9 25	8	43249	43034		4	8 47 - 9 12	8	43250	43035
	5	10 7 - 10 29	8	43242	43036								5	9 4 - 9 19	8	43242	43035
	6	9 42 - 10 4	8	43234	43032								6	9 1 - 9 17	8	43243	43035
	8	10 1 - 10 24	8	43239	43039								7	8 42 - 9 12	8	43231	43033
	9	9 55 - 10 18	8	43237	43036								9	9 1 - 9 22	8	43256	43035
	10	9 43 - 10 17	8	43239	43036								10	8 47 - 9 1	8	43228	43035
	11	9 51 - 10 13	8	43240	43037								11	9 1 - 9 18	8	43258	43035
	12	9 42 - 10 13	8	43236	43037								12	9 11 - 9 33	8	43261	43035
	13	9 26 - 9 48	8	43241	43033								13	9 4 - 9 21	8	43247	43035
	15	9 0 - 9 32	8	43190	43033								14	8 55 - 9 23	8	43257	43037
													16	8 41 - 9 22	8	43256	43035
													17	8 4			

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE XV. - RESULTS OF THE DETERMINATIONS OF THE ABSOLUTE VALUE OF VERTICAL INTENSITY FROM OBSERVATIONS MADE WITH THE DYE COIL MAGNETOMETER IN THE MAGNETIC PAVILION AT ABINGER, WITH THE DEDUCED VALUES OF THE BASE-LINE OF THE VERTICAL INTENSITY MAGNETOGrams

Universal Time				No. of Obs.	Observed Vertical Intensity	Deduced Value of Base-line	Universal Time				No. of Obs.	Observed Vertical Intensity	Deduced Value of Base-line	Universal Time				No. of Obs.	Observed Vertical Intensity	Deduced Value of Base-line						
	h	m	h	m	Y	Y		h	m	h	m	Y	Y		h	m	h	m	Y	Y						
Aug. 25	8	41	-	9	11	8	43254	43036	Oct. 6	9	3	-	9	22	8	43264	43039	Nov. 19	9	45	-	10	12	8	43259	43038
26	9	3	-	9	26	8	43258	43036	7	8	55	-	9	9	8	43257	43038	20	9	41	-	10	7	8	43258	43037
27	8	53	-	9	24	8	43252	43036	8	8	51	-	9	12	8	43254	43037	22	9	38	-	10	3	8	43267	43039
28	8	31	-	9	2	8	43248	43035	9	8	51	-	9	11	8	43258	43036	23	9	46	-	10	12	8	43266	43038
30	8	53	-	9	14	8	43247	43035	11	8	52	-	9	14	8	43266	43035	24	9	37	-	10	6	8	43259	43039
31	8	50	-	9	11	8	43256	43034	12	8	55	-	9	13	8	43263	43038	25	9	41	-	10	7	8	43274	43039
Sept. 1	8	47	-	9	17	8	43245	43035	13	9	17	-	9	38	8	43253	43038	26	9	43	-	10	13	8	43265	43037
2	9	1	-	9	23	8	43260	43034	14	8	46	-	9	2	8	43254	43038	27	9	42	-	10	11	8	43261	43037
3	8	58	-	9	16	8	43258	43035	15	8	56	-	9	15	8	43251	43036	29	9	43	-	10	16	8	43256	43038
4	8	36	-	8	54	8	43263	43037	18	9	24	-	9	42	8	43261	43037	30	9	41	-	10	1	8	43256	43038
6	8	41	-	9	16	8	43249	43034	20	9	23	-	9	40	8	43271	43038	Dec. 1	10	12	-	10	39	8	43256	43038
7	8	50	-	9	8	8	43245	43038	21	8	47	-	9	2	8	43262	43038	2	9	36	-	9	58	8	43257	43039
8	8	22	-	8	57	8	43251	43035	22	9	4	-	9	24	8	43272	43038	3	9	53	-	10	20	8	43264	43038
9	8	42	-	9	13	8	43258	43036	23	8	48	-	9	8	8	43270	43036	4	9	55	-	10	16	8	43250	43038
10	8	35	-	9	1	8	43253	43034	25	9	12	-	9	30	8	43266	43038	6	9	54	-	10	16	8	43255	43040
11	8	33	-	9	10	8	43251	43036	26	8	19	-	8	45	8	43271	43039	7	9	50	-	10	4	8	43264	43040
13	8	50	-	9	14	8	43244	43034	28	8	23	-	8	47	8	43278	43039	9	9	57	-	10	16	8	43264	43036
14	8	54	-	9	12	8	43247	43037	29	8	19	-	8	41	8	43272	43037	10	9	49	-	10	9	8	43263	43041
15	8	46	-	9	10	8	43248	43036	30	8	6	-	8	28	8	43268	43038	11	9	52	-	10	10	8	43260	43040
16	8	38	-	8	55	8	43252	43036	Nov. 1	9	12	-	9	38	8	43257	43037	13	10	8	-	10	34	8	43258	43038
17	8	54	-	9	18	8	43255	43034	2	9	27	-	9	48	8	43264	43039	14	9	53	-	10	13	8	43263	43039
18	8	45	-	9	4	8	43252	43034	4	10	2	-	10	17	8	43266	43038	15	10	15	-	10	36	8	43258	43037
20	8	44	-	9	0	8	43246	43033	5	9	56	-	10	15	8	43256	43037	16	9	59	-	10	22	8	43262	43038
23	8	52	-	9	23	8	43249	43034	6	9	43	-	10	4	8	43260	43039	17	9	47	-	10	10	8	43261	43040
24	8	57	-	9	14	8	43250	43035	8	10	0	-	10	24	8	43262	43036	18	9	56	-	10	14	8	43262	43038
25	8	35	-	8	55	8	43258	43035	9	10	0	-	10	20	8	43259	43039	20	9	54	-	10	15	8	43257	43037
27	8	58	-	9	23	8	43266	43037	10	9	9	-	9	34	8	43266	43037	21	10	7	-	10	30	8	43261	43041
Oct. 1	8	31	-	8	59	8	43250	43038	11	10	8	-	10	28	8	43260	43039	22	9	50	-	10	10	8	43260	43039
2	8	58	-	9	20	8	43243	43035	12	9	43	-	10	6	8	43255	43038	23	9	30	-	9	52	8	43259	43039
4	9	6	-	9	23	8	43259	43037	13	9	29	-	9	55	8	43254	43037	24	10	7	-	10	23	8	43263	43040
5	8	59	-	9	14	8	43258	43037	15	9	56	-	10	16	8	43249	43038	29	9	54	-	10	19	8	43264	43037
									16	9	37	-	10	12	8	43262	43039	30	9	38	-	10	0	8	43262	43042
									17	9	40	-	10	6	8	43258	43039	31	9	54	-	10	14	8	43268	43040
									18	9	37	-	10	7	8	43257	43038									

Jan. 20 - Recording-Room temperature lowered from 16° C to 11° C.

Apr. 24 - " " " raised 11° C " 16° C

May 19 - " " " " 16° C " 21° C

Oct. 16 - " " " lowered 21° C " 16° C

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

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TABLE XV(A). - DAILY VALUE OF THE BASE-LINE OF THE VERTICAL INTENSITY MAGNETOGRAMS AT THE ABINGER MAGNETIC STATION,  
DEDUCED FROM OBSERVATIONS OF MAGNETIC DIP MADE WITH THE EARTH INDUCTOR

Day	January	February	March	April	May	June	July	August	September	October	November	December
1	Y 43028	Y -	Y 43033	Y 43034	Y 43030	Y 43034	Y 43035	Y -	Y 43037	Y 43036	Y 43037	Y 43036
2	43033	43032	43037	-	-	43034	43033	-	43034	43038	43039	43038
3	43030	43031	-	-	43033	-	43033	43032	43033	-	-	43036
4	-	43031	-	-	43031	43033	-	43032	43033	43034	43039	43035
5	43033	43032	43034	-	43032	43032	43035	43036	-	43034	43040	-
6	43032	43032	43033	43038	43029	-	43034	43034	43028	43033	43036	43037
7	43030	43033	-	43039	43032	43032	43033	43037	43034	43037	-	43038
8	-	-	43034	43033	-	43033	43034	-	43032	43037	43034	-
9	43037	43033	43038	-	-	43030	43035	43034	43032	43041	43034	43038
10	43033	43032	43032	43031	43030	43031	43034	-	43035	-	43037	43039
11	-	43036	43033	-	43032	43032	-	43029	43035	43038	43034	43037
12	43033	43030	43033	43033	-	43030	43027	43037	-	43038	43037	-
13	-	43035	43034	-	43033	-	-	43035	43034	43036	43039	43038
14	43034	43027	-	-	43030	43032	-	43032	43032	43036	-	43040
15	43032	-	-	43035	-	43031	43034	-	43032	43035	43037	43038
16	43031	43033	43037	-	-	43033	43031	43037	43037	-	43036	43038
17	43030	43034	43034	43032	-	43031	43035	43033	43036	-	43038	43037
18	-	43033	43033	-	43031	43032	-	43034	43034	-	43035	43039
19	43029	43028	43032	43032	-	43033	43029	43029	43035	-	43035	-
20	-	43033	43032	43030	43033	-	43036	43036	43035	43036	43035	43036
21	43031	43029	-	43029	43033	43035	43035	43032	-	43034	-	43037
22	43027	-	43032	43034	43032	43030	43033	-	-	43038	43037	43041
23	43032	43035	-	-	-	43034	43034	43033	43037	43036	43038	43038
24	43026	43030	43033	43026	43033	43033	43033	43034	43036	-	43038	43039
25	-	43034	43033	-	43031	43032	-	43037	43033	43038	43038	-
26	43029	43036	-	43032	43030	43033	43032	43034	-	43037	43038	-
27	43030	43034	-	43030	43030	-	-	43035	43038	-	43040	-
28	43032	-	-	43027	43033	43025	43030	43034	-	43036	-	-
29	43031	-	-	43032	43030	43033	43032	-	-	43035	43038	43035
30	43031		43033	-	-	43033	43034	43036	-	43036	43036	43037
31	43031		-		43033	.		43032	43033	-		43037

Jan. 20 - Recording-Room temperature lowered from 16° C to 11° C.  
 Apr. 24 - " " " raised " 11° C " 16° C.  
 May 19 - " " " " 16° C " 21° C.  
 Oct. 16 - " " " lowered " 21° C " 16° C.

## MAGNETIC OBSERVATIONS, ABINGER, 1948.

TABLE XVI(A). - MEAN ANNUAL VALUES OF MAGNETIC ELEMENTS DETERMINED AT THE ROYAL OBSERVATORY,  
GREENWICH, BETWEEN THE YEARS 1818 - 1925.

Year	Declination West	Horizontal Intensity	Vertical Intensity	Dip	Year	Declination West	Horizontal Intensity	Vertical Intensity	Dip
	°   '	C.G.S.Unit	C.G.S.Unit	°   '		°   '	C.G.S.Unit	C.G.S.Unit	°   '
1818	24 19 †	..	..	..	1882	18 22.3	0.1806	0.4375	67 34.2
1819	24 21	..	..	..	1883	18 15.0	0.1812	0.4381	67 31.7
1820	24 21	..	..	..	1884	18 7.6	0.1814	0.4379	67 29.7
1841	23 16.2	..	..	..	1885	18 1.7	0.1817	0.4380	67 28.0
1842	23 14.6	..	..	..	1886	17 54.5	0.1818	0.4377	67 27.1
1843	23 11.7	..	..	69 0.6	1887	17 49.1	0.1819	0.4380	67 26.6
1844	23 15.3	..	..	69 0.3	1888	17 40.4	0.1822	0.4383	67 25.6
1845	22 56.7	..	..	68 57.5	1889	17 34.9	0.1823	0.4380	67 24.3
1846	22 49.6	0.1731	..	68 58.1	1890	17 28.6	0.1825	0.4381	67 23.0
1847	22 51.3	0.1736	..	68 59.0	1891	17 23.4	0.1827	0.4380	67 21.5
1848	22 51.8	0.1731	..	68 54.7	1892	17 17.4	0.1829	0.4379	67 20.0
1849	22 37.8	0.1733	..	68 51.3	1893	17 11.4	0.1831	0.4373	67 17.9
1850	22 23.5	0.1738	..	68 46.9	1894	17 4.6	0.1831	0.4374	67 17.4
1851	22 18.3	0.1744	..	68 40.4	1895	16 57.4	0.1834	0.4378	67 16.1
1852	22 17.9	0.1745	..	68 42.7	1896	16 51.7	0.1835	0.4382	67 15.1
1853	22 10.1	0.1748	..	68 44.6	1897	16 45.8	0.1838	0.4377	67 13.5
1854	22 0.8	0.1749	..	68 47.7	1898	16 39.2	0.1840	0.4377	67 12.1
1855	21 48.4	0.1756	..	68 44.6	1899	16 34.2	0.1843	0.4380	67 10.5
1856	21 43.5	0.1759	..	68 43.5	1900	16 29.0	0.1846	0.4380	67 8.8
1857	21 35.4	0.1769	..	68 31.1	1901	16 26.0	0.1850	0.4381	67 6.4
1858	21 30.3	0.1762	..	68 28.3	1902	16 22.8	0.1852	0.4377	67 3.8
1859	21 23.5	0.1761	..	68 26.9	1903	16 19.1	0.1852	0.4368	67 1.2
1860	21 14.3	..	..	68 30.1	1904	16 15.0	0.1854	0.4359	66 57.6
1861	21 5.5	0.1773	..	68 24.6	1905	16 9.9	0.1854	0.4355	66 56.3
					1906	16 3.6	0.1854	0.4353	66 55.6
1861	..	0.1759	..	68 15.8	1907	15 59.8	0.1855	0.4357	66 56.2
1862	20 52.6	0.1763	0.4403	68 9.6	1908	15 53.5	0.1854	0.4356	66 56.3
1863	20 45.9	0.1764	0.4396	68 7.0	1909	15 47.6	0.1854	0.4348	66 54.1
1864	..	0.1767	0.4393	68 4.1	1910	15 41.2	0.1855	0.4345	66 52.8
1865	20 33.9	0.1767	0.4388	68 2.7	1911	15 33.0	0.1855	0.4342	66 52.1
1866	20 28.0	0.1773	0.4397	68 1.3	1912	15 24.3	0.1855	0.4340	66 51.8
1867	20 20.5	0.1777	0.4392	67 57.2	1913	15 15.2	0.1853	0.4333	66 50.5
1868	20 13.1	0.1779	0.4395	67 56.5					
1869	20 4.1	0.1782	0.4396	67 54.8					
1870	19 53.0	0.1784	0.4392	67 52.5	1914	15 6.3	0.1853	0.4333	66 50.8
1871	19 41.9	0.1786	0.4389	67 50.3	1915	14 56.5	0.1851	0.4331	66 51.6
1872	19 36.8	0.1789	0.4383	67 47.8	1916	14 46.9	0.1848	0.4326	66 52.2
1873	19 33.4	0.1793	0.4386	67 45.8	1917	14 37.1	0.1848	0.4330*	66 53.0
1874	19 28.9	0.1797	0.4387	67 43.6	1918	14 27.8	0.1846	0.4325	66 52.8
1875	19 21.2	0.1797	0.4383	67 42.4	1919	14 18.2	0.1845	0.4324	66 53.3
1876	19 8.3	0.1799	0.4383	67 41.0	1920	14 8.6	0.1845	0.4325	66 53.6
1877	18 57.2	0.1800	0.4381	67 39.7	1921	13 57.6	0.1845	0.4322	66 53.0
1878	18 49.3	0.1802	0.4382	67 38.2	1922	13 46.7	0.1844	0.4318	66 52.3
1879	18 40.5	0.1805	0.4382	67 37.0	1923	13 35.1	0.1843	0.4314	66 51.9
1880	18 32.6	0.1805	0.4380	67 35.7	1924	13 22.8	0.1843	0.4311	66 51.6
1881	18 27.1	0.1807	0.4379	67 34.7	1925	13 9.9	0.1841	0.4308	66 51.4

In 1818, 1819 and 1820 numerous observations of Declination were made with a Dolland needle.

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

N.B. - In the above table the value of Vertical Intensity for the years 1862-1913 inclusive were computed from the corresponding values of Horizontal Intensity and Dip, the values of Dip being the mean of all the absolute observations taken in any year, and the time of observation approximating to noon on the average. Beginning with 1914 the values of Dip have been computed from the corresponding annual mean values of Horizontal and Vertical Intensity.

† Mean of seven months June to December.

\* Mean of ten months March to December.

TABLE XVI(B). - MEAN VALUES OF MAGNETIC ELEMENTS DETERMINED AT THE ABINGER MAGNETIC STATION,  
FOR THE YEARS 1925 - 1948.

Year	Declination West	Horizontal Intensity	Vertical Intensity	Inclination
	°   /	C.G.S.Unit	C.G.S.Unit	°
1925	13 22.7	0.18597	0.42946	66 35.1
1926	13 10.4	0.18581	0.42947	66 36.3
1927	12 58.4	0.18575	0.42932	66 36.2
1928	12 47.0	0.18564	0.42941	66 37.3
1929	12 35.8	0.18555	0.42918	66 37.2
1930	12 24.6	0.18542	0.42924	66 38.2
1931	12 13.7	0.18543	0.42923	66 38.1
1932	12 2.6	0.18536	0.42940	66 39.1
1933	11 51.7	0.18532	0.42942	66 39.4
1934	11 41.1	0.18533	0.42955	66 39.7
1935	11 30.3	0.18527	0.42981	66 40.9
1936	11 20.0	0.18524	0.43007	66 41.8
1937	11 10.4	0.18522	0.43031	66 42.7
1938*	11 1.4	0.18522	0.43050	66 43.2
1939	10 51.9	0.18528	0.43074	66 43.5
1940	10 43.0	0.18533	0.43099	66 43.9
1941	10 33.8	0.18539	0.43128	66 44.3
1942	10 24.8	0.18554	0.43146	66 43.9
1943	10 16.2	0.18556	0.43172	66 44.5
1944	10 7.8	0.18566	0.43189	66 44.3
1945	9 59.5	0.18573	0.43207	66 44.3
1946	9 51.1	0.18569	0.43235	66 45.4
1947	9 43.1	0.18577	0.43246	66 45.2
1948	9 35.4	0.18593	0.43255	66 44.4

The values of Inclination are computed from the corresponding values of horizontal and vertical intensity.

Commencing with the years 1927 and 1929 respectively, the values of horizontal and vertical intensity are based upon observations with Coil-magnetometers.

\* Discontinuities of -1.7γ in H and -3.9γ in Z were introduced in 1938. See Introduction pp. x and xi.

## NOTES ON MAGNETIC ACTIVITY

**January.** Activity was renewed on the 1st after a quiet period. This grew to storm intensity between 3d15h and 3d20h when phase difference type of movements in H and D became pronounced. The largest movement occurred in D at 19 $\frac{1}{2}$ h after which the disturbance rapidly subsided. During this period irregular movements accompanied a general rise (60 $\gamma$ ) in Z. Conditions remained calm until 5d6h when unsteadiness again appeared becoming most pronounced between the 7th and 9th. By the 12th the traces had become moderately quiet, interrupted by the appearance of only occasional bays. Most noteworthy were those occurring in H and D at 12d21h and at 15d22 $\frac{1}{2}$ h. A renewed spell of activity began in the morning of the 17th and became most pronounced between 17d11h and 18d4h. The outstanding feature was a broad easterly bay-like movement in D between 17d19h and 22h. General unsteadiness continued, increasing temporarily in intensity between 21d17h and 22d4h after which it gradually subsided. By the 23rd conditions were relatively quiet and continued so until 29d0h. The remainder of the month was characterised by unsteadiness of the traces with the occurrence of bays in D at 29d2h, in H (-50 $\gamma$ ) at 29d16h, in D and H at 29d21h and at 31d1 $\frac{1}{2}$ h.

Ranges for the month: D, -9°13'.4 to -9°57'.0 both on 3rd; H, .18446 on 3rd to .18641 on 8th; Z, .43215 to .43351 both on 3rd.

**February.** A positive bay in H (40 $\gamma$ ) at 1h on the 1st, with corresponding small movements in D and Z, constituted the only notable feature on an otherwise quiet day. Irregularities began to appear at 2d3h and a sudden commencement occurring at 3d2h8m marked the beginning of a period of agitation which lasted for about 24 hours. Irregularities continued on a reduced scale until the 14th, with the appearance of a number of well-defined positive bays around midnight, e.g. 6d23h, H 35 $\gamma$  and D 13'; 8d23h, D 9'. A sudden commencement movement at 10d2h2m was followed by little or no additional disturbance. On the 15th activity became more pronounced taking on the form of a recurrent type storm which continued with varying intensity subsiding by 20d0h. The most striking features of the traces during this period occurred when between 15d18h and 16d1h H assumed an oscillatory character with a period of about 50 minutes. A sharp positive bay also occurred in H (80 $\gamma$ ) at 16d0h. After a calm spell, irregularities again appeared between 23d0h and 24d23h, the principal movement being a large easterly bay in D (18') at 24d21h accompanied by a negative movement in H (50 $\gamma$ ). A further quiet spell was broken by a sudden commencement recorded in H at 26d19h35m which was followed by general irregularities of no great magnitude, the largest occurring between 27d20h and 28d3h during which interval H showed a range of 60 $\gamma$ .

Ranges for the month: D, -9°22'.4 on 24th to -9°50'.5 on 23rd; H, .18497 on 3rd to .18648 on 18th; Z, .43219 on 16th to .43308 on 23rd.

**March.** The month opened during a period of minor activity which became more pronounced during the 1st and 2nd. Between 1d6h and 1d10h the traces were characterised by rapid oscillations which were repeated on the following day at about the same time, but which continued until 12h. Several movements of the order of 50 to 60 $\gamma$  also occurred in H and D around 22h on these two days. Smaller irregularities continued until 11d21h, principal amongst these being several "midnight" bays, though the short period 7d17h to 8d11h was essentially quiet. A sharp easterly swing in D (12') between 11d21h40m and 22h10m, accompanied by an increase in H (45 $\gamma$ ) between 21h40m and 21h50m, marked the beginning of a period of activity which, after rising to storm intensity, terminated rather suddenly about 16d4h. The most active period was preceded by a sudden commencement at 15d3h35m, (H +46 $\gamma$ , D -8', Z +12 $\gamma$ ) and included a notable vortex movement at 15d19h. Amongst the small irregularities recorded during the succeeding four days the most noteworthy was an isolated depression in Z of 20 $\gamma$  that occurred fairly suddenly at 19d15h50m and which had recovered by 16h30m. A crochet recorded at 20d12h23m.7 (H -33 $\gamma$ ) was followed twenty hours later by abrupt movements in all three traces at 21d8h20m.5 having the form of a modified S.C., though not followed by disturbance. Throughout the remainder of the month activity was subdued.

Ranges for the month: D -9°20'.2 on 11th to -10°3'.3 on 15th; H, .18394 to .18686 both on 15th; Z, .43137 to .43400 both on 15th.

**April.** The 1st was characterised by a general agitation of the traces which continued on a much reduced scale for several days. Small positive bays of  $50\gamma$  in H and  $7'$  in D occurred at  $1^d23^h$ . Little else of note occurred until  $6^d3^h58^m$  when a sudden commencement movement in all traces was followed by a disturbance which, though relatively small, was of an unusual character. The principal feature was an abrupt increase of  $50\gamma$  in H at  $16^h52^m$  which was irregularly maintained until  $18^h13^m$  when H rapidly decreased, falling  $120\gamma$  by  $18^h20^m$ , after which a sharp recovery set in. Activity had died out by  $8^d1^h$  and was followed by a period of quiet. With the appearance of a small positive bay in H ( $20\gamma$ ) at  $9^d19\frac{1}{2}^h$  conditions became slightly less quiet, though they remained comparatively featureless until  $20^d23^h$  except for S.C.-like movements at  $16^d12^h16^m$  and  $20^d1^h9^m$ . Between  $20^d23^h$  and  $21^d3^h$  H showed a negative swing, superimposed upon which was a single irregular oscillation of overall amplitude  $150\gamma$  which occurred between  $0^h50^m$  and  $1^h50^m$ . The longer period movement was accompanied by a similar movement towards the east in D and a negative swing in Z. Movements of comparable amplitude again appeared between  $22^d0^h$  and  $12^h$ . Unsteadiness persisted throughout the remainder of the month, the largest single movement being a negative swing in H of  $70\gamma$  between  $7^h$  and  $8^h$  on the 29th.

Ranges for the Month: D,  $-9^{\circ}12' .5$  on 21st to  $-9^{\circ}51' .4$  on 22nd; H, .18491 on 21st to .18690 on 6th; Z, .43158 on 21st to .43307 on 15th.

**May.** The beginning of the month was marked by considerable activity, the larger movements being of the order of  $50\gamma$  in H and  $10'$  in D. An easterly movement of the latter between  $2^d19^h20^m$  and  $19^h52^m$  amounting to  $13'$  and followed by a slower recovery was noteworthy. A change in the general character of the H and D traces occurred on the 7th when a general decrease in the amplitude of the movements was accompanied by an increased agitation. This agitation increased abruptly with the occurrence of a large S.C. movement at  $9^d7^h24^m$ , but resumed its former intensity about  $13^h$ . A positive, irregular swing in H of the order  $100\gamma$  appeared between  $10^d15\frac{1}{2}^h$  and  $20^h$  but the character of the traces did not change until about midday on the 13th when conditions became relatively quiet. This spell was short lived, for a decrease in H of  $50\gamma$  between  $14^d19^h10^m$  and  $19^h34^m$  was followed at  $23^h23^m$  by an S.C. introducing a period of disturbance during which activity rose to storm intensity. The largest range during this storm occurred in H ( $170\gamma$ )\*. By  $17^d0^h$  comparative calm had been restored, and with minor irregularities this continued until about  $21^d6^h$  after which activity gradually increased again to storm intensity, being most pronounced between  $21^d10^h$  and  $22^d10^h$ . Activity continued almost uninterrupted though sometimes on a much reduced scale, until the end of the month. During this period an S.C., unaccompanied by any marked change of conditions, was recorded at  $23^d23^h25^m$ .

Ranges for the month: D,  $-9^{\circ}20' .4$  on 9th to  $-9^{\circ}56' .7$  on 16th; H, .18499 on 16th to .18707 on 9th; Z, .43162 on 16th to .43326 on 21st.

**June.** After a short spell of activity, most apparent in H between  $12^h$  and  $17^h$ , conditions became relatively calm from  $1^d18^h$ . From the 7th to the 10th irregularities in the traces were more pronounced though activity continued low. From  $10^d16^h$  conditions were notably steady until the occurrence of an S.C. at  $11^d19^h1^m$  (H  $+40\gamma$ ) which was followed, however, by no more than minor irregularities. The 15th and 16th were nearly quiet after which ensued a period of minor activity which, though most apparent during afternoon and evening hours, varied little in intensity before subsiding on the morning of the 22nd. The traces continued featureless until the appearance of a small bay in H ( $+50\gamma$ ) at  $25^d20\frac{1}{2}^h$  followed at  $22\frac{1}{2}^h$  by a similar movement in D ( $10'E$ ). Between  $26^d15^h$  and  $17^h$  H showed a roughly sinusoidal swing through positive and negative with an overall amplitude of  $100\gamma$ . Apart from some small irregularities in H occurring after  $30^d13^h$  the remainder of the month was essentially calm. In general the month was devoid of interest.

Ranges for the month: D,  $-9^{\circ}20' .5$  on 1st to  $-9^{\circ}48' .9$  on 20th; H, .18518 on 1st to .18683 on 25th; Z, .43202 on 4th to .43295 on 21st.

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\* The magnetograms for this storm is not given owing to the failure of the "ordinary" La Cour recorder during the period.

**July.** A generally inactive month presenting few features of interest. After three days characterised by small irregularities the period  $4^d12^h - 5^d0^h$  exhibited minor disturbance, particularly in H, which was repeated on a reduced scale the following day. The most active period began about midday on the 30th and continued until the end of the month. The largest single movements occurring during this interval were those associated with an easterly (positive) bay in D ( $11'$ ) at  $30^d20^h$  and a movement resembling a damped, triple oscillation in H extending over the interval  $31^d14\frac{1}{2}^h - 17\frac{1}{2}^h$  (65γ). The quietest extended periods occurred between the 18th and 19th and from the 22nd to the 25th.

Ranges for the month: D,  $-9^{\circ}24' .4$  on 23rd to  $-9^{\circ}49' .3$  on 3rd; H, .18530 on 29th to .18684 on 28th; Z, .43206 on 20th to .43294 on 10th.

**August.** An easterly movement in D ( $10'$ ) between  $1^d22^h22^m$  and  $22^h40^m$  was the most striking feature during a period of minor activity extending from  $1^d0^h$  to  $4^d9^h49^m$ , when a small abrupt movement in H and D introduced a period of slightly enhanced activity lasting until  $4^d20^h$ . Conditions then became relatively quiet and continued so, apart from a negative swing that occurred in H (65γ) between  $6^d15^h$  and  $18^h$ , until the incidence of a well-defined sudden commencement at  $7^d3^h11^m$ . From this moment the traces became subject to irregularities accompanied by a state of agitation, but by  $15^h$  they had again become nearly quiet. A second and large S.C. at  $23^h0^m$  shown in all three elements (H +82γ) marked the beginning of a storm which was notable not only for its severity but also for its long duration. Activity continued, though on a much reduced scale, until the 13th, period around  $7^h$  showing much agitation. Sharp bays, or pinnacles, in H occurring at  $8^d20^h$  (+150γ),  $9^d22^h$  (+100γ) and  $12^d20^h$  (+90γ) with corresponding phase-difference movements in D were notable. Apart from small irregularities occurring in the traces, mainly during the afternoon and evening hours, conditions remained quiet until the occurrence of a large S.C. recorded in H (+74γ) at  $19^d19^h38^m$  which was followed by limited activity accompanying a recovery in the value of H. The largest movement in D was an irregular easterly bay occurring between  $20^d1^h$  and  $3^h$  (15'). Prior to the traces becoming quiet on the 25th unsteadiness remained the characteristic feature of the traces, marked by an occasional small bay noteworthy amongst which were those in D at  $21^d22^h$  (7'E) and at  $23^d3\frac{1}{2}^h$  (10'E), the latter accompanied by a negative bay in Z (-30γ). Generally calm conditions prevailed until the reappearance of small irregularities around midday on the 28th; these became more pronounced the following day, though single movements remained limited in magnitude to about 50γ in H and 10' in D, with little in Z. Of these the outstanding were those forming bays centred about the following times: in D,  $29^d19^h50^m$  (E),  $30^d2^h20^m$  and  $5^h20^m$  (W) and in H,  $30^d5^h$ . By  $30^d7^h$  conditions had again become relatively quiet and continued so until the end of the month.

Ranges for the month: D,  $-9^{\circ}7' .7$  to  $-9^{\circ}54' .7$  both on 8th; H, .18370 on 8th to .18721 on 10th; Z, .43145 to .43416 both on 8th.

**September.** The month opened with a period of moderate disturbance which was most apparent on the 1st, 2nd and 4th. Outstanding movements were in D; a broad easterly bay between  $1^d19\frac{1}{2}^h$  and  $22\frac{1}{2}^h$  (14'), which was repeated at the same time the following day on a reduced scale (10'), a westerly bay at  $2^d1\frac{1}{2}^h$  (10') and an easterly movement of 10' between  $4^d16^h8^m$  and  $30^m$ ; in H; negative bays centred around  $1^d21\frac{1}{2}^h$  (50γ),  $2^d4\frac{1}{2}^h$  (50γ) and  $4^d9^h$  (70γ) with slightly smaller positive bays at  $2^d19^h$ ,  $3^d13^h$  and several between  $4^d12^h$  and midnight, the last being centred around  $22^h$ , (40γ). Conditions on the 5th were nearly quiet and except for the occurrence near  $7^d6^h$  of bays in H (+50γ) and D (10'W) inactivity prevailed generally until  $10^d12^h$  when H became rather more agitated, continuing so until  $18^h$ . Increased activity reappeared the following day from  $15^h$  and was maintained throughout the 12th, after which it subsided. Between  $15^d21^h$  and  $22^h$  the declination magnet moved about 15' to the east and during the following six hours oscillated about this new position, after which it gradually recovered its normal position. At  $16^d3^h$  an oscillation of overall amplitude 13' was accompanied by a positive bay in H of 50γ. Minor activity was noticeable between  $16^d14^h$  and midnight and again between  $18^d21^h$  and  $19^d4^h$ , but otherwise the traces remained featureless until the occurrence of a large S.C. in H (+48γ) at  $21^d18^h58^m$  accompanied by smaller movements in D and Z. Conditions generally remained for a time unchanged, but a second S.C.

movement at  $22^d16^h23^m$  was followed by a series of such like movements between  $20^h43^m$  and midnight. This was followed by a period of moderate disturbance which extended over several days. Activity declined during the 26th and conditions throughout the following two days were quiet. From  $29^d1^h$  there was a renewal of moderate activity which continued generally until the end of the month.

Ranges for the month: D,  $-9^{\circ}12' .6$  on 16th to  $-9^{\circ}47' .6$  on 12th; H, .18502 on 4th to .18675 on 22nd; Z, .43220 on 1st to .43313 on 29th.

**October.** A sudden commencement at  $1^d1h13^m$  introduced a period of activity the outstanding movements of which occurred near  $6^h$  on the mornings of the 1st and 2nd, the largest being in D,  $20'$  and in H,  $100\gamma$ . Activity continued on a reduced scale throughout the 3rd with a noteworthy positive bay appearing in all three elements at  $18^h$ . After a short period of relative quiet, activity again became marked during the night hours of the 4th to 5th, but by  $5^d6^h$  this had practically subsided. A positive bay in H ( $65\gamma$ ) at  $7^d23^h$  was the only feature of note that appeared on otherwise calm traces prior to the 10th when, following the occurrence of a westerly bay in D ( $15'$ ) at  $6\frac{1}{2}^h$ , with an accompanying movement in H, the records became generally agitated. For several days these conditions prevailed, movements sometimes assuming a roughly periodic character. In particular a well-marked pulsation occurred in all elements between  $11^d16^h10^m$  and  $50^m$  with a mean period of about six minutes, the overall amplitude rising to a maximum in H, for which it attained a value of  $50\gamma$  at about  $16^h30^m$ . In the afternoon hours of the 14th activity became more marked and between  $14^d21^h$  and  $15^d1^h$  several movements approaching  $100\gamma$  in H and  $20'$  in D were recorded. During this interval movements up to  $40\gamma$  were also experienced in Z. Approximately periodic movements were a feature of the records during the afternoon hours of both the 14th and 15th. After a positive movement in H ( $80\gamma$ ) at  $15^d20^h$ , followed by an immediate recovery, conditions suddenly became calm with little of note until an S.C. at  $17^d22^h10^m$  marked the beginning of a storm. The most striking features of this storm were the very large initial rise in H and the equally large initial decrease in Z. The disturbance ceased suddenly about  $19^d20^h$  and conditions remained undisturbed until the reappearance of activity around  $13^h$  on the following day. From thence onward until the 24th activity showed a marked diurnal fluctuation, being in general considerable between  $16^h$  and midnight but on a very reduced scale during the remainder of the day. Peaks in the H traces of the order of  $100\gamma$  accompanied by corresponding phase difference movements in D occurred at  $20^d18^h$ ,  $21^d18^h10^m$  and  $50^m$ ,  $23^d16^h30^m$  and  $20^h20^m$  and  $24^d19^h20^m$ . Moderate activity continued from the 25th to the 27th, without the tendency to enhancement during the evening hours, after which conditions became calm, an isolated positive bay in H ( $50\gamma$ ) at  $28^d23^h$  and a westerly bay in D ( $8'$ ) at  $31^d3^h$  being the largest features of note.

Ranges for the month: D,  $-8^{\circ}56' .5$  on 17th to  $-9^{\circ}55' .7$  on 19th; H, .18383 on 19th to .18819 on 17th; Z, .43051 on 18th to .43342 on 19th.

**November.** After a quiet spell, a period of moderate disturbance beginning about  $1^d19^h$  continued throughout the following day interspersed with one or two unusually large movements, the most outstanding being a positive pinnacle in H ( $160\gamma$ ) accompanied by one in D ( $25'E$ ) at  $2^d21^h$ . Activity had become slight by the 3rd, and a positive bay in H ( $60\gamma$ ) at  $2^h30^m$ , accompanied by a comparable westerly movement in D ( $13'$ ) and a decrease in Z ( $40\gamma$ ) was the only outstanding feature of the day. The 4th, 5th and 6th were notably quiet, though at  $6^d23^h$  a small positive bay in H ( $50\gamma$ ) marked the beginning of a period characterised by irregularities in the traces which lasted until the morning of the 10th, when conditions became calm. Quiet conditions continued, with slight perturbations in the evening of the 13th, until a marked increase in activity following  $15^d18^h$ . This was short-lived and its range did not exceed  $16'$  in D, the largest movements being a swing in D to the east between  $18^h40^m$  and  $19^h40^m$  ( $16'$ ) followed by an immediate recovery extending over 40 minutes. Subdued activity continued from  $16^d3^h$  until it became of moderate intensity about midday on the 17th. These conditions prevailed until midday on the 20th when the intensity again increased. The succeeding 24 hours were distinguished by the large number of small irregularities rather than by the small number of large ones that appeared, though one or two movements were recorded of the order of  $100\gamma$  in H and  $15'$  in D. From  $21^d12^h$  to  $22^d12^h$  minor irregularities only occurred, but this was followed by a period of 18 hours during which activity

## NOTES ON MAGNETIC ACTIVITY

had again become moderate. From the 23rd to the 26th activity on a moderate scale was confined to the afternoon and evening hours being most in evidence from 24<sup>d</sup>16<sup>h</sup> to 22<sup>h</sup>. For the remainder of the month the traces remained quiet or nearly quiet.

Ranges for the month: D, -9°5'.5 to -9°44'.9 both on 2nd; H, .18482 on 20th to .18678 on 2nd; Z, .43222 on 2nd to .43354 on 20th.

December. The first five days of the month were quiet or nearly so, the maximum activity consisting of minor irregularities in the traces that appeared during two short periods centred around 22<sup>h</sup> on the 2nd and 4th. Further irregularities began to appear at 5<sup>d</sup>20<sup>h</sup> which continued until 6<sup>d</sup>17<sup>h</sup> when a rapid decrease in H (60Y), accompanied by a similar easterly movement in D, introduced a short period of moderate disturbance. By 23<sup>d</sup> the former conditions had been restored. At 7<sup>d</sup>20<sup>h</sup> there occurred a positive bay in H preceded by a larger, associated easterly bay in D (14'). With the exception of a few hours during the night of the 10th to 11th, when bays occurred at 20<sup>d</sup>1<sup>h</sup> and 1<sup>h</sup>, conditions during the period 8<sup>d</sup>0<sup>h</sup> to 13<sup>d</sup>12<sup>h</sup> were quiet, or nearly so, which gave greater significance to a large positive bay occurring between 8<sup>d</sup>22<sup>h</sup> and 23<sup>d</sup>1<sup>h</sup> in H (80Y) accompanied by a smaller movement in D. In the afternoon of the 13th irregularities began to appear which, by the evening, had developed into moderate disturbance. Activity continued intermittently on a moderate scale until the morning of the 17th. There ensued a period of quiet which extended to 21<sup>d</sup>0<sup>h</sup>, the succeeding 24 hours being characterised by slight to moderate activity. After a further spell of relative calm, broken only by a period of slight activity from 23<sup>d</sup>20<sup>h</sup> to 24<sup>d</sup>10<sup>h</sup>, activity became pronounced between 25<sup>d</sup>13<sup>h</sup> and 26<sup>d</sup>4<sup>h</sup>. An easterly movement of 20' in D, beginning at 17<sup>h</sup> and followed by a steady recovery, was accompanied by a temporary decrease of H (50Y) and a temporary rise in Z of similar magnitude. During the succeeding calm period little of note occurred beyond the appearance of an easterly bay in D (12') at 26<sup>d</sup>19<sup>h</sup>. The month concluded with a spell of moderate disturbance occurring between 30<sup>d</sup>15<sup>h</sup> and 31<sup>d</sup>18<sup>h</sup> during the morning hours of which, however, activity was subdued. The largest movement occurring within the period was a decrease in H between 31<sup>d</sup>9<sup>h</sup> and 10<sup>h</sup> of 100Y, with a recovery during the following hour.

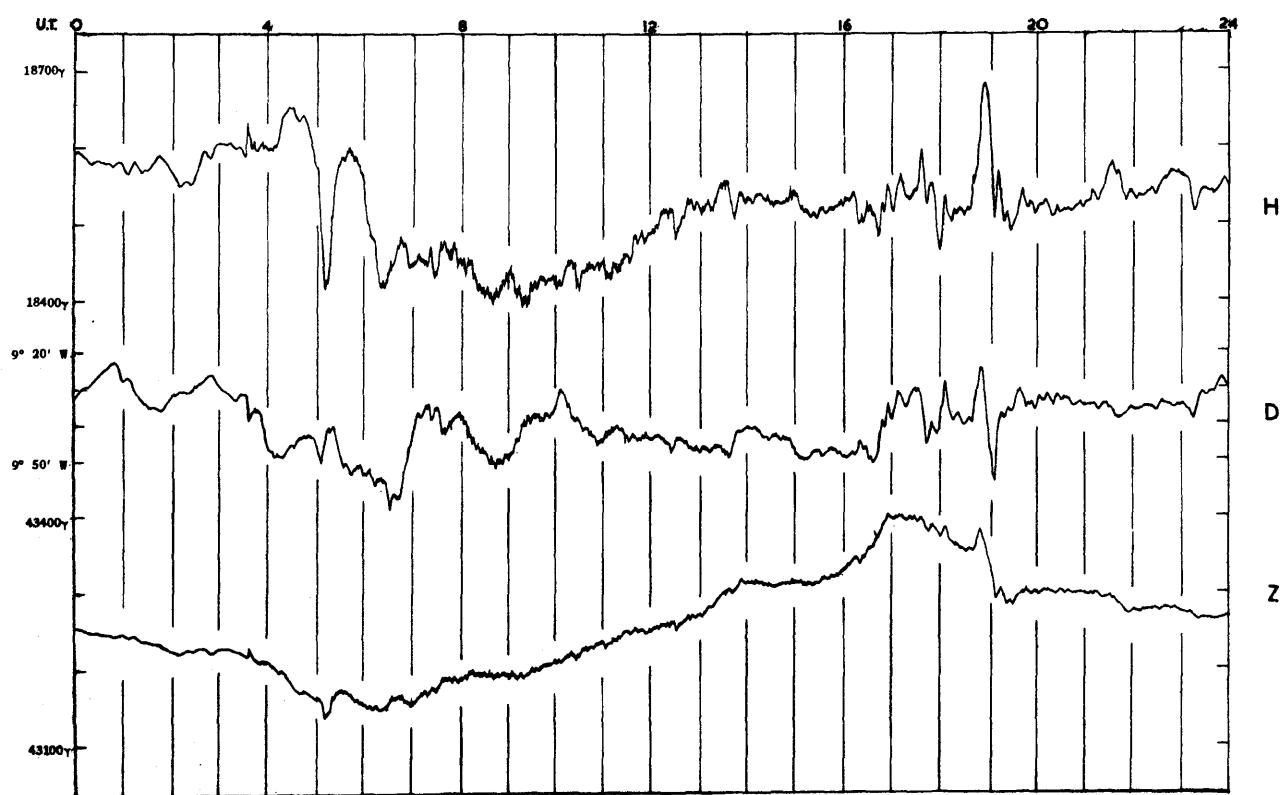
Ranges for the month: D, -9°14'.8 on 7th to -9°47'.6 on 25th; H, .18486 on 25th to .18672 on 8th; Z, .43236 on 14th to .43346 on 25th.

The absolute maximum and minimum values, respectively of the elements recorded during the year were:-

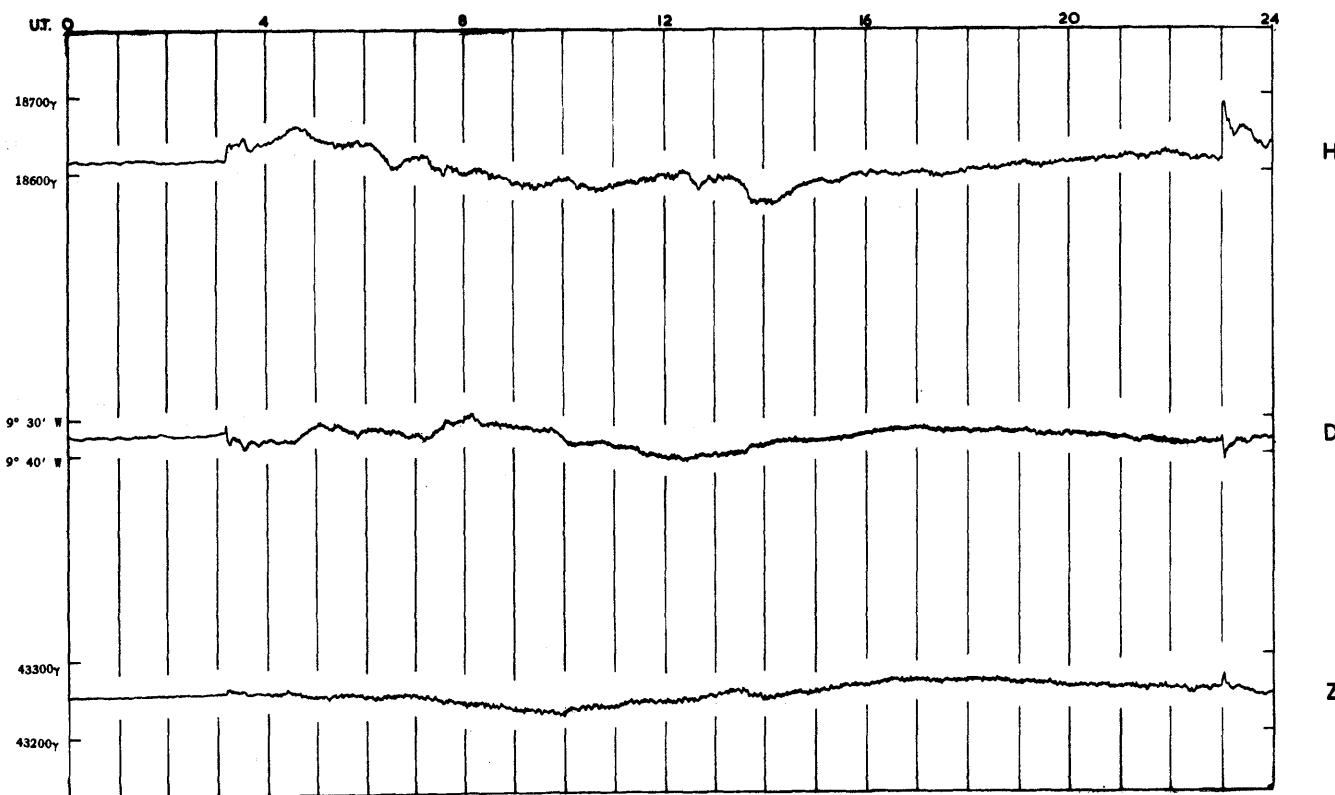
Declination West: 10°3'.3 on March 15th; 8°56'.5 on October 17th.  
Horizontal Intensity: .18819 on October 17th; .18370 on August 8th.  
Vertical Intensity: .43416 on August 8th; .43051 on October 18th.

1948 MARCH 15

Plate I



1948 AUGUST 7



## SCALES FOR THE MAGNETIC ELEMENTS

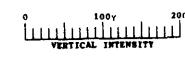
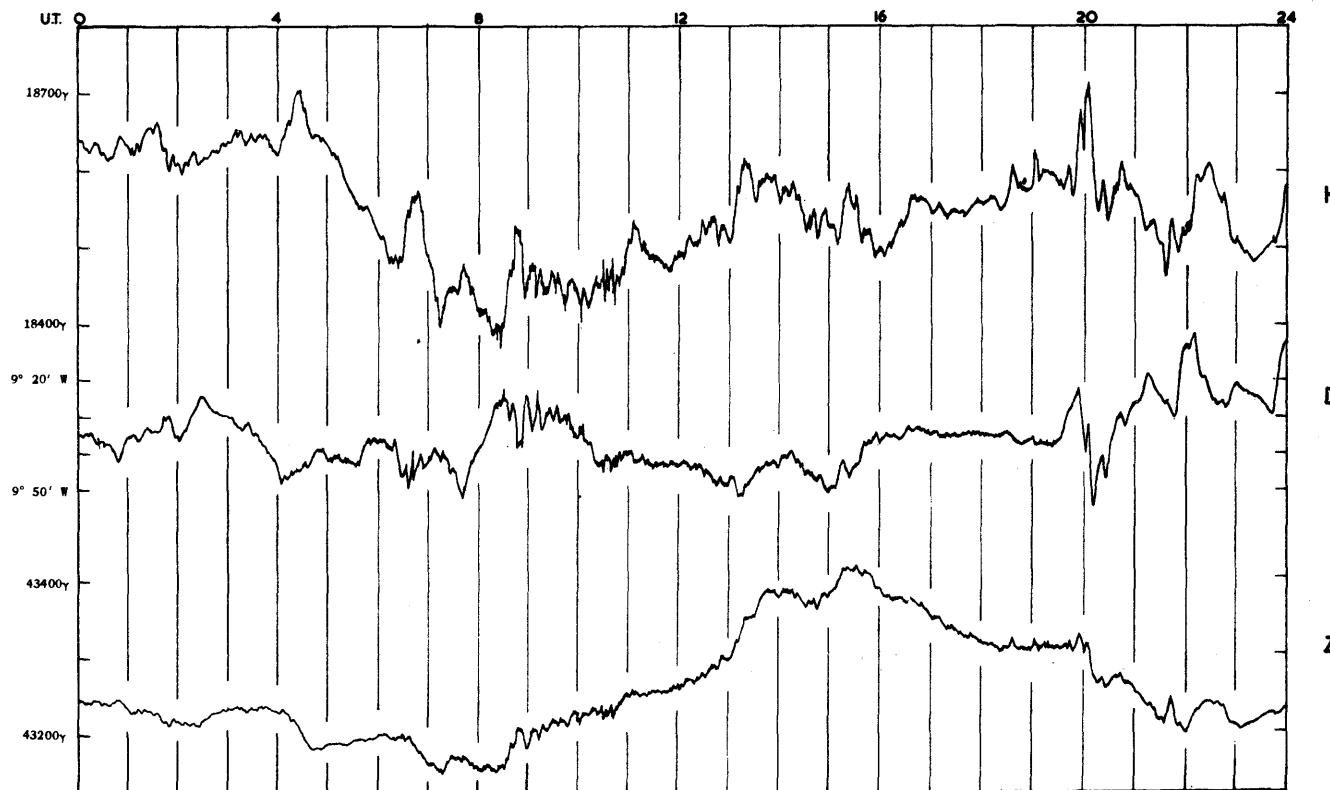
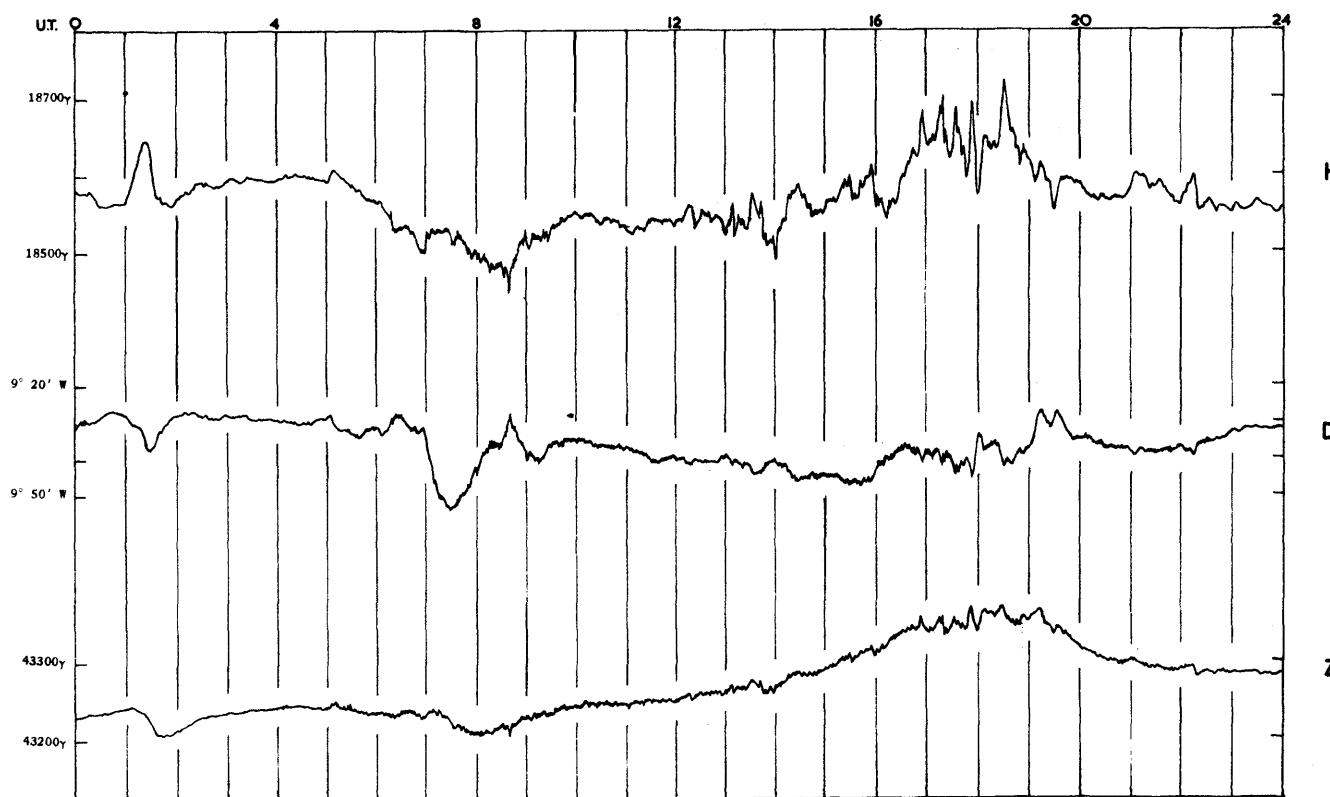


Plate II

1948 AUGUST 8



1948 AUGUST 10

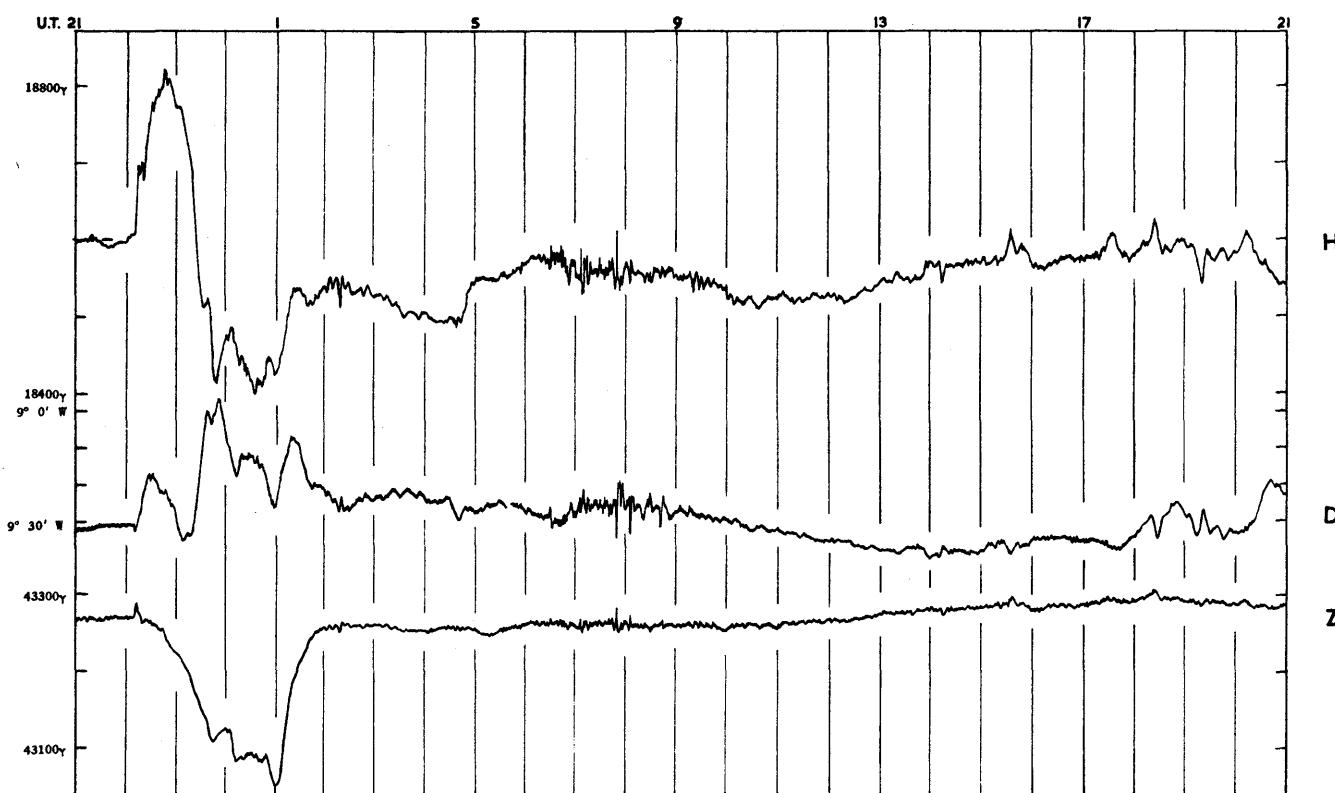


## SCALES FOR THE MAGNETIC ELEMENTS

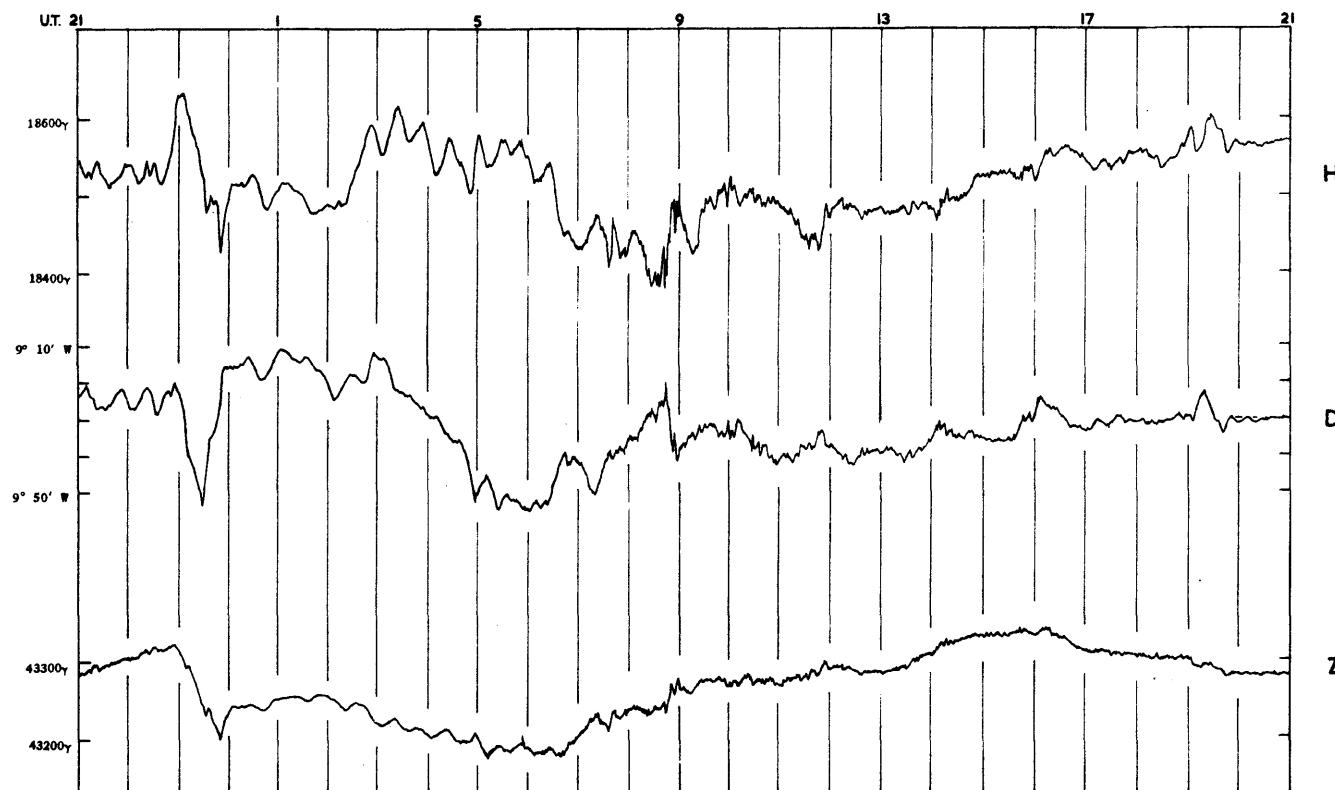


1948 OCTOBER 17 - 18

Plate III



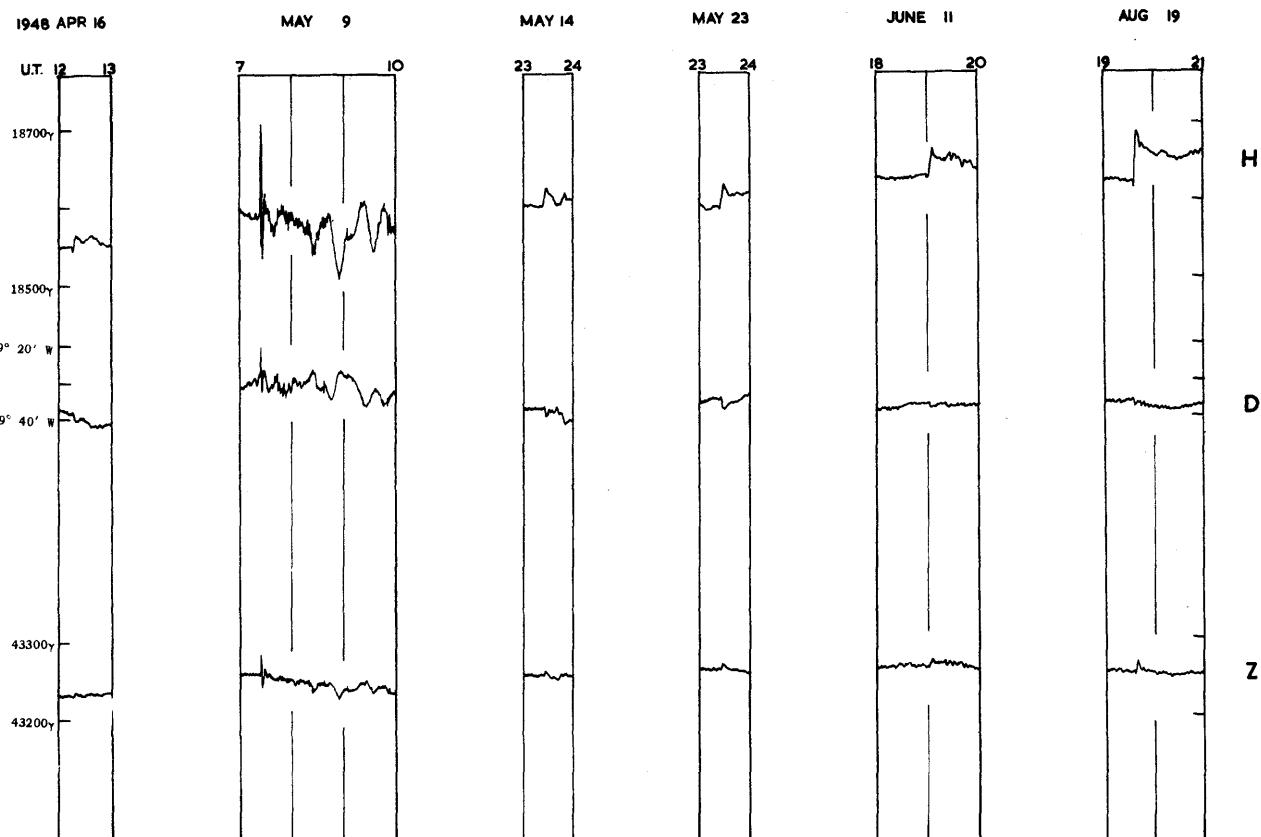
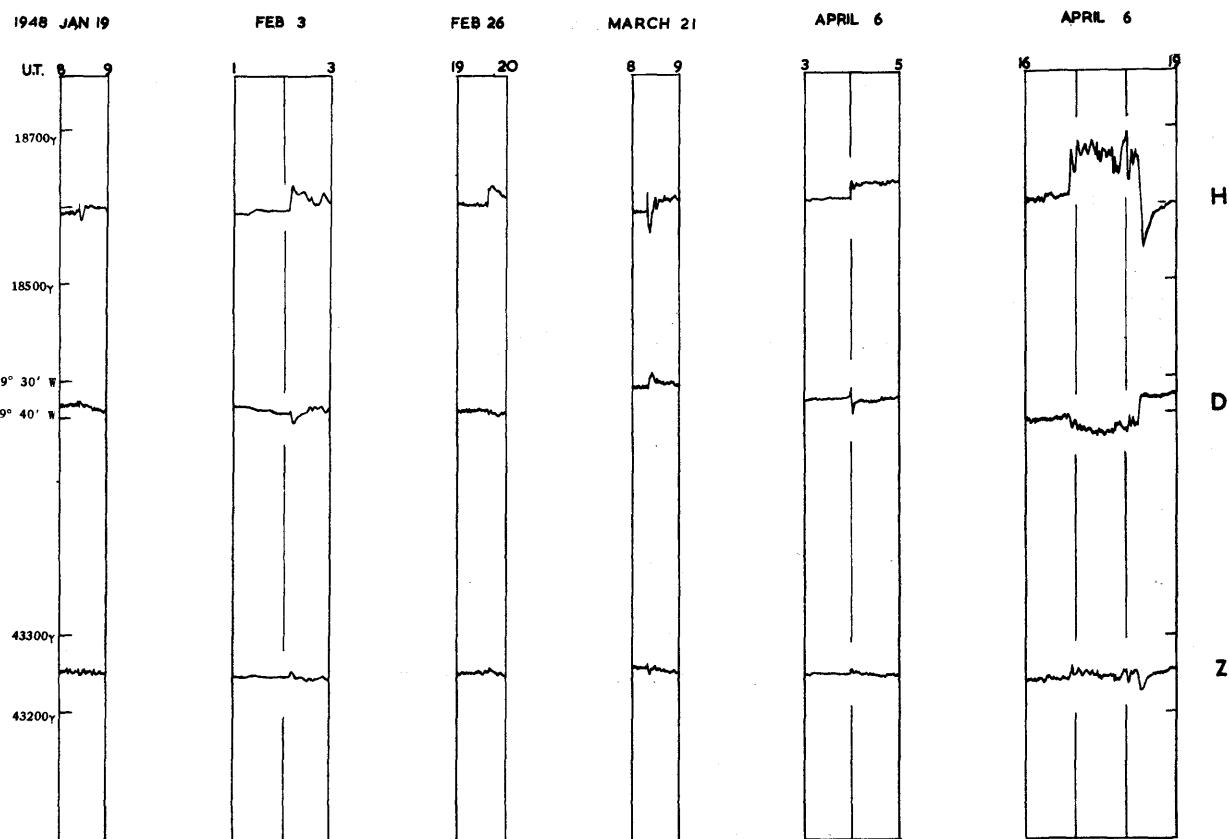
1948 OCTOBER 18 - 19



## SCALES FOR THE MAGNETIC ELEMENTS

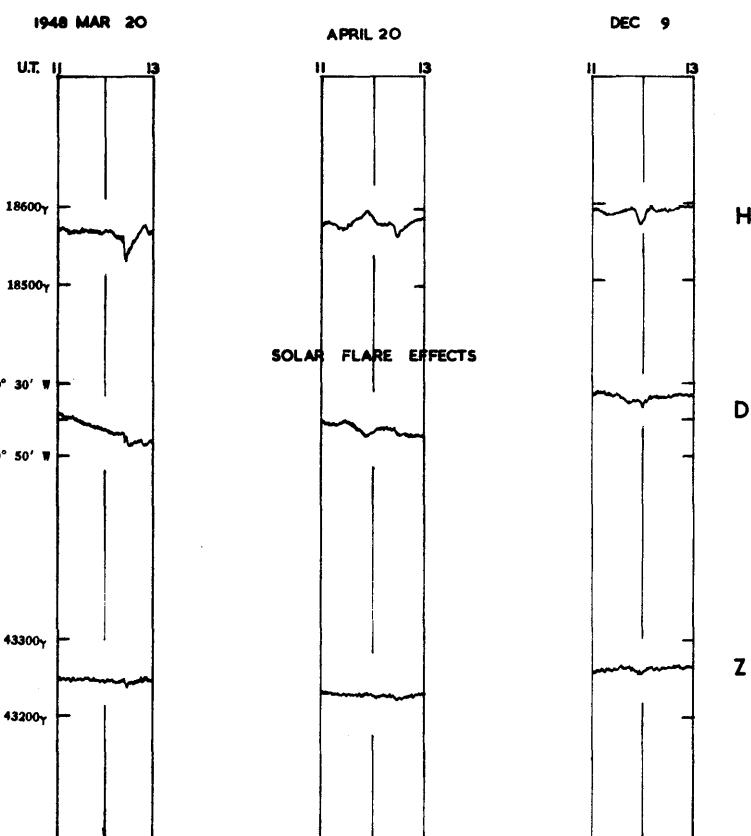
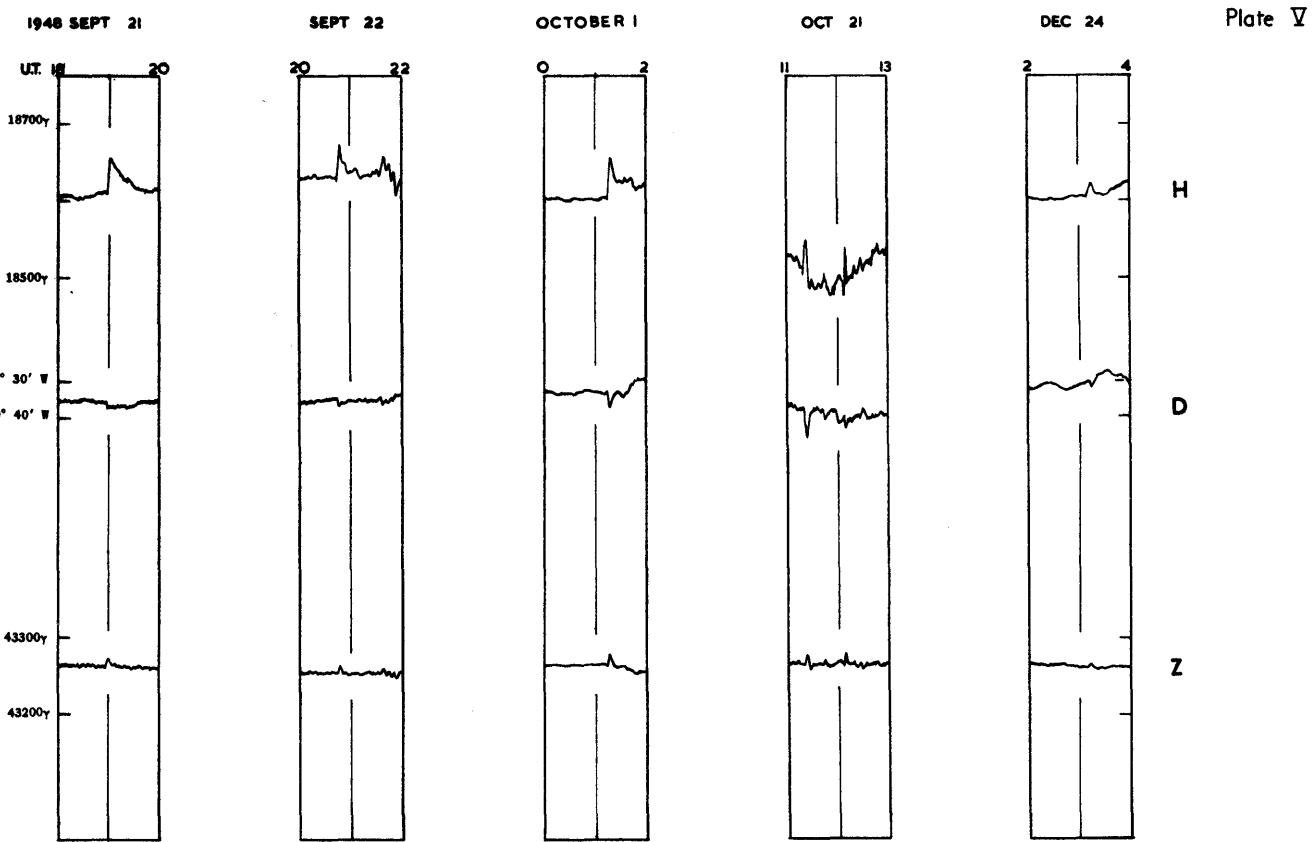


Plate IV

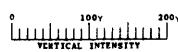
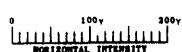


SCALES FOR THE MAGNETIC ELEMENTS





SCALES FOR THE MAGNETIC ELEMENTS





ROYAL OBSERVATORY, GREENWICH

*Results of  
Meteorological Observations*

1948

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER Mean of 24 Hourly Values (Corrected to 32° Fahrenheit)	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 Duration of Sunshine	Sun above Horizon
		Of the Air				Or Evapo-	Of the Dew Point	Of Radiation					Of the Earth 4 ft. below the surface of the Soil					
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Greatest	Least		Highest in Sun's Rays	Lowest on the Grass				
Jan. 1	in.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	in.	hours	hours
2	29.623	55.0	39.2	15.8	49.3	+10.7	48.4	47.5	1.8	5.1	0.7	93	54.5	35.5	47.6	0.216	0.0	7.9
3	29.660	56.2	49.2	7.0	53.5	+15.1	51.5	49.6	3.9	5.6	1.5	87	61.0	42.8	47.4	0.005	0.0	7.9
4	29.733	55.2	51.5	3.7	53.6	+15.3	51.3	49.1	4.5	5.9	2.4	84	63.3	45.4	47.3	0.002	0.0	7.9
5	29.458	57.5	51.0	6.5	53.8	+15.5	50.5	47.2	6.6	9.1	2.7	78	75.5	46.0	47.3	0.030	0.2	8.0
6	29.320	52.3	36.5	15.8	45.3	+ 7.1	41.9	37.1	8.2	13.5	2.0	73	56.7	27.7	47.6	0.120	0.4	8.0
7	29.292	50.5	31.5	19.0	39.5	+ 1.4	38.1	36.1	3.4	8.5	0.0	87	46.8	22.7	47.6	0.168	0.0	8.0
8	28.673	51.7	41.4	10.3	48.1	+10.1	46.8	45.3	2.8	8.4	1.3	90	65.3	37.0	47.8	0.130	0.1	8.0
9	29.238	43.0	37.6	5.4	39.9	+ 2.0	37.2	32.8	7.1	11.2	4.1	76	46.5	31.5	47.6	0.000	0.0	8.1
10	29.315	48.1	33.0	15.1	40.5	+ 2.6	39.3	37.7	2.8	8.9	1.1	89	60.3	25.8	47.6	0.052	0.0	8.1
11	29.586	45.7	39.8	5.9	41.9	+ 4.0	39.2	35.0	6.9	11.5	2.0	77	53.8	36.0	47.3	0.100	0.0	8.1
12	29.293	50.8	45.7	5.1	48.8	+10.9	47.6	46.3	2.5	4.3	1.2	91	55.7	42.0	47.2	0.237	0.0	8.2
13	29.443	54.0	43.2	10.8	48.6	+10.7	46.3	43.7	4.9	8.9	2.2	83	54.3	37.1	47.1	0.105	0.0	8.2
14	29.483	55.6	48.4	7.2	53.5	+15.5	50.8	48.1	5.4	12.5	2.9	82	58.2	45.0	47.3	0.152	0.0	8.2
15	29.595	48.4	39.6	8.8	45.5	+ 7.5	42.4	38.2	7.3	12.3	3.1	76	60.7	33.0	47.3	0.000	0.0	8.3
16	29.362	45.0	35.0	10.0	40.0	+ 1.9	38.0	35.0	5.0	9.4	1.1	82	63.0	27.9	47.3	0.000	0.2	8.3
17	29.531	40.9	35.0	5.9	38.9	+ 0.6	37.6	35.7	3.2	5.8	1.9	88	44.3	31.0	47.3	0.013	0.0	8.3
18	29.347	49.4	31.3	18.1	40.4	+ 1.9	39.5	38.2	2.2	9.4	0.0	92	52.3	27.8	47.2	0.324	0.0	8.4
19	29.127	44.8	35.5	9.3	39.5	+ 0.9	36.6	31.7	7.8	12.6	3.9	74	70.3	28.5	47.0	0.000	4.4	8.4
20	29.031	39.9	30.2	9.7	35.0	- 3.7	33.2	30.1	4.9	11.0	0.3	81	67.1	21.0	46.8	0.000	4.4	8.5
21	29.188	39.9	28.2	11.7	34.4	- 4.4	33.1	30.9	3.5	7.9	0.0	86	60.5	17.1	46.6	0.060	1.8	8.5
22	29.286	41.7	35.0	6.7	38.7	- 0.1	37.7	36.1	2.6	4.9	1.2	91	48.7	31.0	46.4	0.158	0.0	8.6
23	29.319	43.0	34.0	9.0	38.1	- 0.7	36.1	32.9	5.2	11.2	0.3	81	65.6	29.1	46.0	0.000	4.4	8.6
24	29.275	41.0	32.9	8.1	37.2	- 1.7	36.1	34.3	2.9	6.4	0.7	90	48.0	29.4	45.8	0.500	0.0	8.6
25	29.274	46.0	38.6	7.4	41.1	+ 2.2	39.9	38.4	2.7	5.7	0.7	90	65.4	35.0	45.7	0.035	1.3	8.7
26	29.263	46.6	32.4	14.2	40.6	+ 1.5	39.0	36.8	3.8	8.8	0.6	86	80.0	27.3	45.6	0.000	4.6	8.7
27	28.947	45.8	38.4	7.4	41.5	+ 2.2	40.0	38.0	3.5	4.9	1.5	87	53.0	33.0	45.3	0.191	0.1	8.8
28	29.007	47.0	37.5	9.5	41.4	+ 1.9	40.1	38.4	3.0	6.9	0.7	89	79.2	30.4	45.4	0.017	0.5	8.9
29	29.092	48.6	35.3	13.3	42.2	+ 2.6	41.0	39.4	2.8	6.7	0.0	90	82.1	27.2	45.4	0.170	3.1	8.9
30	29.014	49.3	38.2	11.1	44.5	+ 4.8	42.9	40.9	3.6	6.5	0.9	87	58.8	28.4	45.3	0.100	0.4	8.9
31	29.288	55.7	41.8	13.9	49.0	+ 9.3	46.4	43.5	5.5	7.5	2.1	81	65.9	36.5	45.3	0.150	0.0	9.0
Means	29.310	48.5	38.5	10.0	43.6	+ 5.0	41.7	39.2	4.4	8.5	1.5	84.5	61.5	32.5	46.7	Sum 3.210	1.0	8.4
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29.310 in., being 0.491 in. lower than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 57° on January 4; the lowest in the month was 28° on January 20; and the range was 29°.

The mean of all the highest daily readings in the month was 48°, being 5° higher than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 38°, being 4° higher than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 10°, being 1° greater than the average for the 65 years, 1841-1905.

The mean for the month was 43°, being 5° higher than the average for the 65 years 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS					CLOUDS AND WEATHER						
	POLARIS		δ URSAE MINORIS		OSLER'S			ROBINSON'S								
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot	Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>				
	A.M.	P.M.	Greatest	Mean of 24 Hourly Measures												
Jan. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 Means	hours	hours	hours	0.44	SSW:SW	SW:WSW	lbs.	lbs.	miles	rr i d	c i d	c Ast id r c	c b			
	6.5	0.47	6.0	0.44	SSW:SW	SW:WSW	10.0	0.84	454	b c	c Stcu	do c Nbst	c r c			
	4.4	0.32	3.7	0.27	WSW:SW	SW:WSW	8.6	0.66	408	c b c	c Stcu Fr cu	c Stcu i ro	i ro c			
	0.9	0.07	0.5	0.04	SW:	WSW:SW	29.4	1.63	566	c	c Fr cu	c Stcu	c q r bc			
	3.0	0.22	2.3	0.16	WSW:SW:NW	WNW:WSW	14.0	1.47	510	c i r	c i r c Fr cu	bc b Fr cu	b x			
	13.4	0.97	13.0	0.94												
	0.7	0.05	0.5	0.04	WSW:S:S	SE:S:SSW	2.0	0.12	218	b x	c Ast Fr cu	c Nbst r ro	c r ro			
	4.8	0.35	4.1	0.30	SSW:SSW	SSW:WNW	16.5	0.76	383	c i d	bc c Nbst i r mo	c i r Ast mo	ro c			
	11.8	0.86	9.8	0.71	WNW:W	WNW:WSW	16.2	1.16	439	c b	bc Nbst mo	do c b	b			
	1.0	0.07	0.5	0.04	SW:SSW:SSE	SSE:S:W	17.0	0.37	282	b x c	c Ast Cist so-ha	c so-ha c Nbst ro r	d c			
	0.0	0.00	0.0	0.00	NW:W	SW:SSE:S	19.5	0.95	336	c gale	c Ast m	c Nbst do m	c ro r			
	4.7	0.35	4.2	0.31	SSW	S:SW	7.4	1.03	462	r i do	c Nbst do d	d r do c Nbst	c b c p			
	0.0	0.00	0.0	0.00	WSW:SW	SW	14.5	0.93	469	b c	c i r c Ast	c Ast ro r	r ro			
	1.0	0.08	0.5	0.04	SW:WSW	WSW	21.0	2.71	723	rr o	c Nbst i ro	ro i r	c			
	12.9	0.97	11.0	0.83	WSW	WSW:SW	5.3	0.47	388	c	c ro c Ast Stcu	c bc Ci Fr st b	b			
	2.0	0.15	0.5	0.03	WSW:SW	WSW:Calm	2.0	0.14	216	b w x	bc Cist so-ha	bc Ci so-ha f	c f x			
	3.5	0.26	2.6	0.19	Calm:NNE	NNE:N:Calm	2.2	0.11	187	c m	c m c Fr cu A cu	c Nbst r c	c m			
	7.1	0.54	7.0	0.54	Calm:SSW	SSW:SW:W	15.6	0.73	397	c b x	b c r c Ast	c i r o r r	rr o c			
	9.7	0.75	7.7	0.59	WSW	WSW:SW	6.5	0.68	441	c b x	b bc Fr cu Ci	c b Ci	b c b			
	12.5	0.97	12.3	0.94	WSW:SW	WSW:SW	2.2	0.10	209	b l c x	c b x m	bc Fr cu b m	b x			
	2.6	0.20	1.8	0.14	SW	WSW:SW	2.7	0.10	225	b x	c Nbst s c b m	b c ro c Ast m	c b c c r c m			
	8.0	0.62	8.0	0.61	WSW:Calm	SW:WSW	1.0	0.03	168	c m	c d g c A cu m	c Stcu ro m	ro r c b m			
	0.0	0.00	0.0	0.00	WSW:W	W:WSW:Calm	3.0	0.21	280	b x m	b Fr cu m	b c Stcu m	c m			
	0.3	0.02	0.0	0.00	E:ENE	ENE:E	10.0	0.83	393	c m	c m c Ast	c Nbst ro r o	rr			
	2.2	0.17	1.7	0.13	E:ESE	SE:SSE	3.1	0.13	202	r c	bc c Stcu Cumb ro	c Cumb p	c ro c			
	4.7	0.37	2.4	0.19	S	S:SSE	6.0	0.22	244	c b x	b x c b Fr cu	b A cu c	c b			
	9.1	0.71	8.6	0.67	SE:SSE	S:SSW	5.8	0.60	346	b c	c Nbst ro rr	ro r c A cu Fr st b	b c r			
	6.0	0.47	5.9	0.47	SSE:SE	SE:Calm	4.0	0.14	195	b c	c Ast Fr cu	c Ast Fr cu	c r c			
	7.6	0.59	7.0	0.55	SW:SSW	SSW:S:SW	4.6	0.16	245	c b	b bc Fr cu	c r c Ast A cu	c i r c b			
	2.6	0.21	1.4	0.11	SW:S	S:SSW:W	13.0	0.75	384	b	c Nbst r c	c i r c Ast r o	rr c			
	8.6	0.68	6.8	0.54	WSW:SW	SW	15.0	1.40	539	c	c rr c Fr st	c Fr st Ci b	b c r c			
	10.5	0.84	9.9	0.79	SW	SW:WSW	9.0	0.87	490	c b	b Ci	c Nbst i r P bc	bc b			
Means	5.2	0.40	4.5	0.34	..	..	..	0.68	362							
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30	31			

The mean Temperature of Evaporation for the month was 41°.7, being 4°.5 higher than

The mean Temperature of the Dew Point for the month was 39°.2, being 4°.1 higher than

The mean Degree of Humidity for the month was 84.5, being 2.3 less than

The mean Elastic Force of Vapour for the month was 0.240 in., being 0.035 in. greater than

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7.8.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.115. The maximum daily amount of Sunshine was 4.6 hours on January 25.

The highest reading of the Solar Radiation Thermometer was 88°.3 on January 31; and the lowest reading of the Terrestrial Radiation Thermometer was 17.1 on January 20.

The Proportions of Wind referred to the cardinal points were N.4, E.8, S.42, W.40, calm or nearly calm conditions 6, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 29.4 lbs. on the square foot on January 4. The mean daily Horizontal Movement of the Air for the month was 362 miles; the greatest daily value was 723 miles on January 13 and the least daily value was 168 miles on January 21.

Rain (0.005 in. or over) fell on 23 days in the month, amounting to 3.210 in., as measured by gauge No.6 partly sunk below the ground; being 1.329 in. greater than the average fall for the 65 years 1841-1905.

the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER  Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit)	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 Duration of Sun- shine	Sun above Horizon	
		Of the Air				Of Evapo- ration	Of the Dew Point	Mean					Of Radiation	Highest in Sun's Rays	Lowest on the Soil			
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Great- est	Least							
Feb. 1	in.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	in.	hours	hours
2	29.983	54.0	42.8	11.2	48.1	+ 8.5	45.0	41.1	7.0	10.5	3.1	77	76.3	35.5	45.3	0.000	0.3	9.1
3	29.749	55.4	49.4	6.0	52.3	+12.8	48.7	44.9	7.4	9.5	3.7	75	74.9	45.5	45.6	0.103	0.1	9.2
4	29.687	51.6	38.8	12.8	45.8	+ 6.3	43.5	40.6	5.2	7.6	1.9	82	48.3	32.2	45.7	0.364	0.0	9.2
5	29.816	49.1	38.2	10.9	42.9	+ 3.4	39.9	35.6	7.3	12.8	3.1	74	85.0	31.6	45.7	0.000	5.7	9.3
6	29.825	47.2	37.6	9.6	42.9	+ 3.3	41.6	39.8	3.1	7.3	0.7	89	63.6	28.6	45.8	0.085	0.0	9.3
7	29.696	49.1	38.7	10.4	43.6	+ 4.0	40.9	37.1	6.5	16.7	0.7	78	94.3	30.5	45.7	0.106	4.5	9.4
8	29.858	52.8	38.3	14.5	47.6	+ 8.1	45.5	43.1	4.5	8.3	1.4	84	63.7	30.1	45.8	0.110	0.0	9.4
9	29.819	54.0	49.9	4.1	52.3	+13.0	50.5	48.7	3.6	6.0	0.8	87	64.3	48.2	45.8	0.015	0.0	9.5
10	29.936	53.5	37.7	15.8	48.1	+ 9.0	43.3	36.8	11.3	16.7	2.7	65	89.0	29.7	45.8	0.000	4.7	9.6
11	29.854	51.8	35.2	16.6	46.6	+ 7.7	44.3	41.5	5.1	9.2	1.1	82	69.3	27.2	45.9	0.026	0.3	9.6
12	29.883	49.0	42.4	6.6	46.5	+ 7.7	43.9	40.7	5.8	10.2	1.8	80	84.3	33.7	46.0	0.000	0.4	9.7
13	29.826	49.0	39.5	9.5	45.3	+ 6.5	41.4	35.7	9.6	21.0	1.5	69	86.3	29.6	46.0	0.029	2.8	9.7
14	29.942	56.7	39.3	17.4	48.2	+ 9.2	46.6	44.8	3.4	7.0	0.5	88	76.0	29.4	46.0	0.050	0.1	9.8
15	30.042	53.0	46.0	7.0	49.1	+ 9.8	47.7	46.2	2.9	6.8	1.6	90	75.1	38.0	46.0	0.010	0.2	9.9
16	30.009	52.3	44.4	7.9	48.3	+ 8.9	45.1	41.1	7.2	13.9	1.3	76	89.4	33.1	46.1	0.000	2.9	9.9
17	30.222	45.2	37.0	8.2	41.6	+ 2.1	37.6	31.1	10.5	17.5	2.1	66	92.9	31.7	46.2	0.000	4.4	10.0
18	30.239	39.9	31.0	8.9	36.1	- 3.5	32.4	25.7	10.4	15.8	5.7	63	81.3	22.0	46.3	0.000	2.7	10.0
19	30.285	38.4	28.7	9.7	33.1	- 6.4	29.7	23.8	9.3	18.0	2.5	65	100.6	16.1	46.2	0.000	2.8	10.1
20	30.242	35.7	27.0	8.7	32.0	- 7.5	29.8	26.2	5.8	8.3	1.0	76	67.0	22.5	45.9	0.017	0.8	10.2
21	30.112	27.3	21.2	6.1	24.3	-15.2	22.5	18.3	6.0	15.2	0.8	75	91.5	17.4	45.6	0.186	2.7	10.2
22	29.929	29.5	21.5	8.0	25.0	-14.6	24.1	22.1	2.9	6.5	0.9	88	50.6	19.7	45.3	0.555	0.0	10.3
23	29.804	34.0	21.1	12.9	28.6	-11.1	27.0	24.0	4.6	7.1	1.7	80	40.0	27.0	44.9	0.030	0.0	10.4
24	29.949	34.7	31.6	3.1	33.2	- 6.6	30.7	26.6	6.6	7.6	3.3	74	51.2	26.8	44.7	0.000	0.0	10.5
25	30.099	37.3	30.5	6.8	33.6	- 6.4	31.5	28.3	5.3	10.3	1.5	79	85.9	25.0	44.5	0.000	2.9	10.5
26	30.107	37.4	30.3	7.1	33.4	- 6.7	31.0	27.1	6.3	11.4	3.2	75	82.3	24.8	44.3	0.000	3.8	10.6
27	30.065	39.6	31.2	8.4	34.5	- 5.7	31.6	26.9	7.6	15.6	3.7	71	95.0	26.7	44.0	0.000	6.6	10.7
28	29.999	43.2	32.6	10.6	37.0	- 3.3	34.3	29.5	7.5	10.7	3.6	74	62.3	27.2	43.9	0.004	1.0	10.7
29	30.184	55.6	33.8	21.8	44.0	+ 3.7	40.5	35.4	8.6	15.4	1.1	71	97.2	27.0	43.9	0.000	0.7	10.8
	30.345	61.0	33.9	27.1	46.2	+ 5.9	42.3	37.0	9.2	22.2	0.0	70	107.9	26.6	43.8	0.000	3.9	10.9
Means	29.983	46.1	35.5	10.6	41.0	+ 1.5	38.4	34.5	6.6	11.9	2.0	76.7	77.4	29.1	45.4	Sum 1.690	1.9	9.9
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29.983 in., being 0.174 in. higher than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR

The highest in the month was 61.0 on February 29; the lowest in the month was 21.1 on February 22; and the range was 39.9.

The mean of all the highest daily readings in the month was 46.1, being 1.2 higher than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 35.5, being 0.8 higher than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 10.6, being 0.4 greater than the average for the 65 years, 1841-1905.

The mean for the month was 41.0, being 1.5 higher than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS					CLOUDS AND WEATHER				
	Polaris		δ URSÆ MINORIS		OSLER'S			Robin- son's						
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot		Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>	
					A.M.	P.M.	Greatest	Mean of 24 Hourly Measures						
Feb. 1	hours	0.08	hours	0.03	WSW	SW:SSW	lbs.	lbs.	miles	b w bc	c Cist Acu so-ha	c Ast	c	
2	..	..	..	..	SSW:SW	SW	19.5	2.23	628	c q r r o	c Ast so-ha	r c so-ha Cist Cumb b	b c	
3	11.8	0.94	11.6	0.93	SW	WSW	14.8	1.07	446	c r c	c Nbst rr r	r r c Nbst	c b	
4	11.3	0.90	9.6	0.77	SW:WSW	WNW:WSW	6.5	0.58	401	b	b bc Frcu	bc c Ast Frst	r r o c	
5	3.9	0.31	2.9	0.23	WSW:SW	SSW:SW	6.0	0.42	327	b w c	c Stcu c ir o	c Nbst ro r		
6	6.3	0.51	4.4	0.35	W:WSW	WNW:W	17.0	0.98	450	c r o c	b c r t q h r b Cumb	bc Cumb q h r t b	bc	
7	0.0	0.00	0.0	0.00	SW:SSW:WSW	WSW:SW	8.5	0.91	465	bc c rr r	c r o c Frst	c Nbst ido	d o d r d	
8	5.7	0.48	4.6	0.38	WSW	WSW	11.5	0.88	480	d c	c Stcu	bc b Ci Frcu y	c	
9	8.9	0.74	7.6	0.64	W:WNW	NW:WNW	17.6	1.63	509	c b w	b bc Ci Frcu y	b m o	b m o	
10	2.3	0.19	1.8	0.15	SW	W:WNW	7.0	0.51	361	b x c	c Nbst ido r c	c Ast Frst	b c	
11	1.0	0.08	0.8	0.07	WNW:W:WSW	WSW:SW	3.5	0.19	263	c m	c Stcu m	c Stcu	c	
12	0.3	0.02	0.0	0.00	SW:NW:W	W:Calm	5.4	0.30	284	c r b c m	c m b Frcu	b c Acu Cicu y	bc f c	
13	2.2	0.18	0.9	0.07	SSW:SW	W:WSW	3.0	0.23	291	c rr	rr c Stcu	c Stcu	c b c	
14	2.1	0.18	1.5	0.13	Calm:WSW:SW	SSW:SW:WSW	2.0	0.07	210	c f	c f c Stcu	c Stcu do	d o c b c	
15	0.4	0.04	0.0	0.00	WSW:W:NW	NNW:NNE	1.2	0.07	201	c b	b m o c Stcu	c Stcu	c	
16	2.2	0.18	0.0	0.00	ENE:E	ESE	3.8	0.23	263	c	c b bc Ci so-ha y	bc Ci Cist bc y	bc lu-la c	
17	8.1	0.69	7.7	0.66	ESE	E:ESE	5.5	0.30	284	c	c bc Cist so-ha y	bc Cist Frcu so-ha c b y	b c b	
18	0.0	0.00	0.0	0.00	ESE:ENE:E	ENE:NE	6.2	0.46	303	b x	b c Frcu y	c Stcu s o c	c	
19	4.7	0.40	3.6	0.31	NE:ENE	NE	8.0	0.68	402	c i s o	c Nbst 1 s o	c Nbst 1 s o b c	c s b c	
20	0.0	0.00	0.0	0.00	NE	NE	18.9	1.07	462	s c b	s c b Frcu	bc Frcu Stcu 1 s	ss	
21	0.0	0.00	0.0	0.00	NE	NE:ENE:E	7.7	0.63	377	ss	ss c Ast Frst	c Ast s s	ss c	
22	0.0	0.00	0.0	0.00	ENE:NE	NE:NNE	8.2	0.83	415	c s	s c Nbst	c Stcu	c	
23	0.7	0.06	0.0	0.00	NNE:NE	NE	3.5	0.40	317	c	c Stcu	c Stcu	c	
24	3.6	0.32	1.1	0.09	NE:ENE	ENE	2.8	0.19	213	c	c Stcu	bc Frcu Frst c	c b	
25	6.9	0.61	6.5	0.58	ENE	ENE	4.7	0.48	316	c	c Frcu	bc Frcu b	b x	
26	6.2	0.55	6.1	0.54	ENE:E	ENE	8.7	0.91	358	b x c	b zo	b y		
27	8.7	0.77	6.8	0.61	ENE:E:Calm	Calm	1.0	0.03	87	c i s o	c b m c Acu zo	c Acu zo	c b m	
28	9.4	0.87	8.3	0.77	Calm	Calm	0.0	0.00	61	b bc m	bc c Acu m	c Acu bc y z	bc b m	
29	7.9	0.74	6.8	0.63	Calm	Calm	0.0	0.00	25	b c m	c Acu f b Ci z	b Ci c z y	bc c f	
Means	4.1	0.35	3.3	0.28	..	..	..	0.59	333					
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30	31	

The mean Temperature of Evaporation for the month was  $38^{\circ}4$ , being  $0^{\circ}7$  higher than

The mean Temperature of the Dew Point for the month was  $34^{\circ}5$ , being  $0^{\circ}5$  lower than

The mean Degree of Humidity for the month was 76.7, being 6.9 less than

The mean Elastic Force of Vapour for the month was 0.200 in., being 0.004 in. less than

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7.4.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.188. The maximum daily amount of Sunshine was 6.6 hours on February 26.

The highest reading of the Solar Radiation Thermometer was  $107^{\circ}9$  on February 29; and the lowest reading of the Terrestrial Radiation Thermometer was  $16^{\circ}1$  on February 18.

The Proportions of Wind referred to the cardinal points were N.14, E.25, S.16, W.32, calm or nearly calm conditions 13, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 19.5 lbs. on the square foot on February 2. The mean daily Horizontal Movement of the Air for the month was 333 miles; the greatest daily value was 628 miles on February 2 and the least daily value was 25 miles on February 29.

Rain (0.005 in. or over) fell on 14 days in the month, amounting to 1.690 in., as measured by gauge No.6 partly sunk below the ground; being 0.210 in. greater than the average fall for the 65 years, 1841-1905.

} the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit)	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 Duration of Sun- shine	Sun above Horizon
		Of the Air				Of Evapo- ration	Of the Dew Point	Mean					Of Radiation	Of the Earth 4 ft. below the surface of the Soil				
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Highest in Sun's Rays	Lowest on the Grass		Highest in Sun's Rays	Lowest on the Grass				
	in.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	in.	hours	hours
Mar. 1	30.439	55.1	36.2	18.9	43.9	+ 3.5	41.0	37.0	6.9	15.5	1.0	76	96.8	26.5	43.8	0.000	5.4	10.9
2	30.443	40.7	35.4	5.3	37.6	- 2.8	37.0	36.1	1.5	2.4	0.0	94	51.7	33.7	43.8	0.000	0.0	11.0
3	30.469	50.7	32.5	18.2	38.0	- 2.5	36.7	34.7	3.3	11.8	0.0	88	77.1	32.9	43.9	0.000	0.7	11.0
4	30.464	48.7	34.8	13.9	39.6	- 1.1	38.4	36.7	2.9	8.6	0.0	89	76.0	26.7	43.8	0.000	2.1	11.1
5	30.372	40.0	33.7	6.3	36.3	- 4.6	35.8	35.0	1.3	2.5	0.0	95	48.9	24.6	43.9	0.000	0.0	11.2
6	30.291	53.7	33.8	19.9	40.6	- 0.4	39.5	38.0	2.6	7.7	0.0	90	88.4	27.0	44.0	0.000	3.2	11.2
7	30.331	59.8	33.4	26.4	47.8	+ 6.8	45.5	42.9	4.9	14.1	1.1	82	112.5	24.7	44.1	0.002	2.9	11.3
8	30.427	61.5	48.2	13.3	52.2	+11.1	49.9	47.5	4.7	12.5	0.8	84	119.3	42.0	44.3	0.000	1.9	11.3
9	30.435	71.7	43.5	28.2	56.1	+15.1	50.0	43.4	12.7	30.4	0.0	63	112.4	41.4	44.6	0.000	8.5	11.4
10	30.445	59.6	46.0	13.6	52.8	+11.9	46.6	39.0	13.8	26.1	3.8	59	111.0	34.5	44.7	0.000	7.9	11.5
11	30.492	60.4	36.8	23.6	49.3	+ 8.3	44.8	39.2	10.1	17.5	2.0	68	106.0	24.7	44.9	0.000	7.2	11.6
12	30.413	65.4	35.5	29.9	49.4	+ 8.3	45.1	39.8	9.6	24.5	1.1	69	114.0	21.1	45.0	0.000	9.1	11.6
13	30.401	65.7	37.4	28.3	49.0	+ 7.7	45.1	40.3	8.7	21.8	1.2	72	109.1	24.4	45.1	0.000	5.4	11.7
14	30.351	63.8	38.9	24.9	50.2	+ 8.7	46.2	41.5	8.7	20.6	0.9	72	109.7	26.4	45.2	0.000	7.9	11.8
15	30.153	58.7	44.5	14.2	51.0	+ 9.3	47.6	43.7	7.3	14.3	2.1	77	101.9	31.5	45.4	0.000	0.4	11.8
16	29.948	56.7	47.2	9.5	51.5	+ 9.6	47.5	42.9	8.6	15.0	2.8	73	104.5	44.5	45.6	0.113	0.6	11.9
17	29.808	53.9	42.6	11.3	49.0	+ 7.0	46.7	44.2	4.8	13.8	2.6	83	92.3	41.5	45.7	0.030	0.4	12.0
18	29.843	52.1	38.9	13.2	46.5	+ 4.5	43.0	38.5	8.0	19.0	2.0	73	97.7	27.6	45.8	0.105	5.6	12.0
19	29.983	55.7	41.6	14.1	48.5	+ 6.6	46.1	43.4	5.1	8.8	2.2	82	70.1	35.0	46.0	0.008	0.0	12.1
20	30.099	57.0	46.0	11.0	52.3	+10.4	48.1	43.3	9.0	15.5	2.7	71	86.3	40.9	46.1	0.000	0.8	12.1
21	29.981	55.3	45.5	9.8	50.2	+ 8.3	47.0	43.3	6.9	9.8	2.0	77	87.6	40.4	46.2	0.000	0.1	12.2
22	30.017	55.1	45.0	10.1	49.1	+ 7.1	43.5	35.9	13.2	26.1	5.2	60	106.8	34.1	46.3	0.000	5.9	12.3
23	30.187	53.9	34.9	19.0	45.5	+ 3.3	41.2	35.0	10.5	19.2	1.5	66	103.2	22.1	46.4	0.000	4.5	12.3
24	30.251	54.8	32.3	22.5	43.3	+ 0.9	39.1	32.5	10.8	19.0	0.9	66	112.8	15.8	46.5	0.000	10.5	12.4
25	30.169	58.2	34.7	23.5	46.1	+ 3.4	40.9	33.0	13.1	30.4	0.6	60	113.1	18.6	46.5	0.000	9.6	12.5
26	30.160	60.6	40.2	20.4	48.6	+ 5.6	43.7	37.2	11.4	28.2	1.2	64	114.8	32.8	46.4	0.000	9.7	12.6
27	30.060	54.6	42.0	12.6	46.9	+ 3.6	42.6	36.9	10.0	25.3	2.1	68	114.0	35.0	46.4	0.000	9.8	12.6
28	29.921	60.2	37.3	22.9	49.4	+ 5.7	44.2	37.4	12.0	21.8	2.9	63	114.2	29.1	46.7	0.000	9.1	12.7
29	29.788	57.7	44.7	13.0	50.7	+ 6.6	48.3	45.7	5.0	11.5	2.4	83	117.2	32.2	46.6	0.012	1.2	12.7
30	29.478	55.7	43.0	12.7	49.9	+ 5.4	45.1	39.2	10.7	20.5	2.1	66	105.8	31.0	46.7	0.080	0.8	12.8
31	29.274	52.0	34.8	17.2	45.0	+ 0.1	42.4	38.8	6.2	14.3	1.1	79	82.2	32.7	46.8	0.414	0.9	12.9
Means	30.158	56.4	39.4	17.0	47.3	+ 5.4	43.8	39.4	7.9	17.0	1.6	74.6	98.6	30.8	45.4	Sum 0.764	4.3	11.9
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 30.158 in., being 0.405 in. higher than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 71°.7 on March 9; the lowest in the month was 32°.3 on March 24; and the range was 39°.4.

The mean of all the highest daily readings in the month was 56°.4, being 7°.2 higher than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 39°.4, being 3°.8 higher than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 17°.0, being 3°.4 greater than the average for the 65 years, 1841-1905.

The mean for the month was 47°.3, being 5°.4 higher than the average for the 65 years, 1841-1905,

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS				CLOUDS AND WEATHER				
	Polaris		$\delta$ URSE MINORIS		OSLER'S			Robin- son's					
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot	Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>	
					A.M.	P.M.	Greatest	Mean of 24 Hourly Measures					
Mar. 1	hours	0.21	1.9	0.17	Calm:E	E	lbs.	lbs.	miles				
2	0.0	0.00	0.0	0.00	E	Calm	1.0	0.05	144	b x f	b c Ast f b Ci z	b Ci zo y	
3	0.0	0.00	0.0	0.00	Calm	Calm:E	0.1	0.02	123	c f Fe	Fe c f	o St m f	
4	6.2	0.58	5.5	0.51	ENE	E	1.3	0.12	80	Fe Fe	Fe bc Cist f	c Ci Cist so-ha f	
5	0.0	0.00	0.0	0.00	Calm:ENE	ENE:E	0.1	0.01	217	fe Fe	o St fe fe	c St b m	
										bc m Fe x	c Fe f	o St m	
6	8.2	0.80	7.8	0.76	Calm	Calm	0.0	0.00	38	o f Fe	Fe b f	b m	
7	2.1	0.20	0.9	0.08	Calm:SW	SW	2.1	0.17	255	b x c f	c bc Ast Acu	c Acu	
8	4.1	0.40	3.4	0.33	SW:WSW	SW	2.2	0.25	300	c	c ro c bc Ci Acu	c Ci Ast	
9	9.5	0.92	8.8	0.86	SW:WSW	WSW	0.7	0.04	193	c w	c b m zo y	b zo y	
10	10.3	1.00	10.3	1.00	WSW:N	NNW	1.0	0.03	169	b zo	b Ci zo y	b Ci zo y	
11	10.3	1.00	10.3	1.00	Calm	Calm	0.2	0.00	54	b x	b zo y	b m	
12	8.4	0.82	7.8	0.76	Calm	SW:Calm	0.1	0.00	91	b m x	b f b y	b y	
13	8.7	0.90	7.9	0.81	Calm	Calm:E	0.8	0.03	115	b m x	c f b Acu z y	b Acu zo y	
14	8.3	0.85	7.7	0.79	Calm	E:SSE	0.6	0.01	114	b x m	b f m z	b z b y	
15	0.0	0.00	0.0	0.00	WSW	SW	4.5	0.44	366	bc w c	c so-ha c Nbst ro	c Ast Frst	
16	0.0	0.00	0.0	0.00	WSW:W	W:WSW	4.5	0.36	353	c ro c	c Acu Ast	c Nbst Stcu	
17	0.2	0.02	0.0	0.00	WSW:N:Calm	SSW:SW	9.0	0.57	350	c ro c	c Ast Acu	c r c	
18	3.4	0.35	3.0	0.31	SW:NNW	NNW:Calm:SSW	6.2	0.34	273	c 1 r	c b bc Frcu Stcu	bc c Stcu b	
19	1.7	0.17	0.4	0.04	SSW:SW	WSW:SW	4.6	0.53	407	c ro	c ro c Ast Stcu	c Ast Frst	
20	5.9	0.64	5.2	0.56	WSW	WSW	4.7	0.43	396	c	c Stcu	c Stcu bc	
21	4.0	0.43	3.7	0.40	SW	SW	3.6	0.27	334	b c	c Stcu	c Stcu	
22	..	..	..	..	WSW:WNW:NW	NW	3.0	0.18	235	c ro	c bc c Acu Frcu y	c c b	
23	9.3	1.00	9.3	1.00	WSW:Calm	NE:Calm	0.3	0.00	123	b x m	c Stcu b y	b	
24	9.3	1.00	9.3	1.00	Calm	E:ENE	1.8	0.07	146	b x	b y	b	
25	9.3	1.00	9.3	1.00	ENE:Calm	E:ENE	3.1	0.16	212	b m x	b m b y	b Ci y	
26	1.9	0.21	1.8	0.19	E	E:ENE	3.7	0.24	258	b w	b zo y	b y c	
27	9.0	1.00	9.0	1.00	ENE:E	E	13.5	0.95	359	c	c b y	b	
28	6.2	0.69	4.5	0.50	E:ESE	ENE:Calm	1.6	0.10	188	b x	b Ci zo y	b	
29	5.2	0.57	4.6	0.51	S:SSW	S	6.6	0.35	281	b c r o c	c bc Stcu	c Stcu r o c	
30	7.9	0.88	7.4	0.83	SSW:SW	W:NW	10.0	0.53	299	b c rr	c Acu Stcu y	c Acu Ast y	
31	5.7	0.63	4.2	0.46	SW:SSW	SSW:SW	36.2	2.12	491	b x	b c Cist so-ha c Ast	c Nbst r o gale	
Means	5.2	0.54	4.8	0.50	..	..	..	0.27	230				
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30	31

The mean *Temperature of Evaporation* for the month was  $43^{\circ}8$ , being  $4^{\circ}4$  higher than the mean *Temperature of the Dew Point* for the month was  $39^{\circ}4$ , being  $3^{\circ}8$  higher than the mean *Degree of Humidity* for the month was  $74.6$ , being  $3.5$  less than the mean *Elastic Force of Vapour* for the month was  $0.242$  in., being  $0.033$  in. greater than the mean amount of *Cloud* for the month (a clear sky being represented by 0 and an overcast sky by 10) was 5.3. The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0.358. The maximum daily amount of Sunshine was 10.5 hours on March 24. The highest reading of the *Solar Radiation Thermometer* was  $119.3$  on March 8; and the lowest reading of the *Terrestrial Radiation Thermometer* was  $15^{\circ}8$  on March 24. The Proportions of Wind referred to the cardinal points were N.6, E.23, S.20, W.24, calm or nearly calm conditions 27, the whole month being represented by 100. The Greatest Pressure of the Wind in the month was 36.2 lbs. on the square foot on March 31. The mean daily Horizontal Movement of the Air for the month was 230 miles; the greatest daily value was 491 miles on March 31 and the least daily value was 38 miles on March 6. Rain (0.005 in. or over) fell on 7 days in the month, amounting to 0.764 in., as measured by gauge No.6 partly sunk below the ground; being 0.756 in. less than the average fall for the 65 years, 1841-1905.

## GREENWICH METEOROLOGICAL OBSERVATIONS, 1948.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER  Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit)	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 Dur- ation of Sun- shine	Sun above Horizon		
		Of the Air				Of Evapo- ration	Of the Dew Point				Of Radiation	Of the Earth 4 ft. below the surface of the Soil	Highest in Sun's Rays	Lowest on the Grass				
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Greatest	Least							
	in.	o	o	o	o	o	o	o	o	o	o	o	o	o	in.	hours	hours	
Apr. 1	29.085	51.9	41.4	10.5	46.1	+ 0.8	41.5	34.9	11.2	20.4	5.7	65	103.3	34.9	46.8	0.020	8.5	12.9
2	29.233	53.9	40.6	13.3	45.1	- 0.6	41.7	36.9	8.2	17.8	3.0	73	118.4	34.7	46.8	0.216	3.2	13.0
3	29.249	53.0	38.5	14.5	44.5	- 1.5	40.3	33.9	10.6	21.5	3.3	66	115.9	31.7	46.8	0.040	8.1	13.1
4	29.256	52.3	37.8	14.5	42.6	- 3.6	40.3	36.9	5.7	11.6	2.1	80	97.2	29.6	46.7	0.365	1.4	13.1
5	29.340	51.8	34.7	17.1	42.9	- 3.4	39.0	32.9	10.0	21.6	1.4	68	110.1	27.7	46.7	0.000	6.2	13.2
6	29.615	53.5	37.2	16.3	45.7	- 0.6	42.1	37.1	8.6	19.4	2.4	72	114.8	29.0	46.7	0.000	4.9	13.3
7	29.605	62.2	42.0	20.2	50.5	+ 4.2	46.8	42.5	8.0	19.3	1.1	74	125.9	34.9	46.6	0.003	4.0	13.3
8	29.402	52.0	42.0	10.0	47.3	+ 1.2	43.3	38.1	9.2	18.4	2.5	70	103.3	34.3	46.7	0.070	5.5	13.4
9	29.773	54.6	36.8	17.8	47.1	+ 1.1	41.9	34.3	12.8	20.2	3.0	61	99.0	25.0	46.7	0.000	3.6	13.4
10	29.871	58.3	34.1	24.2	46.7	+ 0.8	42.1	35.7	11.0	24.1	1.3	65	112.7	19.8	46.8	0.000	4.6	13.5
11	30.010	56.6	41.5	15.1	48.4	+ 2.6	43.3	36.4	12.0	27.8	3.1	63	127.0	27.6	46.9	0.000	10.4	13.6
12	30.201	61.4	35.8	25.6	48.9	+ 3.0	42.9	34.5	14.4	29.3	1.7	57	113.0	18.8	46.9	0.000	9.6	13.7
13	30.161	63.9	38.8	25.1	52.5	+ 6.4	47.3	41.2	11.3	20.0	2.0	65	111.8	25.8	47.0	0.000	4.4	13.7
14	30.052	58.8	41.3	17.5	50.1	+ 3.7	46.5	42.3	7.8	17.8	0.6	74	86.6	27.8	47.1	0.000	0.5	13.8
15	30.054	57.5	39.5	18.0	47.0	+ 0.2	42.3	35.7	11.3	23.5	2.3	65	117.7	22.7	47.2	0.000	10.2	13.8
16	29.856	56.4	39.7	16.7	47.9	+ 0.7	42.8	35.7	12.2	24.9	1.5	62	123.8	32.5	47.2	0.005	9.5	13.9
17	29.529	55.6	42.2	13.4	50.5	+ 2.9	48.4	46.1	4.4	9.2	1.6	85	94.5	30.4	47.4	0.170	0.5	14.0
18	29.674	67.7	39.6	28.1	52.4	+ 4.4	47.5	41.9	10.5	25.8	1.0	67	125.3	27.8	47.6	0.000	10.1	14.0
19	29.681	70.7	43.2	27.5	56.3	+ 8.0	51.8	47.4	8.9	17.3	2.1	72	128.2	29.9	47.8	0.000	9.2	14.1
20	29.653	72.9	49.1	23.8	59.5	+ 11.0	53.9	48.7	10.8	25.0	0.8	68	141.2	39.8	48.0	0.000	5.9	14.2
21	29.597	70.8	46.7	24.1	59.1	+ 10.4	54.6	50.6	8.5	17.5	1.6	73	133.1	29.8	48.2	0.012	6.4	14.2
22	29.610	63.0	43.0	20.0	54.9	+ 6.2	50.7	46.5	8.4	25.2	1.9	73	119.7	28.0	48.4	0.007	5.4	14.3
23	29.870	65.0	40.4	24.6	52.5	+ 3.9	46.8	39.8	12.7	27.5	1.2	62	138.4	24.6	48.7	0.000	10.5	14.4
24	30.113	64.9	40.9	24.0	54.3	+ 5.7	47.4	39.1	15.2	26.5	1.2	56	129.7	26.9	49.0	0.000	8.8	14.4
25	30.360	62.9	44.6	18.3	52.4	+ 3.8	46.5	39.2	13.2	21.5	3.7	61	126.6	37.7	49.0	0.000	10.1	14.5
26	30.490	61.6	43.0	18.6	51.4	+ 2.8	46.0	39.3	12.1	26.1	1.8	64	126.1	28.5	49.2	0.000	12.7	14.5
27	30.217	69.7	41.8	27.9	56.5	+ 7.8	50.8	44.9	11.6	22.6	1.4	65	125.7	27.1	49.4	0.000	9.6	14.6
28	29.583	66.4	45.6	20.8	54.6	+ 5.8	48.9	42.5	12.1	27.2	3.5	64	136.3	38.5	49.6	0.065	5.6	14.7
29	29.292	56.8	42.6	14.2	47.9	- 1.1	44.3	39.7	8.2	19.6	1.6	73	129.2	41.0	49.5	0.156	2.4	14.7
30	29.245	54.1	41.6	12.5	46.1	- 3.0	43.1	39.2	6.9	18.6	1.8	77	101.3	35.5	49.7	0.069	0.9	14.8
Means	29.723	60.0	40.9	19.1	50.1	+ 2.8	45.5	39.8	10.3	21.6	2.1	68.0	117.9	30.1	47.7	Sum 1.198	6.4	13.9
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29.723 in., being 0.032 in. lower than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 72°.9 on April 20; the lowest in the month was 34°.1 on April 10; and the range was 38°.8.

The mean of all the highest daily readings in the month was 60°.0, being 3°.9 higher than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 40°.9, being 1°.4 higher than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 19°.1, being 2°.5 greater than the average for the 65 years, 1841-1905.

The mean for the month was 50°.1, being 2°.8 higher than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS					CLOUDS AND WEATHER			
	POLARIS		δ URSA MINORIS		OSLER'S			Robin- son's					
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot	Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>	
Apr. 1	hours	..	hours	..	SW	SW:WSW	lbs.	lbs.	miles	b	b bc c Nbst Cumb	c Cumb h p t bc	bc b
2	8.5	0.94	8.4	0.93	WSW:SW	SSW:SW	12.0	1.89	563	b	bc c Ast Frcu	c Nbst r R c	c b
3	5.2	0.61	4.8	0.57	SW:WSW	WSW:SSW	9.0	1.31	485	b	b bc Cumb p h	bc Nbst Cumb b y	b c p
4	5.4	0.64	5.1	0.60	S:SSW	WSW:SW	7.4	0.85	401	b	rr c Cumb p c	c Cumb q c	po c b m o
5	7.7	0.91	7.5	0.88	Calm:N	NNW:NW	16.5	0.97	397	b	c m o c Frcu	c bc Frcu y	b
							4.8	0.26	234	x c m o			
6	6.3	0.75	5.7	0.67	WSW:WNW	W:WSW	4.0	0.31	284	b c m o	c bc Acu Stcu	c Stcu ro c	c b
7	0.6	0.07	0.4	0.05	WSW:W	SW	8.6	0.53	360	b c m o	c b m o c Cu Acu	bc Acu y c Ast	c ido r
8	6.5	0.76	6.0	0.71	SW:WSW	W:WSW	18.7	1.77	544	r c	c Cumb p h	c Cumb q p	c b
9	8.5	1.00	8.5	1.00	W:NW	NW:Calm	5.6	0.60	322	b c	c Frcu y	c Stcu y	b m
10	5.0	0.63	3.8	0.47	Calm:S	S:SE:Calm	2.0	0.07	113	b x m	c Ci Frcu y	c Cist so-ha y	c b
11	8.0	1.00	8.0	1.00	Calm:E	ENE:E	3.5	0.20	203	bc	bc Cist b Cu y	b Cu y	b x
12	..	..	..	..	Calm	Calm:SSW	0.2	0.01	77	b x m	b f b zo y	b Acu zo y	b c m
13	7.7	0.96	7.7	0.96	Calm	NW:Calm	0.9	0.02	78	b x m	bmc Stcu zo y	c Stcu zo y	c b
14	5.9	0.74	4.7	0.59	Calm	NN:E	1.3	0.04	112	b w c m	c Stcu m	c Frcu bc	c
15	7.7	0.96	7.7	0.96	Calm:NE	E:ENE	4.2	0.15	178	c b x	b Ci y	b Acu Cu y	b
16	0.0	0.00	0.0	0.00	ENE:NE	ENE:NE	8.6	0.70	338	bc c m	c bc b Frcu y	b Frcu y	b c r o
17	7.5	1.00	7.5	1.00	ENE:E	E:SE:S	3.0	0.15	205	c rr c	c Nbst r ro	r c	b m b
18	7.2	0.96	7.2	0.96	S:Calm	SW:Calm	1.2	0.03	118	b x	b zo y	b Cu zo y	b
19	4.2	0.56	3.7	0.50	Calm:ENE	ENE:EESE	0.9	0.06	124	b w m	b mcb Cu Ci	b Cu Ci	c t l r o c
20	7.1	0.95	7.1	0.95	Calm	SW:Calm	0.9	0.03	90	c m	c bc Frcu y	bc Cu b y c prhn	c b
21	0.0	0.00	0.0	0.00	Calm:E	E:SE:S	5.2	0.30	223	b w m o	c m o bc Stcu	bc c Acu Cu y	c r
22	7.4	0.99	7.4	0.98	Calm:SSW	SW:S	5.0	0.44	273	r c	c Stcu	c bc Cu Frcu b y	b
23	7.5	1.00	7.5	1.00	S:SW	SW:WSW	2.2	0.13	201	b x c b	b Cu y	b Cu y	b
24	6.3	0.90	5.8	0.83	Calm:N	N:NNE	2.4	0.16	193	b x	b Cu y	b c Frcu y	c b
25	2.7	0.39	2.1	0.30	N:NNE	NNE:NE	7.5	0.75	374	b c	c b Frcu y	b c Frcu y	b c
26	6.3	0.89	6.3	0.89	NNE:NE	NE:Calm	3.1	0.23	222	c b	b Cu y	b Ci y	b m o
27	4.9	0.70	4.5	0.64	Calm:NW	NW:Calm:SW	1.5	0.08	167	b c m o	c Stcu y	c bc Cu Cist b y	b m o
28	0.0	0.00	0.0	0.00	SW:WSW	WSW:W	9.5	0.89	408	b c	c bc Acu Ci y	c Acu Cu y	r ro
29	0.0	0.00	0.0	0.00	Calm	SSW:W	2.1	0.09	148	rr	r c Cu Ci y	c Cu Ci y c Stcu	c r o c
30	0.0	0.00	0.0	0.00	Calm	Calm	1.8	0.03	86	c m o	c Stcu m o	c Cumb p m o	c r t c
Means	5.1	0.65	4.9	0.62	..	..	..	0.43	251				
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30	31

The mean Temperature of Evaporation for the month was 45°.5, being 1°.6 higher than

The mean Temperature of the Dew Point for the month was 39°.8, being 0°.2 higher than

The mean Degree of Humidity for the month was 68.0, being 6.5 less than

The mean Elastic Force of Vapour for the month was 0.246 in., being 0.002 in. greater than

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 5.3.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.463. The maximum daily amount of Sunshine was 12.7 hours on April 26.

The highest reading of the Solar Radiation Thermometer was 141°.2 on April 20; and the lowest reading of the Terrestrial Radiation Thermometer was 18°.8 on April 12.

The Proportions of Wind referred to the cardinal points were N.13, E.15, S.20, W.25, calm or nearly calm conditions 27, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 18.7 lbs. on the square foot on April 8. The mean daily Horizontal Movement of the Air for the month was 251 miles; the greatest daily value was 563 miles on April 1, and the least daily value was 77 miles on April 12.

Rain (0.005 in. or over) fell on 12 days in the month, amounting to 1.198 in., as measured by gauge No.6 partly sunk below the ground; being 0.368 in. less than the average fall for the 65 years, 1841-1905.

} the average for the 65 years, 1841-1905.

## GREENWICH METEOROLOGICAL OBSERVATIONS, 1948.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER Mean of 24 Hourly Values (corrected to 32° Fahrenheit it)	TEMPERATURE						Difference between the Air Temperature and Dew Point Temperature			Degree of Humidity (Saturation = 100)	TEMPERATURE			Rain collected in No. 6, whose receiving surface is 5 inches above the Ground	Daily Duration of Sun- shine	Sun above Horizon	
		Of the Air			Of Evapo- ration	Of the Dew Point	Of Radiation					Highest in Sun's Rays	Lowest on the Grass					
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Great- est	Least	Highest in Sun's Rays	Lowest on the Grass					
May 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	in.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	in.	hours	hours
	29.332	53.5	40.2	13.3	46.2	- 3.1	43.3	39.6	6.6	17.4	1.0	78	99.1	33.1	49.7	0.034	2.6	14.8
	29.438	49.1	39.0	10.1	42.9	- 6.6	40.8	37.8	5.1	12.9	1.5	82	80.0	30.0	49.7	0.000	0.8	14.9
	29.744	57.7	32.3	25.4	45.2	- 4.6	41.1	35.1	10.1	20.0	0.9	68	112.9	21.7	49.7	0.000	5.4	14.9
	29.560	59.8	39.4	20.4	48.4	- 1.6	46.3	43.9	4.5	10.5	1.7	84	110.1	26.6	49.5	0.110	2.5	15.0
	29.727	64.0	46.5	17.5	54.7	+ 4.4	48.7	41.9	12.8	27.8	2.7	62	121.1	36.5	49.6	0.000	8.8	15.1
	30.084	63.7	36.5	27.2	51.7	+ 1.2	46.1	39.1	12.6	26.0	1.0	62	125.1	23.5	49.6	0.000	9.6	15.1
	30.267	67.7	39.6	28.1	53.8	+ 3.1	48.3	42.1	11.7	24.4	1.2	64	124.3	25.3	49.6	0.000	11.6	15.2
	30.163	65.3	42.3	23.0	54.8	+ 3.8	48.6	41.5	13.3	28.2	1.1	61	132.3	25.0	49.8	0.000	13.1	15.2
	29.818	69.8	44.5	25.3	57.2	+ 6.0	52.1	47.1	10.1	22.3	1.5	69	132.2	35.6	49.9	0.000	9.7	15.3
	29.606	66.6	51.4	15.2	58.6	+ 7.1	55.4	52.7	5.9	13.3	0.8	80	106.3	39.4	50.0	0.000	0.6	15.3
	29.606	66.7	52.9	13.8	58.7	+ 6.9	56.5	54.7	4.0	10.9	1.4	86	99.0	41.1	50.2	0.254	0.1	15.4
	29.755	58.8	50.7	8.1	54.9	+ 2.8	53.5	52.3	2.6	7.1	0.6	91	84.7	42.0	50.5	0.000	0.0	15.5
	29.945	68.4	46.7	21.7	56.3	+ 3.9	53.0	49.9	6.4	17.9	1.0	79	103.9	36.0	50.7	0.000	3.5	15.5
	30.091	72.5	44.8	27.7	59.5	+ 6.9	53.9	48.7	10.8	21.1	0.0	68	130.0	30.5	50.9	0.000	12.9	15.6
	30.109	70.8	49.3	21.5	59.6	+ 6.8	53.5	47.8	11.8	27.2	2.2	64	128.6	40.8	51.0	0.000	13.7	15.6
	30.006	74.4	49.3	25.1	62.5	+ 9.5	55.7	49.6	12.9	28.5	1.4	63	131.3	42.5	51.2	0.000	13.2	15.7
	30.045	75.2	52.1	23.1	64.0	+ 10.9	56.1	49.1	14.9	30.9	3.2	59	136.1	44.8	51.5	0.000	14.1	15.7
	30.084	77.0	54.2	22.8	65.3	+ 12.0	56.5	48.7	16.6	34.8	4.1	55	138.5	48.0	51.9	0.000	14.4	15.7
	30.001	72.3	47.8	24.5	62.1	+ 8.6	53.9	45.9	16.2	32.1	2.8	55	133.7	41.0	52.1	0.000	14.0	15.8
	29.879	63.5	46.9	16.6	54.9	+ 1.1	51.0	47.1	7.8	17.3	2.8	75	120.3	40.1	52.1	0.000	5.3	15.8
	29.963	64.1	42.2	21.9	55.2	+ 1.0	48.5	40.7	14.5	27.6	4.0	58	127.2	23.8	52.4	0.000	12.8	15.9
	29.857	73.7	39.0	34.7	57.8	+ 3.2	48.8	37.9	19.9	35.4	2.6	48	136.2	23.0	52.7	0.000	8.9	15.9
	29.576	54.0	42.2	11.8	47.2	- 7.7	44.1	40.3	6.9	15.6	0.6	76	85.0	41.5	52.6	0.062	0.0	16.0
	29.531	56.3	39.9	16.4	46.2	- 9.1	42.7	38.1	8.1	21.8	0.6	73	106.4	34.0	52.7	0.156	2.6	16.0
	29.676	57.0	37.9	19.1	49.0	- 6.5	45.9	42.1	6.9	13.9	0.9	77	103.9	26.0	52.7	0.198	3.5	16.1
	29.549	58.8	45.0	13.8	51.2	- 4.6	48.0	44.5	6.7	11.3	2.6	78	113.0	37.0	52.6	0.117	3.8	16.1
	29.771	60.5	38.4	22.1	50.6	- 5.4	44.8	37.1	13.5	26.1	1.2	60	117.0	27.9	52.5	0.000	7.5	16.2
	29.741	61.9	37.9	24.0	49.8	- 6.4	45.5	40.3	9.5	24.9	0.9	69	127.2	26.2	52.4	0.000	2.1	16.2
	29.662	53.6	41.7	11.9	48.5	- 7.9	46.9	45.1	3.4	10.1	0.6	88	58.3	26.9	52.2	0.555	0.0	16.2
	29.816	61.1	41.2	19.9	51.7	- 5.0	48.2	44.4	7.3	15.6	1.0	76	120.0	28.2	52.4	0.030	4.2	16.2
	29.623	62.2	47.4	14.8	53.3	- 3.8	50.3	47.2	6.1	17.1	1.9	80	119.5	39.0	52.1	0.092	5.1	16.3
Means	29.807	63.9	43.8	20.0	53.9	+ 0.9	49.3	44.3	9.7	21.0	1.6	70.6	114.9	33.5	51.2	Sum 1.608	6.7	15.6
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29.807 in., being 0.006 in. higher than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR

The highest in the month was 77°.0 on May 18; the lowest in the month was 32°.3 on May 3; and the range was 44°.7.

The mean of all the highest daily readings in the month was 63°.9, being 1°.7 higher than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 43°.8, being 0°.4 lower than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 20°.0, being 2°.0 greater than the average for the 65 years, 1841-1905.

The mean for the month was 53°.9, being 0°.9 higher than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS					CLOUDS AND WEATHER			
	Polaris		δ URSE MINORIS		OSLER'S			Robin- son's					
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot	Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>	
					A.M.	P.M.	Greatest	Mean of 24 Hourly Measures					
May 1	hours	hours	hours	0.35	Calm	SSW:SW	lbs.	lbs.	miles	c	c t l p	c p c Stcu	cpo b c
2	2.5	0.41	2.2	0.35	SW:W:N	NNE	6.3	0.15	170	c	c do c Nbst	c Nbst 1 r o	b
3	6.3	1.00	6.3	1.00	Calm	SSW:S	3.5	0.25	235	b x m o	b m c Cumb Frcu y	c Cumb Acu b y	b x
4	4.3	0.69	4.2	0.68	S	S:SSW	2.2	0.09	127	b x c	c r i r o	c bc Frcu	b c
5	2.8	0.44	2.7	0.43	SW:W	W:N	13.0	0.75	340	c	c b c Frcu y	c Frcu b y	b
6	6.2	0.99	6.2	0.99			3.2	0.21	239				
7	6.3	1.00	6.3	1.00	Calm	NE:Calm	0.7	0.04	111	b x m	b m b y	b c Cu Stcu y	b m
8	6.3	1.00	6.3	1.00	Calm	E:Calm	1.2	0.04	78	b x m f	b f b zo y	b Frcu zo y	b
9	5.7	1.00	5.7	1.00	Calm:ENE	ENE	5.8	0.34	232	b x c m	b Ci y	b Ci y	b
10	2.1	0.36	2.0	0.34	ENE:NNE:NE	ENE:E:Calm	2.9	0.19	203	b	b c Ast Frcu y	c b Ci y	b c
	0.4	0.07	0.3	0.04	Calm:NNE	NNE:Calm	1.0	0.07	145	c w m	c St mo	c Stcu mo	c m o
11	1.5	0.27	1.0	0.17	Calm	Calm	3.8	0.01	40	c m	c rr c Stcu m	c m bc Acu mo	c t l R c m o
12	0.0	0.00	0.0	0.00	Calm:N	Calm	0.2	0.01	76	c m	c Stcu mo	c Stcu mo	c m
13	5.7	1.00	5.7	1.00	Calm	Calm:SW	0.1	0.01	61	c w m f	o St b c Stcu m	c Stcu b zo y	b z o
14	5.7	1.00	5.7	1.00	Calm	Calm:E	2.0	0.07	130	b w m o	b Cu y	b bc Cu b y	b
15	5.3	1.00	5.1	0.98	ENE	ENE	7.0	0.69	340	b m o	b Frcu y	b y	b
16	5.3	1.00	5.3	1.00	NE:ENE	ENE:NE	8.8	0.86	346	b	b y	b y	b
17	5.3	1.00	5.3	1.00	NE:ENE	ENE	7.2	0.68	315	b	b y	b y	b y
18	5.3	1.00	5.3	1.00	ENE:E	ENE	8.3	0.79	351	b	b y	b y	b
19	2.8	0.54	2.8	0.54	NE:ENE	ENE:E:NNE	7.2	0.47	263	b m o	b Ci y	b Ci y	b c
20	0.2	0.04	0.0	0.00	NNE:NE	NNE:NE	4.8	0.62	341	c	c Stcu	c b Frcu y c	c
21	5.3	1.00	5.3	1.00	NE	ENE:E:Calm	5.0	0.49	275	c b	b Cu y	b Cu y	b x
22	1.8	0.36	1.4	0.29	SW:WSW:NW	NW:NNW	3.6	0.41	260	b x bc	c Cist y	c Cist y	c
23	0.0	0.00	0.0	0.00	NNW:Calm:E	NNE:N	2.0	0.13	159	c	c Stcu 1 r m o	r o c m o	
24	5.0	1.00	4.3	0.86	NNW	Calm:SE	2.6	0.15	188	rr m o	c Frcu y	c Frcu y	c b
25	0.9	0.18	0.7	0.15	Calm:SE:E	E:ENE	3.3	0.19	205	b x c	c Nbst Cumb ro	c Nbst Cumb r r o	c r r
26	3.1	0.62	3.0	0.60	SSW	NW:W	6.7	0.33	268	c	c Acu Cumb p h r t l	c Stcu p c	c
27	5.0	1.00	5.0	1.00	Calm:NNW	Calm	0.1	0.00	104	b m o x	c Cu Stcu y	c Cu Stcu y	c b m o
28	3.2	0.64	3.0	0.60	Calm	Calm:SSE	0.0	0.00	76	b x m	c Cu Cumb	c Nbst 1 r o	c b
29	2.5	0.56	2.1	0.47	Calm:E	ENE:NNE	4.0	0.19	233	b x c m o	c Nbst m o r o rr	rr	r o c
30	0.0	0.00	0.0	0.00	N:Calm	SW	2.6	0.08	159	b c m o	c b c Stcu Cumb	c Acu Cumb p h c	c
31	4.5	1.00	4.5	1.00	SW:SSW	SW	4.4	0.44	337	c i r o	c Nbst 1 r o rr	r c b c Cu Ci	c b
Means	3.6	0.65	3.5	0.63	..	..	..	0.28	207				
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30	31

The mean Temperature of Evaporation for the month was 49°3, being 0°3 higher than

The mean Temperature of the Dew Point for the month was 44°3, being 0°5 lower than

The mean Degree of Humidity for the month was 70.6, being 3.3 less than

The mean Elastic Force of Vapour for the month was 0.292 in., being 0.006 in. less than

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 5.6.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.426. The maximum daily amount of Sunshine was 14.4 hours on May 18.

The highest reading of the Solar Radiation Thermometer was 138.5 on May 18; and the lowest reading of the Terrestrial Radiation Thermometer was 21.7 on May 3.

The Proportions of Wind referred to the cardinal points were N.19, E.26, S.12, W.11, calm or nearly calm conditions 32, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 13.0 lbs. on the square foot on May 4. The mean daily Horizontal Movement of the Air for the month was 207 miles; the greatest daily value was 351 miles on May 18 and the least daily value was 40 miles on May 11.

Rain (0.005 in. or over) fell on 10 days in the month, amounting to 1.608 in., as measured by gauge No.6 partly sunk below the ground; being 0.307 in. less than the average fall for the 65 years, 1841-1905.

the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER  Mean of 24 Hourly Values (Corrected and reduced to 32° Fahrenheit)	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 Dur- ation of Sun- shine	Sun above Horizon
		Of the Air				Of Evapo- ration	Of the Dew Point	Mean					Of Radiation	Highest in Sun's Rays	Lowest on the Grass			
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Great- est	Least							
June 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	in.	o	o	o	o	-3.2	49.8	45.2	9.0	15.8	1.3	71	119.8	35.6	52.2	0.082	8.6	16.3
	29.537	62.0	44.6	17.4	54.2	-4.0	49.3	44.5	9.3	18.5	1.0	70	113.2	41.1	52.2	0.180	4.5	16.4
	29.347	60.2	47.8	12.4	53.8	-6.9	46.9	41.9	9.3	20.3	2.2	70	121.9	37.7	52.2	0.431	10.7	16.4
	29.329	59.3	44.4	14.9	51.2	-2.6	51.4	47.1	8.6	19.1	2.8	73	107.1	46.3	52.2	0.000	0.8	16.4
	29.585	62.8	49.7	13.1	55.7	-2.0	51.0	45.4	11.0	21.4	1.6	66	116.5	43.0	52.3	0.045	4.6	16.4
	29.760	63.4	49.7	13.7	56.4													
	29.667	62.8	48.5	14.3	56.1	-2.2	52.5	49.0	7.1	15.2	2.0	77	108.4	41.1	52.3	0.048	0.7	16.5
	29.797	70.0	49.5	20.5	59.4	+1.2	54.3	49.6	9.8	21.0	2.3	70	138.9	42.0	52.7	0.020	10.6	16.5
	29.859	79.7	52.8	26.9	65.2	+7.1	59.8	55.7	9.5	20.6	0.8	72	143.3	45.9	53.0	0.000	3.3	16.5
	29.944	69.7	52.5	17.2	59.9	+1.9	53.8	48.1	11.8	20.4	4.4	64	131.6	45.9	53.1	0.000	8.1	16.5
	29.926	67.8	51.3	16.5	58.3	+0.2	54.2	50.6	7.7	13.2	2.6	76	128.1	46.5	53.3	0.130	5.3	16.6
	29.921	68.4	52.2	16.2	58.6	+0.4	55.0	51.9	6.7	13.3	3.4	78	129.0	44.3	53.7	0.000	5.1	16.6
	29.856	68.6	51.6	17.0	59.3	+0.9	56.7	54.6	4.7	9.0	1.0	85	116.3	47.6	53.7	0.000	4.5	16.6
	29.853	78.0	52.8	25.2	62.7	+4.2	59.6	57.3	5.4	13.9	0.6	83	126.9	49.3	54.0	0.000	5.9	16.6
	29.795	77.6	57.8	19.8	66.2	+7.5	62.8	60.6	5.6	12.8	1.6	82	119.6	46.9	54.3	0.398	2.5	16.6
	29.730	70.2	53.8	16.4	61.3	+2.5	56.3	52.1	9.2	13.4	4.0	72	136.9	43.3	54.6	0.000	3.8	16.6
	29.695	68.0	52.9	15.1	58.3	-0.6	53.1	48.1	10.2	26.0	2.6	69	132.0	45.3	54.8	0.000	5.4	16.6
	29.614	67.4	51.9	15.5	57.4	-1.6	53.7	50.3	7.1	26.5	1.0	77	124.1	45.0	54.8	0.230	5.7	16.6
	29.653	66.3	49.9	16.4	56.3	-2.9	52.4	48.6	7.7	20.8	1.2	76	128.0	43.1	55.0	0.152	7.3	16.6
	29.547	67.9	50.4	17.5	56.6	-2.9	52.8	49.1	7.5	19.8	3.1	76	144.5	43.2	55.1	0.053	5.9	16.6
	29.804	64.0	50.5	13.5	56.7	-3.2	51.2	45.5	11.2	20.5	2.8	66	127.1	39.7	55.1	0.002	6.5	16.6
	29.783	66.0	50.4	15.6	57.1	-3.2	53.0	49.1	8.0	13.3	2.8	75	116.0	39.4	55.1	0.002	2.1	16.6
	29.722	65.0	49.8	15.2	55.1	-5.5	52.0	49.1	6.0	15.4	1.0	80	130.3	42.6	55.1	0.220	2.9	16.6
	29.935	69.0	49.6	19.4	59.0	-1.9	53.0	47.3	11.7	21.9	1.0	64	132.6	41.0	55.3	0.000	11.3	16.6
	30.076	67.5	47.5	20.0	59.0	-2.2	55.1	51.7	7.3	16.6	1.3	77	106.3	34.6	55.2	0.000	2.5	16.6
	30.084	72.2	53.4	18.8	64.0	+2.6	59.1	55.3	8.7	15.8	2.5	73	130.3	39.9	55.4	0.000	4.8	16.6
	30.001	79.6	58.5	21.1	68.9	+7.4	62.7	58.4	10.5	19.3	1.8	69	142.2	48.1	55.6	0.000	11.7	16.6
	29.766	67.7	52.4	15.3	61.1	-0.5	54.5	48.4	12.7	20.9	3.3	63	130.4	45.0	55.7	0.011	6.1	16.6
	29.625	60.7	50.2	10.5	54.9	-6.7	51.8	48.8	6.1	10.5	2.0	80	108.1	42.8	55.8	0.185	2.3	16.6
	29.773	57.9	48.5	9.4	52.9	-8.7	49.1	45.1	7.8	13.8	3.2	74	103.0	40.4	55.8	0.017	0.8	16.6
	29.782	61.5	49.0	12.5	54.8	-6.7	50.9	47.0	7.8	14.3	3.4	75	103.8	43.8	55.8	0.012	0.8	16.6
Means	29.759	67.4	50.8	16.6	58.3	-1.1	53.9	49.8	8.5	17.4	2.2	73.4	123.9	43.0	54.2	2.218	5.1	16.5
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29.759 in., being 0.063 in. lower than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 79°.7 on June 8; the lowest in the month was 44°.4 on June 3; and the range was 35°.3.

The mean of all the highest daily readings in the month was 67°.4, being 1°.5 lower than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 50°.8, being 0°.4 higher than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 16°.6, being 1°.9 less than the average for the 65 years, 1841-1905.

The mean for the month was 58°.3, being 1°.1 lower than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS				CLOUDS AND WEATHER			
	Polaris		δ URSAE MINORIS		OSLER'S			Robin- son's				
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot	Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>
	A.M.	P.M.			Greatest	Mean of 24 Hourly Measures						
June 1	hours	hours	hours		SSW:WSW	SW	lbs.	lbs.	miles			
2	0.0	0.00	0.0	0.00	SSW:S:SW	W:WSW	4.6	0.25	288	b	bc c Frcu Cist so-ha	p t c Acu Cumb
3	4.5	1.00	4.5	1.00	WSW:W	WSW:W	14.5	1.26	444	c rr	rro c Stcu p	bc Cumb Frcu p y
4	0.0	0.00	0.0	0.00	WNW	W:SW	16.6	1.42	479	b	b bc Frcu p	bc Frcu Cumb q h p
5	0.0	0.00	0.0	0.00	SW:W	SW	5.0	0.70	382	c	c Stcu	c Cu Acu y
	0.7	0.15	0.5	0.12			5.0	0.56	339	c r ro	c Ast Frcu	c Acu Cu
6	0.0	0.00	0.0	0.00	SSW	SSW:SW	12.8	1.44	440	bc	c ro c Cu Ast	c Frst d c
7	2.6	0.57	2.2	0.50	SW:WSW	SW:WSW	6.6	0.35	279	c i d b	b bc b Cu Cicu y	b c Acu Frcu y
8	4.0	0.88	4.0	0.88	Calm	SW:NW:N	1.7	0.05	139	bc c	c Cist Acu so-ha c y	c Acu Cu y
9	0.2	0.04	0.2	0.04	NE	E	3.0	0.19	247	b c bc	b bc Cist so-ha y	c Cu Acu y
10	0.9	0.19	0.6	0.13	ENE:NE	NE	5.2	0.20	232	c r R c	c Stcu	c Acu Cu Cicu
11	1.9	0.42	1.9	0.41	NE:N	N	0.7	0.03	150	o mo	o moc b Frst zo	b Frst c zo
12	1.8	0.39	1.7	0.38	NE:Calm	Calm:NE	0.3	0.00	119	b w c m	c St mo	c b mo
13	4.5	1.00	4.5	1.00	Calm:N	Calm	0.1	0.00	94	c m o w	c Frst zo	c b zo
14	4.0	0.88	4.0	0.88	Calm:Var	Calm:WSW	6.0	0.05	94	b w c m	c tl r R mo	c m b
15	1.2	0.26	1.2	0.26	WSW:SW	SSW:SW	4.6	0.15	244	b c	c Acu Frcu	c ro c Stcu Cu
16	0.1	0.01	0.0	0.00	SW:WSW	WSW:SSW	4.8	0.29	297	c ro c	c Cu Cumb Acu y	c Stcu Cu y
17	4.3	0.95	4.3	0.95	S:SSW	WSW:SW	8.0	0.50	324	c rr	rr c Frst p o	c b c Cu y
18	2.3	0.52	2.3	0.52	SSW:SW	SW:SSW	8.0	0.66	331	bc	c r h R c Frcu	b c Stcu b y
19	0.3	0.07	0.3	0.07	SSW:SW	SW:Calm:NNW	1.6	0.10	188	b c ro c	c Frcu Cumb	c t p Nbst
20	0.6	0.13	0.5	0.12	N	N:Calm	3.0	0.13	191	c ro c	c Frcu y	c bc y
21	1.3	0.28	1.2	0.27	SW	SSW:WSW	6.6	0.43	304	c	c ro c Ast	c ro c Ast Frst
22	3.1	0.69	3.0	0.67	WSW	SW:NW:WSW	7.5	0.21	280	c	c Nbst Ast ro r	c Acu Cumb i r c
23	4.5	1.00	4.5	1.00	W:NW	NW>NNW	1.6	0.10	204	bc c b	b c Frcu y	bc b
24	2.6	0.57	2.6	0.57	Calm	Calm	0.0	0.00	39	b c m	c m z	c b
25	0.0	0.00	0.0	0.00	Calm:NW	NW:Calm	1.4	0.05	117	b c m	c Cu Acu y	c ro c
26	3.1	0.69	2.9	0.66	Calm:W	W:WSW	3.1	0.20	233	c	c Stcu	b
27	1.8	0.39	1.6	0.35	WSW:W>NNW	W:WSW	4.4	0.46	354	b c r c	c bc Frcu y	c
28	3.0	0.66	2.9	0.65	WSW:W	NW>NNW	13.5	0.75	399	c b c ro	rr o c p t	c ro c b
29	0.3	0.06	0.2	0.05	NNW	NNW:NW	4.7	0.22	270	b	c Nbst ro	c i ro
30	0.0	0.00	0.0	0.00	NNW>NNW	N	4.2	0.32	302	c r o c	c Nbst ro	c ro c
Means	1.8	0.39	1.7	0.38	..	..	..	0.37	260			
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30
												31

The mean Temperature of Evaporation for the month was 53°.9, being 1°.0 lower than the mean Temperature of the Dew Point for the month was 49°.8, being 1°.0 lower than the mean Degree of Humidity for the month was 73.4, being 0.2 greater than the mean Elastic Force of Vapour for the month was 0.360 in., being 0.015 in. less than 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 0.308. The maximum daily amount of Sunshine was 11.7 hours on June 26.

The highest reading of the Solar Radiation Thermometer was 144°.5 on June 19; and the lowest reading of the Terrestrial Radiation Thermometer was 34°.6 on June 24.

The Proportions of Wind referred to the cardinal points were N.18, E.5, S.21, W.38, calm or nearly calm conditions 18, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 16.6 lbs. on the square foot on June 3. The mean daily Horizontal Movement of the Air for the month was 260 miles; the greatest daily value was 479 miles on June 3 and the least daily value was 39 miles on June 24.

Rain (0.005 in. or over) fell on 16 days in the month, amounting to 2.218 in., as measured by gauge No.6 partly sunk below the ground; being 0.180 in. greater than the average fall for the 65 years, 1841-1905.

} the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER Mean of 24 Hourly Values (Corrected to 32° Fahrenheit and reduced to 101)	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 Duration of Sunshine	Sun above Horizon			
		Of the Air				Of Evaporation	Of the Dew Point	Of Radiation				Of the Earth 4 ft. below the surface of the Soil							
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Greatest	Least	Highest in Sun's Rays	Lowest on the Grass						
July 1	in.	o	o	o	o	o	o	o	o	o	o	o	o	o	in.	hours	hours		
2	29.942	59.2	48.1	11.0	53.7	- 7.8	50.1	46.5	7.2	14.2	2.0	76	109.2	35.8	55.8	0.062	0.9	16.6	
3	30.135	67.0	48.0	19.0	57.7	- 3.9	52.3	46.9	10.8	18.1	1.7	68	113.1	35.8	55.8	0.000	1.3	16.6	
4	30.123	72.8	48.1	24.7	60.1	- 1.7	54.4	49.3	10.8	23.5	2.2	68	140.8	34.8	55.8	0.000	5.9	16.5	
5	29.798	56.0	52.9	3.1	54.3	- 7.8	52.8	51.4	2.9	6.1	1.6	90	64.7	42.9	55.7	0.312	0.0	16.5	
6	29.772	63.4	50.2	13.2	56.9	- 5.4	50.4	43.3	13.6	22.5	5.0	61	115.5	35.9	55.7	0.000	11.4	16.5	
7	29.984	65.8	50.1	15.7	57.4	- 5.0	52.0	46.6	10.8	20.5	5.0	67	126.7	35.8	55.7	0.000	3.9	16.4	
8	29.977	64.7	54.4	10.3	59.1	- 3.3	55.3	52.1	7.0	10.8	3.5	78	97.5	49.7	55.7	0.036	0.0	16.4	
9	29.924	61.3	50.6	10.7	55.4	- 7.0	49.8	43.7	11.7	19.3	5.0	65	115.0	45.9	55.7	0.000	5.1	16.4	
10	29.955	59.0	50.1	8.9	53.0	- 9.4	48.6	43.7	9.3	15.3	5.4	71	105.3	47.8	55.7	0.002	0.8	16.4	
11	29.937	56.3	46.4	9.9	53.0	- 9.5	49.9	46.6	6.4	8.5	0.9	79	66.8	35.5	55.6	0.000	0.0	16.3	
12	29.773	62.4	44.3	18.1	55.4	- 7.3	52.8	50.5	4.9	12.5	0.0	84	94.3	33.4	55.6	0.018	0.0	16.3	
13	29.472	58.7	52.1	6.6	55.0	- 7.9	53.0	51.1	3.9	7.3	1.3	87	102.1	45.6	55.5	0.130	0.3	16.3	
14	29.455	67.0	52.0	15.0	57.1	- 6.0	53.8	50.8	6.3	16.8	1.8	79	131.6	45.2	55.5	0.044	3.6	16.3	
15	29.610	67.2	51.0	16.2	57.9	- 5.4	54.5	51.4	6.5	15.0	1.8	79	128.3	44.4	55.4	0.094	2.1	16.2	
16	29.678	60.1	54.6	5.5	57.3	- 6.1	52.6	48.1	9.2	12.8	5.9	71	80.0	52.2	55.5	0.000	0.0	16.2	
17	29.758	65.2	52.6	12.6	57.6	- 5.8	53.2	49.1	8.5	18.5	2.9	73	122.2	42.5	55.6	0.000	0.4	16.2	
18	29.733	64.7	46.6	18.1	56.9	- 6.5	54.0	51.4	5.5	12.8	1.4	82	125.8	32.8	55.6	0.195	2.2	16.1	
19	29.623	71.5	58.6	12.9	64.8	+ 1.5	60.2	56.8	8.0	14.2	2.3	75	137.2	55.5	55.7	0.005	1.9	16.1	
20	29.696	79.6	60.8	18.8	67.5	+ 4.3	62.0	58.2	9.3	24.9	2.1	72	141.1	53.0	55.9	0.000	9.1	16.0	
21	29.721	75.8	61.0	14.8	66.8	+ 3.6	62.3	59.2	7.6	17.8	2.6	77	139.6	54.8	56.0	0.021	7.3	16.0	
22	29.658	71.2	55.8	15.4	64.1	+ 0.9	58.7	54.4	9.7	20.3	2.1	71	133.4	47.5	56.2	0.000	5.5	16.0	
23	29.929	72.0	50.9	21.1	60.3	- 2.8	54.4	49.0	11.3	26.2	2.6	66	140.7	41.0	56.6	0.006	10.6	15.9	
24	30.007	70.5	48.9	21.6	59.7	- 3.3	54.2	49.2	10.5	21.7	1.2	68	138.0	36.6	56.8	0.000	8.2	15.9	
25	29.910	69.3	53.0	16.3	60.2	- 2.7	57.0	54.4	5.8	12.9	2.3	81	125.4	45.5	56.8	0.113	0.8	15.8	
26	30.006	80.3	55.3	25.0	67.7	+ 5.0	61.7	57.4	10.3	20.5	1.8	70	144.6	46.5	57.1	0.000	8.1	15.8	
27	30.055	88.3	57.3	31.0	72.8	+ 10.3	63.8	57.7	15.1	29.7	0.0	59	146.5	44.9	57.3	0.000	13.2	15.8	
28	30.000	85.0	57.9	27.1	72.7	+ 10.3	65.5	60.9	11.8	22.3	1.5	66	140.0	43.6	57.4	0.000	13.1	15.7	
29	29.861	91.4	65.8	25.6	76.9	+ 14.6	69.3	65.0	11.9	29.2	2.8	66	146.8	56.0	57.8	0.000	11.3	15.6	
30	29.792	90.7	64.8	25.9	77.1	+ 14.8	67.8	62.2	14.9	29.9	3.1	60	146.1	53.0	58.0	0.000	13.1	15.6	
31	29.780	90.6	62.7	27.9	74.1	+ 11.8	66.5	61.8	12.3	29.1	2.7	65	140.0	49.8	58.3	0.000	8.2	15.5	
Means	29.838	70.6	53.8	16.9	61.7	- 0.9	56.7	52.5	9.2	18.6	2.4	72.3	122.6	44.2	56.3	1.038	5.1	16.1	
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn on the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month 29.838 in., being 0.032 in. higher than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 91°.4 on July 28; the lowest in the month was 44°.3 on July 11; and the range was 47°.1.

The mean of all the highest daily readings in the month was 70°.6, being 1°.5 lower than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 53°.8, being the same as the average for the 65 years, 1841-1905.

The mean of the daily ranges was 16°.9, being 1°.4 less than the average for the 65 years, 1841-1905.

The mean for the month was 61°.7, being 0.9 lower than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS					Robinson's	CLOUDS AND WEATHER				
	Polaris		δ URSA MINORIS		OSLER'S						CLOUDS AND WEATHER				
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot		Horizontal Move- ment of the Air		0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>	
July 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	hours	hours	hours	0.21	N Calm	N:Calm	lbs.	lbs.	miles	c r c c m o c b c Ci A cu so-ha y c Nbst ro rr bc c Frcu	c Stcu c Stcu y bc Ci Cicu c y rr d bc Frcu Stcu b y	b c c b d c b			
	1.3	0.29	0.9	0.65	Calm:WSW	NNW	7.8 1.6 1.0 6.3 7.6	0.46 0.04 0.03 0.49 1.05	300 125 149 322 393	c r c c m o b w c m o b c c bc	c Stcu c Stcu y bc Ci Cicu c y rr d bc Frcu Stcu b y	b c c b d c b			
	3.3	0.72	2.9	0.79	WSW:SW	SSW:NW	0.27	0.26	NNW:Calm	2.0	0.06	150	c Stcu y	c Stcu Cu y	c b c
	4.0	0.84	3.8	0.79	SSW:NW	NNW	0.00	0.00	NNW:NNW	6.0	0.22	245	c St Nbst id	c St ro r	c
	0.0	0.00	0.0	0.00	NNW	NNW	0.00	0.00	NNW	5.8	0.81	380	bc c Frcu	c Stcu y	c
	2.9	0.61	2.8	0.58	NNW	NNW	0.96	0.96	N:Calm	4.2	0.40	312	c ro c Stcu	c St ido c	c
	1.3	0.27	1.2	0.26	NW:NNW	NNW:Calm	3.3	0.27	NNW:NNW	3.3	0.27	238	c Stcu	c Stcu	c b
	1.2	0.26	0.9	0.19	NW:WSW	NNW	0.00	0.00	NNW:NNW	2.0	0.06	150	c Stcu y	c Stcu Cu y	c b c
	0.0	0.00	0.0	0.00	NNW	NNW	0.00	0.00	NNW	6.0	0.22	245	c St Nbst id	c St ro r	c
	0.0	0.00	0.0	0.00	NNW	NNW	0.00	0.00	NNW	5.8	0.81	380	bc c Frcu	c Stcu y	c
	5.3	1.00	5.1	0.96	NNW	NNW	0.00	0.00	N:Calm	4.2	0.40	312	c ro c Stcu	c St ido c	c
	1.0	0.19	0.8	0.15	Calm:SW:WSW	SW:NW:W	0.00	0.00	NNW:NNW	3.3	0.27	238	c Stcu	c Stcu	c b
	1.8	0.34	1.7	0.33	W:WSW	WSW	0.00	0.00	NNW:NNW	2.0	0.06	150	c Stcu y	c Stcu Cu y	c b c
	2.9	0.56	2.9	0.56	WSW:W	NW:SW	0.00	0.00	NNW:NNW	6.0	0.22	245	c St Nbst id	c St ro r	c
	0.0	0.00	0.0	0.00	WSW:Calm	NW:Calm	0.00	0.00	NNW:NNW	5.8	0.81	380	bc c Frcu	c Stcu y	c
	0.0	0.00	0.0	0.00	Calm:NW	NNW	0.00	0.00	N:Calm	4.2	0.40	312	c ro c Stcu	c St ido c	c
	5.1	0.97	5.1	0.97	Calm:WSW	NW:Calm	0.00	0.00	NNW:NNW	3.3	0.27	238	c Stcu	c Stcu	c b
	0.0	0.00	0.0	0.00	WSW:Calm	SWS:SSW	0.00	0.00	NNW:NNW	2.0	0.06	150	c Stcu y	c Stcu ro r	r r r o
	0.7	0.12	0.5	0.09	WSW:W:WNW	W:WSW	0.00	0.00	NNW:NNW	6.0	0.22	245	c St Nbst Cumb	c Stcu Cu	c
	3.0	0.54	2.9	0.53	SW:WSW	SW	0.00	0.00	NNW:NNW	5.8	0.81	380	c b Cu	b y bc Acu Frcu	c b c
	2.8	0.52	2.2	0.39	SW:WSW	SW:S	0.00	0.00	NNW:NNW	4.2	0.40	312	c bc Ci Frcu y	c bc Ci Frcu y	b c
	5.4	0.99	5.4	0.99	S:SW	SW:WSW	0.00	0.00	NNW:NNW	3.3	0.27	238	c Stcu y	c Stcu y	c b
	5.5	1.00	5.5	1.00	WSW	SW:WSW	0.00	0.00	NNW:NNW	2.0	0.06	150	c St Nbst Cumb	c Stcu y	c b
	0.6	0.11	0.5	0.10	WSW	SW	0.00	0.00	NNW:NNW	6.0	0.22	245	c St Nbst Cumb	c Stcu y	c
	1.9	0.32	1.5	0.24	Calm	SE:Calm	0.00	0.00	NNW:NNW	5.8	0.81	380	c Stcu y	c Stcu y	c
	6.0	1.00	6.0	1.00	Calm:SSW	SW:SSW	0.00	0.00	NNW:NNW	4.2	0.40	312	c Stcu y	b c Cu y	b
	6.0	1.00	6.0	1.00	Calm:SSW	ESE:Calm	0.00	0.00	NNW:NNW	3.3	0.27	238	c Stcu y	b m o b y	b m o
	5.6	0.93	4.6	0.76	Calm:E	ESE:Calm	0.00	0.00	NNW:NNW	2.0	0.06	150	c St Nbst Cumb	b c Cu zo y	b c
	6.0	1.00	6.0	1.00	Calm:NE	E	0.00	0.00	NNW:NNW	6.0	0.22	245	c St Nbst Cumb	b zo y	b
	6.0	1.00	6.0	1.00	Calm:ENE	ESE:E:Calm	0.00	0.00	NNW:NNW	5.8	0.81	380	c St Nbst Cumb	b zo y	b
	..	..	..	..	Calm	Calm:SSW	0.00	0.00	NNW:NNW	4.2	0.40	312	c St Nbst Cumb	b bc Frcu y	b z
	5.6	0.86	5.4	0.83	SSW:SW	SW	0.00	0.00	NNW:NNW	3.3	0.27	238	c St Nbst Cumb	b Acu y	b
Means	2.8	0.51	2.7	0.49	..	..	..	..	..	0.23	214				
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28		29	30	31	

The mean Temperature of Evaporation for the month was 56°.7, being 1°.2 lower than the average for the 65 years, 1841-1905.  
The mean Temperature of the Dew Point for the month was 52°.5, being 1°.6 lower than the average for the 65 years, 1841-1905.  
The mean Degree of Humidity for the month was 72.3, being 0.9 less than the average for the 65 years, 1841-1905.  
The mean Elastic Force of Vapour for the month was 0.398 in., being 0.023 in. less than the average for the 65 years, 1841-1905.  
The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 6.8.  
The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.314. The maximum daily amount of Sunshine was 13.2 hours on July 26.  
The highest reading of the Solar Radiation Thermometer was 146°.8 on July 28; and the lowest reading of the Terrestrial Radiation Thermometer was 32°.8 on July 17.  
The Proportions of Wind referred to the cardinal points were N.20, E.5, S.17, W.33, calm or nearly calm conditions 25, the whole month being represented by 100.  
The Greatest Pressure of the Wind in the month was 11.6 lbs. on the square foot on July 21. The mean daily Horizontal Movement of the Air for the month was 214 miles; the greatest daily value was 383 miles on July 5 and the least daily value was 86 miles on July 24.  
Rain (0.005 in. or over) fell on 12 days in the month, amounting to 1.038 in., as measured by gauge No.6 partly sunk below the ground; being 1.361 in. less than the average fall for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER Mean of 24 Hourly Values (corrected to 32° Fahrenheit) and reduced to 32° Fahrenheit)	TEMPERATURE							Difference between the Air Temperature and Dew Point Temperature			Degree of Humidity (Saturation = 100)	TEMPERATURE			Gauge No. 6, whose receiving surface is 5 inches above the Ground	Daily Duration of Sunshine	Sun above Horizon
		Of the Air				Of Evaporation	Of the Dew Point	Of Radiation					Of the Earth 4 ft. below the surface of the Soil					
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Greatest	Least		Highest in Sun's Rays	Lowest on the Grass				
Aug. 1	in. 29.871	83.4	58.8	24.6	69.7	+7.5	61.9	56.3	13.4	30.2	2.5	62	145.9	43.9	58.8	0.000	11.1	15.4
2	29.683	73.8	59.5	14.3	64.7	+2.6	61.2	58.7	6.0	14.8	1.2	81	112.1	46.1	59.0	0.540	0.1	15.4
3	29.753	63.0	56.9	6.1	59.8	-2.3	58.3	57.2	2.6	5.0	0.5	91	83.3	52.0	59.2	0.000	0.0	15.3
4	29.879	69.4	55.9	13.5	61.6	-0.5	56.8	52.8	8.8	15.1	2.5	73	118.5	51.0	59.2	0.013	0.1	15.3
5	29.735	64.8	56.0	8.8	60.6	-1.5	59.0	57.9	2.7	4.8	1.0	90	93.3	51.1	59.1	0.166	0.0	15.2
6	29.528	68.0	59.4	8.6	62.8	+0.6	61.6	60.8	2.0	5.7	0.9	93	89.5	54.5	59.1	1.309	0.0	15.2
7	29.239	72.3	59.8	12.5	64.0	+1.8	60.8	58.5	5.5	15.2	1.1	82	124.9	54.5	59.2	0.580	4.5	15.1
8	29.096	70.0	56.7	13.3	61.0	-1.3	59.0	57.6	3.4	12.1	1.2	88	118.7	55.4	59.2	0.488	0.8	15.0
9	29.513	70.8	57.2	13.6	61.7	-0.6	58.3	55.7	6.0	14.1	0.7	81	130.9	50.3	59.2	0.144	2.6	15.0
10	29.684	63.5	56.8	6.7	59.1	-3.2	55.1	51.6	7.5	14.0	3.7	77	93.0	49.2	59.0	0.000	0.1	14.9
11	29.553	64.7	55.6	9.1	60.1	-2.3	58.4	57.1	3.0	6.4	1.4	90	101.0	50.6	59.1	0.329	0.3	14.9
12	29.488	65.2	51.8	13.4	58.7	-3.8	53.8	49.3	9.4	20.3	3.2	71	99.6	44.6	59.0	0.013	1.3	14.8
13	29.640	62.0	49.1	12.9	55.5	-7.0	53.6	51.9	3.6	5.9	2.3	87	78.3	41.9	58.8	0.177	0.0	14.8
14	29.881	70.9	52.8	18.1	59.3	-3.2	55.8	52.9	6.4	15.6	1.8	79	120.5	46.6	58.8	0.000	3.7	14.7
15	29.775	72.2	55.2	17.0	62.2	-0.2	57.9	54.6	7.6	17.8	1.8	76	133.3	46.6	58.7	0.008	6.2	14.7
16	29.795	72.8	51.6	21.2	61.3	-1.0	55.6	50.6	10.7	23.4	1.3	68	135.9	41.4	58.7	0.000	8.6	14.6
17	29.755	68.7	50.2	18.5	56.9	-5.2	53.0	49.3	7.6	20.7	1.1	76	124.9	37.1	58.7	0.152	3.9	14.5
18	29.622	68.9	47.8	21.1	57.7	-4.2	53.1	48.8	8.9	21.9	1.2	72	140.3	38.7	58.7	0.000	7.5	14.5
19	29.646	68.7	52.0	16.7	58.6	-3.1	53.6	48.9	9.7	21.3	1.3	70	135.3	39.8	58.7	0.000	6.4	14.4
20	29.766	68.5	46.4	22.1	56.7	-4.8	52.7	48.8	7.9	17.4	1.8	75	120.3	33.4	58.7	0.018	1.9	14.3
21	29.678	66.6	50.2	16.4	59.0	-2.3	56.6	54.7	4.3	11.1	0.8	85	97.7	38.2	58.5	0.082	0.2	14.3
22	29.660	70.0	54.4	15.6	61.9	+0.8	56.8	52.5	9.4	21.8	1.5	71	131.9	47.0	58.7	0.000	7.1	14.2
23	29.743	67.3	51.7	15.6	59.3	-1.6	55.4	52.1	7.2	12.1	1.8	77	103.1	44.2	58.5	0.000	0.7	14.2
24	29.781	75.9	53.4	22.5	63.7	+2.9	59.0	55.4	8.3	20.7	1.0	74	135.2	44.5	58.7	0.000	10.4	14.1
25	29.664	74.0	57.2	16.8	66.1	+5.4	60.7	56.7	9.4	24.0	3.0	72	130.7	52.0	58.6	0.002	5.8	14.0
26	29.875	69.1	53.3	15.8	60.8	+0.1	53.5	46.3	14.5	23.4	4.9	59	134.1	39.0	58.7	0.000	10.2	14.0
27	30.055	68.0	47.9	20.1	57.7	-2.9	52.3	46.9	10.8	19.9	1.0	68	134.3	34.0	58.7	0.000	9.7	13.9
28	30.101	67.0	48.8	18.2	57.6	-2.8	52.6	47.8	9.8	17.3	1.6	70	134.2	38.0	58.8	0.000	6.0	13.8
29	30.150	74.3	45.2	29.1	59.7	-0.6	54.9	50.6	9.1	20.4	0.8	72	128.2	33.0	58.8	0.000	10.2	13.8
30	30.093	76.8	48.9	27.9	62.3	+2.2	55.8	50.0	12.3	23.8	0.8	65	135.4	36.5	58.8	0.000	9.4	13.7
31	29.900	76.9	47.0	29.9	61.5	+1.6	55.6	50.4	11.1	26.5	1.2	67	134.3	32.6	58.9	0.040	7.1	13.7
Means	29.729	69.9	53.1	16.8	60.7	-0.9	56.5	53.0	7.7	16.9	1.6	76.2	119.3	44.1	58.9	4.061	4.4	14:6
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by Means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean and difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers

The mean reading of the Barometer for the month was 29.729 in., being 0.061 in. lower than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 83°.4 on August 1; the lowest in the month was 45°.2 on August 29; and the range was 38°.2

The mean of all the highest daily readings in the month was 69°.9, being 0°.9 lower than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 53°.1, being 0°.5 lower than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 16°.8, being 0°.4 less than the average for the 65 years, 1841-1905.

The mean for the month was 60°.7, being 0°.9 lower than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS					CLOUDS AND WEATHER			
	POLARIS		δ URSA MINORIS		OSLER'S			Robin- son's					
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot		Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>
	hours	hours	hours		A.M.	P.M.	Greatest	Mean of 24 Hourly Measures	Horizontal Move- ment of the Air				
Aug. 1	5.3	0.81	5.1	0.79	Calm	SW:Calm	lbs.	lbs.	miles	b w c	c bc Acu Cu Ci y	b Cu Acu y	b
2	1.0	0.15	0.7	0.10	Calm	Calm:SW:WSW	0.7	0.03	100	b c	c mo r o c Stcu	c Nbst R r	rr c
3	0.9	0.14	0.8	0.12	Sw:Calm:NNW	NN:NNNE	1.1	0.06	138	c mo	c do c Nbst	c Nbst	c
4	0.0	0.00	0.0	0.00	Calm	Calm	0.1	0.00	185	c mo	c Ast Stcu	c Stcu	c r c
5	0.3	0.04	0.1	0.02	Calm	ESE:Calm	0.7	0.02	60	c mo	c r c mo	r c Frst r mo	r c m o
6	0.8	0.12	0.7	0.11	Calm	SE:Calm	1.1	0.01	108	c mo	c mo r c Nbst	c Nbst r R R	r c
7	1.4	0.20	1.3	0.18	Calm:SW	SSW:SE	5.2	0.32	101	c rr c	c Stcu Cu	bc c Stcu	c r R c
8	0.0	0.00	0.0	0.00	S:SE:W	WSW:SW	7.5	0.72	257	c rr	rr c Nbst ro	c Cumb t p	c i r
9	0.9	0.12	0.7	0.10	WSW	WSW:NNW	0.6	0.04	397	ir c	c Cumb Stcu	c Stcu	c
10	0.5	0.08	0.4	0.05	Calm:NW	NNW:WSW:SW	0.4	0.01	176	c mo	c Stcu	c g c Stcu	c
11	0.3	0.04	0.2	0.02	Calm:SSW	SSE:SSW	2.0	0.04	144	c mo	c Nbst r r	rr c Stcu	c r c
12	5.9	0.84	5.8	0.83	W:WNW	WNW:W	9.8	0.74	173	c r c	c Stcu Nbst	c r o c Stcu	p c b
13	3.1	0.45	2.8	0.40	WSW:W	NNW	7.8	0.38	382	c mo	c Nbst d d	c Nbst r i r c	c b c
14	3.1	0.42	2.7	0.36	NNW	Calm:SSW	1.6	0.03	339	c mo	c Stcu mo	c Stcu b	b
15	6.5	0.87	6.3	0.85	S:SW	SW	4.2	0.25	133	b c	c Cumb p	c Acu y b	b c
16	5.3	0.71	5.1	0.68	SW	SW:WSW	4.0	0.26	300	c b w	b Cu y	b bc Cist y	bc
17	7.5	1.00	7.5	1.00	Calm:SW	WSW:SW	4.3	0.09	298	bc c	bc c Cu Ci y	c Ast rr	b
18	2.7	0.35	2.3	0.30	WSW	SSW:Calm	0.7	0.04	208	b w	b c Cu Cist so-ha y	c Cu Cist so-ha c y	c b c
19	7.3	0.97	7.2	0.96	Calm	Var:SW	1.6	0.02	174	c w m	bc c Fr cu Cumb y	c Cumb po y	c b
20	6.2	0.83	5.9	0.79	SW:Calm	SW:SSW	1.7	0.05	147	b c	c Acu	c Acu Cu ir o	c
21	0.7	0.09	0.5	0.06	Calm:S	SSW:SW	5.8	0.34	162	b w c f	c Cist so-ha c iro	c Nbst iro r	r id c
22	8.0	1.00	8.0	1.00	WSW	WSW:SW	3.0	0.14	281	c	b c Ci so-ha y	c Cu Ci y	b
23	..	..	..	..	SSW:SW	SW	6.1	0.47	252	c Stcu	c Acu Stcu	c b	
24	0.0	0.00	0.0	0.00	SW:WSW	SW	1.8	0.14	327	b w	b c Fr cu mo	bc Cu Cicu y	c r o c
25	3.2	0.40	2.4	0.30	SW	WSW:SW	11.6	1.43	251	c	c Stcu 1 do	bc Cu po b y	b c
26	8.0	1.00	8.0	1.00	WSW:W	W:NW	5.8	0.62	497	c	b c Stcu y	c Fr cu b y	b
27	2.0	0.25	1.4	0.17	Calm:ENE	E	1.8	0.07	345	b w c	c b Fr cu y	b Cu Ci	b c
28	8.5	1.00	8.5	1.00	Calm:ENE	E:Calm	0.9	0.01	154	c m	c m c Ci Frst y	c b Cu y	b
29	8.5	1.00	8.5	1.00	Calm	SW:Calm	0.2	0.00	118	b w	b Cu y	b y	b
30	8.0	0.94	7.9	0.93	Calm	SSW:Calm	0.2	0.01	100	b w c	c bc Ci y	bc Cicu Cist so-ha c y	c b
31	2.8	0.33	2.6	0.30	SW:Calm	SW:SSW	2.6	0.12	106	b w m	b Ci Acu y	bc Acu Ast Ci y	c r r o c
Means	3.6	0.47	3.4	0.45	..	..	..	0.21	214				
No. of Col. for Means	19	20	21	22	23	24	25	26	27	28	29	30	31

The mean Temperature of Evaporation for the month was 56°.5, being 1°.0 lower than

The mean Temperature of the Dew Point for the month was 53°.0, being 1°.3 lower than

The mean Degree of Humidity for the month was 76.2, being 0.6 less than

The mean Elastic Force of Vapour for the month was 0.405 in., being 0.019 in. less than

The amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7.4.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.301. The maximum daily amount of Sunshine was 11.1 hours on August 1.

The highest reading of the Solar Radiation Thermometer was 145°.9 on August 1; and the lowest reading of the Terrestrial Radiation Thermometer was 32.6 on August 31.

The Proportions of Wind referred to the cardinal points were N.7, E.4, S.26, W.34, calm or nearly calm conditions 29, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 11.6 lbs. on the square foot on August 25. The mean daily Horizontal Movement of the Air for the month was 214 miles; the greatest daily value was 497 miles on August 25 and the least daily value was 60 miles on August 4.

Rain (0.005 in. or over) fell on 15 days in the month, amounting to 4.061 in., as measured by gauge No.6 partly sunk below the ground; being 1.717 in. greater than the average fall for the 65 years, 1841-1905.

the average for the 65 years, 1841-1905.

## GREENWICH METEOROLOGICAL OBSERVATIONS, 1948.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER Mean of 24 Hourly Values (corrected and reduced to 32° Fahrenheit)	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 Duration of Sun- shine	Sun above Horizon
		Of the Air				Of Evapo- ration	Of the Dew Point	Mean					Of Radiation	Of the Earth 4 ft. below the surface of the Soil				
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Great- est	Least		Highest in Sun's Ray's	Lowest on the Grass				
	in.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	in.	hours	hours
Sept. 1	29.817	68.9	52.6	16.3	60.5	+0.7	55.6	51.3	9.2	17.7	2.0	72	122.0	43.0	58.8	0.000	6.4	13.6
2	29.626	66.0	51.6	14.4	59.2	-0.5	57.2	55.7	3.5	6.0	1.8	88	107.3	40.5	58.7	0.152	0.1	13.5
3	29.241	67.7	54.5	13.2	59.0	-0.6	55.8	53.2	5.8	12.8	1.9	81	125.9	48.4	58.7	0.050	4.6	13.5
4	29.521	65.0	53.4	11.6	57.7	-1.8	55.6	53.8	3.9	10.7	1.0	87	101.0	49.1	58.6	0.054	2.5	13.4
5	29.758	63.8	53.3	10.5	58.2	-1.2	55.6	53.4	4.8	10.5	1.7	84	102.7	41.4	58.6	0.000	1.0	13.3
6	29.773	67.5	51.0	16.5	59.3	+0.1	53.5	48.1	11.2	25.7	1.7	66	124.6	41.0	58.6	0.039	6.8	13.3
7	29.915	70.5	47.7	22.8	58.3	-0.7	54.7	51.5	6.8	17.6	1.0	78	136.1	36.6	58.6	0.000	4.6	13.2
8	29.965	72.6	57.0	15.6	62.5	+3.7	58.3	55.1	7.4	18.5	1.6	76	134.1	50.7	58.6	0.022	6.1	13.1
9	29.973	78.9	54.1	24.8	65.1	+6.5	59.5	55.2	9.9	23.1	1.0	71	134.6	41.9	58.6	0.000	10.2	13.1
10	29.699	74.2	61.0	13.2	66.5	+8.1	62.3	59.4	7.1	13.0	2.8	78	120.5	48.0	58.6	0.018	2.2	13.0
11	29.594	67.9	50.0	17.9	60.1	+2.0	56.0	52.5	7.6	18.6	1.5	76	127.9	37.2	58.6	0.040	2.8	12.9
12	29.638	61.0	46.6	14.4	53.1	-4.9	50.7	48.4	4.7	13.0	1.4	84	95.0	33.8	58.6	0.467	2.7	12.9
13	29.728	66.3	47.8	18.5	56.0	-1.8	50.5	44.8	11.2	23.5	3.0	65	119.4	42.5	58.6	0.000	8.1	12.8
14	29.905	71.5	54.1	17.4	62.9	+5.2	58.4	54.9	8.0	19.3	2.6	75	125.3	40.5	58.6	0.000	7.2	12.8
15	29.942	68.4	50.7	17.7	57.8	+0.2	54.4	51.3	6.5	17.0	1.4	79	116.7	37.1	58.3	0.000	2.9	12.7
16	30.152	65.0	45.4	19.6	55.5	-2.0	51.1	46.7	8.8	18.0	1.1	72	108.9	34.1	58.4	0.000	3.2	12.6
17	30.077	66.4	44.7	21.7	55.2	-2.0	51.3	47.5	7.7	16.2	0.6	75	128.7	30.9	58.3	0.000	7.5	12.6
18	30.085	68.8	51.6	17.2	59.8	+2.9	56.0	52.8	7.0	15.7	1.1	78	112.0	43.9	58.2	0.000	2.5	12.5
19	30.035	67.2	53.8	13.4	60.0	+3.5	56.5	53.5	6.5	14.2	0.8	79	117.2	40.6	58.1	0.000	4.3	12.4
20	29.980	64.7	49.0	15.7	57.4	+1.2	51.5	45.5	11.9	20.5	5.3	64	124.2	42.0	58.1	0.000	7.5	12.4
21	30.055	56.1	38.2	17.9	48.6	-7.3	43.3	36.1	12.5	21.5	4.6	61	108.3	24.0	57.9	0.000	7.3	12.3
22	30.001	59.8	36.2	23.6	47.9	-7.7	43.1	36.5	11.4	21.0	1.3	65	113.2	21.6	57.9	0.000	5.1	12.2
23	29.959	60.9	48.9	12.0	54.7	-0.7	52.1	49.7	5.0	8.5	1.7	83	100.6	42.0	57.7	0.000	0.9	12.2
24	29.947	68.5	50.0	18.5	57.6	+2.3	54.1	50.9	6.7	16.6	0.4	78	130.5	37.0	57.6	0.000	3.9	12.1
25	29.897	72.8	48.4	24.4	59.8	+4.6	55.2	51.1	8.7	21.8	0.0	73	126.7	34.6	57.5	0.000	9.3	12.0
26	29.741	78.7	53.3	25.4	64.6	+9.4	59.0	54.6	10.0	21.7	2.9	70	131.1	38.5	57.5	0.009	8.4	12.0
27	29.669	68.0	57.8	10.2	63.0	+7.9	59.7	57.2	5.8	9.3	1.6	81	109.0	50.4	57.3	0.000	0.5	11.9
28	29.686	72.1	57.9	14.2	64.0	+9.1	60.4	57.7	6.3	18.4	1.2	80	127.6	51.8	57.4	0.108	5.3	11.8
29	29.970	64.5	52.7	11.8	59.1	+4.4	55.9	53.3	5.8	11.0	1.9	81	105.9	40.0	57.3	0.000	0.7	11.8
30	30.260	70.0	47.5	22.5	57.6	+3.2	54.0	50.7	6.9	18.0	0.6	78	119.9	33.1	57.6	0.000	8.0	11.7
Means	29.854	67.8	50.7	17.1	58.7	+1.5	54.7	51.1	7.6	16.6	1.7	75.9	118.6	39.9	58.2	Sum 0.959	4.8	12.7
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29.854 in., being 0.036 in. higher than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 78°.9 on September 9; the lowest in the month was 36°.2 on September 22; and the range was 42°.7.

The mean of all the highest daily readings in the month was 67°.8, being 1°.6 higher than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 50°.7, being 1°.0 higher than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 17°.1, being 0°.6 greater than the average for the 65 years, 1841-1905.

The mean for the month was 58°.7, being 1°.5 higher than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS					CLOUDS AND WEATHER			
	POLARIS		δ URSE MINORIS		OSLER'S			Robin- son's					
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot		Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>
					A.M.	P.M.	Greatest	Mean of 24 Hourly Measures					
Sept. 1	hours	0.44	hours	0.43	WSW	W:WSW	1bs.	1bs.	miles	c b	b c Frcu	c Stcu Acu	c b
2	3.8	0.35	2.8	0.33	SW:SSW	SW:SSW	4.0	0.30	306	b c	c Nbst d ido	c Nbst 1 do	c r
3	1.3	0.16	1.1	0.13	SSW:SW	SW:WSW	7.0	0.56	324	c b	c Nbst Acu p	c Cumb Ci t l p c	c
4	2.4	0.27	2.1	0.24	WSW:Calm	N:NNE	6.5	0.44	316	c b c m o	c g r c Nbst	c Cumb Stcu p b	c b c
5	0.9	0.10	0.8	0.09	N	NNW:Calm:SW	1.9	0.03	146	c	c Stcu	c Stcu bc	bc c
6	8.7	0.97	8.4	0.94	WSW:Calm:NNW	WNW:WSW	1.2	0.07	184	c	c r c Frcu y	c bc Frcu y	bc b
7	0.3	0.04	0.1	0.01	SW	SW	3.0	0.11	211	b w c	c Frcu Acu Ci	c Ci Frcu	c
8	3.0	0.33	2.8	0.31	SSW:SW	SW:SSW	5.0	0.39	296	c r c	c b Cu	b c Stcu	c b c
9	4.7	0.52	4.0	0.45	Calm:S	S:SE	3.8	0.19	257	c b w c	b Ci Cy y	b Ci y	b c
10	0.3	0.04	0.1	0.01	SSE	S	2.0	0.07	152	c	b c Acu	c r c Ast	c
11	9.5	1.00	9.5	1.00	S:SW	SW	1.8	0.07	172	c r c	c i r c Acu	c r c Stcu bc	b
12	5.8	0.61	5.7	0.59	SW:SSW	S:SSE:NNW	3.0	0.12	208	b w	b c Nbst ro	c Nbst rr	rr c b
13	0.0	0.00	0.0	0.00	WNW:NW	WNW:WSW:SSW	11.0	0.53	309	b c	b c Acu y	b c Acu y	c
14	6.8	0.72	6.6	0.69	SW:WSW	WSW:SW	8.6	0.83	367	c r o c	b Frcu	b Frcu y	b c b
15	5.3	0.56	4.9	0.52	SW	W:NW:NNW	1.5	0.09	187	b w c	c Stcu	c bc Frcu y c	c do b
16	7.5	0.79	3.0	0.32	Calm:WSW	WSW	1.2	0.08	370	b w m	b m bc Cist	bc Cist so-ha y	bc
17	4.5	0.48	4.3	0.45	Calm:WSW	WSW	3.2	0.24	167	b c b	b c bc Cist Frcu	bc Acu Frcu b y	b c
18	7.1	0.73	6.5	0.67	WSW:SW	WSW:SW	0.6	0.02	264	c	c Stcu	c bc Cu	b
19	0.6	0.06	0.6	0.06	SW:WSW	WSW	4.4	0.18	162	b w c	c m o c Stcu	c b Cu	b c
20	9.6	0.98	9.5	0.98	W:NNW	NW	2.3	0.20	255	c	c b c Acu y	c Acu y	c b
21	7.6	0.78	7.4	0.76	NNW	NNW:N:Calm	2.0	0.15	246	b	b bc Ci Frcu y	bc Ci Frcu y	c b x
22	0.1	0.01	0.1	0.01	Calm:SW	WNW:Calm	1.8	0.05	193	b x m	b c m b Frcu y	c Frcu y	c
23	4.6	0.47	4.1	0.42	Calm:SW	SW	0.7	0.02	124	c m	c m c d o c Stcu m o	c Stcu b m o	c b m o
24	9.7	1.00	9.7	1.00	SW	WSW:SSW	1.7	0.07	367	b w c m o	c m o b c Frcu	c Stcu	b w
25	2.3	0.22	2.1	0.20	S:SW	SSW:S	2.1	0.09	187	b w	b Ci y	b Ci y	b c
26	7.1	0.68	5.4	0.51	S:Calm	SSW:S	3.9	0.16	208	c r c b	b Cist so-ha y	bc Cist so-ha y	c
27	0.8	0.07	0.4	0.04	S:SW	SW:SSW	8.5	0.73	217	c b c m o	c Stcu	c Stcu	c
28	10.4	0.99	10.2	0.97	SSW:SW	SSW:SW	6.2	0.69	368	c d	c id r d c Frcu	b y	b
29	8.5	0.81	8.4	0.80	SW	WSW	5.6	0.22	396	b c	c Ast Frcu	c Stcu	c b
30	6.1	0.58	3.2	0.30	SW:WSW	W:Calm	1.0	0.03	283	b w	b Ci m	b bc Frcu y	bc m o
Means	4.7	0.49	4.2	0.44	..	..	..	0.25	239				
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30	31

The mean Temperature of Evaporation for the month was 54°.7, being 0°.6 higher than

The mean Temperature of the Dew Point for the month was 51°.1, being the same as

The mean Degree of Humidity for the month was 75.9, being 4.0 less than

The mean Elastic Force of Vapour for the month was 0.378 in., being 0.001 in. less than

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 0.376. The maximum daily amount of Sunshine was 10.2 hours on September 9.

The highest reading of the Solar Radiation Thermometer was 136°.1 on September 7; and the lowest reading of the Terrestrial Radiation Thermometer was 21.6 on September 22.

The Proportions of Wind referred to the cardinal points were N.10, E.1, S.37, W.36, calm or nearly calm conditions 16, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 12.7 lbs. on the square foot on September 15. The mean daily Horizontal Movement of the Air for the month was 239 miles; the greatest daily value was 396 miles on September 28 and the least daily value was 124 miles of September 22.

Rain (0.005 in. or over) fell on 10 days in the month, amounting to 0.959 in., as measured by gauge No.6 partly sunk below the ground; being 1.189 in. less than the average fall for the 65 years, 1841-1905.

} the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER  Mean of 24 Hourly Values (corrected to 32° Fahrenheit)	TEMPERATURE							Difference between the Air Temperature and Dew Point Temperature			Degree of Humidity (Saturation = 100)	TEMPERATURE		Gauge No. 6, whose receiving surface is 5 inches above the Ground	Daily Duration of Sun- shine	Sun above Horizon			
		Of the Air				Of Evapo- ration	Of the Dew Point	Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deduced Mean Daily Value	Mean	Greatest	Least			
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deduced Mean Daily Value	Mean	Great- est	Least	Highest in Sun's Rays	Lowest on the Grass							
Oct. 1	in.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	in.	hours	hours
2	30.280	69.0	51.8	17.2	58.5	+ 4.4	55.2	52.4	6.1	15.5	0.6	80	116.2	39.7	57.4	0.000	0.8	11.6		
3	30.171	72.6	52.6	20.0	60.4	+ 6.7	55.7	51.6	8.8	23.6	1.2	73	129.5	39.4	57.4	0.000	8.9	11.6		
4	29.968	65.3	50.4	14.9	56.4	+ 3.1	53.7	51.3	5.1	10.8	1.1	83	113.3	36.3	57.4	0.006	2.7	11.5		
5	29.941	59.0	47.0	12.0	53.4	+ 0.4	48.4	42.8	10.6	18.7	3.8	67	113.0	33.0	57.2	0.003	4.6	11.4		
6	30.150	58.0	40.3	17.7	48.5	- 4.3	44.4	39.2	9.3	21.3	1.2	70	114.9	24.5	57.2	0.000	9.0	11.4		
7	30.147	57.3	39.6	17.7	49.0	- 3.5	45.1	40.3	8.7	17.1	1.2	72	83.4	23.1	57.1	0.000	0.0	11.3		
8	30.115	58.0	42.7	15.3	50.0	- 2.3	46.4	42.1	7.9	14.8	1.4	74	93.2	30.5	56.9	0.000	0.2	11.3		
9	30.208	62.3	35.4	26.9	48.7	- 3.3	46.3	43.6	5.1	14.4	0.5	82	103.6	22.9	56.7	0.000	7.4	11.2		
10	30.201	69.8	39.1	30.7	52.1	+ 0.5	49.5	46.7	5.4	20.3	0.0	82	114.6	24.5	56.4	0.000	7.9	11.1		
11	30.116	70.9	43.2	27.7	54.4	+ 3.1	50.8	47.2	7.2	21.3	0.0	76	113.0	26.2	56.3	0.000	6.7	11.1		
12	29.922	66.9	49.1	17.8	56.2	+ 5.3	54.0	52.2	4.0	14.3	1.0	86	113.8	32.5	56.1	0.082	1.0	11.0		
13	29.759	66.2	47.5	18.7	57.6	+ 7.0	55.1	53.0	4.6	11.4	1.0	85	121.1	35.0	56.0	0.117	1.7	10.9		
14	29.750	60.4	44.2	16.2	53.2	+ 2.9	51.0	48.9	4.3	12.0	0.0	85	85.0	30.5	55.8	0.000	0.2	10.9		
15	29.492	55.6	44.3	11.3	52.6	+ 2.5	51.0	49.4	3.2	7.2	1.0	89	66.6	30.3	55.7	0.236	0.2	10.8		
16	29.549	56.7	41.8	14.9	49.9	- 0.0	48.5	46.9	3.0	6.6	0.6	90	79.6	27.5	55.7	0.045	0.2	10.7		
17	29.538	61.9	48.6	13.3	54.6	+ 4.8	52.9	51.3	3.3	10.3	0.8	89	105.1	40.8	55.6	0.172	0.7	10.7		
18	29.281	57.8	52.6	5.2	55.4	+ 5.8	53.1	51.1	4.3	7.4	1.2	85	70.9	46.0	55.4	0.120	0.0	10.6		
19	29.058	56.0	40.4	15.6	47.9	- 1.4	45.7	43.2	4.7	16.1	1.0	83	113.9	33.0	55.2	0.715	5.7	10.6		
20	29.566	53.6	36.5	17.1	44.3	- 4.8	41.6	37.9	6.4	15.4	0.0	78	96.0	28.1	55.1	0.000	5.1	10.5		
21	29.930	57.4	41.5	15.9	50.0	+ 1.2	47.4	44.5	5.5	10.3	1.6	81	103.3	32.2	55.0	0.000	1.6	10.4		
22	29.973	62.5	49.8	12.7	56.7	+ 8.1	54.5	52.7	4.0	7.6	2.2	86	87.0	44.4	54.9	0.000	0.2	10.4		
23	29.939	63.7	50.6	13.1	58.6	+10.3	55.4	52.7	5.9	9.9	2.7	80	124.4	40.8	54.8	0.000	0.7	10.3		
24	30.040	57.0	43.9	13.1	50.3	+ 2.2	46.4	41.8	8.5	15.8	1.8	73	122.0	34.1	54.7	0.000	4.7	10.2		
25	29.803	61.8	47.4	14.4	53.1	+ 5.2	50.1	46.9	6.2	11.4	1.8	80	106.0	38.9	54.8	0.000	3.8	10.2		
26	29.479	56.5	38.8	17.7	49.7	+ 2.0	48.2	46.5	3.2	4.9	1.2	89	68.5	27.8	54.7	0.517	0.0	10.1		
27	29.815	45.4	29.2	16.2	40.5	- 7.1	37.5	32.5	8.0	19.6	1.1	73	85.2	17.4	54.5	0.140	5.9	10.0		
28	29.981	45.9	26.7	19.2	35.7	-11.8	33.5	29.7	6.0	17.4	0.0	78	69.7	14.9	54.1	0.000	2.7	10.0		
29	29.900	48.7	32.9	15.8	42.0	- 5.4	38.7	33.6	8.4	14.6	1.9	72	89.3	23.0	53.9	0.000	4.0	9.9		
30	29.951	47.0	41.2	5.8	44.6	- 2.7	41.3	36.6	8.0	11.2	4.1	73	57.9	38.9	53.5	0.000	1.2	9.9		
31	29.959	44.1	38.7	5.4	42.2	- 5.0	41.0	39.4	2.8	6.4	2.8	90	46.0	30.0	53.1	0.000	0.0	9.8		
Means	29.873	58.7	42.5	16.1	50.5	+ 0.5	47.7	44.6	5.9	13.6	1.3	80.2	96.3	31.2	55.5	Sum 2.153	2.9	10.7		
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

The mean reading of the Barometer for the month was 29.873 in., being 0.145 in. higher than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 72°.6 on October 2; the lowest in the month was 26°.7 on October 27; and the range was 45°.9.

The mean of all the highest daily readings in the month was 58°.7, being 1°.7 higher than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 42°.5, being 1°.3 lower than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 16°.1, being 2°.9 greater than the average for the 65 years, 1841-1905.

The mean for the month was 50°.5, being 0°.5 higher than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS					CLOUDS AND WEATHER			
	Polaris		δ URSÆ MINORIS		OSLER'S			Robins- son's					
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot	Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>	
	hours	hours	hours	hours	A.M.	P.M.	Greatest	Mean of 24 Hourly Measures					
Oct. 1	5.1	0.49	4.4	0.42	Calm:SW	SW	1.0	0.06	156	c w mo	c Ast	c b c	
2	8.1	0.73	7.7	0.70	SW	SW	2.0	0.17	259	c b Ci y	b Ci y	b	
3	0.6	0.06	0.4	0.04	WSW:NNW	NNW	1.2	0.04	160	bc Ci c Frst	c d c	c m o	
4	10.3	0.94	10.2	0.92	NNW:N	NN: N	1.4	0.07	181	c p c Cmb	c b Fr cu y	b c b	
5	6.2	0.57	6.0	0.55	Calm:NNE	NNE:Calm	1.4	0.03	126	b Cu y	b Cu y	b x m	
6	1.2	0.11	0.3	0.03	Calm	Calm	0.2	0.00	62	b x c m	c Stcu m	c Stcu y	
7	11.0	1.00	11.0	1.00	Calm:E	ENE:Calm	1.1	0.05	120	c m	c Stcu	b m	
8	11.0	1.00	11.0	1.00	Calm	E:Calm	0.9	0.03	73	b x m f	b f b mo	b x f	
9	11.3	0.98	10.5	0.92	Calm	Calm:SSE	0.3	0.00	63	b f F x	F f b Ci mo	b m	
10	3.9	0.34	3.2	0.28	Calm:S	S:Calm	0.4	0.01	90	b m x	f b mo	c b c m	
11	0.8	0.07	0.4	0.04	Calm	S:SSW	3.0	0.08	166	c m	m c Acu	dd c	
12	11.3	0.99	11.2	0.98	SW:SSW	SW	3.3	0.12	244	c	c Stcu	b	
13	4.3	0.37	2.8	0.24	SW:SSW	SSW:S	3.7	0.16	245	b w	c Acu ro	bc lu-ha	
14	11.5	1.00	11.3	0.98	S:SSW	SW:W	3.2	0.14	241	c	c R r c Nb st ro mo	b mo	
15	6.7	0.58	6.3	0.55	SW:S	SSW:SW	2.6	0.14	256	b c m o	c Nb st r r o c mo	c b mo	
16	2.6	0.22	2.2	0.19	SW:SSW	SSW:S	2.8	0.12	226	b c r m o	c Stcu Nb st po	rr c	
17	2.5	0.21	0.1	0.01	SSW:SW	SW:SSW	6.0	0.62	369	c b c	c Nb st ro	c R	
18	8.8	0.75	8.1	0.69	SW:WSW	NW:WSW	34.0	0.57	313	q R r c	c Cmb p R t l c r	r d o c b	
19	7.1	0.61	2.3	0.19	WSW:NNW	NW:NNW	1.5	0.05	195	b x m	b m b Cu	bc m	
20	4.6	0.39	3.1	0.27	WSW	WSW:SW	2.2	0.20	287	c m w	c Stcu mo	c mo	
21	0.7	0.06	0.6	0.05	SW:WSW	WSW	3.2	0.25	302	c ro c m o	c Frst mo	c m o	
22	7.8	0.67	7.5	0.64	WSW:SW	WSW:NNW	8.0	0.53	366	c m o	c Stcu	c b	
23	11.5	0.96	11.2	0.93	NW:W	W:SW	2.0	0.10	217	b lu-ha	c m bc Fr cu	b	
24	2.9	0.24	1.6	0.13	SW:WSW	WSW:SW	3.1	0.37	352	b	b c b Fr cu	bc b	
25	3.2	0.27	2.5	0.21	SW	SW:N:Calm	7.0	0.25	243	c	c Nb st d R r	b c m	
26	12.0	1.00	7.6	0.64	WSW:NW:NNW	NNW:Calm	2.3	0.13	215	c rr c	c Stcu b Fr cu	b m f x	
27	9.6	0.80	6.5	0.54	Calm	E	0.7	0.02	123	b ff x	b Ci mo	c x	
28	0.0	0.00	0.0	0.00	Calm:E:ESE	E	8.5	0.49	272	c bc x	c Stcu	c Ro c	
29	0.0	0.00	0.0	0.00	E:ESE	ESE:Calm	2.3	0.16	173	c	c Stcu	c	
30	4.5	0.36	1.8	0.14	Calm	Calm	0.0	0.00	13	c m	c Stcu	c b f	
31	4.4	0.35	3.9	0.31	Calm	Calm:S	0.0	0.00	58	b x f F	b F bc m	c Acu Ast m b f	
Means	6.0	0.52	5.0	0.44	..	..	..	0.16	199				
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30	31

The mean Temperature of Evaporation for the month was 47°.7, being 0°.2 lower than

The mean Temperature of the Dew Point for the month was 44°.6, being 1°.0 lower than

The mean Degree of Humidity for the month was 80.2, being 4.7 less than

The mean Elastic Force of Vapour for the month was 0.296 in., being 0.012 in. less than

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 0.275. The maximum daily amount of Sunshine was 9.0 hours on October 5.

The highest reading of the Solar Radiation Thermometer was 129.5 on October 2; and the lowest reading of the Terrestrial Radiation Thermometer was 14°.9 on October 27.

The Proportions of Wind referred to the cardinal points were N. 8, E. 8, S. 28, W. 27, calm or nearly calm conditions 29, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 34.0 lbs. on the square foot on October 18. The mean daily Horizontal Movement of the Air for the month was 199 miles; the greatest daily value was 369 miles on October 17 and the least daily value was 13 miles on October 30.

Rain (0.005 in. or over) fell on 10 days in the month, amounting to 2.153 in., as measured by gauge No. 6 partly sunk below the ground; being 0.629 in. less than the average fall for the 65 years, 1841-1905.

the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER Mean of 24 Hourly Values (Corrected to 32° Fahrenheit) 16)	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 Duration of Sun- shine	Sun above Hor- izon
		Of the Air				Of Evapo- ration	Of the Dew Point	Highest in Sun's Rays					Of Radiation					
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deduced Mean Daily Value	Mean	Greatest	Least		Highest in Sun's Rays	Lowest on the Grass				
Nov. 1	in.	o	o	o	o	o	o	o	o	o	o	92	51.2	40.0	52.7	0.400	0.0	9.7
2	29.845	51.8	42.0	9.8	47.3	+ 0.3	46.3	45.1	2.2	5.0	0.0	95	75.2	51.0	52.5	0.018	0.0	9.6
3	29.657	58.0	51.8	6.2	55.6	+ 8.8	54.9	54.3	1.3	2.9	0.0	77	98.3	46.6	52.5	0.000	2.4	9.6
4	29.597	58.7	51.4	7.3	55.0	+ 8.4	51.4	47.8	7.2	10.3	1.9	76	98.3	47.0	52.5	0.331	4.3	9.5
5	29.439	57.0	48.6	8.4	52.8	+ 6.4	49.3	45.6	7.2	15.7	1.6	71	88.6	35.0	52.6	0.000	6.1	9.5
6	29.450	52.7	42.6	10.1	48.2	+ 2.1	44.3	39.3	8.9	16.7	3.7	87	84.5	22.5	51.7	0.000	5.3	9.2
7	29.746	51.9	36.7	15.2	44.0	- 1.8	41.3	37.6	6.4	13.6	0.8	78	81.2	26.2	52.4	0.000	3.1	9.4
8	29.548	47.3	41.6	5.7	44.5	- 0.9	43.1	41.3	3.2	5.1	1.4	88	49.5	40.5	52.3	0.684	0.0	9.3
9	30.086	48.1	34.0	14.1	42.6	- 2.4	39.1	33.8	8.8	14.3	3.7	70	88.6	25.0	52.1	0.000	5.5	9.3
10	30.342	46.9	27.9	19.0	38.0	- 6.6	36.1	33.1	4.9	10.7	1.0	82	64.4	18.6	51.8	0.000	0.1	9.2
11	30.127	51.7	31.3	20.4	40.5	- 3.8	39.0	37.0	3.5	10.3	1.5	87	84.5	22.5	51.7	0.000	5.3	9.2
12	30.118	56.5	37.0	19.5	45.8	+ 1.8	44.2	42.2	3.6	10.0	0.7	87	81.8	27.0	51.3	0.000	4.7	9.1
13	30.204	57.0	41.6	15.4	48.2	+ 4.5	46.6	44.8	3.4	10.7	0.0	88	70.7	31.9	51.2	0.000	0.0	9.1
14	30.138	63.0	45.7	17.3	52.4	+ 8.9	50.0	47.5	4.9	11.3	1.7	83	86.8	34.0	51.0	0.000	1.8	9.0
15	30.038	60.2	51.5	8.7	55.1	+11.8	52.2	49.5	5.6	8.4	1.2	81	80.1	47.0	50.9	0.000	0.0	8.9
16	29.688	55.6	47.8	7.8	52.8	+ 9.7	51.5	50.3	2.5	5.6	1.0	91	62.7	42.7	50.8	0.170	0.2	8.9
17	29.831	53.4	46.9	6.5	50.1	+ 7.3	49.0	47.9	2.2	4.5	0.6	92	63.3	41.8	50.8	0.126	0.0	8.8
18	30.014	53.7	43.9	9.8	49.2	+ 6.6	47.7	46.0	3.2	9.7	0.0	89	68.8	33.8	50.9	0.020	2.7	8.8
19	29.944	60.4	51.3	9.1	56.4	+14.0	54.4	52.8	3.6	5.5	1.7	87	74.7	47.0	51.1	0.000	0.0	8.7
20	29.969	59.1	50.2	8.9	56.1	+13.8	54.1	52.5	3.6	7.4	1.4	87	72.3	45.5	51.1	0.068	0.0	8.7
21	30.091	56.8	41.6	15.2	49.4	+ 7.2	46.5	43.1	6.3	16.9	1.1	79	89.3	28.2	51.1	0.000	6.6	8.6
22	30.105	54.3	41.5	12.8	47.0	+ 4.9	44.9	42.4	4.6	13.1	0.5	84	81.6	28.1	51.2	0.000	4.5	8.6
23	30.285	46.2	39.0	7.2	42.0	- 0.1	41.2	40.2	1.8	3.1	0.4	93	47.3	35.8	51.1	0.000	0.0	8.5
24	30.339	41.7	36.2	5.5	39.2	- 2.8	38.8	38.3	0.9	1.8	0.0	96	54.4	36.4	51.0	0.000	0.0	8.5
25	30.367	46.6	35.3	11.3	40.0	- 2.0	38.6	36.7	3.3	8.5	0.5	87	74.2	22.4	50.8	0.000	5.6	8.4
26	30.310	47.6	32.7	14.9	38.5	- 3.4	36.5	33.3	5.2	12.1	0.8	81	79.5	19.8	50.6	0.000	6.5	8.4
27	30.212	51.7	31.6	20.1	39.1	- 2.7	37.6	35.5	3.6	12.9	0.0	86	75.1	15.9	50.3	0.000	6.8	8.4
28	30.131	46.0	33.8	12.2	39.0	- 2.7	38.9	38.8	0.2	2.3	0.0	99	66.1	19.8	50.0	0.001*	2.9	8.4
29	30.195	38.6	33.6	5.0	36.1	- 5.4	36.1	36.1	0.0	0.5	0.0	100	38.7	25.8	49.5	0.004*	0.0	8.3
30	30.302	37.3	28.6	8.7	32.2	- 9.0	32.1	32.0	0.2	0.3	0.0	99	33.7	29.0	49.1	0.000	0.0	8.3
No. of Col. for Ref.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Means	30.014	51.6	40.3	11.3	45.7	+ 2.2	43.9	41.9	3.8	8.5	0.9	86.7	70.7	33.1	51.2	Sum 1.825	2.3	8.9

The results apply to the civil day, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

\* Rainfall (Column 16). The amounts entered on November 27, 28 and 30 are derived from wet fog.

The mean reading of the Barometer for the month was 30.014 in., being 0.249 in. higher than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 63°.0 on November 13; the lowest in the month was 27°.9 on November 9; and the range was 35°.1.

The mean of all the highest daily readings in the month was 51°.6, being 2°.7 higher than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 40°.3, being 1°.9 higher than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 11°.3, being 0°.8 greater than the average for the 65 years, 1841-1905.

The mean for the month was 45°.7, being 2°.2 higher than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS				Horizontal Move- ment of the Air	CLOUDS AND WEATHER				
	Polaris		δ URSA MINORIS		OSLER'S			Robin- son's						
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot			0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>	
					A.M.	P.M.	Greatest	Mean of Hourly Measures						
Nov. 1	hours	0.00	hours	0.00	S:SSW	S:SSW	lbs.	lbs.	miles	c r r o c Stcu	c Nbst r r	r o r c		
2	0.2	0.01	0.1	0.01	WSW	SW	2.3	0.14	208	c i do f	c St m	c		
3	2.1	0.17	1.4	0.11	SW:WSW	WSW:SW	0.5	0.02	164	c do bc Frcu	c Stcu b	bc c		
4	4.5	0.36	3.7	0.29	SW:W	WSW:SW	8.4	0.63	391	c r r	b Frcu	b c R		
5	12.3	0.99	12.1	0.97	WSW:W	W:WSW	6.7	0.56	383	c b	b y	b		
6	2.0	0.15	1.5	0.12	WSW:Calm	Calm:E	9.0	0.67	365	b x	b bc Cist so-ha	bc Cist so-ha c m	c	
7	4.7	0.36	3.5	0.27	E:ENE	NE	1.4	0.05	107	o r r	ro ro c Stcu mo	c m o		
8	13.0	1.00	13.0	1.00	NE:NNE	NNE:Calm	9.0	0.60	343	c b mo	bc Frcu b	b m		
9	8.0	0.62	3.0	0.23	Calm	SSW	5.5	0.51	292	b m f x	c Stcu m	c m		
10	2.7	0.21	1.8	0.14	SSW:Calm	Calm	0.5	0.01	94	c b x m	b bc Cist so-ha m b mo	c m		
11	7.3	0.56	4.5	0.35	Calm	Calm:SW	0.0	0.00	82	b Ci f m	bc Ci m f	c ff		
12	3.5	0.27	1.6	0.13	Calm	Calm	0.0	0.00	68	c w ff	c f c Cist so-ha mo	c m o		
13	4.5	0.34	4.0	0.31	SSW	SSW	0.3	0.04	69	c w mo	c Ast b mo	b lu-ha c m o		
14	0.5	0.04	0.0	0.00	SSW:SW	WSW:SW	2.2	0.09	211	c mo	c Cist so-ha c Frst m	c m c		
15	2.8	0.22	2.1	0.16	SSW:SSW	SSW:SE:N	4.2	0.19	225	c	c Frst ro	r c r		
16	4.1	0.31	3.1	0.24	N:NNW	NW:W:SW	1.2	0.06	269	c Nbst mo	c Nbst do c m	c r o r		
17	0.2	0.02	0.1	0.01	NW:WSW	SW:SSW	1.6	0.05	210	c r o b bc mo	bc Ast Acu m	c m o c r o		
18	1.4	0.11	0.5	0.04	SW	SW	4.4	0.34	190	c	c Frst	c		
19	7.3	0.57	6.4	0.49	SW:SSW	SSW:WSW	4.5	0.27	310	c r c	c Stcu	c r c		
20	9.5	0.71	7.7	0.57	WSW:SW	WSW:SW	3.4	0.18	325	bc lu-ha b	b Ci	b		
21	3.3	0.25	2.1	0.16	SW:WSW	WSW>NNW	0.7	0.03	282	b c x m	b Ci c m	c r o c		
22	0.0	0.00	0.0	0.00	NNE:Calm	Calm	0.3	0.00	179	c m f	c St f m	c m		
23	0.3	0.02	0.1	0.01	Calm	Calm	0.0	0.00	64	c m f Fe	F f	c ff		
24	13.5	1.00	13.5	1.00	Calm:E	SE:ESE	2.2	0.06	71	c x m	b f b Frcu	b x		
25	13.5	1.00	13.5	1.00	Calm:SE	ESE	0.8	0.04	154	b x mo	b mo	b m x		
26	10.7	0.79	10.3	0.77	Calm	Calm:SSE	0.1	0.00	152	b x m	b f m	b m x		
27	0.0	0.00	0.0	0.00	S:Calm	Calm	0.0	0.00	98	b c x m	c Fe b m	Fe Fe		
28	0.0	0.00	0.0	0.00	Calm	Calm	0.0	0.00	79	Fe f	Fe Fe	Fe Fe		
29	0.0	0.00	0.0	0.00	Calm	Calm	0.0	0.00	47	Fe Fe	Fe Fe	Fe Fe		
30	0.0	0.00	0.0	0.00	Calm	Calm	0.0	0.00	84	Fe Fe	Fe Fe	Fe Fe		
Means	4.4	0.34	3.7	0.28	..	..	..	0.15	186	Fe Fe	Fe Fe	Fe Fe		
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30	31	

The mean Temperature of Evaporation for the month was 43°.9, being 2°.0 higher than

The mean Temperature of the Dew Point for the month was 41°.9, being 2°.2 higher than

The mean Degree of Humidity for the month was 86.7, being 0.1 greater than

The mean Elastic Force of Vapour for the month was 0.267 in., being 0.021 in. greater than

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7.0.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.259. The maximum daily amount of Sunshine was 6.8 hours on November 26.

The highest reading of the Solar Radiation Thermometer was 98°.3 on November 3 and 4; and the lowest reading of the Terrestrial Radiation Thermometer was 15°.9 on November 26.

The Proportions of Wind referred to the cardinal points were N.5, E.9, S.26, W.23, calm or nearly calm conditions 37, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 9.0 lbs. on the square foot on November 5. The mean daily Horizontal Movement of the Air for the month was 186 miles; the greatest daily value was 391 miles on November 3 and the least daily value was 47 miles on November 28.

Rain (0.005 in. or over) fell on 8 days in the month, amounting to 1.825 in., as measured by gauge No.6 partly sunk below the ground; being 0.395 in. less than the average fall for the 65 years, 1841-1906.

} the average for the 65 years, 1841-1906.

## GREENWICH METEOROLOGICAL OBSERVATIONS, 1948.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	BAROMETER Mean of 24 Hourly Values (corrected to 32° Fahrenheit and reduced to 32°)	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 Duration of Sunshine	Sun above Horizon	
		Of the Air			Of Evaporation	Of the Dew Point	Of Radiation					Of the Earth 4 ft. below the surface of the Soil						
		Highest	Lowest	Daily Range	Mean of 24 Hourly Values	Excess above Average of 65 Years	Mean of 24 Hourly Values	Deducted Mean Daily Value	Mean	Greatest	Least	Highest in Sun's Rays	Lowest on the Grass					
	in.	o	o	o	o	o	o	o	o	o	o	o	o	o	in.	hours	hours	
Dec. 1	30.114	45.8	29.9	15.9	36.9	- 4.0	36.4	35.6	1.3	4.1	0.0	95	63.7	27.9	48.8	0.002*	4.1	8.2
2	29.830	53.4	41.6	11.8	48.6	+ 7.7	46.3	43.7	4.9	8.2	1.3	83	60.3	35.0	48.7	0.040	0.0	8.2
3	29.666	55.6	52.0	3.6	54.0	+12.9	51.8	49.7	4.3	7.1	2.0	85	66.0	46.0	48.5	0.046	0.1	8.1
4	29.907	52.0	35.0	17.0	47.3	+ 6.0	45.3	43.0	4.3	11.5	1.5	85	54.8	26.7	48.5	0.033	0.1	8.1
5	30.006	47.8	34.0	13.8	42.1	+ 0.6	40.5	38.3	3.8	7.0	1.0	86	72.6	25.7	48.6	0.000	0.8	8.1
6	29.651	54.2	47.2	7.0	50.5	+ 9.0	48.6	46.5	4.0	6.6	1.0	87	69.2	43.0	48.7	0.115	1.5	8.0
7	29.582	56.2	51.7	4.5	54.3	+13.0	50.9	47.6	6.7	8.0	2.9	78	69.7	46.7	48.6	0.110	1.4	8.0
8	29.664	54.9	46.6	8.3	50.3	+ 9.3	48.2	45.9	4.4	7.4	2.0	85	64.8	41.7	48.7	0.127	0.7	8.0
9	29.504	52.1	46.3	5.8	49.5	+ 8.9	46.8	43.7	5.8	10.6	2.4	80	58.7	40.4	48.7	0.124	0.3	7.9
10	29.587	51.0	46.4	4.6	48.9	+ 8.5	46.2	43.1	5.8	10.4	1.8	80	64.9	39.0	48.8	0.000	0.7	7.9
11	29.299	54.4	44.9	9.5	50.7	+10.5	48.8	46.7	4.0	7.6	0.0	87	61.9	35.0	49.0	0.034	0.0	7.9
12	29.176	53.4	44.4	9.0	49.6	+ 9.3	48.5	47.4	2.2	5.2	0.6	92	57.5	34.5	49.0	0.029	0.0	7.9
13	29.398	54.7	45.2	9.5	50.8	+10.3	49.7	48.6	2.2	4.0	0.8	92	61.3	31.6	49.0	0.200	0.1	7.9
14	29.448	57.7	51.5	6.2	54.6	+13.9	52.7	50.9	3.7	5.8	1.7	87	76.2	44.0	49.1	0.158	0.4	7.9
15	29.816	52.1	38.9	13.2	45.0	+ 4.2	41.9	37.5	7.5	13.7	2.6	75	56.9	32.7	49.0	0.000	3.3	7.9
16	30.247	47.3	38.8	8.5	42.5	+ 1.8	40.1	36.5	6.0	9.5	3.8	79	59.6	32.6	49.2	0.000	3.8	7.9
17	30.311	50.2	39.4	10.8	45.2	+ 4.8	43.7	41.7	3.5	5.7	0.0	88	55.3	31.0	49.0	0.011	0.0	7.9
18	30.423	47.0	37.8	9.2	42.4	+ 2.4	40.5	37.8	4.6	9.0	0.9	84	50.7	29.8	48.8	0.012	1.0	7.8
19	30.460	43.0	38.1	4.9	40.6	+ 1.1	38.1	34.2	6.4	8.2	2.6	78	51.6	31.5	48.7	0.000	0.3	7.8
20	30.347	39.9	37.4	2.5	38.7	- 0.3	35.9	31.1	7.6	10.1	4.7	74	42.5	36.2	48.4	0.000	0.0	7.8
21	30.296	43.5	38.6	4.9	41.1	+ 2.4	39.1	36.2	4.9	7.8	2.3	83	45.9	37.0	48.2	0.061	0.0	7.8
22	30.228	39.3	35.5	3.8	37.6	- 0.8	35.6	32.3	5.3	8.4	2.8	81	42.9	29.5	48.1	0.005	0.0	7.8
23	30.116	41.3	31.2	10.1	35.8	- 2.4	34.4	32.0	3.8	8.5	1.0	86	54.1	23.0	47.9	0.000	4.4	7.8
24	30.075	44.7	37.0	7.7	40.0	+ 1.8	37.3	32.9	7.1	12.2	2.1	76	74.2	30.0	47.8	0.000	4.6	7.8
25	30.256	37.6	27.2	10.4	33.1	- 5.3	31.6	29.3	3.8	10.5	0.7	84	57.8	18.0	47.5	0.000	3.0	7.8
26	30.321	30.9	22.0	8.9	28.0	-10.6	27.6	27.0	1.0	2.1	0.0	95	34.0	9.7	47.0	0.000	0.0	7.9
27	30.009	33.7	24.0	9.7	29.9	- 8.9	29.6	29.1	0.8	2.1	0.0	96	33.9	11.2	46.1	0.000	0.0	7.9
28	29.894	49.0	32.8	16.2	38.2	- 0.7	37.1	35.4	2.8	7.5	0.0	90	52.6	31.4	46.5	0.152	0.9	7.9
29	29.859	47.3	38.3	9.0	42.4	+ 3.4	39.3	34.6	7.8	13.5	3.2	74	66.0	30.6	46.2	0.000	4.7	7.9
30	29.437	48.3	36.2	12.1	43.2	+ 4.3	41.2	38.4	4.8	8.2	1.7	84	61.1	30.1	46.1	0.377	0.4	7.9
31	29.036	44.0	34.1	9.9	38.4	- 0.3	36.6	33.8	4.6	10.1	0.6	83	65.7	29.6	45.9	0.342	4.5	7.9
Means	29.870	47.8	38.8	9.0	43.6	+ 3.6	41.6	39.0	4.5	8.1	1.5	84.3	58.3	32.0	48.2	Sum 1.978	1.3	7.9
No. of Col. for Ref.	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, except Columns 19 to 22 (Record of the Night Sky), which relate to the period extending from dusk on the civil day named, to dawn of the following day.

The mean reading of the Barometer (Column 1) and the mean temperatures of the Air and Evaporation (Columns 5 and 7) are deduced from the autographic records. The average temperature (Column 6) is deduced from the 65 years' observations, 1841-1905. The temperature of the Dew Point (Column 8) and the Degree of Humidity (Column 12) are deduced from the corresponding temperatures of the Air and Evaporation by means of Hygrometrical Tables, published by the Meteorological Office, Air Ministry. The mean difference between the Air and Dew Point Temperatures (Column 9) is the difference between the numbers in Columns 5 and 8, and the Greatest and Least Differences (Columns 10 and 11) are deduced from the 24 hourly autographic measures of the Dry-bulb and Wet-bulb Thermometers. The readings in Column 15 are taken daily at noon.

The values given in Columns 2, 3, 4, 13 and 14 are derived from eye-readings of self-registering thermometers.

\* Rainfall (Column 16). The amount entered on December 1 is derived from wet fog.

The mean reading of the Barometer for the month was 29.870 in., being 0.078 in. higher than the average for the 65 years, 1841-1905.

#### TEMPERATURE OF THE AIR.

The highest in the month was 57°.7 on December 14; the lowest in the month was 22°.0 on December 26; and the range was 35°.7.

The mean of all the highest daily readings in the month was 47°.8, being 3°.6 higher than the average for the 65 years, 1841-1905.

The mean of all the lowest daily readings in the month was 38°.8, being 3°.3 higher than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 9°.0, being 0°.3 greater than the average for the 65 years, 1841-1905.

The mean for the month was 43°.6, being 3°.6 higher than the average for the 65 years, 1841-1905.

TABLE XVII. - DAILY RESULTS OF THE METEOROLOGICAL OBSERVATIONS

Month and Day 1948	RECORD OF THE NIGHT SKY				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS				CLOUDS AND WEATHER				
	Polaris		δ URSA MINORIS		OSLER'S			Robin- son's					
	Duration	Fraction of Total Exposure	Duration	Fraction of Total Exposure	General Direction		Pressure on the Square Foot	Horizontal Move- ment of the Air	0 <sup>h</sup> to 6 <sup>h</sup>	6 <sup>h</sup> to 12 <sup>h</sup>	12 <sup>h</sup> to 18 <sup>h</sup>	18 <sup>h</sup> to 24 <sup>h</sup>	
Dec. 1	hours	hours	hours	hours									
2	13.3	0.97	12.6	0.92	Calm	SSE:SSW	lbs.	lbs.					
3	2.1	0.15	1.1	0.08	S:SSW	S:SSW	0.8	0.02	140	Fe Fe b f	b f m	b w	
4	2.9	0.21	1.1	0.08	SSW	SSW	7.0	0.83	401	b w c	c Ast Acu	c r c	
5	13.7	1.00	11.3	0.82	SW:W:NW	NW:Calm	6.2	0.78	379	c	c Stcu ir o	c rr	
	0.0	0.00	0.0	0.00	SSE:S	S:SSE	3.7	0.21	241	r c	c Stcu	b m	
							7.5	0.34	262	b x	b c Ci Acu	c	
6	2.1	0.15	1.1	0.08	S:SSW	SW:SSW	16.5	1.02	397	c	c Nbst rr c	c rr	
7	1.3	0.09	0.1	0.01	SSW:SW	SSW	27.5	2.26	561	r c	c Acu so-ha c	c ir	
8	1.4	0.10	0.1	0.01	SW:SSW	SSW:SE	5.8	0.44	298	c ir	c do c Stcu	c Frcu Ci	
9	2.9	0.21	2.1	0.16	SE:S:SW	SW	32.5	1.89	510	ro c Ast	c Frcu Ci so-ha	lu-ha p c	
10	2.6	0.19	2.4	0.17	SW:SSW	S	7.2	0.83	377	c	c b c Frcu Acu	c Stcu Acu	
11	2.0	0.15	1.5	0.11	S	S:SSE	5.2	0.46	304	c r c	c Stcu Frst	c 1 d	
12	11.4	0.83	10.5	0.76	SSW:S	Calm:SSW	5.3	0.15	211	d c	c Nbst	c mp	
13	3.0	0.22	1.8	0.13	SSW	SSW:SW	11.0	0.85	400	bc	c Nbst Frst r	r c	
14	9.7	0.71	8.4	0.61	SSW:SW	SW:WSW	9.0	1.24	478	c	c r c Acu	bc c	
15	9.7	0.70	8.7	0.63	WSW:W	W	7.6	0.40	340	c	c b Cu mo	b	
16	8.4	0.61	5.5	0.40	W:WSW	W:WSW	4.2	0.11	257	b w c	c b so-ha Ci m	bc c w f	
17	2.3	0.16	1.9	0.14	WSW:W	NNW:NNE	1.0	0.05	191	c w f	b f c Stcu mo	c id m	
18	3.4	0.24	1.5	0.11	NNE:NE	E:NE	1.3	0.07	203	d c b m	c b Cu c mo	c b c mo	
19	0.0	0.00	0.0	0.00	NE	ENE	8.0	0.41	318	c mo	c Stcu mo	c mo	
20	0.0	0.00	0.0	0.00	NE	NE	8.0	0.43	390	c mo	c Stcu mo	c Stcu mo	
21	0.0	0.00	0.0	0.00	NE	NE	3.8	0.24	322	c do mo	c St fr mo	c fr ro	
22	7.9	0.56	6.9	0.49	ENE:E	E	3.7	0.26	262	c mo do	c Stcu	c	
23	2.0	0.14	1.4	0.10	E	E	2.8	0.15	231	c b x f	b bc mo	c mo	
24	7.7	0.55	7.1	0.51	E:ESE	ESE:E	5.6	0.26	244	c mo	c mo b Acu	b c	
25	11.9	0.87	9.8	0.71	ESE	E:Calm	1.0	0.03	146	c b x	b m	b FF x	
26	7.6	0.55	6.3	0.46	Calm	Calm	0.0	0.00	61	b Fe Fe x	c Fe Fe	Fe bc f	
27	0.0	0.00	0.0	0.00	Calm:SE	Calm:SE	1.0	0.03	118	b f c mo x	c x m	c m f	
28	6.3	0.46	6.1	0.44	Calm:SW	SSW	13.0	0.55	293	c m f	c f bc Ci m	c rr	
29	12.9	0.94	12.5	0.91	WSW	SW	6.6	0.42	393	b	b m	b	
30	0.5	0.04	0.2	0.01	SW:SSW	SSW	26.5	2.65	614	b	c Acu Frcu	IT q	
31	0.7	0.05	0.5	0.04	NW:WSW	SW:SSW	9.0	0.73	408	rr c	c b Acu mo	c rr	
Means	4.8	0.35	4.0	0.29	..	..	..	0.58	315				
No. of Col. for Ref.	19	20	21	22	23	24	25	26	27	28	29	30	31

The mean Temperature of Evaporation for the month was 41°.6, being 3.1 higher than

The mean Temperature of the Dew Point for the month was 39°.0, being 2°.6 higher than

The mean Degree of Humidity for the month was 84.3, being 3.2 less than

The mean Elastic Force of Vapour for the month was 0.238 in., being 0.022 in. greater than

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7.2.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.167. The maximum daily amount of Sunshine was 4.7 hours on December 29.

The highest reading of the Solar Radiation Thermometer was 76°.2 on December 14; and the lowest reading of the Terrestrial Radiation Thermometer was 9°.7 on December 26.

The Proportions of Wind referred to the cardinal points were N.8, E.21, S.37, W.23, calm or nearly calm conditions 11, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 32.5 lbs. on the square foot on December 9. The mean daily Horizontal Movement of the Air for the month was 315 miles; the greatest daily value was 614 miles on December 30 and the least daily value was 61 miles on December 26.

Rain (0.005 in. or over) fell on 18 days in the month, amounting to 1.978 in., as measured by gauge No.6 partly sunk below the ground; being 0.151 in. greater than the average fall for the 65 years, 1841-1905.

} the average for the 65 years, 1841-1905.

## GREENWICH METEOROLOGICAL OBSERVATIONS, 1948.

TABLE XVIII(A). - HIGHEST AND LOWEST READINGS OF THE BAROMETER, REDUCED TO 32° FAHRENHEIT,  
AS EXTRACTED FROM THE PHOTOGRAPHIC RECORDS

MAXIMA		MINIMA		MAXIMA		MINIMA		MAXIMA		MINIMA	
U.T., 1948.	Reading										
d. h. m.	in.										
January		January		April		August		September		September	
2. 9. 25	29.720	1. 15. 50	29.536	18. 23. 45	29.748	20. 1. 30	29.612	24. 10. 10	29.820	25. 13. 20	29.613
3. 9. 0	29.787	2. 19. 20	29.608	21. 1. 5	29.702	22. 3. 20	29.483	29. 8. 20	30.174		
6. 0. 15	29.663	5. 5. 30	28.965	26. 10. 20	30.537	30. 5. 45	29.173				
8. 23. 40	29.488	7. 16. 0	28.557	30. 23. 40	29.366						
10. 14. 5	29.749	9. 21. 45	29.068								
12. 10. 5	29.569	11. 17. 25	29.122								
14. 2. 15	29.639	12. 20. 40	29.420								
16. 21. 45	29.654	15. 17. 0	29.279	May		May					
18. 11. 20	29.178	17. 21. 50	28.951								
21. 8. 55	29.340	19. 14. 50	28.985	3. 11. 0	29.784	1. 18. 55	29.285	1. 21. 20	29.871	1. 1. 10	29.760
22. 18. 50	29.369	21. 22. 30	29.219	7. 10. 50	30.295	4. 15. 0	29.472	5. 8. 30	29.789	3. 13. 50	29.193
25. 10. 0	29.330	23. 15. 10	29.221	15. 1. 0	30.162	10. 18. 0	29.559	9. 8. 35	30.027	6. 4. 15	29.700
27. 2. 35	29.049	26. 12. 40	28.819	18. 10. 10	30.126	16. 15. 35	29.969	12. 7. 20	29.763	11. 4. 40	29.520
28. 12. 45	29.164	27. 15. 0	28.961	21. 22. 0	29.982	20. 16. 50	29.852	14. 21. 15	29.985	12. 20. 50	29.333
29. 5. 30	29.100	29. 19. 35	28.911	25. 6. 30	29.716	24. 3. 5	29.396	16. 8. 10	30.193	15. 12. 0	29.831
30. 4. 10	29.402	30. 12. 0	29.201	27. 7. 40	29.800	26. 9. 40	29.443	21. 21. 30	30.113	17. 16. 50	30.017
				30. 8. 50	29.858	29. 12. 20	29.604			20. 17. 0	29.955
										28. 8. 0	29.636
February		February		June		June		October		October	
1. 11. 30	30.115	2. 6. 25	29.672					1. 0. 40	30.318	4. 4. 40	29.871
2. 18. 20	29.810	3. 17. 0	29.588					5. 10. 0	30.182	7. 4. 10	30.095
5. 0. 0	29.978	6. 0. 20	29.563	2. 21. 35	29.402	2. 10. 0	29.231	8. 22. 35	30.247	12. 14. 40	29.708
7. 1. 25	29.984	9. 1. 20	29.747	5. 22. 5	29.811	3. 22. 0	29.265	12. 23. 50	29.810	14. 8. 45	29.431
9. 20. 35	30.108	10. 13. 10	29.715	7. 23. 0	29.921	6. 19. 35	29.536	15. 1. 15	29.586	15. 17. 0	29.508
11. 7. 25	29.957	12. 1. 20	29.673	9. 23. 10	29.968	8. 15. 10	29.809	21. 23. 10	30.005	18. 0. 10	28.961
12. 23. 45	29.969	13. 9. 0	29.887	16. 18. 0	29.734	17. 11. 0	29.496	23. 9. 20	30.088	22. 15. 50	29.870
14. 10. 25	30.088	15. 5. 10	29.969	18. 0. 0	29.707	19. 11. 55	29.504	27. 9. 15	30.025	25. 12. 50	29.350
18. 12. 15	30.313	22. 15. 50	29.755	20. 21. 15	29.900	22. 14. 30	29.662	31. 9. 10	29.980	28. 4. 20	29.875
25. 0. 45	30.125	27. 4. 45	29.958	24. 9. 10	30.100	28. 11. 55	29.563	30. 5. 5	30.121	4. 10. 10	29.897
				29. 12. 10	29.804	30. 5. 5	29.722				
March		March		July		July		November		November	
4. 10. 40	30.498	6. 17. 20	30.258					3. 19. 20	29.657	3. 5. 25	29.541
9. 9. 40	30.464	10. 3. 45	30.387	3. 0. 0	30.167	4. 18. 40	29.596	6. 11. 0	29.796	4. 23. 10	29.272
11. 9. 0	30.534	12. 16. 40	30.363	6. 23. 10	30.052	8. 2. 50	29.889	9. 8. 45	30.415	7. 7. 15	29.463
13. 20. 50	30.441	17. 1. 5	29.743	8. 23. 30	29.988	12. 19. 30	29.359	12. 11. 0	30.228	11. 5. 45	30.071
17. 9. 0	29.947	18. 2. 15	29.582	16. 23. 50	29.823	18. 2. 15	29.507	17. 10. 50	30.081	15. 18. 40	29.475
19. 0. 35	30.027	19. 12. 25	29.924	20. 11. 25	29.741	21. 5. 25	29.569	24. 10. 10	30.384	18. 4. 00	29.873
20. 10. 30	30.143	21. 18. 20	29.910	23. 6. 55	30.042	24. 16. 45	29.888	29. 10. 5	30.326	27. 14. 50	30.090
24. 9. 50	30.297	30. 15. 20	29.450	26. 9. 0	30.069	30. 15. 50	29.751				
31. 3. 10	29.536	31. 19. 30	28.889	31. 22. 20	29.954						
April		April		August		August		December		December	
2. 7. 19	29.344	2. 18. 15	29.073					5. 0. 15	30.191	4. 1. 0	29.642
3. 23. 10	29.407	4. 11. 25	29.093	5. 10. 10	29.907	8. 6. 35	28.708	7. 11. 35	29.625	7. 23. 30	29.544
7. 7. 10	29.680	8. 8. 25	29.331	10. 12. 10	29.714	12. 1. 15	29.366	8. 10. 55	29.756	9. 7. 30	29.279
12. 10. 10	30.241	14. 16. 40	30.004	14. 11. 30	29.923	18. 19. 0	29.562	26. 10. 40	30.485	11. 23. 25	29.050
15. 7. 0	30.082	17. 16. 20	29.489	21. 0. 10	29.804	21. 21. 15	29.504	31. 11. 25	30.381	14. 17. 55	29.394
										28. 23. 20	30.054
										31. 0. 50	28.940

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 Universal Time.

The height of the Barometer cistern above mean sea level is 152 feet; no correction has been applied to the reading to reduce to sea level.

TABLE XVIII(B). - HIGHEST AND LOWEST READINGS OF THE BAROMETER IN EACH MONTH FOR THE YEAR 1948

	January	February	March	April	May	June	July	August	September	October	November	December
HIGHEST	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
LOWEST	29.787	30.313	30.534	30.537	30.295	30.100	30.167	30.174	30.193	30.318	30.415	30.485
RANGE	28.557	29.563	28.889	29.073	29.285	29.231	29.359	28.708	29.193	28.961	29.272	28.940
	1.230	0.750	1.645	1.464	1.010	0.869	0.808	1.466	1.000	1.357	1.143	1.545

The highest reading in the year was 30.537 ins. on April 26. The lowest reading in the year was 28.557 ins. on January 7. The range of reading in the year was 1.980 ins.

TABLE XIX. - MONTHLY RESULTS OF METEOROLOGICAL ELEMENTS FOR THE YEAR 1948

MONTH 1948	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 the Average of 65 Years			
January	in. 29.310	o 57.5	28.2	29.3	48.5	38.5	10.0	43.6	+5.0	41.7	39.2	84.5
February	29.983	61.0	21.1	39.9	46.1	35.5	10.6	41.0	+1.5	38.4	34.5	76.7
March	30.158	71.7	32.3	39.4	56.4	39.4	17.0	47.3	+5.4	43.8	39.4	74.6
April	29.723	72.9	34.1	38.8	60.0	40.9	19.1	50.1	+2.8	45.5	39.8	68.0
May	29.807	77.0	32.3	44.7	63.9	43.8	20.0	53.9	+0.9	49.3	44.3	70.6
June	29.759	79.7	44.4	35.3	67.4	50.8	16.6	58.3	-1.1	53.9	49.8	73.4
July	29.838	91.4	44.3	47.1	70.6	53.8	16.9	61.7	-0.9	56.7	52.5	72.3
August	29.729	83.4	45.2	38.2	69.9	53.1	16.8	60.7	-0.9	56.5	53.0	76.2
September	29.854	78.9	36.2	42.7	67.8	50.7	17.1	58.7	+1.5	54.7	51.1	75.9
October	29.873	72.6	26.7	45.9	58.7	42.5	16.1	50.5	+0.5	47.7	44.6	80.2
November	30.014	63.0	27.9	35.1	51.6	40.3	11.3	45.7	+2.2	43.9	41.9	86.7
December	29.870	57.7	22.0	35.7	47.8	38.8	9.0	43.6	+3.6	41.6	39.0	84.0
Means	29.826	Highest 91.4	Lowest 21.1	Annual Range 70.3	59.1	44.0	15.0	51.3	+1.7	47.8	44.1	76.9

MONTH 1948	Mean Elastic Force of Vapour	Mean Tempera- ture of the Earth 4 feet below the Surface of the Soil	Mean Amount of Cloud (0-10)	RAIN		WIND								Number of Calm or Nearly Calm Hours	Mean Daily Pressure on the Square Foot	From Robin- son's Anemo- meter				
				Number of Rainy Days (0.005 in. or over)	Amount collected in Gauge No. 6, whose receiving surface is 5 inches above the Ground	From Osler's Anemometer														
						N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.							
January	in. 0.240	o 46.7	7.8	23	in. 3.210	h 12	h 11	h 26	h 51	h 122	h 331	h 121	h 29	lbs. 41	miles 0.68	362				
February	0.200	45.4	7.4	14	1.690	15	135	98	16	21	173	120	27	91	0.59	333				
March	0.242	45.4	5.3	7	0.764	17	27	155	12	44	193	66	31	199	0.27	230				
April	0.246	47.7	5.3	12	1.198	49	59	67	16	55	160	86	32	196	0.43	251				
May	0.292	51.2	5.6	10	1.608	56	147	115	14	45	70	30	31	236	0.28	207				
June	0.360	54.2	7.5	16	2.218	72	36	18	1	43	221	124	72	133	0.37	260				
July	0.398	56.3	6.8	12	1.038	95	14	28	9	25	197	100	90	186	0.23	214				
August	0.405	58.9	7.4	15	4.061	25	15	19	14	65	245	108	38	215	0.21	214				
September	0.378	58.2	6.4	10	0.959	43	3	0	12	116	286	88	58	114	0.25	239				
October	0.296	55.5	6.5	10	2.153	38	8	49	11	85	238	67	35	213	0.16	199				
November	0.267	51.2	7.0	8	1.825	20	29	32	32	63	215	52	11	266	0.15	186				
December	0.238	48.2	7.2	18	1.978	12	80	89	49	154	202	63	16	79	0.58	315				
Sums	...	...	...	155	22.702	454	564	696	237	838	2531	1025	470	1969	...	...				
Means	0.297	51.6	6.7	...	...	...	...	...	...	...	...	...	...	...	0.35	251				

The greatest recorded pressure of the wind on the square foot in the year was 36.2 lbs. on March 31.  
The greatest recorded daily horizontal movement of the air in the year was 723 miles on January 13.  
The least recorded daily horizontal movement of the air in the year was 13 miles on October 30.

TABLE XX. - MONTHLY MEAN READING OF THE BAROMETER AT EVERY HOUR OF THE DAY  
AS DEDUCED FROM THE PHOTOGRAPHIC RECORDS

Hour, Universal Time	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Means	
0 <sup>h</sup>	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	
1	29.309	29.977	30.172	29.728	29.815	29.766	29.844	29.736	29.851	29.879	30.011	29.882	29.831	
2	29.310	29.975	30.167	29.724	29.811	29.763	29.841	29.731	29.850	29.877	30.007	29.877	29.828	
3	29.317	29.973	30.162	29.720	29.806	29.758	29.834	29.727	29.847	29.873	30.003	29.877	29.825	
4	29.319	29.972	30.159	29.715	29.802	29.755	29.830	29.722	29.842	29.867	30.000	29.875	29.822	
5	29.316	29.972	30.165	29.715	29.805	29.756	29.832	29.720	29.842	29.865	29.999	29.870	29.821	
6	29.319	29.973	30.169	29.722	29.809	29.758	29.837	29.721	29.848	29.869	29.999	29.873	29.825	
7	29.322	29.978	30.177	29.727	29.813	29.761	29.843	29.726	29.854	29.877	30.006	29.876	29.830	
8	29.328	29.985	30.185	29.727	29.815	29.762	29.845	29.734	29.862	29.882	30.013	29.883	29.835	
9	29.334	29.989	30.190	29.729	29.816	29.761	29.845	29.738	29.866	29.888	30.024	29.892	29.839	
10	29.336	29.992	30.190	29.728	29.815	29.761	29.845	29.740	29.863	29.889	30.030	29.899	29.841	
11	29.330	29.993	30.186	29.724	29.812	29.757	29.844	29.739	29.859	29.885	30.029	29.897	29.838	
12	29.316	29.989	30.179	29.719	29.807	29.755	29.842	29.736	29.854	29.875	30.021	29.887	29.832	
13	29.307	29.981	30.165	29.717	29.802	29.755	29.838	29.734	29.851	29.865	30.015	29.876	29.826	
14	29.299	29.975	30.152	29.708	29.797	29.752	29.834	29.731	29.848	29.861	30.010	29.867	29.820	
15	29.297	29.972	30.142	29.707	29.792	29.751	29.831	29.726	29.844	29.857	30.010	29.865	29.816	
16	29.297	29.973	30.136	29.706	29.790	29.748	29.828	29.725	29.844	29.858	30.012	29.862	29.815	
17	29.295	29.980	30.133	29.709	29.791	29.748	29.825	29.721	29.845	29.862	30.016	29.860	29.815	
18	29.295	29.988	30.132	29.715	29.794	29.752	29.826	29.721	29.850	29.870	30.020	29.857	29.818	
19	29.294	29.995	30.134	29.725	29.801	29.755	29.829	29.725	29.859	29.875	30.022	29.854	29.822	
20	29.293	29.995	30.136	29.736	29.812	29.763	29.835	29.732	29.863	29.878	30.020	29.849	29.826	
21	29.292	29.996	30.135	29.743	29.820	29.771	29.845	29.733	29.867	29.879	30.022	29.846	29.829	
22	29.296	29.997	30.132	29.745	29.823	29.774	29.848	29.731	29.869	29.876	30.021	29.842	29.829	
23	29.304	30.001	30.128	29.744	29.823	29.775	29.849	29.731	29.869	29.872	30.018	29.838	29.829	
24	29.308	30.001	30.124	29.742	29.821	29.775	29.848	29.730	29.869	29.870	30.018	29.832	29.828	
Means {	0 <sup>h</sup> -23 <sup>h</sup>	29.310	29.983	30.158	29.723	29.807	29.759	29.838	29.729	29.854	29.873	30.014	29.870	29.826
	1 <sup>h</sup> -24 <sup>h</sup>	29.310	29.984	30.156	29.723	29.808	29.759	29.838	29.729	29.854	29.872	30.014	29.868	29.826
No. of Days Employed	31	29	31	30	31	30	31	31	30	31	30	31	..	

TABLE XXI. - MONTHLY MEAN TEMPERATURE OF THE AIR AT EVERY HOUR OF THE DAY  
AS DEDUCED FROM THE AUTOGRAPHIC RECORDS

Hour, Universal Time	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Means	
0 <sup>h</sup>	°	°	°	°	°	°	°	°	°	°	°	°	°	
1	42.7	39.4	43.8	45.2	48.3	53.9	56.7	56.7	55.0	47.5	44.1	42.8	48.0	
2	42.2	39.1	43.2	44.3	47.5	53.2	56.0	56.0	54.5	46.9	44.1	42.5	47.5	
3	41.9	38.9	42.9	43.7	47.1	52.7	55.6	55.4	54.0	46.5	44.0	42.1	47.1	
4	41.5	38.8	42.4	43.1	46.5	52.2	55.1	54.9	53.8	46.5	43.6	41.8	46.7	
5	41.2	38.7	41.6	42.7	45.9	51.8	54.9	54.5	53.4	46.1	43.3	41.7	46.3	
6	41.4	38.3	41.0	42.4	45.6	52.3	55.3	54.3	53.1	45.7	43.3	41.6	46.2	
7	41.7	38.4	41.1	43.0	47.6	53.8	56.4	55.1	52.8	45.9	43.3	41.9	46.8	
8	41.9	38.5	41.6	45.2	50.5	55.7	58.2	56.9	54.0	46.2	43.3	42.0	47.8	
9	42.0	39.2	43.8	48.5	53.3	57.7	60.6	59.3	56.3	47.8	43.4	42.4	49.5	
10	42.7	40.6	46.6	51.7	55.9	59.6	62.9	61.9	59.3	50.5	44.7	42.7	51.6	
11	44.1	41.9	49.0	54.2	57.6	61.2	64.5	64.0	61.6	52.9	46.5	43.6	53.4	
12	45.3	43.4	51.3	55.8	58.8	62.7	66.5	65.2	63.2	55.1	48.1	44.8	55.0	
13	46.2	44.3	53.1	57.2	59.9	63.4	67.6	66.4	64.5	56.7	49.5	45.7	56.2	
14	46.5	44.7	54.3	57.4	61.0	63.8	68.5	67.1	65.7	57.6	50.3	46.5	57.0	
15	46.1	44.7	54.8	57.8	61.9	64.5	68.3	67.4	65.7	56.3	49.3	45.8	56.9	
16	45.6	44.0	54.2	57.3	61.5	64.1	67.7	66.6	64.9	55.1	48.2	45.1	56.2	
17	44.8	43.1	52.8	56.0	60.4	63.2	66.9	65.7	63.4	53.7	47.1	44.3	55.1	
18	44.2	42.1	50.8	54.2	58.8	62.0	65.9	64.1	61.5	52.1	46.3	44.0	53.9	
19	44.1	41.3	48.8	52.0	56.8	60.6	64.3	62.1	59.6	50.8	45.6	43.9	52.5	
20	43.9	40.7	47.3	50.0	54.5	58.9	62.4	60.5	58.2	50.0	45.2	43.7	51.3	
21	43.7	40.3	46.0	48.4	52.6	57.3	60.6	59.2	57.0	49.1	44.8	43.4	50.2	
22	43.7	40.0	44.9	47.1	50.9	56.1	59.0	58.3	56.1	48.4	44.3	43.4	49.4	
23	43.4	39.6	44.4	46.2	49.5	55.1	57.9	57.5	55.3	47.7	44.1	43.3	48.7	
24	42.9	39.2	43.9	45.2	48.4	54.1	56.9	56.7	54.7	47.2	43.8	43.2	48.0	
Means {	0 <sup>h</sup> -23 <sup>h</sup>	43.6	41.0	47.3	50.1	53.9	58.3	61.7	60.7	58.7	50.5	45.7	43.6	51.3
	1 <sup>h</sup> -24 <sup>h</sup>	43.6	41.0	47.3	50.1	53.9	58.4	61.7	60.7	58.7	50.5	45.7	43.6	51.3
No. of Days Employed	31	29	31	30	31	30	31	31	30	31	30	31	..	

TABLE XXII. - MONTHLY MEAN TEMPERATURE OF EVAPORATION AT EVERY HOUR OF THE DAY,  
AS DEDUCED FROM THE AUTOGRAPHIC RECORDS

Hour, Universal Time	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Means	
0 <sup>h</sup>	40.9	37.5	42.0	43.1	46.5	51.7	54.3	54.8	53.0	46.1	43.0	41.4	46.2	
1	40.5	37.3	41.5	42.5	46.0	51.2	53.9	54.2	52.6	45.5	42.9	41.2	45.8	
2	40.3	37.2	41.3	42.0	45.8	50.8	53.6	53.7	52.4	45.3	42.8	40.8	45.5	
3	40.2	37.2	41.0	41.6	45.2	50.6	53.3	53.3	52.2	45.2	42.5	40.5	45.2	
4	40.0	37.1	40.5	41.2	44.7	50.3	53.3	53.2	51.9	45.0	42.4	40.5	45.0	
5	40.0	36.9	40.0	41.1	44.6	50.5	53.3	53.2	51.8	44.7	42.2	40.4	44.9	
6	40.2	36.8	39.8	41.2	45.7	51.5	54.1	53.6	51.6	44.5	42.1	40.4	45.1	
7	40.2	36.8	40.0	42.9	47.7	52.6	55.1	54.7	52.5	44.8	42.1	40.4	45.8	
8	40.3	37.4	41.7	45.1	49.1	53.7	56.2	56.1	53.9	46.1	42.3	40.5	46.9	
9	40.9	38.3	43.6	46.8	50.3	54.5	57.1	57.1	55.5	48.0	43.3	40.9	48.0	
10	42.1	39.2	44.9	48.1	51.1	55.2	57.8	58.0	56.6	49.4	44.7	41.4	49.0	
11	43.0	39.9	46.1	48.7	51.7	55.9	58.8	58.5	57.2	50.6	45.6	42.3	49.9	
12	43.6	40.2	47.1	49.1	52.0	56.4	59.1	59.3	57.7	51.3	46.3	43.0	50.4	
13	43.7	40.4	47.9	48.9	52.6	56.5	59.3	59.5	57.9	51.7	47.0	43.5	50.7	
14	43.9	40.6	48.1	49.4	52.8	57.1	59.6	59.9	58.0	51.3	46.9	43.2	50.9	
15	43.6	40.4	48.1	49.3	53.1	57.2	59.5	59.6	57.8	50.9	46.4	42.9	50.7	
16	43.3	40.0	47.8	49.1	53.1	56.9	59.4	59.3	57.1	50.3	45.5	42.4	50.4	
17	42.5	39.4	47.0	48.5	52.7	56.4	59.4	59.0	56.5	49.6	44.8	42.1	49.8	
18	42.2	38.8	45.8	47.7	51.9	56.0	59.1	58.2	55.8	48.8	44.3	42.0	49.2	
19	42.0	38.5	44.8	46.8	51.2	55.5	58.4	57.4	55.2	48.1	44.0	41.9	48.7	
20	41.9	38.3	44.1	45.8	50.2	54.6	57.5	56.8	54.7	47.6	43.8	41.8	48.1	
21	41.9	38.1	43.5	45.1	49.3	53.8	56.9	56.3	54.3	47.2	43.5	41.8	47.6	
22	42.0	37.8	42.7	44.2	48.2	53.1	56.0	55.8	53.6	46.5	43.1	41.9	47.1	
23	41.5	37.6	42.4	43.8	47.3	52.4	55.3	55.3	53.1	46.1	42.9	41.9	46.6	
24	41.1	37.4	42.0	43.1	46.6	51.8	54.5	54.8	52.7	45.8	42.6	41.8	46.2	
Means {	0 <sup>h-23<sup>h</sup></sup>	41.7	38.4	43.8	45.5	49.3	53.9	56.7	56.5	54.7	47.7	43.9	41.6	47.8
	1 <sup>h-24<sup>h</sup></sup>	41.7	38.4	43.8	45.5	49.3	53.9	56.7	56.5	54.7	47.7	43.9	41.6	47.8
No. of Days Employed	31	29	31	30	31	30	31	31	30	31	30	31	..	

TABLE XXIII. - MONTHLY MEAN TEMPERATURE OF THE DEW POINT AT EVERY HOUR OF THE DAY,  
AS DEDUCED FROM THE CORRESPONDING AIR AND EVAPORATION TEMPERATURES

Hour, Universal Time	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Means	
0 <sup>h</sup>	38.4	34.6	39.7	40.3	44.5	49.6	52.3	53.2	51.1	44.5	41.7	39.5	44.1	
1	38.1	34.6	39.2	40.2	44.3	49.3	52.2	52.7	50.8	43.8	41.5	39.4	43.8	
2	38.1	34.7	39.1	39.8	44.3	49.0	51.9	52.2	50.9	43.8	41.3	39.1	43.7	
3	38.5	34.9	39.1	39.5	43.6	49.0	51.7	51.9	50.7	43.6	41.1	38.8	43.5	
4	38.5	34.7	39.1	39.1	43.2	48.7	51.9	52.1	50.5	43.6	41.2	38.9	43.5	
5	38.1	34.8	38.8	39.3	43.4	48.7	51.5	52.3	50.6	43.5	40.8	38.8	43.4	
6	38.2	34.5	38.1	38.6	43.5	49.3	52.2	52.3	50.5	42.7	40.5	38.4	43.2	
7	37.8	34.2	37.8	39.8	44.6	49.7	52.4	52.9	51.1	43.1	40.5	38.2	43.5	
8	37.9	34.7	38.9	40.9	44.6	50.1	52.5	53.5	51.9	44.2	40.9	37.8	44.0	
9	38.4	34.8	39.8	41.1	44.4	49.8	52.2	53.1	52.3	45.3	41.5	38.4	44.3	
10	39.5	35.0	39.8	41.0	44.3	49.8	52.3	53.2	52.4	45.7	42.5	38.4	44.5	
11	40.0	34.7	39.7	40.5	44.3	49.9	52.6	53.1	52.2	45.9	42.7	38.9	44.5	
12	40.3	34.0	39.8	39.7	43.8	50.3	52.3	53.7	52.1	45.7	42.5	39.5	44.5	
13	40.2	33.9	40.4	38.8	44.0	50.2	51.9	53.5	51.4	45.8	43.2	39.7	44.4	
14	40.7	34.2	40.1	39.7	43.7	50.7	52.1	53.5	51.2	45.3	43.2	39.1	44.5	
15	40.5	33.9	40.2	39.4	44.1	51.0	52.5	53.5	51.1	45.3	43.0	39.1	44.5	
16	40.3	33.9	40.2	39.5	44.7	50.8	52.8	53.5	50.4	45.3	42.3	38.7	44.4	
17	39.4	33.8	40.0	39.7	44.9	50.5	53.5	53.7	50.5	45.3	42.1	39.2	44.4	
18	39.6	33.7	39.5	40.0	44.8	50.7	53.7	53.5	50.8	45.3	41.9	39.4	44.4	
19	39.3	34.1	39.8	40.6	45.4	51.1	53.7	53.6	51.3	45.2	42.0	39.3	44.6	
20	39.3	34.6	40.1	40.8	45.8	50.8	53.5	53.7	51.6	45.0	42.0	39.3	44.7	
21	39.5	34.7	40.3	41.0	45.8	50.6	53.9	53.9	52.0	45.1	41.9	39.7	44.9	
22	39.8	34.4	39.7	40.7	45.3	50.4	53.6	53.7	51.4	44.4	41.7	39.9	44.6	
23	38.9	34.5	39.8	40.8	44.9	49.9	53.1	53.5	51.1	44.3	41.5	40.0	44.4	
24	38.5	34.7	39.5	40.3	44.6	49.6	52.7	53.2	50.8	44.2	41.1	39.9	44.1	
Means {	0 <sup>h-23<sup>h</sup></sup>	39.1	34.4	39.5	40.0	44.4	50.0	52.6	53.2	51.2	44.7	41.8	39.1	44.2
	1 <sup>h-24<sup>h</sup></sup>	39.1	34.4	39.5	40.0	44.4	50.0	52.6	53.2	51.2	44.6	41.8	39.1	44.2

## GREENWICH METEOROLOGICAL OBSERVATIONS, 1948.

TABLE XXIV. - MONTHLY MEAN DEGREE OF HUMIDITY (SATURATION = 100) AT EVERY HOUR OF THE DAY,  
AS DEDUCED FROM THE CORRESPONDING AIR AND EVAPORATION TEMPERATURES

Hour, Universal Time	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Means
0 <sup>h</sup>	84	83	85	83	86	85	85	88	87	89	91	88	86
1	85	84	86	85	88	87	87	88	87	89	90	89	87
2	86	84	86	86	90	87	87	89	89	91	90	89	88
3	89	85	88	87	90	89	88	89	89	90	91	89	89
4	90	85	90	87	91	89	89	91	90	91	92	90	90
5	88	87	91	89	92	87	87	93	91	92	91	90	90
6	87	85	89	85	85	84	85	90	91	89	90	87	87
7	85	84	86	82	80	80	81	86	90	89	90	86	85
8	85	84	83	75	72	76	74	81	85	87	91	84	81
9	84	79	77	67	65	70	68	73	78	82	88	84	76
10	84	77	70	61	61	66	65	68	72	76	86	82	72
11	82	71	65	56	59	63	61	65	68	71	81	80	69
12	80	67	61	52	55	62	58	64	66	67	77	79	66
13	78	66	59	50	53	61	55	62	60	64	77	77	63
14	80	66	57	51	52	61	55	60	59	64	77	75	63
15	81	66	58	50	52	62	57	61	59	66	79	77	64
16	82	68	59	51	54	62	59	63	59	70	80	79	66
17	82	69	62	55	57	63	62	65	63	73	82	82	68
18	84	72	65	59	60	67	65	69	68	78	84	84	71
19	83	76	71	65	66	71	69	74	74	81	87	84	75
20	84	78	76	70	72	74	73	79	79	83	89	84	78
21	85	80	81	75	78	78	79	83	83	86	89	87	82
22	86	80	82	78	81	81	82	85	85	86	90	87	84
23	84	82	84	81	84	83	84	86	86	88	90	88	85
24	84	84	84	83	86	85	85	88	87	89	90	88	86
Means	{ 0 <sup>h</sup> -23 <sup>h</sup>	84	77	75	70	72	75	73	77	77	81	86	78
	{ 1 <sup>h</sup> -24 <sup>h</sup>	84	77	75	70	72	75	73	77	77	81	86	78

TABLE XXV. - 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 1948

MONTH 1948	Registered duration of Sunshine in the Hour ending:-															Corresponding aggregate Period during which the Sun was above the Horizon	Proportion of Sunshine	Mean Altitude of the Sun at Noon	
	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	Noon	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>			
January	h	h	h	h	h	1.6	5.9	6.1	7.1	4.3	3.2	1.5	0.1			h	h	o	
February						2.8	6.0	8.3	8.9	9.1	8.4	6.8	3.9	0.1		29.8	260.1	18	
March		0.8	4.7	11.2	13.4	16.0	16.8	16.5	15.1	14.3	13.4	8.7	1.2			54.3	288.5	26	
April	0.4	0.7	7.2	13.9	17.4	21.8	21.4	19.4	17.8	17.5	16.4	15.5	13.6	7.9	2.2	132.1	368.5	37	
May	7.9	17.2	16.2	15.2	15.6	15.7	15.9	13.9	15.0	15.4	18.0	16.8	13.9	8.6	0.7	192.7	416.1	48	
June	2.5	7.8	9.9	10.9	10.3	9.1	12.7	11.7	9.8	12.3	13.0	13.4	12.6	9.7	6.3	1.1	206.4	484.2	57
July	0.3	6.4	9.4	12.5	12.1	13.1	14.9	14.5	14.6	12.3	9.7	10.3	10.0	9.4	6.9	0.4	153.1	496.5	62
August		1.2	6.4	8.7	11.5	12.4	11.5	11.7	13.7	13.3	11.8	10.4	11.7	8.7	2.9		156.8	499.4	60
September	0.1	3.8	8.9	12.6	14.1	14.4	14.5	16.1	15.5	13.8	14.6	11.5	2.7			135.9	451.7	52	
October		0.1	2.4	6.4	10.3	11.5	14.2	12.7	12.0	10.6	7.6	2.4	0.2			142.6	379.6	41	
November				4.7	9.0	10.1	10.7	12.3	10.8	8.7	2.8					90.4	331.1	30	
December				0.4	3.6	6.8	8.3	9.7	6.9	5.2	0.2					69.1	266.9	20	
For the Year	3.2	24.1	54.8	78.2	106.2	134.3	149.4	153.7	150.5	142.3	127.2	110.2	87.4	53.7	26.9	2.2	1404.3	4488.2	..

The hours are reckoned from "Apparent" midnight.

TABLE XXVI. - READINGS OF THE THERMOMETERS IN THE STEVENSON SCREEN IN THE CHRISTIE ENCLOSURE  
(The readings of the maximum and minimum thermometers apply to the 24 hours ending 21<sup>h</sup>)

Day of the Month	Dry-Bulb Thermometers, 4 ft. above the Ground.						Wet-Bulb Thermometers, 4 ft. above the Ground.				Day of the Month	Dry-Bulb Thermometers, 4 ft. above the Ground.						Wet-Bulb Thermometers, 4 ft. above the Ground.				
	Maxi- mum	Mini- mum	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>		Maxi- mum	Mini- mum	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>	
JANUARY																						
1	o	o	49.6	50.5	52.2	54.8	48.3	49.3	51.5	53.1	1	o	o	o	o	o	o	o	o	o	o	
2	54.8	36.4	49.2	52.4	54.7	55.9	56.1	50.3	53.0	53.9	2	55.1	36.2	41.9	52.9	54.3	38.6	40.3	37.7	36.2	37.6	37.6
3	56.2	49.2	51.5	52.8	55.0	54.8	53.1	50.8	53.1	52.8	3	50.7	35.4	36.5	38.1	40.3	37.7	36.2	37.6	39.3	37.2	37.2
4	56.1	51.5	54.5	57.5	54.6	51.2	50.7	52.8	52.1	48.4	4	50.7	32.5	34.2	44.3	50.1	35.6	33.8	41.6	45.4	35.4	35.4
5	57.5	51.0	45.3	45.2	43.7	38.6	41.9	40.4	39.0	35.8	5	40.0	33.7	34.6	37.4	39.7	35.4	34.5	36.8	38.7	34.9	34.9
6	52.3	38.6	45.3	45.2	43.7	38.6	41.9	40.4	39.0	35.8	6	53.7	33.8	35.6	42.9	52.7	42.0	35.4	41.7	49.2	41.2	41.2
7	48.3	31.5	37.3	41.6	40.2	48.3	35.1	38.3	39.4	48.1	7	59.8	33.4	52.0	59.5	55.5	50.3	49.0	53.5	51.0	48.3	48.3
8	43.0	37.6	39.6	40.1	42.4	37.6	37.5	37.9	38.3	35.4	8	61.5	48.3	50.3	58.8	56.5	50.0	48.8	53.7	53.0	48.5	48.5
9	45.9	33.0	39.4	45.8	43.7	44.0	37.9	43.2	42.2	43.2	9	71.7	43.5	50.1	64.4	71.7	56.4	47.1	53.9	56.5	49.9	49.9
10	48.1	39.8	41.3	41.9	40.8	42.4	38.7	38.9	38.6	41.2	10	59.6	46.0	52.0	57.0	58.3	50.7	48.0	47.0	47.8	45.7	45.7
11	50.8	42.4	50.4	49.8	49.0	48.0	49.6	48.7	47.7	46.0	11	60.4	36.8	48.3	57.4	60.3	46.5	44.3	49.7	51.8	43.8	43.8
12	54.0	43.2	44.6	47.3	51.5	53.8	41.8	43.8	48.9	51.5	12	65.4	35.5	46.6	60.3	64.3	49.2	44.3	52.3	53.4	46.7	46.7
13	55.6	50.5	54.2	55.1	55.2	50.5	52.5	53.5	51.7	45.5	13	65.7	37.4	48.0	61.0	62.8	44.0	45.7	52.6	53.3	42.5	42.5
14	50.5	41.5	45.2	47.4	46.4	41.5	42.2	44.2	42.6	39.8	14	63.8	38.9	45.0	60.7	63.4	49.0	43.5	53.7	54.7	45.5	45.5
15	45.0	35.3	40.5	44.3	43.0	35.3	38.0	40.7	39.7	34.8	15	58.7	44.5	49.3	54.2	56.6	51.8	46.4	49.7	51.0	49.6	49.6
16	40.9	35.0	38.5	40.9	39.9	38.2	37.2	38.6	38.6	37.2	16	56.7	48.4	51.3	54.4	54.0	48.4	47.7	48.6	47.8	45.7	45.7
17	48.0	31.3	37.6	43.3	44.0	48.0	36.3	41.4	43.0	47.5	17	53.9	42.6	45.3	52.0	50.2	51.0	42.7	46.7	48.6	49.5	49.5
18	49.4	36.2	38.5	42.4	42.0	36.6	35.7	38.1	37.3	34.9	18	52.1	40.8	44.6	49.0	51.0	40.8	41.1	42.9	43.8	39.0	39.0
19	39.9	31.0	32.8	39.3	38.9	32.7	31.7	36.0	34.9	31.7	19	55.7	38.9	46.3	52.2	54.0	50.0	44.7	49.5	51.1	47.9	47.9
20	39.9	28.2	34.2	39.0	37.4	35.5	32.1	36.1	36.2	34.5	20	57.0	49.4	52.6	54.7	56.9	49.5	48.3	48.5	49.6	47.0	47.0
21	41.7	34.7	38.6	40.3	41.6	38.2	38.1	39.1	39.6	37.2	21	55.3	45.5	50.9	51.8	54.0	49.0	47.2	48.0	49.7	46.5	46.5
22	43.0	34.0	36.2	41.0	42.6	37.8	34.5	37.7	38.4	36.2	22	55.1	45.3	47.3	51.0	55.1	48.7	43.4	43.4	45.1	43.0	43.0
23	41.0	32.9	36.2	40.2	40.3	37.0	35.5	38.0	37.8	36.4	23	53.9	34.9	46.8	52.2	53.5	42.3	42.4	45.3	45.4	40.3	40.3
24	46.0	36.6	39.9	45.0	43.8	39.8	39.3	42.7	41.8	38.6	24	54.8	32.3	47.2	53.5	54.5	40.9	41.2	45.4	46.3	38.5	38.5
25	46.6	32.4	34.4	46.0	44.4	42.8	33.9	42.6	41.7	40.9	25	58.2	34.7	47.7	56.6	57.3	45.0	43.0	46.7	45.2	40.5	40.5
26	45.8	39.9	41.7	42.2	44.9	40.6	39.8	41.1	43.4	39.5	26	60.6	40.2	50.4	59.3	58.0	44.4	45.9	50.3	47.5	42.9	42.9
27	47.0	37.5	40.6	45.6	43.8	40.8	39.9	43.0	41.5	40.1	27	54.6	41.6	50.4	53.7	51.2	43.0	44.8	44.6	43.2	41.0	41.0
28	48.6	35.3	40.6	48.4	46.1	43.5	39.5	45.5	44.4	42.5	28	60.2	37.3	49.5	57.9	59.6	50.0	43.0	48.5	49.9	45.3	45.3
29	49.3	38.2	43.2	45.5	46.0	42.6	42.6	43.7	46.9	44.3	29	57.7	44.7	53.4	55.0	54.3	50.0	49.9	50.5	50.0	48.0	48.0
30	55.7	41.8	45.6	54.6	55.2	50.5	44.5	52.1	51.4	47.0	30	55.7	45.2	49.8	53.6	53.5	49.6	46.5	46.1	45.3	43.7	43.7
31	53.4	45.2	47.6	52.3	50.0	48.5	44.8	47.5	47.0	45.0	31	52.0	34.8	48.9	50.4	47.0	47.2	44.9	44.8	44.8	45.5	45.5
Means	48.6	38.5	42.7	46.2	46.1	43.7	40.9	43.6	43.6	41.9	Means	56.4	39.6	46.6	53.1	54.8	46.0	43.6	47.1	48.1	43.5	43.5
FEBRUARY																						
1	o	o	o	o	o	o	o	o	o	o	1	o	o	o	o	o	o	o	o	o	o	o
2	54.0	42.8	45.1	51.4	51.0	49.7	43.0	47.5	47.0	46.7	2	51.9	41.4	48.1	51.5	50.4	44.4	42.4	43.3	44.3	40.6	40.6
3	55.4	49.4	53.6	55.4	54.6	51.4	50.2	50.7	50.4	48.2	3	53.9	40.7	48.3	52.6	45.6	43.2	43.3	45.1	44.3	40.7	40.7
4	51.6	40.7	49.3	45.0	43.1	40.7	46.1	44.1	42.2	38.6	4	53.0	38.5	46.6	45.2	52.4	43.5	41.6	41.4	43.7	41.2	41.2
5	47.2	37.6	42.3	46.0	46.3	45.0	40.7	43.9	43.1	44.4	5	51.8	34.7	42.6	46.5	50.7	44.6	39.6	40.7	42.2	40.6	40.6
6	49.1	40.0	44.0	44.2	45.6	40.0	42.3	41.0	39.9	37.2	6	53.5	37.2	46.4	53.1	51.9	46.2	42.4	45.0	46.4	44.7	44.7
7	52.8	38.3	50.0	52.1	52.8	50.5	47.5	48.4	48.4	49.5	7	62.2	42.0	51.3	57.9	58.1	51.4	47.0	50.1	51.1	48.8	48.8
8	54.0	49.9	52.6	53.5	53.6	52.2	51.0	50.7	50.8	50.5	8	52.0	42.0	48.6	47.8	50.4	43.0	42.6	42.9	44.1	40.2	40.2
9	53.5	44.0	47.1	49.8	51.4	44.0	41.6	44.7	41.0	41.0	9	54.6	41.8	50.								

## GREENWICH METEOROLOGICAL OBSERVATIONS, 1948.

TABLE XXVI. - READINGS OF THE THERMOMETERS IN THE STEVENSON SCREEN IN THE CHRISTIE ENCLOSURE  
(The readings of the maximum and minimum thermometers apply to the 24 hours ending 21<sup>h</sup>)

Day of the Month	Dry-Bulb Thermometers, 4 ft. above the Ground.						Wet-Bulb Thermometers, 4 ft. above the Ground.				Day of the Month	Dry-Bulb Thermometers, 4 ft. above the Ground.						Wet-Bulb Thermometers, 4 ft. above the Ground.			
	Maxi- mum	Mini- mum	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>		Maxi- mum	Mini- mum	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>
MAY												JULY									
1	53.5	40.2	50.5	50.7	49.4	43.6	46.2	45.0	45.1	41.8	1	59.2	50.7	52.9	54.5	58.3	51.0	49.6	49.8	51.4	48.7
2	49.1	39.8	41.6	44.3	45.8	42.5	40.3	41.3	41.8	40.0	2	67.0	48.0	57.3	63.1	66.1	60.0	50.8	54.7	57.0	54.2
3	57.7	32.3	46.3	52.7	57.5	44.3	42.7	45.1	48.5	42.0	3	72.8	48.1	61.6	68.1	68.2	61.4	55.7	58.1	57.9	56.8
4	59.8	39.4	44.6	48.9	57.8	49.3	43.3	47.5	53.8	48.0	4	61.4	52.9	55.2	54.6	54.8	54.7	52.8	53.7	53.9	51.8
5	64.0	47.5	56.4	58.0	61.9	52.8	50.1	49.5	51.1	46.3	5	63.4	51.6	58.4	60.3	63.2	55.6	50.7	50.7	52.5	50.8
6	63.7	36.5	55.7	60.6	61.6	52.5	48.5	49.6	51.3	48.9	6	65.8	50.1	56.1	62.0	64.8	58.3	51.0	53.7	54.5	54.6
7	67.7	39.6	58.7	64.4	66.6	52.4	51.1	53.1	54.8	49.4	7	64.7	54.9	59.5	60.2	63.3	59.4	55.1	57.5	58.9	55.4
8	65.3	42.3	58.8	64.3	64.9	54.0	49.8	51.7	51.9	49.7	8	61.3	50.6	56.2	60.2	59.2	54.0	49.4	51.8	51.6	49.4
9	69.8	44.5	58.5	65.9	69.8	55.9	52.7	56.6	58.0	54.6	9	59.0	50.1	54.4	56.0	55.3	52.4	48.6	49.6	50.7	49.3
10	66.6	51.4	56.3	60.4	65.6	62.0	53.6	56.4	58.9	57.5	10	56.3	50.9	52.7	54.3	55.3	52.1	49.5	50.7	51.5	50.1
11	66.7	54.4	59.0	60.9	65.9	56.3	56.4	58.3	60.1	55.6	11	62.4	44.3	59.6	60.9	57.9	59.5	53.8	55.7	55.1	56.5
12	58.8	52.6	53.0	54.4	56.6	54.5	51.9	52.4	54.1	53.3	12	59.5	52.1	56.1	55.1	55.2	52.4	53.7	54.5	53.8	
13	68.4	46.7	51.8	63.0	66.8	56.4	50.8	56.9	57.3	54.4	13	67.0	52.0	56.5	63.9	59.8	56.0	53.6	54.3	53.8	
14	72.5	44.8	62.8	69.7	72.3	56.0	55.4	59.4	60.6	53.0	14	67.2	51.0	57.3	62.6	59.0	55.4	56.1	54.8		
15	70.8	49.3	63.8	67.0	70.6	55.8	56.0	57.8	58.1	51.8	15	60.1	54.6	57.4	59.3	59.2	56.2	52.4	53.0	52.7	
16	74.4	49.3	66.0	73.0	73.2	61.8	58.5	59.0	60.2	56.3	16	55.2	53.1	57.6	63.6	63.4	56.0	53.5	56.3	54.4	52.8
17	75.2	52.1	66.6	74.4	74.3	62.3	58.9	59.9	59.9	55.1	17	64.7	46.6	61.0	63.3	62.3	58.0	55.4	57.7	57.0	56.4
18	77.0	54.2	69.5	75.3	75.1	62.5	59.5	59.8	58.9	54.7	18	71.5	58.0	64.8	67.0	70.0	63.0	60.0	60.6	62.0	59.5
19	72.3	51.6	66.5	70.1	71.5	57.2	56.2	55.4	55.8	54.2	19	79.6	60.8	69.6	74.6	75.2	64.0	62.6	64.4	65.1	61.2
20	63.5	46.9	52.9	56.4	63.3	54.0	50.1	50.9	54.6	50.6	20	75.8	61.2	67.7	71.6	75.3	63.6	63.9	63.2	64.7	61.1
21	64.1	47.9	55.8	62.9	63.7	47.9	48.8	50.4	51.1	43.9	21	71.2	60.2	68.6	69.6	65.9	60.2	59.8	59.1	59.0	56.8
22	73.7	39.0	63.0	71.6	71.5	56.4	51.3	55.4	55.5	49.9	22	72.0	50.9	64.2	69.2	68.2	57.8	55.5	56.0	57.3	55.0
23	56.4	43.0	47.3	51.6	49.6	43.0	43.8	46.9	47.6	42.5	23	70.5	48.9	64.2	67.4	66.9	59.0	57.1	56.6	57.4	54.5
24	56.3	39.9	42.7	48.6	53.7	48.0	40.5	43.8	44.7	44.4	24	69.3	53.0	57.2	63.4	67.5	61.0	55.4	59.4	61.5	59.0
25	57.0	37.9	55.0	55.3	53.1	50.0	48.2	48.8	49.7	48.5	25	80.3	55.3	71.7	79.9	78.5	65.5	64.7	67.4	67.0	62.1
26	58.8	46.8	57.8	54.5	53.4	47.8	52.2	50.5	48.7	44.8	26	88.3	57.3	79.6	86.2	86.2	69.0	66.6	69.5	69.1	64.0
27	60.5	38.4	54.5	56.3	59.5	49.2	45.1	47.0	48.2	46.4	27	85.0	57.9	76.8	84.6	83.9	72.7	67.4	70.9	70.2	67.2
28	61.9	37.9	56.7	60.5	55.6	51.0	48.7	49.8	49.1	48.6	28	91.4	65.8	75.5	88.0	90.4	74.7	69.1	75.2	74.6	68.8
29	53.8	41.7	53.6	50.3	50.6	48.5	48.8	49.4	49.6	46.8	29	90.7	67.6	80.0	88.1	88.8	70.8	68.7	71.6	72.8	64.8
30	61.1	41.2	53.0	59.4	58.0	52.2	49.1	51.8	54.0	48.8	30	90.6	62.7	73.4	85.6	88.1	72.0	66.4	70.7	71.3	67.0
31	62.2	50.3	53.0	52.6	60.4	51.0	51.3	51.6	52.6	47.8	31	82.4	63.4	68.3	79.4	82.0	66.8	63.6	67.5	67.8	61.1
Means	64.0	44.5	55.9	59.9	61.9	52.6	50.3	52.0	53.1	49.3	Means	70.8	54.3	62.9	67.6	68.3	60.6	57.1	59.1	59.5	56.9
JUNE												AUGUST									
1	62.0	44.6	59.3	59.5	60.1	52.6	51.7	51.8	54.1	49.3	1	83.4	58.8	70.1	75.6	81.2	69.8	62.5	64.5	65.9	62.8
2	60.2	49.3	56.6	60.2	59.6	50.0	54.2	52.9	50.9	46.2	2	73.8	60.9	67.5	73.5	66.0	61.5	60.7	64.6	64.0	60.7
3	59.3	44.4	54.7	59.3	50.4	49.4	46.5	50.6	48.7	48.3	3	63.0	58.0	61.0	61.7	61.3	58.0	59.7	59.7	58.5	55.6
4	62.8	49.4	54.3	58.7	61.6	55.2	50.7	52.7	52.7	52.6	4	69.4	55.9	61.7	65.6	68.3	60.0	54.9	57.7	60.3	58.5
5	63.4	50.7	57.9	60.6	62.0	52.0	51.7	51.7	53.0	48.6	5	64.8	56.0	62.0	63.5	62.4	59.7	61.4	60.4	60.2	
6	62.8	48.5	56.1	59.3	60.0	58.8	52.6	51.9	56.0	54.4	6	68.0	59.4	64.3	67.8	64.7	61.0	62.8	65.0	63.7	60.2
7	70.0	49.5	61.4	66.8	67.2	57.3	54.5	57.4	57.3	54.8	7	72.3	59.8	64.2	70.7	69.0	60.8	63.0	63.0	59.6	59.6
8	79.7	52.8	68.6	76.9	77.8	64.3	62.6	67.3	67.1	58.8	8	70.0	56.7	59.7	61.5	68.0	60.8	58.6	58.9	62.0	59.3
9	69.7	52.6	62.3	69.4	65.0	56.8	53.7	58.4	58.2	53.8	9	70.8	57.2	61.7	63.6	66.5	61.1	59.2	59.9	60.0	56.1
10	67.8	51.3	59.2	59.5	65.3	66.7	57.7	54.9	58.1	59.7	10	63.5	56.8	58.5	59.3	61.2	58.4	54.9	55.7	55.4	
11	68.4	52.2</																			

TABLE XXVI. - READINGS OF THE THERMOMETERS IN THE STEVENSON SCREEN IN THE CHRISTIE ENCLOSURE  
(The readings of the maximum and minimum thermometers apply to the 24 hours ending 21<sup>h</sup>)

Day of the Month	Dry-Bulb Thermometers, 4 ft. above the Ground.					Wet-Bulb Thermometers, 4 ft. above the Ground.					Day of the Month	Dry-Bulb Thermometers, 4 ft. above the Ground.					Wet-Bulb Thermometers, 4 ft. above the Ground.				
	Maxi- mum	Mini- mum	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>		Maxi- mum	Mini- mum	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>	9 <sup>h</sup>	12 <sup>h</sup>	15 <sup>h</sup>	21 <sup>h</sup>
SEPTEMBER																					
1	68.9	52.6	61.8	64.7	65.6	59.5	56.6	57.1	56.4	55.0	1	50.8	37.5	45.7	46.9	48.6	50.8	44.7	45.9	47.8	50.5
2	66.0	51.6	60.6	64.0	64.1	58.2	59.2	61.4	61.2	56.6	2	58.0	50.8	54.5	56.9	57.9	56.7	54.2	55.7	56.4	55.9
3	67.7	54.5	62.2	61.9	62.6	56.2	57.2	58.4	58.3	54.5	3	58.7	52.2	56.0	57.0	56.8	52.2	51.8	52.8	51.8	48.6
4	65.0	53.4	55.3	58.4	62.2	59.0	54.1	56.5	57.7	57.3	4	57.0	48.6	53.6	54.3	55.5	50.2	50.6	48.1	48.3	47.7
5	63.8	53.4	57.2	62.3	62.5	53.4	55.4	57.3	56.8	52.5	5	53.0	44.8	47.7	51.2	50.5	44.8	44.7	44.8	44.3	42.4
6	67.5	53.3	58.6	64.5	66.5	55.4	55.1	54.8	54.0	51.7	6	51.9	36.7	42.6	49.8	48.6	45.0	40.5	44.3	44.1	42.0
7	70.5	47.7	60.9	67.3	65.3	60.8	55.6	58.6	59.5	58.5	7	47.3	41.6	43.6	45.0	45.4	43.5	42.7	43.9	44.0	42.0
8	72.6	57.0	63.2	70.4	68.6	58.4	58.7	61.1	61.1	56.6	8	48.1	38.6	43.0	46.4	46.7	38.6	38.9	42.0	41.0	36.0
9	78.9	54.1	66.5	75.3	77.4	61.2	61.5	64.9	64.0	57.7	9	46.9	27.9	32.7	46.0	45.2	41.0	31.5	41.6	42.1	39.8
10	74.2	59.9	70.6	71.3	72.3	62.0	64.5	65.6	66.3	60.2	10	51.7	31.3	37.9	49.3	47.2	38.6	36.7	45.5	44.6	38.0
11	67.9	54.0	58.0	63.9	62.7	54.0	57.0	58.5	56.3	49.5	11	56.5	37.0	41.6	52.9	53.6	48.0	40.6	48.6	50.2	47.0
12	61.0	46.6	59.3	57.4	55.3	56.0	53.1	53.4	53.3	54.8	12	57.0	41.6	46.2	55.0	54.1	48.6	45.4	51.2	51.1	47.1
13	66.3	47.8	54.7	61.1	66.3	57.4	49.2	53.2	54.6	54.4	13	63.0	45.7	52.7	60.5	59.0	50.1	49.8	55.8	54.7	48.3
14	71.5	57.4	63.9	67.6	71.5	59.4	59.7	60.6	60.7	55.9	14	60.2	49.3	55.2	59.5	58.0	54.1	51.5	55.7	55.0	52.9
15	68.4	50.7	57.8	63.5	64.8	56.0	54.6	59.5	55.9	54.0	15	55.6	50.0	55.3	54.5	50.0	53.0	52.9	53.0	49.2	49.2
16	65.0	45.4	53.8	61.9	64.5	55.8	50.8	53.9	55.2	52.8	16	53.4	46.9	51.6	53.4	51.9	47.7	51.1	51.1	47.0	47.0
17	66.4	44.7	55.0	62.8	66.1	54.0	50.8	55.0	57.4	51.4	17	53.7	43.9	45.9	51.1	51.3	50.4	45.3	48.6	48.3	48.4
18	68.8	51.1	61.6	64.6	67.4	58.0	57.6	57.9	56.3	56.1	18	60.4	50.4	57.8	60.3	59.4	56.0	55.9	57.4	56.9	54.8
19	67.2	53.8	61.3	63.7	67.0	59.2	58.3	57.9	59.1	56.0	19	59.1	54.2	57.1	59.1	57.8	56.8	55.3	55.7	53.9	53.8
20	64.7	52.3	57.1	62.6	62.6	52.3	50.5	53.6	52.6	47.7	20	56.8	45.5	49.2	54.7	54.0	45.8	46.3	48.7	47.7	44.2
21	56.1	42.8	48.8	52.6	55.6	46.7	43.6	45.4	46.3	41.2	21	54.3	41.5	45.5	53.2	52.8	47.3	44.2	48.5	47.0	45.8
22	59.8	36.2	48.4	57.4	57.0	51.0	42.9	48.2	48.7	47.6	22	47.3	40.0	41.2	41.7	43.4	40.0	40.7	40.9	42.3	39.7
23	60.9	48.9	55.1	59.3	58.7	56.7	51.8	54.8	55.6	54.2	23	41.7	36.2	37.9	41.7	41.2	39.3	37.6	40.9	40.7	38.9
24	68.5	50.2	59.2	67.6	64.8	53.7	56.2	58.6	57.1	52.0	24	46.6	36.2	37.1	45.4	44.0	38.3	36.8	42.2	41.5	36.8
25	72.8	48.4	62.0	70.4	72.4	57.4	57.9	58.8	60.4	55.4	25	47.6	32.7	38.2	45.4	45.0	37.1	37.2	41.2	41.2	35.1
26	78.7	53.3	66.1	76.6	76.0	61.7	61.1	65.4	64.5	58.2	26	51.7	31.6	35.7	47.6	48.1	38.0	34.8	43.8	44.9	37.6
27	68.0	57.8	63.3	65.7	66.8	64.6	59.8	61.0	61.6	61.6	27	46.0	34.0	39.2	44.2	44.0	34.0	39.0	43.7	43.5	33.9
28	72.1	59.0	62.9	68.3	71.0	59.0	62.2	64.4	60.7	56.7	28	38.6	33.6	34.7	36.7	38.5	37.4	34.6	36.6	38.3	37.4
29	64.5	55.8	59.6	62.5	63.4	57.0	57.1	57.2	58.1	54.7	29	37.4	28.6	31.0	29.5	30.1	32.8	31.0	29.4	30.1	32.8
30	70.0	47.5	55.5	66.8	70.0	56.0	52.9	58.9	60.0	54.5	30	37.1	31.1	31.5	34.8	36.4	31.5	32.8	35.6	31.5	31.5
Means	67.8	51.4	59.3	64.5	65.7	57.0	55.5	57.7	57.8	54.3	Means	51.6	40.7	44.7	49.5	49.3	44.8	43.3	46.3	46.4	43.5
OCTOBER																					
1	69.0	51.8	58.8	66.1	66.5	56.7	56.3	58.6	59.4	54.6	1	45.8	29.8	33.5	42.6	44.5	39.0	33.5	41.8	42.7	38.2
2	72.6	52.6	57.2	68.5	72.4	58.3	54.1	59.1	59.6	56.7	2	53.4	39.0	47.6	51.6	53.0	50.6	45.5	48.0	49.0	49.6
3	65.3	50.4	56.0	64.4	61.2	55.2	53.4	58.8	57.2	52.2	3	55.6	50.6	55.2	54.5	54.6	53.0	51.6	52.2	52.8	51.6
4	59.0	49.9	54.4	58.2	58.6	51.0	48.9	50.6	49.9	47.0	4	53.0	39.0	49.9	49.0	49.1	39.0	48.6	45.5	44.1	38.0
5	58.0	40.3	49.2	56.4	56.8	43.9	45.2	47.2	47.5	42.4	5	47.8	34.0	40.3	47.5	46.0	45.6	39.3	44.3	43.5	43.5
6	57.3	39.6	51.0	56.8	55.2	48.0	47.0	48.9	48.3	44.5	6	54.2	45.6	49.6	53.0	51.5	52.6	49.1	51.8	48.7	50.6
7	58.0	45.4	50.6	56.2	57.1	47.0	46.9	49.7	50.2	45.3	7	56.2	51.7	54.4	55.0	54.6	53.6	50.5	51.2	50.6	50.6
8	62.3	35.4	47.2	59.7	59.9	46.9	46.2	53.5	53.4	46.3	8	54.9	46.6	49.0	52.0	50.2	48.8	46.8	48.6	47.7	47.8
9	69.8	39.1	48.4	65.4	67.5	50.0	47.9	58.9	59.5	49.2	9	52.1	46.3	47.4	48.5	51.7	48.6	44.4	45.9	46.8	46.6
10	70.9	43.2	55.4	67.8	66.0	49.7	53.8	57.4	57.0	48.7	10	51.0	46.4	48.8	50.6	49.0	47.0	46.7	45.9	44.8	45.2
11	66.9	47.6	55.6	65.3	61.7	55.5	54.4	58.9	57.9	54.0	11	54.4	44.9	51.7	54.1	53.0	52.2	50.1	51.1	49.3	49.2</

## GREENWICH METEOROLOGICAL OBSERVATIONS, 1948.

TABLE XXVII. - READINGS OF THERMOMETERS AT 9<sup>h</sup> ON THE REVOLVING OPEN STAND  
(FORMERLY CALLED "ORDINARY") IN THE NEW SITE IN THE CHRISTIE ENCLOSURE

1948	January	February	March	April	May	June	July	August	September	October	November	December
Day	Max. Min.											
1	49.8 29.9	54.0 41.9	61.3 34.3	52.8 41.0	56.3 39.6	64.9 44.3	63.6 50.7	84.1 58.3	78.1 52.3	70.3 51.8	51.7 34.1	37.0 30.5
2	55.3 48.8	54.7 44.4	55.8 35.2	52.9 40.2	55.6 38.9	64.3 49.3	60.9 46.9	85.7 59.2	70.3 51.3	69.8 52.8	54.8 46.0	47.7 34.1
3	56.6 51.0	57.2 47.8	41.9 32.3	55.4 38.0	51.8 30.6	62.3 44.0	69.0 46.7	76.4 58.0	67.1 54.7	72.6 50.1	58.9 54.2	55.4 47.5
4	55.8 52.2	49.2 37.2	52.0 34.0	54.8 37.4	59.7 39.2	61.1 49.0	75.0 52.4	63.9 55.7	68.9 53.3	66.2 49.1	59.6 51.3	55.8 48.9
5	58.2 43.1	49.7 36.7	49.7 32.2	52.7 33.9	62.0 44.4	65.2 50.5	60.0 51.0	71.2 55.3	66.0 54.4	61.0 38.2	56.9 45.6	50.2 33.3
6	45.7 31.2	48.7 41.1	40.6 33.8	54.3 36.4	66.9 36.0	66.2 48.2	65.4 48.8	66.5 58.9	65.1 53.1	59.6 38.3	52.8 36.3	49.5 40.8
7	51.2 36.9	50.0 37.8	55.0 32.1	55.9 41.2	66.6 38.2	64.7 49.1	67.9 53.0	69.3 59.1	68.9 47.1	58.6 44.6	52.4 41.7	56.5 49.3
8	52.2 37.4	53.2 49.4	59.9 48.0	62.7 45.2	69.9 40.3	.. ..	66.1 50.1	74.0 56.6	70.8 57.0	59.9 34.7	45.4 39.1	56.4 46.8
9	42.9 32.4	54.6 44.0	62.8 43.4	53.8 41.2	69.0 42.6	.. ..	63.4 50.0	71.9 57.0	72.9 52.8	63.7 38.4	48.7 28.1	52.5 47.2
10	48.5 39.3	52.2 34.2	72.7 45.3	57.2 32.7	73.3 51.5	.. ..	61.9 51.1	72.9 56.6	78.9 59.2	68.9 42.3	47.7 31.7	52.5 45.8
11	50.8 39.8	52.3 41.5	60.7 36.2	59.8 40.0	69.5 53.4	.. ..	60.4 44.6	64.9 55.3	74.5 57.2	70.2 47.7	50.5 36.3	51.7 44.7
12	50.9 42.5	49.5 41.4	60.9 34.2	59.0 34.1	68.8 51.0	.. ..	63.8 52.0	65.9 55.6	68.4 46.3	66.9 54.1	56.0 41.1	54.7 48.9
13	54.3 43.8	49.4 38.9	66.3 37.1	62.7 37.6	60.6 44.8	.. ..	60.4 51.9	66.2 48.9	62.4 47.8	67.0 44.1	57.4 45.1	52.1 44.6
14	55.6 43.6	56.8 46.6	67.0 37.4	66.0 40.2	71.8 43.3	.. ..	69.0 50.6	62.2 51.8	66.2 55.6	61.5 52.7	62.6 49.6	55.8 49.9
15	48.0 38.2	54.1 43.4	65.2 43.9	60.7 37.8	75.7 47.6	.. ..	69.2 54.0	72.5 54.9	71.5 49.8	55.7 41.3	60.4 52.3	58.0 42.8
16	45.3 34.0	54.6 40.6	59.7 48.6	59.7 38.9	74.2 48.2	.. ..	61.0 53.0	73.6 51.6	69.8 44.0	58.0 48.6	55.8 46.4	47.7 38.2
17	41.2 30.6	46.3 33.3	58.0 42.4	59.3 46.5	77.5 50.8	69.9 52.0	67.8 45.7	74.7 50.7	65.9 44.2	62.6 52.5	53.9 44.1	47.0 39.2
18	50.0 36.0	41.3 27.0	54.7 41.1	57.2 38.8	79.1 53.2	68.6 49.6	67.3 56.8	70.9 47.6	66.8 50.9	57.7 45.0	57.8 45.7	50.0 36.9
19	43.3 29.7	39.9 31.4	54.2 38.8	69.8 41.8	80.4 50.4	67.8 49.7	74.5 60.7	70.3 51.3	69.8 53.0	56.8 36.1	60.6 54.2	44.6 37.9
20	39.9 37.1	36.5 21.7	56.3 46.0	73.7 47.9	76.3 46.0	70.6 50.7	80.8 61.0	70.7 45.8	67.7 51.7	54.2 41.4	59.3 45.4	43.6 37.5
21	40.5 33.4	28.8 21.0	58.4 45.3	74.2 45.5	66.9 49.7	66.9 50.2	77.1 59.6	70.3 50.2	67.0 42.3	58.0 50.0	55.4 41.9	42.0 38.0
22	42.3 33.2	30.6 20.0	57.0 44.9	73.4 52.4	68.0 39.2	67.2 50.1	72.1 50.7	67.6 55.0	57.8 36.0	62.8 54.9	54.0 40.4	43.2 37.5
23	43.4 32.2	34.0 27.6	56.7 33.5	64.0 39.0	76.1 46.2	66.3 49.0	74.6 48.3	71.7 51.5	60.7 49.3	63.9 43.8	43.6 36.3	38.8 30.2
24	41.5 35.9	35.0 30.1	56.2 30.4	65.9 40.0	56.0 40.0	70.9 46.2	72.3 52.2	69.0 53.0	61.8 50.0	57.4 47.3	42.7 35.6	41.0 31.8
25	46.7 33.2	39.0 29.2	56.4 32.8	67.6 44.0	59.5 36.8	69.8 51.9	74.1 54.6	77.4 62.6	69.1 49.1	62.0 50.8	46.4 31.4	45.3 28.5
26	46.8 35.5	38.4 30.5	60.2 39.4	66.1 43.3	60.0 48.6	73.9 59.0	82.2 56.9	75.8 54.1	72.8 51.9	57.5 37.1	47.0 30.7	36.9 21.3
27	46.3 36.6	40.4 31.6	62.0 41.3	64.6 40.4	61.0 37.5	82.6 57.8	90.7 56.3	70.8 46.8	78.2 57.7	45.6 26.7	50.3 34.8	30.5 23.2
28	47.4 34.2	45.1 32.6	56.9 36.2	72.4 50.2	63.9 37.2	70.2 50.0	88.3 64.2	70.7 50.0	69.6 62.5	45.9 31.8	46.7 33.9	34.9 29.7
29	48.9 37.5	56.6 33.9	62.7 44.1	67.0 42.0	65.2 39.8	63.0 47.2	94.9 66.2	70.7 45.0	72.2 55.7	49.2 42.7	38.0 30.7	49.3 34.0
30	52.0 41.6		58.6 44.9	58.6 40.9	55.0 39.2	61.2 48.5	94.7 61.0	75.3 48.9	65.6 47.0	47.0 40.1	33.2 28.8	45.4 36.2
31	55.7 44.8		57.5 34.3		64.6 50.3		94.3 63.0	78.0 47.6		44.4 31.6		48.7 33.8
Means	48.6 37.9	46.6 35.7	58.0 38.8	61.8 41.0	66.5 43.7	.. ..	72.3 53.7	71.8 53.3	68.8 51.2	59.8 43.9	52.0 40.5	47.6 38.4

TABLE XXVIII. - AMOUNT OF RAIN COLLECTED IN EACH MONTH OF THE YEAR 1948

Gauges partly sunk in the Ground in the Christie Enclosure	Monthly Amount of Rain collected in each Gauge													Height of Receiving Surface		
	Number of Gauge	January	February	March	April	May	June	July	August	September	October	November	December	Sums	Above the Ground	Above Mean Sea Level
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	ft. in.	ft. in.	
	6	3.210	1.690	0.764	1.198	1.608	2.218	1.038	4.061	0.959	2.153	1.825	1.978	22.702	0 5	149 6
	8	3.143	1.681	0.755	1.183	1.538	2.213	1.009	4.053	0.948	2.195	1.834	1.975	22.527	1 0	150 1
Number of Rainy Days (0.005 in. or over)		23	14	7	12	10	16	12	15	10	10	8	18	155	..	..

TABLE XXIX. - MEAN HOURLY MEASURES OF THE HORIZONTAL MOVEMENT OF THE AIR, IN EACH MONTH,  
AND GREATEST HOURLY MEASURES, AS DERIVED FROM THE RECORDS OF ROBINSON'S ANEMOMETER.\*

Hour Ending	January	February	March	April	May	June	July	August	September	October	November	December	Mean for the Year
h	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles
1	14.7	12.2	9.4	7.9	6.6	9.4	6.8	7.6	8.6	7.7	7.7	12.3	9.2
2	14.6	12.8	9.4	8.2	6.5	9.2	7.9	7.9	8.5	7.1	7.9	12.2	9.3
3	14.0	12.8	8.5	8.1	6.7	9.1	7.2	7.8	8.4	7.5	7.9	11.3	9.1
4	14.3	12.2	8.5	8.4	6.7	9.2	7.2	7.3	8.6	7.7	7.9	11.4	9.1
5	14.4	12.7	8.5	8.5	6.6	9.0	7.2	7.3	8.2	7.6	7.4	11.7	9.1
6	14.0	12.6	8.5	8.0	6.4	9.1	7.5	7.1	7.9	7.6	7.7	12.0	9.0
7	14.7	12.2	8.4	8.0	6.9	9.2	8.1	7.3	8.5	7.3	7.9	12.2	9.2
8	14.2	12.4	8.1	9.3	7.7	9.8	8.3	7.7	9.1	7.5	7.6	12.5	9.5
9	13.7	12.9	8.9	11.2	8.2	10.5	8.8	8.4	9.6	7.9	7.5	12.8	10.0
10	13.5	13.1	8.8	12.1	9.1	10.9	9.7	8.8	9.5	8.2	7.2	13.1	10.3
11	15.1	14.7	9.6	12.1	10.1	12.5	10.7	9.4	10.8	8.6	8.0	14.0	11.3
12	16.0	16.2	10.5	11.7	10.3	12.4	10.9	9.2	11.3	9.3	9.0	13.7	11.7
13	15.3	15.5	10.5	13.4	10.0	13.0	11.0	10.4	12.4	10.2	8.1	14.2	12.0
14	15.5	16.5	11.0	14.2	10.0	13.2	11.5	10.7	13.1	10.5	8.2	14.5	12.4
15	15.9	17.6	11.3	13.9	10.9	13.3	11.2	11.3	12.2	10.2	8.5	14.2	12.5
16	14.5	16.0	11.1	12.7	10.9	12.7	10.7	11.0	11.8	9.5	8.3	14.0	11.9
17	15.1	16.4	11.1	12.5	11.4	13.6	11.1	11.0	12.0	8.9	7.7	13.5	12.0
18	14.6	14.6	10.5	12.3	11.4	12.3	10.5	10.6	11.2	8.2	7.5	13.4	11.4
19	15.4	14.5	9.8	10.9	9.9	10.8	9.6	9.9	10.1	8.2	7.6	13.3	10.8
20	16.6	13.9	9.8	10.1	9.2	10.2	9.0	9.2	9.7	7.9	7.4	13.7	10.6
21	16.5	13.5	9.8	10.0	8.5	10.3	8.0	9.0	10.1	8.2	7.2	13.7	10.4
22	16.8	13.5	9.2	9.5	8.0	10.1	7.1	8.7	9.4	7.5	6.9	13.8	10.0
23	17.0	12.8	8.9	8.9	7.5	9.9	6.9	8.5	9.1	7.8	7.0	13.3	9.8
24	15.8	11.8	9.6	8.7	7.2	10.4	7.1	7.6	8.6	8.0	7.5	13.8	9.7
Means	15.1	13.9	9.6	10.4	8.6	10.8	8.9	8.9	9.9	8.3	7.7	13.1	10.4
Greatest Hourly Measures	38	37	37	35	25	32	29	28	28	24	24	38	..

\* The measures are derived from the motion of the cups by the formula  $V = 2.7 v$ , where  $v$  is the hourly motion of the cups in miles. See Introduction.



