



# RESULTS OF THE MAGNETIC & METEOROLOGICAL OBSERVATIONS

MADE AT THE ABINGER MAGNETIC STATION, SURREY  
AND THE ROYAL OBSERVATORY, GREENWICH  
RESPECTIVELY IN THE YEAR

1937

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

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THE ROYAL OBSERVATORY, GREENWICH  
AND  
ABINGER MAGNETIC STATION, SURREY.

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MAGNETIC AND METEOROLOGICAL  
OBSERVATIONS, 1937.

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INTRODUCTION.

During the year 1937 the staff employed in the Magnetic and Meteorological Department of the Royal Observatory consisted of W. M. Witchell, Superintendent, W. Stevens, G. F. Wells, P. L. Rickerby, B. R. Leaton, and two ladies engaged in computational duties. Computers employed during the earlier part of the year were:— Miss Clack, W. J. H. Dennis and F. E. Deeks. Miss Clack resigned in February after twenty years' service as computer.

On account of electric railways in the neighbourhood of Greenwich, magnetic observations are made at an out-station about six miles from the town of Dorking in Surrey, and one and a half miles from the village of Abinger Common. Mr. Stevens, resident observer and assistant-in-charge of the station, is assisted by Mr. Rickerby.

THE MAGNETIC STATION AT ABINGER, NEAR DORKING, SURREY.

The Station was established in 1924 on a site on the northern slope of Leith Hill, 800 feet above sea level. It is approximately 26 miles from the Royal Observatory in a direction a little south of south-west. The nearest railway track approaches to about  $2\frac{1}{2}$  miles. The adopted geographical position is Latitude  $51^{\circ} 11' 5''$  N., Longitude  $0^{\circ} 23' 12''$  W.

*General Description of the Buildings and Instruments of the Magnetic Observatory.*

The Magnetic Pavilion for absolute observations is constructed of carefully chosen non-magnetic materials, and measures approximately 28 feet by 15 feet. It contains four circular tables stoutly built of hard wood into concrete piers 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 observing horizontal intensity, on the south-east pier the coil-magnetometer for observing vertical intensity, and on the south-west pier the dip inductor.

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

The unifilar magnetometer, mounted until August 1928 in the Magnetic Pavilion, is at present used in this pavilion. It has been ascertained by interchange of two coil-magnetometers, simultaneously operated, that as regards horizontal intensity the site difference is negligible.

A second pavilion, 20 feet in length and breadth, suitable for comparative observations and more convenient than the first for standardising magnetic instruments, was completed in 1932. It occupies a position on the north-east of the pavilion for absolute observations corresponding to that of the testing pavilion on the south-east and contains three circular wooden tables built into concrete piers free from contact with the floor, similar to those in the Magnetic Pavilion.

The Magnetograph House stands 50 feet east of the Magnetic Pavilion in which the absolute magnetic observations are made. The recording instruments are situated in an inner chamber 15 feet long, 12 feet wide, and 8 feet high. This chamber is supported on small concrete piers and is surrounded by an outer chamber, whose walls of non-conducting material are nearly 2 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 about 50 suitably insulated low-temperature non-magnetic metallic resistance strips each consuming 25 watts. The current used is alternating, and is therefore without effect upon the magnetic registration.

A small power-house with storage battery and alternating generator for the supply of electric current required in lighting and heating is situated about 125 yards south of the observation houses. A public mains supply of three-phase current became available early in the year, however, and from March 11 the current used at the station was largely drawn from the mains.

The temperature of the Magnetograph House is controlled by a thermostat placed in the centre of the room, at the same level as the magnetic instruments. This actuates a relay, which switches the electric current into or out of the heating circuits. The departure from a mean temperature is not more than  $0^{\circ}\cdot 2$  C.

The centres of the three instrument piers are situated as follows: For the horizontal intensity instrument, 2 feet west and 2 feet 6 inches south of the north-east angle of the room; for the declination instrument, 5 feet 6 inches west and 5 feet south of the same angle; for the vertical intensity instrument, 2 feet east and 3 feet north of the south-west angle. The two piers which support the recording mechanism occupy the north-west and south-east corners of the room, their longer sides being in the direction at right angles to the meridian. The clocks can be wound and the recording drums inserted or removed through shuttered openings in the wall of the inner chamber. The temperature in the chamber is read daily from a thermometer attached to the horizontal intensity instrument.

The horizontal intensity and declination instruments record on the south-east drum; the vertical intensity instrument on the other drum. Both drums are horizontal and are 10 inches long by  $5\frac{1}{2}$  inches in diameter. Their normal period of revolution is 30 hours and the time scale 15 mm. to the hour. The registering beams of light are focussed on the drum by an adjustable cylindrical lens. Two horizontal straight-filament lamps mounted at suitable heights on the north and south walls of the chamber provide the time-registration for the photographic sheets. The lamps are illumined for a period of one second centred at each exact hour of Universal Time, the current being controlled by a relay connected to a mean solar clock in the computing room. The effect is to produce narrow dark hour-lines right across the photographic records.

The error of the clock is observed daily by comparison with a radio time signal from one of the official broadcasting stations. Correction is made by magnetically altering the rate until the observed error has been removed. The error thus seldom exceeds one second.

It should be mentioned that in order to dispense with the necessity of continuously running an alternator in circuit with the storage battery, the illuminating lamps for the recording drums and also the hourly-signal lamps are lit by *direct* current, special care being taken with the return circuit. Experiments have shown that, with the precautions taken, the effect of this current on the variometer records is negligible. Alternating current for heating the chamber or for general illumination is supplied

as required, the alternating generator being started and stopped automatically by the thermostat at the same time as the heating circuit is switched in and out. From May 10, all current was alternating, the source from that day being the public mains supply.

#### INSTRUMENTS.

**DECLINATION MAGNET FOR ABSOLUTE DETERMINATIONS.**—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° of torsion deflects the magnet about 3' of arc. The telescope has a six-inch circle on which azimuths are read by means of two microscope-micrometers to 1" of arc. 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 have been made at intervals by means of observations of Polaris. During each observation of Polaris, both direct and reflected views 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.

#### ABSOLUTE HORIZONTAL INTENSITY INSTRUMENTS.

**THE SCHUSTER-SMITH COIL MAGNETOMETER.**—This instrument has been lent to the Observatory by the Director of the National Physical Laboratory. It is the second constructed of the type 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 observation 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" of arc 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 the ten loops in a double spiral being that adopted in the original instrument referred to above. The whole forms a Helmholtz-Gauguin 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 a little over 7 feet 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 e.m.f. across a known resistance is balanced against that 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 the 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 position 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 piece 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 that 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 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 azimuth 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 observation of horizontal intensity is readily obtained in two minutes.

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 1937 is based were verified in August 1937. The factor at present adopted to convert the measure of current from international units to C.G.S. units is 0.99997.

If  $F$  be the factor of the coil and  $i$  be the current passing in ampères, 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 ( $1 - .000043 t$ ),  $t$  being temperature Centigrade.

The observed value of horizontal intensity obtained from this instrument is subject to a correction of  $-I\gamma$  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.

A KEW-PATTERN UNIFILAR MAGNETOMETER by Messrs. C. F. Casella & Co. (No. 181) is also used to determine absolute horizontal intensity. Deflection observations are made at three distances, namely, 22.5 cms., 30 cms. and 40 cms. 10 observations of the moment of inertia of the collimator magnet were made during the year 1937. The mean observed value of  $\log K$  from these determinations was 2.42361. This value has been used in the reductions and is based on the Greenwich Standard Inertia Cylinder. (See Appendix II of the Magnetic Results, 1926).

The mean values of the distribution constants  $P$  and  $Q$  derived from 88 normal determinations made during the year are +9.87 and -1670 respectively.

The values used in the reduction of the 1937 observations, however, are the mean values obtained from a series of 235 special observations made during the year 1936. These values are:  $P = +9.17$ ,  $Q = -1409$ .

The method employed in reducing the special series was as follows:—

A deflection observation gives  $H$  through the equation  $H \sin \alpha = \frac{2m}{r^3} \left( 1 + \frac{P}{r^2} + \frac{Q}{r^4} + \dots \right)$

If deflections,  $\alpha$ , are made at several distances,  $r$ , and the values of  $H$  and  $m$  are known from some other source, a direct solution of the equations for  $P$  and  $Q$  is possible by "least squares." The value of  $m$  was determined from the period of vibration and

the moment of inertia of the deflecting magnet, in combination with the value of  $H$  as observed by a coil-magnetometer at the time of the vibration experiment. The values of  $r$  were 22·5, 25, 30, 35, 40, 45, 50 cms.

In 1937 the deflection at 22·5 cms. has not been used in computing observed values of horizontal intensity.

VERTICAL INTENSITY COIL MAGNETOMETER.—This instrument, designed by the late Dr. D. W. Dye, F.R.S., for direct measurement of vertical intensity, and constructed under his supervision at the National Physical Laboratory, Teddington, has been lent to the Royal Observatory by the Director of the National Physical Laboratory. It is erected on the south-east pier of the observing pavilion, and was adopted as the standard for observation 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 in 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. D 13). The current is taken from the battery that supplies the *Schuster-Smith* instrument.

The adopted value of the factor is  $F=3\cdot59643(1 - \cdot0000079 t)$ ,  $t$  being temperature Centigrade.

The constants of the potentiometer in use during the year for the measurement of the current were verified at the National Physical Laboratory in August, 1937.

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 of the instrument mentioned above.

A weak alternating current, supplied from a generator at some distance from the instrument, passes through the test coil. The reaction between this current and the magnetic field causes the coil to receive an alternating rotatory force which only vanishes 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 mirror, of an image of cross wires to a screen erected about 2 metres distant.

ABSOLUTE INCLINATION INSTRUMENT.—An Earth Inductor by The Cambridge Instrument Co., 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.

THE DECLINATION VARIOMETER.—The magnet is a single short needle of chromium steel, 10 mm. long and 0.4 mm. in diameter. The mirror for reflecting a beam of light on to the recording drum is  $2\frac{1}{2}$  mm. square, and is fastened by shellac to a small piece of stout aluminium foil. The foil is shaped above the mirror to form two small V hooks, by which it is hung on to the magnet. A small mica damping vane is fixed to the foil below the mirror, and the needle is rendered aperiodic by adjusting brass damping plates on either side of the vane. Adjustment of the beam of light is made solely by adjusting the position of the illuminating lamp, which has sliding attachment to a vertical wooden pillar capable of being fixed in any desired position in the room.

A very fine quartz filament .003 mm. in diameter forms the suspension-thread, and the displacement produced by revolving the torsion head  $360^\circ$  is only a fraction

of a minute of arc. The distance of the magnet-mirror from the recording cylinder is such that the geometric scale-value at the centre of the photographic sheet is  $0' \cdot 610$  per mm. As the beam is not normal to the drum, however, the scale value varies from  $0' \cdot 605$  at the top of the sheet to  $0' \cdot 615$  at the bottom. Expressed as magnetic intensity the corresponding mean scale-value would be  $3 \cdot 29\gamma$  per mm. at the present time.

A base-line mirror, with lens, is mounted rigidly on the pier at the side of the variometer and serves to provide a common base line for both declination and horizontal intensity records.

THE HORIZONTAL INTENSITY VARIOMETER.—The general construction of the instrument is in all respects similar to that of the declination variometer. The suspension filament is of quartz  $0 \cdot 012$  mm. diameter. The needle is adjusted to a position at right angles to the magnetic meridian by means of the torsion head in the following manner. Orientation marks have been drawn on the western wall of the room subtending successive degrees of azimuth at the centre of the variometer pier. An ordinary magnetometer distance-bar, securely held beneath the base of the variometer in a wooden frame, is by this means easily set at right angles to the magnetic meridian, and upon it is placed, about 25 cms. from the variometer, the usual carrier with a magnet mounted in position. A relatively strong magnetic field is thus imposed at right angles to that of the earth, and the torsion head is adjusted until the needle of the variometer is negligibly disturbed by the reversal of the imposed field. The magnet is then transferred to an equal distance on the opposite side of the variometer, and the experiment is repeated. Any error due to imperfect correspondence of the centre of the distance-bar with the point of suspension of the variometer needle is eliminated by setting the torsion head to the mean position.

An adjustment of orientation was made on February 13, 1935, by which the needle will be maintained within about  $30'$  of the correct azimuth until the end of 1942.

The scale value of the variometer is determined from the deflections produced electro-magnetically by passing measured current through a Helmholtz coil of 50 cms. radius which envelopes the instrument. The factor for the coil is determined, absolutely, by using the coil in the same manner to deflect the needle of the declination variometer. The horizontal intensity at the time of the experiment being known, the strength of the field necessary to produce the observed deflection is readily computed.

The adopted scale value was  $2 \cdot 62\gamma$  per mm. throughout the year.

THE QUARTZ-THREAD VERTICAL INTENSITY VARIOMETER.—For a detailed description of the instrument reference may be made to the *Philosophical Magazine*, vol. vii.,

sixth series (1904), p. 393. The base of the instrument consists of a metal casting with uprights at the two ends, carrying attachments for the ends of the quartz fibre which supports the magnet system. By an ingenious arrangement the length of the frame, carrying the horizontal quartz fibre that suspends the magnet system, is defined by quartz tubes. The metal rods composing the sides of the frame pass through these tubes and, by the reaction of stiff springs, press the ends of the frame firmly on to the ends of the quartz tubes. The change in tension of the suspension thread with change of temperature, which would be produced by the difference in the coefficients of expansion of quartz and brass, is avoided by this design. The instrument was carefully adjusted at Greenwich for elimination of other temperature effects, in the manner explained in the description given in the *Philosophical Magazine*, but a small effect has developed since 1927.

The magnet system consists of two magnets, 8 cms. long and 1 mm. in diameter, which are attached by small platinum stirrups to two rods of fused quartz; these are fused to a quartz plate, whose upper surface is optically worked and platinised to form a plane mirror. The quartz rods are drawn out at their other ends into fibres of about 0.08 to 0.10 mm. diameter; one fibre is fused to a coiled quartz spring. The quartz spring and the other fibre are soldered to small brass rods fitting into clamps at the two ends of the metal base. The thread is under sufficient tension to stretch the spring through about two millimetres. A right-angled prism, supported in a frame above the mirror, reflects the light from the illuminating lamp on to the mirror and then, after reflection from the mirror, back in a horizontal direction to the recording drum. A single lens, placed between the mirror and the prism, brings the light to a focus on the drum. The prism frame is adjustable in azimuth to enable the trace to be brought to any desired part of the drum. An adjustable mirror beneath the quartz fibre and adjacent to the mirror of the magnet system serves to give a base line.

The sensitiveness of the instrument is varied by raising or lowering the centre of gravity of the magnet system. Coarse adjustment is obtained by means of small aluminium discs pierced centrally to allow them to rest on a slender vertical quartz pin provided for this purpose at one side of the mirror. To obtain fine adjustment a small vertical screw is fixed at the opposite side of the mirror and a small piece of aluminium can be moved up and down the screw.

The scale value is obtained by electro-magnetic deflections. The radius of the coil used for this purpose is 30.15 cms. The mean of the scale values adopted during the year 1937 was  $2.52\gamma$  per mm. until September 13; afterwards  $2.55\gamma$ . Slight

deviations from the mean value occur when the standard temperature of the room is raised or lowered. The value is sensibly uniform over the range allowed by the photographic sheet.

#### MAGNETIC REDUCTIONS.

The time used is *Universal Time* (U.T.).

The estimated mean ordinates of the photographic traces for each hour are measured from the base-lines by the aid of an etched glass scale, the hour being the period of sixty minutes *commencing* at the time named in the table—and from the tables of these measures are obtained the mean monthly values for each hour of the day, and the mean daily value of the element for each day of the month. The daily mean is taken from the 24 hourly mean ordinates.

Base-line values are adopted from smooth curves drawn through points plotted on a chart, each point representing the mean result from several independent observations.

Ten observations of declination, eight of horizontal intensity and six of vertical intensity are made, on an average, each week-day. Previous to 1929 the base-line values for vertical intensity traces were computed from absolute observations of inclination combined with simultaneous values of horizontal intensity taken from the magnetograms. From 1929 January 1, the values have been obtained directly from observations of vertical intensity with the coil-magnetometer. A discontinuity arises in the definitive values of vertical intensity at the time of changing the method of deriving the base-line value of the magnetograms.

The magnetograph chamber being maintained at a sensibly constant temperature, no temperature corrections are required in general. When the seasonal changes are made in the temperature at which the chamber is maintained, new base-line values are adopted from the hour at which control is observed to be established, and during the period of change interpolated values are applied at hourly intervals.

#### ARRANGEMENT OF RESULTS.

Tables I to III contain the hourly results for declination, horizontal intensity and vertical intensity respectively.

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.

Then follow in Tables V to VII the monthly and annual mean diurnal inequalities for all days, and for quiet and disturbed days as selected by the International Committee. In addition to monthly and annual values there are also given mean values

of the diurnal inequalities grouped into the seasonal periods, Winter (that is January, February, November, December), Equinox (March, April, September, October) and Summer (May, June, July, August). The values in these tables have *not* been adjusted for the effect of non-cyclic change.

From the inequalities in declination, horizontal intensity and vertical intensity, corresponding inequalities in the north and west components and in inclination have been computed and appear at the same opening of the page. In general, the computations are carried to one significant figure beyond the actual figure printed.

The extremes of any inequality are indicated by heavy type.

The inequalities in the north, west and vertical components (that is in X, -Y, Z) have been subjected to harmonic analysis, the results being given in Tables VIII and IX. In the case of the International Quiet and Disturbed Days, the inequalities were adjusted for non-cyclic change before analysis, but in analysing the results for "All" Days the non-cyclic change was ignored. The phase angles in Table IX are corrected to refer to Abinger Local Mean Time.

In Table X are given the mean diurnal ranges in declination, horizontal intensity and vertical intensity for each month, for the year and for the seasons. The corresponding results for quiet and disturbed days are also given. The quantities are derived from Tables V to VII.

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

Table XII contains the mean monthly and annual values of the components collected together. In this table corrections have been applied, when necessary, to the values of H and V 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 XV contain the daily values of the base lines of the magnetograms deduced from absolute observations of declination, horizontal and vertical intensity.

On p. D 62 is printed a table giving 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 observations of declination made in 1818 to 1820. These observations were taken with a Dollond magnet thrice daily from June



1818 to December 1820. As a general rule the times of observation were 8 a.m., noon and 4 p.m., and there were comparatively few intermissions. The results were published in detail in "Astronomical Observations at the Royal Observatory," by John Pond, Astronomer Royal. Corrections for a presumed diurnal inequality have been applied to the monthly means in 1818-19-20 according to the hour of observation, the quantities being derived from years—1909-10-11, respectively,—in a corresponding relation to the cycle of solar activity.

A table follows giving the values determined at the Abinger Station since 1925.

Reduced copies of the magnetograms for certain disturbed days have been printed in each volume since 1882. The days are now those selected at De Bilt for the International Committee. These dates in 1937 are February 2-3; March 31; April 24, 25, 26, 27, 28; May 4-5; August 22; September 30-October 1; October 9-10. Where two days are mentioned together, it is to be understood that the reference is to a series of 24 consecutive hours comprising parts of two consecutive days.

The plates are preceded by a brief descriptive summary of significant magnetic motions (superposed on the ordinary diurnal movement) recorded during the year.

With regard to the plates, on each day three distinct registers are given, viz.: declination, horizontal intensity, and vertical intensity marked D, H and V respectively.

At the foot of each plate, scales, in C.G.S. measure, are given for each of the magnetic registers and a datum line is marked for each trace at the side of the diagrams. Upward motion indicates increase of declination west and increase of intensity in all cases.

H. SPENCER JONES.

ROYAL OBSERVATORY, GREENWICH.  
1938 *September 14.*

ROYAL OBSERVATORY, GREENWICH.  
ABINGER MAGNETIC STATION.

# Results of Magnetic Observations

1937

TABLE I.—HOURLY MEANS OF MAGNETIC DECLINATION AT THE ABINGER MAGNETIC STATION.

Table with columns for U.T. (0h to 24h) and rows for January and February. Each row contains 24 values representing magnetic declination. Includes sub-headers for 'January' and 'February' and '11° + Tabular Quantities.' Summary rows for Mean, Mean\*, and Mean\*\* are provided for each month.

\* Denotes an International Quiet Day.

\*\* Denotes an International Disturbed Day.

TABLE I.—HOURLY MEANS OF MAGNETIC DECLINATION AT ABINGER—continued.

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>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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1**	9.7	10.7	12.1	12.9	12.5	11.8	11.6	11.2	11.7	13.5	15.6	16.7	18.7	17.9	19.2	18.6	18.1	17.1	17.5	18.1	14.7	10.8	3.0	7.9	2	15.4	14.1	11.5	12.9	12.1	10.5	11.1	10.3	10.8	16.7	14.2	17.3	19.0	21.6	21.7	17.7	17.5	16.9	12.8	9.3	11.5	11.3	11.9	11.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
3*	11.1	12.2	12.5	12.3	12.4	12.1	11.4	10.2	9.3	10.0	13.0	16.4	18.2	19.2	17.7	15.7	14.4	14.0	14.6	14.4	14.0	13.7	13.6	13.3	13.3	4	13.2	13.0	13.2	13.5	12.7	12.0	11.7	11.3	10.2	10.6	12.7	15.5	17.8	19.4	18.2	16.4	15.2	14.7	14.3	14.2	14.0	13.7	13.7	12.7	5**	12.5	10.9	10.1	11.2	9.2	8.7	11.1	9.9	9.7	11.7	18.9	22.2	23.2	26.7	23.0	22.7	21.4	16.1	14.7	13.9	12.8	9.7	3.3	7.7	6	8.0	8.8	9.7	10.8	11.5	11.2	11.1	10.6	10.6	11.2	13.0	14.6	16.2	16.1	15.9	15.2	14.2	14.5	14.6	14.5	13.7	13.6	13.4	13.1	7*	12.8	12.9	12.6	12.6	12.6	12.2	11.8	11.5	10.5	10.8	12.8	14.6	16.7	17.6	17.2	15.8	14.8	14.6	14.4	13.9	13.8	13.6	13.5	13.3	8*	12.9	12.7	12.7	12.5	12.1	11.5	11.8	11.2	9.5	9.3	11.1	13.8	16.5	17.6	16.5	15.5	14.7	14.7	14.5	13.7	13.8	13.8	13.7	13.3	9	10.7	8.3	8.8	9.0	9.4	10.3	11.4	11.5	10.5	11.5	14.1	17.0	18.8	20.0	19.4	16.4	15.1	14.8	14.4	13.4	14.7	13.4	12.6	13.3	10	12.4	12.9	12.9	12.6	12.3	11.6	11.5	11.0	10.1	11.1	13.6	16.2	17.8	17.2	17.2	17.5	15.4	14.7	14.7	14.2	14.0	13.7	13.2	12.2	11*	12.6	13.2	13.2	13.0	12.6	11.8	11.2	9.8	8.3	9.0	12.2	16.2	18.2	19.2						13.8	13.2	12.7	13.7	13.7	12*	13.8	13.6	13.2	13.0	12.8	12.2	11.7	10.5	9.2	9.2	11.5	15.4	18.4	19.2	18.5	16.5	15.0	14.6	14.3	14.0	13.9	13.9	13.9	13.8	13.2	13	13.4	13.5	13.2	13.1							(13.1)	15.9	18.7	18.9	17.9	16.2	14.6	14.3	14.3	13.7	13.3	13.0	5.0	0.5	14	3.9	6.0	2.1	4.2	10.7	12.2	11.5	9.9	9.2	11.1	14.2	17.9	17.9	18.6	18.4	17.6	15.9	11.6	13.7	13.5	13.3	12.5	11.6	9.5	15**	10.0	11.0	11.0	10.0	9.3	10.0	14.0	15.9	15.3	14.4	15.4	19.7	(22.5)	22.7	20.3	16.1	14.2	13.6	13.8	13.1	12.4	12.2	12.2	12.0	16	11.9	12.1	12.1	11.9	11.7	11.5	11.4	10.5	10.3	11.3	13.5	16.0	17.8	19.2	18.5	17.3	15.6	14.9	15.4	14.2	13.9	9.5	11.8	12.5	17	12.1	13.4	12.9	11.1	9.9	10.5	10.3	10.0	8.9	8.4	10.4	13.5	16.6	17.5	18.0	17.3	15.1	14.6	12.3	10.6	12.0	9.0	9.5	12.6	18	11.6	11.8	11.7	12.5	12.0	12.1	12.8	10.2	7.2	7.2	10.8	14.4	17.0	18.9	(19.5)	(18.3)	(15.3)	13.6	13.7	13.8	13.1	10.0	10.0	11.3	19	9.9	10.3	12.3	12.4	11.9	11.4	11.4	10.4	9.1	10.7	13.6	17.3	20.2	21.3	20.5	17.5	15.4	14.5	14.4	14.4	14.2	13.6	10.1	10.6	10.8	20	8.8	10.2	10.3	10.2	9.1	9.6	10.4	9.1	7.3	8.9	12.3	15.6	16.8	18.6	17.6	16.5	14.5	13.6	13.3	13.5	13.6	12.6	11.5	11.8	21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7
5**	12.5	10.9	10.1	11.2	9.2	8.7	11.1	9.9	9.7	11.7	18.9	22.2	23.2	26.7	23.0	22.7	21.4	16.1	14.7	13.9	12.8	9.7	3.3	7.7	6	8.0	8.8	9.7	10.8	11.5	11.2	11.1	10.6	10.6	11.2	13.0	14.6	16.2	16.1	15.9	15.2	14.2	14.5	14.6	14.5	13.7	13.6	13.4	13.1	7*	12.8	12.9	12.6	12.6	12.6	12.2	11.8	11.5	10.5	10.8	12.8	14.6	16.7	17.6	17.2	15.8	14.8	14.6	14.4	13.9	13.8	13.6	13.5	13.3	8*	12.9	12.7	12.7	12.5	12.1	11.5	11.8	11.2	9.5	9.3	11.1	13.8	16.5	17.6	16.5	15.5	14.7	14.7	14.5	13.7	13.8	13.8	13.7	13.3	9	10.7	8.3	8.8	9.0	9.4	10.3	11.4	11.5	10.5	11.5	14.1	17.0	18.8	20.0	19.4	16.4	15.1	14.8	14.4	13.4	14.7	13.4	12.6	13.3	10	12.4	12.9	12.9	12.6	12.3	11.6	11.5	11.0	10.1	11.1	13.6	16.2	17.8	17.2	17.2	17.5	15.4	14.7	14.7	14.2	14.0	13.7	13.2	12.2	11*	12.6	13.2	13.2	13.0	12.6	11.8	11.2	9.8	8.3	9.0	12.2	16.2	18.2	19.2						13.8	13.2	12.7	13.7	13.7	12*	13.8	13.6	13.2	13.0	12.8	12.2	11.7	10.5	9.2	9.2	11.5	15.4	18.4	19.2	18.5	16.5	15.0	14.6	14.3	14.0	13.9	13.9	13.9	13.8	13.2	13	13.4	13.5	13.2	13.1							(13.1)	15.9	18.7	18.9	17.9	16.2	14.6	14.3	14.3	13.7	13.3	13.0	5.0	0.5	14	3.9	6.0	2.1	4.2	10.7	12.2	11.5	9.9	9.2	11.1	14.2	17.9	17.9	18.6	18.4	17.6	15.9	11.6	13.7	13.5	13.3	12.5	11.6	9.5	15**	10.0	11.0	11.0	10.0	9.3	10.0	14.0	15.9	15.3	14.4	15.4	19.7	(22.5)	22.7	20.3	16.1	14.2	13.6	13.8	13.1	12.4	12.2	12.2	12.0	16	11.9	12.1	12.1	11.9	11.7	11.5	11.4	10.5	10.3	11.3	13.5	16.0	17.8	19.2	18.5	17.3	15.6	14.9	15.4	14.2	13.9	9.5	11.8	12.5	17	12.1	13.4	12.9	11.1	9.9	10.5	10.3	10.0	8.9	8.4	10.4	13.5	16.6	17.5	18.0	17.3	15.1	14.6	12.3	10.6	12.0	9.0	9.5	12.6	18	11.6	11.8	11.7	12.5	12.0	12.1	12.8	10.2	7.2	7.2	10.8	14.4	17.0	18.9	(19.5)	(18.3)	(15.3)	13.6	13.7	13.8	13.1	10.0	10.0	11.3	19	9.9	10.3	12.3	12.4	11.9	11.4	11.4	10.4	9.1	10.7	13.6	17.3	20.2	21.3	20.5	17.5	15.4	14.5	14.4	14.4	14.2	13.6	10.1	10.6	10.8	20	8.8	10.2	10.3	10.2	9.1	9.6	10.4	9.1	7.3	8.9	12.3	15.6	16.8	18.6	17.6	16.5	14.5	13.6	13.3	13.5	13.6	12.6	11.5	11.8	21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																			
7*	12.8	12.9	12.6	12.6	12.6	12.2	11.8	11.5	10.5	10.8	12.8	14.6	16.7	17.6	17.2	15.8	14.8	14.6	14.4	13.9	13.8	13.6	13.5	13.3	8*	12.9	12.7	12.7	12.5	12.1	11.5	11.8	11.2	9.5	9.3	11.1	13.8	16.5	17.6	16.5	15.5	14.7	14.7	14.5	13.7	13.8	13.8	13.7	13.3	9	10.7	8.3	8.8	9.0	9.4	10.3	11.4	11.5	10.5	11.5	14.1	17.0	18.8	20.0	19.4	16.4	15.1	14.8	14.4	13.4	14.7	13.4	12.6	13.3	10	12.4	12.9	12.9	12.6	12.3	11.6	11.5	11.0	10.1	11.1	13.6	16.2	17.8	17.2	17.2	17.5	15.4	14.7	14.7	14.2	14.0	13.7	13.2	12.2	11*	12.6	13.2	13.2	13.0	12.6	11.8	11.2	9.8	8.3	9.0	12.2	16.2	18.2	19.2						13.8	13.2	12.7	13.7	13.7	12*	13.8	13.6	13.2	13.0	12.8	12.2	11.7	10.5	9.2	9.2	11.5	15.4	18.4	19.2	18.5	16.5	15.0	14.6	14.3	14.0	13.9	13.9	13.9	13.8	13.2	13	13.4	13.5	13.2	13.1							(13.1)	15.9	18.7	18.9	17.9	16.2	14.6	14.3	14.3	13.7	13.3	13.0	5.0	0.5	14	3.9	6.0	2.1	4.2	10.7	12.2	11.5	9.9	9.2	11.1	14.2	17.9	17.9	18.6	18.4	17.6	15.9	11.6	13.7	13.5	13.3	12.5	11.6	9.5	15**	10.0	11.0	11.0	10.0	9.3	10.0	14.0	15.9	15.3	14.4	15.4	19.7	(22.5)	22.7	20.3	16.1	14.2	13.6	13.8	13.1	12.4	12.2	12.2	12.0	16	11.9	12.1	12.1	11.9	11.7	11.5	11.4	10.5	10.3	11.3	13.5	16.0	17.8	19.2	18.5	17.3	15.6	14.9	15.4	14.2	13.9	9.5	11.8	12.5	17	12.1	13.4	12.9	11.1	9.9	10.5	10.3	10.0	8.9	8.4	10.4	13.5	16.6	17.5	18.0	17.3	15.1	14.6	12.3	10.6	12.0	9.0	9.5	12.6	18	11.6	11.8	11.7	12.5	12.0	12.1	12.8	10.2	7.2	7.2	10.8	14.4	17.0	18.9	(19.5)	(18.3)	(15.3)	13.6	13.7	13.8	13.1	10.0	10.0	11.3	19	9.9	10.3	12.3	12.4	11.9	11.4	11.4	10.4	9.1	10.7	13.6	17.3	20.2	21.3	20.5	17.5	15.4	14.5	14.4	14.4	14.2	13.6	10.1	10.6	10.8	20	8.8	10.2	10.3	10.2	9.1	9.6	10.4	9.1	7.3	8.9	12.3	15.6	16.8	18.6	17.6	16.5	14.5	13.6	13.3	13.5	13.6	12.6	11.5	11.8	21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																					
9	10.7	8.3	8.8	9.0	9.4	10.3	11.4	11.5	10.5	11.5	14.1	17.0	18.8	20.0	19.4	16.4	15.1	14.8	14.4	13.4	14.7	13.4	12.6	13.3	10	12.4	12.9	12.9	12.6	12.3	11.6	11.5	11.0	10.1	11.1	13.6	16.2	17.8	17.2	17.2	17.5	15.4	14.7	14.7	14.2	14.0	13.7	13.2	12.2	11*	12.6	13.2	13.2	13.0	12.6	11.8	11.2	9.8	8.3	9.0	12.2	16.2	18.2	19.2						13.8	13.2	12.7	13.7	13.7	12*	13.8	13.6	13.2	13.0	12.8	12.2	11.7	10.5	9.2	9.2	11.5	15.4	18.4	19.2	18.5	16.5	15.0	14.6	14.3	14.0	13.9	13.9	13.9	13.8	13.2	13	13.4	13.5	13.2	13.1							(13.1)	15.9	18.7	18.9	17.9	16.2	14.6	14.3	14.3	13.7	13.3	13.0	5.0	0.5	14	3.9	6.0	2.1	4.2	10.7	12.2	11.5	9.9	9.2	11.1	14.2	17.9	17.9	18.6	18.4	17.6	15.9	11.6	13.7	13.5	13.3	12.5	11.6	9.5	15**	10.0	11.0	11.0	10.0	9.3	10.0	14.0	15.9	15.3	14.4	15.4	19.7	(22.5)	22.7	20.3	16.1	14.2	13.6	13.8	13.1	12.4	12.2	12.2	12.0	16	11.9	12.1	12.1	11.9	11.7	11.5	11.4	10.5	10.3	11.3	13.5	16.0	17.8	19.2	18.5	17.3	15.6	14.9	15.4	14.2	13.9	9.5	11.8	12.5	17	12.1	13.4	12.9	11.1	9.9	10.5	10.3	10.0	8.9	8.4	10.4	13.5	16.6	17.5	18.0	17.3	15.1	14.6	12.3	10.6	12.0	9.0	9.5	12.6	18	11.6	11.8	11.7	12.5	12.0	12.1	12.8	10.2	7.2	7.2	10.8	14.4	17.0	18.9	(19.5)	(18.3)	(15.3)	13.6	13.7	13.8	13.1	10.0	10.0	11.3	19	9.9	10.3	12.3	12.4	11.9	11.4	11.4	10.4	9.1	10.7	13.6	17.3	20.2	21.3	20.5	17.5	15.4	14.5	14.4	14.4	14.2	13.6	10.1	10.6	10.8	20	8.8	10.2	10.3	10.2	9.1	9.6	10.4	9.1	7.3	8.9	12.3	15.6	16.8	18.6	17.6	16.5	14.5	13.6	13.3	13.5	13.6	12.6	11.5	11.8	21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																							
11*	12.6	13.2	13.2	13.0	12.6	11.8	11.2	9.8	8.3	9.0	12.2	16.2	18.2	19.2						13.8	13.2	12.7	13.7	13.7	12*	13.8	13.6	13.2	13.0	12.8	12.2	11.7	10.5	9.2	9.2	11.5	15.4	18.4	19.2	18.5	16.5	15.0	14.6	14.3	14.0	13.9	13.9	13.9	13.8	13.2	13	13.4	13.5	13.2	13.1							(13.1)	15.9	18.7	18.9	17.9	16.2	14.6	14.3	14.3	13.7	13.3	13.0	5.0	0.5	14	3.9	6.0	2.1	4.2	10.7	12.2	11.5	9.9	9.2	11.1	14.2	17.9	17.9	18.6	18.4	17.6	15.9	11.6	13.7	13.5	13.3	12.5	11.6	9.5	15**	10.0	11.0	11.0	10.0	9.3	10.0	14.0	15.9	15.3	14.4	15.4	19.7	(22.5)	22.7	20.3	16.1	14.2	13.6	13.8	13.1	12.4	12.2	12.2	12.0	16	11.9	12.1	12.1	11.9	11.7	11.5	11.4	10.5	10.3	11.3	13.5	16.0	17.8	19.2	18.5	17.3	15.6	14.9	15.4	14.2	13.9	9.5	11.8	12.5	17	12.1	13.4	12.9	11.1	9.9	10.5	10.3	10.0	8.9	8.4	10.4	13.5	16.6	17.5	18.0	17.3	15.1	14.6	12.3	10.6	12.0	9.0	9.5	12.6	18	11.6	11.8	11.7	12.5	12.0	12.1	12.8	10.2	7.2	7.2	10.8	14.4	17.0	18.9	(19.5)	(18.3)	(15.3)	13.6	13.7	13.8	13.1	10.0	10.0	11.3	19	9.9	10.3	12.3	12.4	11.9	11.4	11.4	10.4	9.1	10.7	13.6	17.3	20.2	21.3	20.5	17.5	15.4	14.5	14.4	14.4	14.2	13.6	10.1	10.6	10.8	20	8.8	10.2	10.3	10.2	9.1	9.6	10.4	9.1	7.3	8.9	12.3	15.6	16.8	18.6	17.6	16.5	14.5	13.6	13.3	13.5	13.6	12.6	11.5	11.8	21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																									
13	13.4	13.5	13.2	13.1							(13.1)	15.9	18.7	18.9	17.9	16.2	14.6	14.3	14.3	13.7	13.3	13.0	5.0	0.5	14	3.9	6.0	2.1	4.2	10.7	12.2	11.5	9.9	9.2	11.1	14.2	17.9	17.9	18.6	18.4	17.6	15.9	11.6	13.7	13.5	13.3	12.5	11.6	9.5	15**	10.0	11.0	11.0	10.0	9.3	10.0	14.0	15.9	15.3	14.4	15.4	19.7	(22.5)	22.7	20.3	16.1	14.2	13.6	13.8	13.1	12.4	12.2	12.2	12.0	16	11.9	12.1	12.1	11.9	11.7	11.5	11.4	10.5	10.3	11.3	13.5	16.0	17.8	19.2	18.5	17.3	15.6	14.9	15.4	14.2	13.9	9.5	11.8	12.5	17	12.1	13.4	12.9	11.1	9.9	10.5	10.3	10.0	8.9	8.4	10.4	13.5	16.6	17.5	18.0	17.3	15.1	14.6	12.3	10.6	12.0	9.0	9.5	12.6	18	11.6	11.8	11.7	12.5	12.0	12.1	12.8	10.2	7.2	7.2	10.8	14.4	17.0	18.9	(19.5)	(18.3)	(15.3)	13.6	13.7	13.8	13.1	10.0	10.0	11.3	19	9.9	10.3	12.3	12.4	11.9	11.4	11.4	10.4	9.1	10.7	13.6	17.3	20.2	21.3	20.5	17.5	15.4	14.5	14.4	14.4	14.2	13.6	10.1	10.6	10.8	20	8.8	10.2	10.3	10.2	9.1	9.6	10.4	9.1	7.3	8.9	12.3	15.6	16.8	18.6	17.6	16.5	14.5	13.6	13.3	13.5	13.6	12.6	11.5	11.8	21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																												
15**	10.0	11.0	11.0	10.0	9.3	10.0	14.0	15.9	15.3	14.4	15.4	19.7	(22.5)	22.7	20.3	16.1	14.2	13.6	13.8	13.1	12.4	12.2	12.2	12.0	16	11.9	12.1	12.1	11.9	11.7	11.5	11.4	10.5	10.3	11.3	13.5	16.0	17.8	19.2	18.5	17.3	15.6	14.9	15.4	14.2	13.9	9.5	11.8	12.5	17	12.1	13.4	12.9	11.1	9.9	10.5	10.3	10.0	8.9	8.4	10.4	13.5	16.6	17.5	18.0	17.3	15.1	14.6	12.3	10.6	12.0	9.0	9.5	12.6	18	11.6	11.8	11.7	12.5	12.0	12.1	12.8	10.2	7.2	7.2	10.8	14.4	17.0	18.9	(19.5)	(18.3)	(15.3)	13.6	13.7	13.8	13.1	10.0	10.0	11.3	19	9.9	10.3	12.3	12.4	11.9	11.4	11.4	10.4	9.1	10.7	13.6	17.3	20.2	21.3	20.5	17.5	15.4	14.5	14.4	14.4	14.2	13.6	10.1	10.6	10.8	20	8.8	10.2	10.3	10.2	9.1	9.6	10.4	9.1	7.3	8.9	12.3	15.6	16.8	18.6	17.6	16.5	14.5	13.6	13.3	13.5	13.6	12.6	11.5	11.8	21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																														
17	12.1	13.4	12.9	11.1	9.9	10.5	10.3	10.0	8.9	8.4	10.4	13.5	16.6	17.5	18.0	17.3	15.1	14.6	12.3	10.6	12.0	9.0	9.5	12.6	18	11.6	11.8	11.7	12.5	12.0	12.1	12.8	10.2	7.2	7.2	10.8	14.4	17.0	18.9	(19.5)	(18.3)	(15.3)	13.6	13.7	13.8	13.1	10.0	10.0	11.3	19	9.9	10.3	12.3	12.4	11.9	11.4	11.4	10.4	9.1	10.7	13.6	17.3	20.2	21.3	20.5	17.5	15.4	14.5	14.4	14.4	14.2	13.6	10.1	10.6	10.8	20	8.8	10.2	10.3	10.2	9.1	9.6	10.4	9.1	7.3	8.9	12.3	15.6	16.8	18.6	17.6	16.5	14.5	13.6	13.3	13.5	13.6	12.6	11.5	11.8	21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																
19	9.9	10.3	12.3	12.4	11.9	11.4	11.4	10.4	9.1	10.7	13.6	17.3	20.2	21.3	20.5	17.5	15.4	14.5	14.4	14.4	14.2	13.6	10.1	10.6	10.8	20	8.8	10.2	10.3	10.2	9.1	9.6	10.4	9.1	7.3	8.9	12.3	15.6	16.8	18.6	17.6	16.5	14.5	13.6	13.3	13.5	13.6	12.6	11.5	11.8	21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																		
21	11.6	11.3	10.9	10.8	10.9	11.1	11.0	9.6	8.5	10.1	12.8	16.1	18.6	19.7	20.9	20.0	19.0	17.6	15.1	17.2	15.4	14.5	13.6	13.1	22	9.7	11.6	11.2	11.5	11.6	13.1	11.3	9.2	7.6	8.6	11.4	17.6	21.6	22.0	20.4	17.6	15.1	13.2	13.2	13.1	7.7	12.0	11.6	13.1	23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
23	10.5	9.1	7.9	9.3	12.9	12.7	11.7	9.9	9.1	9.5	12.8	16.7	20.4	20.4	20.4	16.4	15.0	13.0	12.5	13.3	13.5	13.6	13.5	13.3	24	12.9	12.7	12.3	11.0	11.2	11.6	11.7	10.3	8.3	9.6	13.0	15.6	17.4	19.4	18.8	16.2	14.4	14.4	11.1	10.6	13.1	12.4	11.2	11.3	25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
25	11.4	11.7	11.8	11.4	11.4	10.8	9.8	7.4	7.4	9.4	12.1	16.1	19.1	19.4	18.6	17.1	14.4	13.4	12.8	12.9	12.8	12.7	13.1	12.9	26	12.8	12.3	12.4	12.2	11.6	11.3	10.3	7.9	6.9	8.3	11.9	17.6	21.4	23.2	21.6	19.2	16.0	14.2	13.2	13.2	13.4	13.8	12.4	13.4	27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
27**	8.8	6.4	10.6	12.4	11.0	10.6	12.1	11.1	9.1	11.1	15.3	19.3	24.8	24.7	23.6	19.8	17.3	13.3	11.0	6.6	5.7	8.7	2.9	7.7	28	11.0	11.9	10.7	12.7	8.4	11.7	13.9	11.2	7.7	11.0	12.4	13.6	17.3	21.3	19.3	18.0	15.8	14.4	13.6	13.0	13.0	8.2	8.5	7.9	29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
29	9.1	10.1	10.9	13.4	11.6	10.8	10.3	8.1	5.7	5.9	8.6	12.9	17.1	20.0	19.2	17.7	15.7	14.3	13.9	13.2	13.0	12.7	8.2	6.7	30	7.9	9.2	11.1	11.4	13.0	12.6	10.7	8.0	5.7	6.1	8.9	13.8	18.5	21.1	22.0	20.0	18.1	15.8	15.0	12.6	11.7	12.7	12.5	11.8	31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
31**	11.7	11.1	12.6	10.3	6.2	10.3	19.3	22.3	7.1	8.6	11.5	17.1	19.2	19.7	18.6	16.5	15.5	11.1	5.5	7.9	10.5	6.3	9.5	10.1	Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Mean†	10.9	11.1	11.2	11.5	11.2	11.3	11.7	10.7	9.0	10.0	12.8	16.2	18.8	20.0	19.3	17.5	15.8	14.4	13.6	13.1	12.8	11.9	11.0	11.5	Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Mean*†	12.7	12.9	12.8	12.6	12.5	12.0	11.7	10.9	9.6	9.8	12.1	15.1	17.5	18.2	17.5	15.9	14.8	14.6	14.3	13.9	13.8	13.7	13.6	13.3	Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1	April.																										$11^{\circ}$ + Tabular Quantities.																										1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Mean**	10.5	10.0	11.3	11.4	9.6	10.3	13.6	14.1	10.6	11.9	15.3	19.0	21.7	22.3	20.9	18.7	17.3	14.2	12.5	11.9	11.2	9.5	6.2	9.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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1	10.1	11.1	12.3	11.6							(11.1)	15.4	18.4	20.2	20.0	17.5	15.1	13.5	13.0	12.9	11.5	10.1	7.1	9.0	2	9.8	7.2	7.7	8.9	9.5	8.8	8.5	5.8	5.4	6.3	12.1	16.4	17.8	20.2	19.9	18.1	16.0	13.3	10.5	10.6	8.3	8.1	9.9	5.9	3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
3	6.9	4.0	0.8	7.5	8.3	8.5	7.4	8.3	10.8	12.3	14.4	17.2	20.5	20.5	20.6	18.9	16.5	14.6	10.6	11.4	8.1	8.8	8.9	8.1	4	9.9	11.2	10.6	9.7	9.7	9.6	9.6	8.3	8.0	8.8	10.8	13.6	18.3	20.8	19.5	17.3	15.3	13.9	12.6	12.0	11.0	11.2	11.9	12.6	5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
5	12.0	11.4	10.6	10.9	10.0	10.0	8.7	7.2	6.4	8.5	11.6	15.5	18.8	20.1	19.6	16.1	13.5	13.1	12.4	12.7	12.7	13.0	12.8	12.4	6	12.4	12.3	11.6	11.2	11.4	11.5	10.3	8.2	6.6	7.4	11.6	17.2	18.9	21.0	19.7	17.3	15.3	14.5	14.4	13.5	13.4	13.2	12.7	12.3	7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
7	12.1	11.8	11.5	11.4	11.1	10.9	10.3	8.4	7.0	7.8	10.4	13.6	16.4	18.3	17.9	(16.7)	(15.5)	(14.5)	13.5	12.9	12.6	13.1	13.2	12.6	8*	12.1	11.9	11.4	11.1	11.0	10.5	9.7	8.5	8.0	9.8	12.5	15.8	18.0	19.3	18.7	17.6	16.0	14.6	14.1	13.9	13.7	13.4	12.9	12.6	9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
9*	12.1	11.9	11.2	11.3	11.2	10.9	10.3	8.6	7.9	8.9	11.3	15.1	18.1	19.7	18.6	16.7	15.3	14.8	13.9	13.5	13.1	12.9	12.8	12.4	10*	12.2	12.0	11.9	11.5	11.4	11.0	9.6	7.8	7.0	7.8	10.4	14.7	18.3	19.8	19.1	17.3	15.5	14.1	13.4	13.1	12.7	12.7	11.7	9.6	11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
11	10.1	13.4	7.6	6.4	10.2	9.9	9.5	8.0	7.0	8.6	12.6	17.3	20.5	21.0	19.3	17.2	15.5	13.2	12.0	13.0	12.7	12.5	12.6	12.3	12	12.2	12.0	11.7	12.0	12.2	11.7	10.4	8.0	6.2	7.4	12.3	17.0	22.5	25.0	24.7	26.5	23.0	18.3	13.0	14.4	8.8	7.6	9.6	11.6	13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
13	12.6	9.0	10.0	10.4	10.3	10.3	9.4	10.4	10.0	10.1	10.6	14.5	17.4	18.4	18.1	16.5	14.8	13.9	12.0	11.1	10.7	8.6	10.0	10.8	14*	11.6	11.3	11.5	10.8	9.3	10.4	10.8	8.6	7.5	8.6	10.8	13.6	15.6	16.2	15.6	15.0	14.0	13.0	12.0	11.9	12.4	12.0	11.6	9.9	15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
15	9.8	10.3	10.4	10.0	9.2	8.0	6.9	6.1	6.0	6.5	(9.0)	(11.6)	15.0	18.0	18.9	18.0	16.7	16.0	13.6	14.2	14.0	12.4	11.7	11.2	16*	11.1	11.0	10.6	10.5	10.7	10.1	9.3	8.1	7.1	7.1	9.1	13.1	17.1	19.1	19.7	18.5	17.1	15.7	14.3	13.1	13.1	12.8	12.5	11.8	17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
17	10.9	10.6	10.6	10.7	10.7	11.1	10.9	9.1	7.5	7.4	9.6	14.1	17.5	18.4	18.0	16.8	15.0	13.4	12.8	12.4	12.1	10.7	11.1	12.1	18	12.7	11.6	6.1	8.2	7.5	9.0	9.0	7.6	7.0	8.4	11.0	16.0	17.9	19.7	18.7	16.9	15.3	13.3	11.9	12.4	12.9	12.2	10.9	11.2	19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
19	11.8	10.8	11.0	11.0	10.2	9.8	8.5	7.8	8.5	10.8	13.5	16.2	18.6	19.9	19.1	16.7	13.9	13.0	12.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

TABLE I.—HOURLY MEANS OF MAGNETIC DECLINATION AT ABINGER—*continued.*

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>May.</b>																									
	11° + Tabular Quantities.																								
1	3.8	4.4	3.8	7.8	9.3	7.3	7.8	7.3	7.3	8.8	(11.1)	12.7	15.8	16.3	15.6	14.8	14.0	13.8	10.0	10.3	11.4	9.8	7.8	9.8	
2	9.8	9.9	10.8	10.9	10.1	8.5	6.6	6.2	7.0	8.4	11.0	13.8	15.4	16.0	15.9	14.9	14.1	13.3	12.7	11.6	10.7	10.8	11.2	9.5	
3	9.4	9.6	9.3	9.3	9.2	8.9	8.6	9.7	10.1	10.3	11.7	12.9	13.9	15.3	15.1	15.0	13.9	13.4	12.5	11.5	11.8	12.5	12.4	8.9	
4**	7.6	7.3	5.5	4.6	5.2	5.8	6.0	6.9	8.6	9.6	11.6	14.8	16.6	16.3	14.8	13.7	13.6	14.1	10.6	10.9	7.1	4.2	4.4	3.7	
5**	7.1	5.1	3.9	2.4	7.4	9.9	4.2	12.0	13.1	12.2	16.4	18.9	18.6	16.6	15.0	19.2	13.0	10.9	9.8	10.2	10.9	11.1	11.4	11.4	
6*	10.8	10.8	10.8	10.3	8.1	7.1	5.7	6.0	6.7	7.7	10.3	13.3	15.4	16.4	15.6	14.0	12.6	11.9	11.6	11.6	11.7	11.6	11.5	11.1	
7*	11.1	10.5	9.8	9.5	8.1	7.4	5.8	5.6	6.8	8.9	11.2	13.6	15.6	15.9	15.8	15.1	14.4	13.5	12.6	12.0	12.2	12.0	11.5	11.3	
8	10.5	10.1	10.1	9.5	8.3	7.1	6.1	5.1	6.5	9.3	12.7	14.4	16.2	17.2	16.6	15.6	14.8	14.2	13.2	13.0	12.2	12.5	11.6	8.2	
9	9.0	9.3	8.8	8.2	7.9	7.7	7.1	6.9	7.7	9.7	13.3	16.3	17.6	18.2	18.5	17.9	14.9	14.3	12.3	10.5	8.5	10.3	11.0	13.5	
10	10.3	9.3	7.7	7.6	9.1	7.3	6.3	6.7	7.3	10.3	13.5	15.9	18.4	18.8	19.8	17.4	16.4	14.8	12.8	(8.6)	10.7	11.7	12.5	10.6	
11	4.9	2.1	9.3	9.9	8.1	9.1	7.1	6.1	5.1	6.1	11.3	15.0	18.0	19.5	20.0	19.1	16.3	11.1	11.1	11.3	11.3	11.1	10.9	11.1	
12	11.8	11.2	11.2	10.5	10.1	12.1	9.6	7.4	6.1	7.5	11.1	14.9	19.3	21.1	20.8	19.1	16.8	14.0	12.3	12.1	12.1	11.8	11.4	11.3	
13	11.0	10.9	10.6	10.4	8.6	6.0	2.9	3.8	3.5	4.4	8.0	12.4	15.6	18.2	18.7	17.4	15.6	13.5	12.0	12.0	12.0	11.9	11.0	10.5	
14	10.3	10.2	10.5	10.5	10.0	8.3	7.4	7.5	6.4	6.9	10.9	15.9	18.2	20.4	20.0	18.4	17.8	16.0	12.0	11.9	12.0	12.8	12.2	11.2	
15	11.0	11.9	12.0	12.9	9.0	6.9	4.0	3.9	5.0	7.0	9.3	14.0	16.9	17.9	17.8	16.9	16.0	13.5	12.7	12.3	12.2	12.3	11.5	12.9	
16	9.9	7.1	7.9	8.5	6.7	5.9	5.9	6.7	6.2	7.9	11.3	13.4	16.8	17.8	16.9	15.9	14.1	12.3	11.5	12.3	11.9	11.9	11.5	11.2	
17	10.8	10.8	10.3	9.9	8.8	7.2	6.8	7.8	7.1	8.8	12.4	15.2	17.8	18.0	17.8	16.4	14.6	11.7	10.7	12.2	12.7	12.7	11.8	11.3	
18*	10.7	10.6	10.4	10.2	9.5	7.9	6.9	5.2	4.1	4.7	7.3	10.7	15.1	17.6	18.7	18.0	15.3	12.7	10.7	10.7	12.0	11.1	11.6	11.7	
19	11.7	11.7	11.0	10.6	9.2	8.7	8.7	4.5	6.3	7.7	10.0	13.4	16.9	16.7	15.7	15.5	13.7	11.5	9.8	9.4	10.1	10.8	11.2	11.2	
20*	11.3	11.2	10.9	10.1	8.9	6.5	4.5	4.1	4.8	6.3	10.0	14.9	16.9	16.9	16.3	14.4	12.0	10.2	10.2	9.5	10.9	11.6	11.4	11.4	
21	11.2	11.1	10.9	9.9	8.6	6.3	4.2	4.1	4.7	6.8	10.5	13.9	16.9	17.8	15.9	14.4	14.9	12.9	11.9	11.8	11.9	12.2	12.6	11.8	
22	10.9	10.9	10.2	10.0	9.3	8.1	6.7	5.7	5.3	7.5	11.9	16.5	17.8	17.3	15.8	14.1	12.8	11.8	11.1	11.1	11.8	11.5	10.8	10.7	
23*	10.2	10.3	10.6	12.1	11.9	9.6	5.9	4.9	3.4	2.9	5.9	11.5	15.6	17.4	17.5	14.9	13.5	12.7	12.2	12.0	12.0	12.0	12.0	11.2	
24	10.1	10.4	10.1	9.3	8.8	7.5	6.9	4.8	3.2	4.2	8.2	12.2	16.3	17.9	17.8	16.3	14.5	12.6	11.4	11.8	11.7	11.8	10.4	9.1	
25	9.0	8.8	10.2	14.4	7.9	5.0	2.6	1.0	2.9	6.0	9.4	12.7	16.3	19.5	17.8	16.2	14.2	12.3	10.4	10.2	10.2	7.0	5.4	8.0	
26	7.3	2.7	4.4	7.9	3.0	1.5	6.0	5.7	7.4	9.7	11.3	13.4	16.5	18.5	18.4	17.3	16.0	14.4	12.5	11.0	8.6	9.6	8.4	9.6	
27**	9.5	9.5	9.5	9.1	8.0	5.0	4.8	4.4	2.4	6.4	9.4	14.7	19.3	20.3	18.3	18.1	15.2	13.5	11.1	6.7	4.5	5.5	5.6	3.1	
28**	6.0	6.5	5.3	7.0	4.5	2.8	5.1	5.4	3.8	5.5	12.4	15.9	20.7	23.7	19.2	16.8	16.0	14.6	12.1	8.4	6.9	7.9	9.9	5.2	
29**	11.2	9.9	13.5	10.6	13.8	10.2	7.2	6.2	2.8	6.2	10.2	12.6	14.4	16.6	16.5	15.4	13.2	12.7	11.2	10.2	9.2	5.6	7.9	7.4	
30	7.1	7.7	8.2	10.8	9.7	7.0	5.5	4.3	4.6	7.4	10.6	12.4	15.4	16.4	15.5	14.9	14.0	11.5	11.2	10.5	9.4	9.9	11.4	10.7	
31	9.0	12.0	7.0	6.5	5.5	4.7	3.5	3.4	3.5	5.7	9.4	12.4	15.4	17.4	18.4	17.4	15.8	13.4	11.7	10.9	10.3	10.0	9.4	9.4	
Mean	9.5	9.2	8.9	9.4	8.5	7.2	6.0	5.8	5.8	7.5	10.8	14.0	16.8	17.9	17.3	16.3	14.7	13.0	11.6	11.0	10.7	10.6	10.4	9.9	
Mean*	10.8	10.7	10.5	10.4	9.3	7.7	5.8	5.2	5.2	6.1	8.9	12.8	15.7	16.8	16.8	15.3	13.6	12.2	11.5	11.4	11.8	11.7	11.6	11.3	
Mean**	8.3	7.7	6.0	6.7	7.8	6.7	5.5	7.0	6.1	8.0	12.0	15.4	17.9	18.7	16.8	16.6	14.2	13.2	11.0	9.3	7.7	6.9	7.8	6.2	
<b>June.</b>																									
	11° + Tabular Quantities.																								
1	9.1	9.2	8.3	8.6	7.6	9.1	9.3	6.3	5.6	6.8	10.4	14.4	18.2	21.2	20.0	17.2	14.5	12.6	11.1	8.6	9.4	11.1	11.8	11.7	
2	11.0	11.0	12.0	9.3	7.8	6.0	(5.0)	(4.0)	(5.0)	8.2	11.0	14.5	16.5	16.4	16.0	16.3	15.0	13.8	12.2	11.8	11.3	10.6	8.6	10.5	
3	10.6	10.9	7.7	8.4	7.7	6.2	4.3	4.7	6.7	8.5	10.8	14.1	16.8	17.7	17.6	15.6	13.6	12.8	11.5	11.2	11.5	11.7	11.2	11.2	
4	10.5	10.2	9.8	9.3	8.3	6.2	3.8	3.2	4.4	8.2	12.8	15.0	17.7	18.7	19.6	17.9	15.5	12.5	10.8	12.6	11.6	12.5	11.9	12.8	
5**	15.4	10.8	9.0	9.2	9.6	6.2	5.0	4.4	7.1	9.4	11.1	15.1	18.6	19.9	20.1	19.9	17.9	15.2	12.2	9.6	7.6	9.4	0.2	-1.8	
6**	1.7	11.3	8.0	0.9	3.3	10.3	9.3	5.3	10.7	11.8	19.3	19.8	21.3	22.8	21.0	18.4	14.6	11.3	11.7	11.7	8.1	8.8	9.5	11.7	
7	10.1	8.5	7.6	7.2	5.5	4.0	3.6	3.5	5.7	8.9	13.2	16.9	19.7	21.3	20.4	17.8	14.9	12.6	11.6	11.1	10.7	10.6	9.3	8.6	
8	11.3	11.4	8.4	7.2	6.6	5.0	3.4	3.6	5.8	9.9	13.5	17.1	19.7	21.2	20.2	16.6	14.7	13.0	12.4	10.2	11.2	10.7	9.5	8.1	
9*	7.6	7.1	8.1	7.1	5.7	5.1	3.9	3.6	3.9	6.4	10.0	13.7	16.4	17.0	18.1	17.1	14.6	13.0	12.0	11.4	11.1	11.0	10.9	10.7	
10	10.4	10.0	9.5	8.8	7.1	2.8	2.3	4.7	7.5	10.4	11.5	15.3	17.7	18.6	17.6	16.5	14.6	12.7	11.9	11.4	10.8	11.4	11.5	10.5	
11*	11.2	10.2	9.6	8.4	6.0	4.6	4.1	5.5	5.7	7.0	10.7	14.6	17.6	18.3	17.3	15.5	13.2	12.0	11.8	11.7	10.9	10.8	10.4	9.5	
12*	9.0	8.9	8.9	8.9	8.3	6.9	5.9	5.1	5.7	6.7	8.4	11.4	14.4	15.5	15.6	14.0	12.2	10.0	8.6	9.6	10.0	11.1	11.0	11.0	
13**	11.3	11.5	12.2	13.0	10.6	6.2	3.6	2.1	2.5	6.2	8.9	13.3	17.5	18.5	18.1	17.1	15.0	11.7	10.9	11.1	11.3	12.2	12.2	11.8	
14	10.1	11.6	10.3	8.2	5.6	2.2	3.6	5.1	4.7	6.1	8.9	12.7	15.0	15.1	15.1	13.3	12.8	11.4	11.1	10.9	11.0	11.3	10.3	10.2	
15	9.0	8.7	9.0	7.7	6.7	6.0	4.6	9.4	6.0	7.0	10.7	15.1	17.8	18.4	18.0	17.0	14.6	13.1	12.5	11.6	11.0	10.9	11.8	10.5	
16	11.9	7.9	4.5	6.9	8.7	10.8	4.9	3.9	3.6	4.8	7.0	10.9	13.0	13.8	14.4	15.2	14.9	13.0	12.9	11.9	11.9	9.9	9.9	12.1	
17	11.3	12.5	8.0	9.9	10.3	6.1	5.0	2.8	2.6	5.5	(9.9)	(14.6)	18.4	17.3	16.5	14.9	12.8	12.7	11.1	9.3	10.6	11.1	11.0	10.0	
18	10.5	9.3	8.9	7.2	5.5	2.9	2.4	3.8	4.2	6.5	9.3	13.6	17.3	18.8	17.7	14.8	12.7	10.1	9.1	8.7	10.8	11.8	12.1	11.8	
19*	11.1	11.1	10.3	10.3	9.3	5.5	2.5	2.7	4.2	7.7	10.7	14.0	16.1	17.5	16.5	15.1	13.5	11.8	11.8	10.8	11.1	11.5	11.7	11.9	

TABLE I.—HOURLY MEANS OF MAGNETIC DECLINATION AT ABINGER—continued.

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>	
July.																										
$10^\circ + \text{Tabular Quantities.}$																										
1	71.3	67.9	66.3	66.3	65.9	65.9	66.2	65.4	65.0	64.9	65.9	69.0	73.1	78.1	76.5	74.5	73.0	72.0	71.2	69.9	67.8	70.4	70.1	70.1		
2	69.7	69.7	69.3	68.8	67.7	65.7	64.0	63.8	64.0	65.1	67.2	70.3	73.5	75.0	75.0	73.9	72.2	71.6	71.9	69.0	68.8	70.5	70.4	68.4		
3*	67.3	66.7	66.1	64.8	64.1	64.5	63.9	65.2	66.9	68.0	69.3	73.0	75.9	76.5	75.4	74.7	73.3	71.7	71.0	70.9	71.0	70.0	70.0	69.8		
4	69.6	69.0	67.8	67.0	66.4	64.9	63.7	63.2	64.1	65.9	68.5	71.7	74.1	76.3	75.9	75.2	74.0	73.0	73.0	72.6	72.0	71.3	70.7	70.0		
5	69.7	69.4	69.6	69.4	69.6	68.6	64.7	63.4	64.0	66.8	70.4	74.6	78.7	79.7	78.4	76.1	75.5	74.8	74.1	73.8	73.0	72.8	71.9	71.1		
6	70.1	69.7	69.2	68.4	67.2	66.0	65.3	65.7	66.3	67.7	72.2	76.6	79.7	82.4	81.6	79.0	75.3	71.7	71.9	71.7	72.2	71.2	70.2	68.6		
7	67.3	65.6	63.9	63.6	61.7	59.7	58.7	61.7	62.9	67.5	72.1	76.1	78.1	79.6	78.4	76.5	74.7	73.2	71.0	71.4	70.7	68.7	70.7	70.7		
8*	70.0	69.4	68.9	68.5	67.2	66.0	65.0	63.7	63.6	65.9	68.9	72.7	75.7	77.9	78.7	77.4	75.9	74.4	73.3	72.3	70.3	70.5	70.6	70.9		
9	70.5	69.8	70.0	69.7	68.9	66.8	64.2	61.8	62.0	64.3	68.6	73.8	77.5	79.5	81.9	79.5	74.6	72.4	71.6	72.0	72.5	70.5	70.7	70.9		
10	69.9	70.9	66.5	66.5	67.6	63.4	62.5	60.9	61.9	65.0	69.5	74.1	76.8	77.4	77.7	77.4	75.1	72.7	71.0	70.1	70.0	70.1	70.1	70.0		
11	70.0	70.1	69.5	68.8	67.0	64.5	63.0	63.6	64.6	67.3	70.5	75.3	78.8	80.7	82.0	82.7	78.8	75.4	72.5	69.5	68.8	70.4	69.0	69.2		
12	72.0	68.7	66.2	65.4	65.4	64.5	63.4	61.9	62.9	65.9	69.5	73.5	76.5	78.6	79.2	77.7	74.8	71.6	69.4	69.2	69.5	69.6	69.7	69.6		
13	69.3	69.5	68.6	68.1	66.1	63.7	62.2	62.1	62.2	63.9	67.0	71.8	77.0	78.8	77.6	75.8	73.8	72.1	71.6	71.8	72.1	71.9	71.2	69.1		
14**	70.4	70.1	70.6	71.6	71.0	66.0	64.1	63.8	64.1	67.5	69.1	71.8	73.8	80.9	80.7	78.6	75.1	70.6	69.0	68.1	71.2	73.9	72.9	71.8		
15	72.6	71.3	68.6	67.5	65.1	63.7	64.1	62.6	62.9	65.1	68.3	72.4	76.3	78.9	79.3	76.2	72.5	70.7	70.3	70.3	69.4	69.8	71.9	70.8		
16	70.2	69.9	69.9	69.1	66.6	64.2	62.2	61.6	62.5	64.6	67.2	71.3	77.1	79.0	78.4	76.8	74.7	72.4	70.0	70.3	69.8	70.0	70.8	71.4		
17	70.5	70.2	69.2	66.7	64.8	63.0	63.7	63.5	63.4	65.7	68.8	73.2	75.8	77.2	77.2	76.6	75.1	73.2	71.1	70.6	70.7	70.8	70.2	69.8		
18	68.9	68.3	67.7	67.3	66.3	64.3	62.5	62.9	65.0	67.8	71.5	74.9	76.5	78.4	79.3	77.4	74.8	73.0	72.1	71.8	71.0	71.7	71.5	70.7		
19**	70.2	69.6	68.8	67.6	65.6	62.6	62.5	63.2	65.0	66.7	70.7	73.0	74.4	77.6	78.7	79.4	78.8	77.8	76.5	70.6	66.4	70.5	71.1	68.3		
20**	66.9	64.1	66.5	64.6	68.9	66.6	63.9	62.2	63.8	67.0	70.9	74.2	76.9	78.0	78.0	76.7	74.1	71.5	70.6	70.7	70.8	70.6	69.9	69.6		
21	69.2	69.0	68.8	68.0	66.8	66.4	65.3	64.4	66.3	70.3	70.8	74.4	75.9	77.7	78.5	76.7	74.7	71.3	70.7	70.7	70.6	70.8	70.0	69.4		
22**	68.1	66.1	69.3	68.9	70.4	71.3	69.6	64.6	64.1	65.4	69.1	70.8	74.5	77.2	77.9	77.5	75.6	72.6	71.8	73.1	68.8	69.6	67.4	67.3		
23	68.2	67.9	65.2	65.2	63.5	61.0	63.0	63.6	64.3	66.3	71.0	75.3	78.2	78.7	79.5	79.2	76.7	74.4	73.2	70.2	71.2	71.2	71.1	70.2		
24**	73.1	65.1	55.1	62.6	64.1	62.8	65.3	61.9	64.1	67.1	71.1	75.1	78.2	81.2	81.3	78.0	74.0	73.0	70.9	70.9	70.2	71.1	71.0	70.9		
25	67.9	67.0	67.1	65.2	68.9	65.9	62.3	61.9	62.3	65.7	69.6	71.9	75.0	77.0	79.0	75.8	75.7	73.0	69.8	68.2	67.0	70.1	70.5	69.8		
26	68.9	68.7	67.8	67.9	67.5	64.5	61.2	61.7	63.3	64.1	68.2	72.5	74.7	77.4	75.6	72.2	71.6	70.6	70.2	70.1	69.7	70.1	69.6	69.6		
27*	69.1	69.0	67.7	67.2	65.5	63.7	61.9	62.4	63.1	65.5	68.4	71.4	74.5	75.9	75.7	74.6	73.1	71.6	71.1	70.6	70.6	70.2	69.6	68.9		
28*	69.1	67.7	68.1	67.7	66.2	64.1	63.1	62.6	64.0	66.6	68.3	72.9	77.6	79.0	78.0	75.5	72.4	70.5	69.5	69.5	69.2	68.3	68.6	69.0		
29*	68.5	68.5	68.3	68.5	67.0	65.4	62.4	64.2	65.0	67.5	70.4	73.4	76.8	77.7	76.4	74.4	72.4	70.2	69.1	69.8	69.4	69.4	68.9	69.4		
30	68.6	67.9	66.4	66.4	63.4	63.7	64.5	62.2	63.7	65.9	68.2	70.9	74.4	77.1	77.4	76.0	73.4	71.8	71.0	70.9	70.4	69.4	68.9	69.0		
31	68.7	68.5	68.5	68.6	67.6	66.5	65.5	65.5	66.0	68.0	70.5	74.0	76.0	75.9	76.1	74.9	74.0	70.7	69.1	69.4	69.5	70.1	70.5	70.0		
Mean	69.5	68.6	67.6	67.3	66.7	64.8	63.7	63.1	64.0	66.3	69.4	73.1	76.3	78.2	78.2	76.7	74.6	72.5	71.4	70.6	70.1	70.6	70.3	69.8		
Mean*	68.8	68.3	67.8	67.3	66.0	64.7	63.7	63.6	64.5	66.7	69.1	72.7	76.1	77.4	76.8	75.3	73.4	71.7	70.8	70.6	70.1	69.7	69.6	69.6		
Mean**	69.7	67.0	66.1	67.1	68.0	65.9	65.1	63.1	64.2	66.7	70.2	73.0	76.5	79.0	79.3	78.0	75.5	73.1	72.2	70.5	69.2	71.1	70.5	69.6		
August.																										
$10^\circ + \text{Tabular Quantities.}$																										
1	69.7	67.5	67.4	67.0	66.0	63.1	62.9	63.0	64.5	66.9	70.5	73.5	77.0	76.8	75.4	73.2	70.8	69.4	69.2	69.6	69.1	70.8	72.6	72.3		
2**	67.1	65.8	70.6	74.0	72.1	73.9	71.7	78.3	70.0	68.7	71.9	77.6	79.3	80.2	82.8	78.0	77.2	75.8	73.4	73.0	73.0	71.8	69.5	68.0		
3**	67.3	67.6	66.9	66.9	64.9	63.9	63.2	62.0	63.7	67.5	70.0	72.6	73.5	75.1	77.2	75.5	74.1	72.0	70.8	70.6	70.1	65.8	65.2	62.1		
4**	54.2	69.8	60.3	61.3	62.3	59.8	60.9	62.5	64.4	65.7	68.4	72.4	74.9	76.1	76.0	74.2	71.5	68.9	68.5	68.4	69.5	69.9	69.8	69.9		
5	70.6	68.1	67.5	67.2	66.4	64.9	63.8	62.6	63.0	65.6	68.5	73.3	76.4	77.5	76.3	73.8	71.9	69.9	67.4	66.9	68.9	69.9	68.9	68.9		
6	68.2	69.3	69.7	67.2	65.0	62.3	61.0	62.0	63.0	65.8	70.5	74.3	76.5	77.5	75.0	73.3	71.1	67.5	66.5	65.8	67.5	70.1	..	..		
7	..	..	..	..	..	..	..	(62.9)	63.7	66.5	70.3	74.7	76.3	77.7	79.3	76.3	72.9	70.2	67.8	67.8	68.2	68.7	69.3	69.8		
8	69.2	68.2	69.1	68.4	69.7	64.8	63.1	62.2	63.0	67.1	69.6	72.2	75.2	77.2	77.5	75.2	71.7	68.8	67.6	68.2	68.6	69.2	69.1	68.8		
9	69.0	68.6	68.1	67.5	65.7	64.6	61.6	60.5	61.9	65.1	69.5	75.0	79.2	79.3	77.7	74.8	72.0	69.0	67.7	68.4	69.0	69.0	69.6	69.6		
10	70.0	70.0	69.9	69.5	69.0	65.5	64.5	63.1	64.2	67.6	72.4	76.6	80.3	80.5	79.3	75.7	71.4	68.3	67.2	67.5	68.7	69.7	69.7	69.9		
11	69.7	69.5	68.9	68.3	66.8	64.5	62.6	61.7	63.3	67.3	71.6	75.6	78.7	79.5	78.7	75.9	73.0	70.7	69.3	69.2	69.8	69.9	69.7	69.6		
12	68.9	68.7	68.3	67.8	65.9	63.8	62.7	61.9	63.2	66.5	70.1	73.9	76.8	78.8	77.9	75.6	72.9	71.1	70.2	70.6	71.6	70.6	70.0	70.1		
13*	69.2	68.9	67.6	66.6	66.3	64.5	63.0	61.8	63.0	66.0	70.0	74.6	78.0	80.2	79.0	75.3	71.5	70.0	70.7	71.0	70.5	70.1	69.9	69.0		
14	68.6	69.1	68.4	67.7	66.4	64.1	62.5	63.0	64.5	66.5	70.0	73.8	76.4	76.7	75.5	73.5	71.8	70.9	70.9	71.8	71.8	70.9	70.8	69.7		
15	68.8	67.6	66.1	64.7	64.6	65.6	68.2	65.9	66.8	68.0	70.4	72.9	73.2	72.9	72.3	71.7	70.4	70.0	69.7	69.9	69.6	69.4	70.5	69.1		
16*	68.5	68.0	6																							



TABLE I.—HOURLY MEANS OF MAGNETIC DECLINATION AT ABINGER—continued.

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>																													
<i>10° + Tabular Quantities.</i>																													
1**	69.3	68.5	67.9	67.5	66.9	65.1	62.5	60.4	60.6	64.1	69.4	74.1	77.3	77.4	75.8	74.4	72.6	(71.7)	71.0	69.8	68.6	69.7	64.5	65.6	65.6	68.6	68.6	68.6	
2	65.3	65.0	66.3	66.6	65.3	64.4	63.3	62.3	63.3	66.3	(70.8)	(74.3)	(76.4)	76.4	74.3	70.8	68.4	67.9	68.7	69.0	68.8	68.8	68.8	68.6	68.6	68.6	68.6	68.6	
3*	68.6	69.0	67.4	66.4	64.4	63.6	61.9	61.4	63.0	66.4	71.8	75.0	78.7	(79.0)	(76.3)	(72.9)	70.0	68.4	68.3	68.8	69.0	69.2	69.2	69.1	69.1	69.1	69.1	69.1	
4	67.6	67.4	67.1	66.9	67.8	67.9	65.2	62.8	63.0	65.8	69.5	74.3	76.7	76.4	74.2	70.2	68.7	68.6	68.6	67.6	68.4	69.6	69.5	68.2	68.2	68.2	68.2	68.2	
5	68.5	65.8	63.4	66.9	67.5	66.5	65.1	63.5	65.0	66.4	71.5	75.9	77.9	77.4	75.9	73.4	70.4	68.4	69.0	69.0	69.0	69.3	69.4	68.8	68.2	68.2	68.2	68.2	
6	68.2	68.2	68.8	66.9	65.8	65.2	64.3	64.2	65.1	66.6	70.4	74.8	75.8	75.8	74.6	71.0	69.4	65.9	67.8	67.4	67.0	67.4	67.8	67.4	67.8	67.4	67.4	67.4	
7	68.1	68.1	68.5	67.5	66.6	65.5	63.7	62.0	64.0	67.5	70.7	73.2	76.0	77.1	76.3	73.5	71.0	70.1	69.9	69.4	68.6	68.4	68.2	68.0	68.0	68.0	68.0	68.0	
8	67.6	66.6	66.9	66.5	65.7	65.7	64.5	62.7	62.7	64.7	67.9	71.3	74.7	76.1	76.1	74.1	71.2	70.1	69.0	66.1	68.1	68.7	67.7	68.1	68.1	68.1	68.1	68.1	
9	68.0	67.5	67.4	67.6	66.5	66.5	65.0	63.4	63.0	64.0	67.5	71.8	76.7	77.3	75.8	74.5	72.2	71.2	70.4	70.3	69.7	69.4	68.1	67.1	67.1	67.1	67.1	67.1	
10**	67.6	67.0	67.5	67.0	66.9	65.9	64.3	62.9	62.8	64.2	67.5	71.8	76.7	77.7	75.8	74.9	73.5	72.5	72.0	70.4	70.3	72.9	69.6	69.2	66.2	66.2	66.2	66.2	
11**	63.9	53.9	59.4	67.0	68.0	70.9	70.8	64.5	64.5	66.2	68.3	72.8	76.2	76.6	76.2	74.6	69.8	68.6	68.6	69.7	68.7	67.5	68.7	68.7	68.6	68.6	68.6	68.6	68.6
12*	68.3	68.1	68.1	68.1	67.4	66.5	65.3	64.0	64.1	65.6	68.9	74.0	76.2	76.5	74.6	72.6	70.4	69.1	69.5	69.5	68.9	68.1	67.5	68.1	68.1	68.1	68.1	68.1	68.1
13	68.6	69.3	70.4	67.3	66.0	65.3	64.3	65.7	67.6	68.2	(70.3)	(73.7)	(76.0)	(76.1)	(74.0)	(72.6)	71.0	69.2	68.6	67.7	66.3	66.8	65.2	65.7	65.7	65.7	65.7	65.7	65.7
14**	65.1	64.2	63.8	64.8	64.8	65.1	65.8	64.1	(64.6)	67.1	68.6	70.2	73.0	73.7	73.6	71.6	71.0	70.7	70.3	70.1	69.2	68.1	65.7	66.2	66.2	66.2	66.2	66.2	66.2
15	68.3	65.9	65.2	65.3	65.7	65.9	67.9	66.2	65.6	66.9	69.7	72.1	72.8	72.8	71.4	70.2	69.3	69.1	69.3	70.1	69.3	68.7	68.8	68.8	68.8	68.8	68.8	68.8	68.8
16	68.3	68.0	67.5	67.1	66.4	64.8	63.6	64.0	65.8	66.7	68.6	71.2	72.8	74.1	73.3	72.0	71.0	69.3	62.4	66.3	68.4	69.3	68.4	68.8	68.8	68.8	68.8	68.8	68.8
17	67.4	66.8	65.6	61.8	64.7	67.2	66.4	65.8	66.3	66.8	69.1	73.4	75.6	75.3	74.8	71.3	68.9	69.2	69.3	67.0	68.9	68.8	69.0	68.6	68.6	68.6	68.6	68.6	68.6
18	67.9	67.7	67.3	67.4	65.4	65.8	65.0	64.9	64.6	65.7	68.0	72.3	74.3	73.6	72.4	71.9	69.8	68.4	68.4	69.8	68.4	68.3	68.3	68.3	68.3	68.3	68.3	68.3	68.3
19	64.9	67.3	65.9	65.9	67.8	66.7	66.2	64.9	64.7	65.5	68.3	72.2	75.8	76.5	74.3	72.3	69.7	68.4	68.8	68.4	69.8	68.4	68.3	68.3	68.3	68.3	68.3	68.3	68.3
20	68.5	68.2	68.1	67.4	67.3	67.0	66.1	65.4	65.2	66.2	69.3	71.9	73.5	73.0	71.9	70.4	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5
21	73.0	66.7	62.8	61.3	64.7	65.3	64.3	64.8	64.6	65.8	67.6	69.2	71.1	71.9	72.6	72.1	71.0	70.1	69.7	69.6	69.6	69.4	68.9	66.1	66.1	66.1	66.1	66.1	
22	67.6	67.7	67.2	67.1	66.7	66.2	65.3	64.2	63.8	64.8	67.7	73.1	75.8	75.5	74.9	72.7	70.4	70.0	69.4	69.1	68.7	67.2	67.6	68.3	68.3	68.3	68.3	68.3	68.3
23	68.5	68.5	67.5	67.1	67.5	67.9	66.8	(65.2)	(64.7)	66.8	70.8	74.8	76.3	75.7	73.1	71.8	69.7	69.2	69.0	68.6	68.0	63.9	64.2	62.4	62.4	62.4	62.4	62.4	62.4
24	59.9	60.4	60.9	65.0	67.9	67.7	65.9	67.7	65.1	65.6	67.0	71.2	74.3	76.5	74.5	72.9	70.6	69.8	70.1	69.9	69.1	68.7	68.5	68.2	68.2	68.2	68.2	68.2	68.2
25*	65.7	67.5	67.8	68.5	68.4	67.7	66.0	63.4	61.4	62.3	65.5	70.9	75.1	75.9	74.7	72.7	71.0	70.1	70.1	69.4	69.1	68.8	68.3	68.2	68.2	68.2	68.2	68.2	68.2
26	67.6	67.2	67.3	67.2	67.5	67.3	66.2	66.1	64.3	62.9	66.5	69.3	72.2	74.8	74.5	72.8	70.4	69.9	69.5	69.1	68.9	69.1	68.7	68.3	68.3	68.3	68.3	68.3	68.3
27	67.4	69.0	66.8	67.4	67.5	67.5	69.6	68.8	65.5	64.6	66.3	69.2	72.5	75.1	75.8	74.1	71.2	70.3	68.7	67.7	67.7	69.1	68.9	68.9	68.9	68.9	68.9	68.9	68.9
28*	68.8	68.2	68.0	68.0	68.8	67.0	66.5	64.1	63.1	64.6	67.0	72.4	75.6	77.7	76.9	74.1	72.0	70.0	69.4	68.5	68.2	68.7	68.4	68.2	68.2	68.2	68.2	68.2	68.2
29*	67.8	68.4	69.3	68.9	68.1	67.8	66.7	64.8	63.2	62.8	65.1	69.4	72.9	74.7	74.7	73.1	71.1	70.5	70.1	69.6	69.5	69.5	69.4	69.0	69.0	69.0	69.0	69.0	69.0
30**	68.9	68.5	68.4	67.8	67.5	67.4	65.9	64.5	62.5	63.5	65.7	71.0	75.3	76.9	77.6	76.8	72.4	72.4	73.3	70.6	59.2	61.9	58.0	59.2	59.2	59.2	59.2	59.2	59.2
Mean	67.5	66.8	66.6	66.7	66.7	66.4	65.5	64.3	64.1	65.5	68.5	72.4	75.1	75.8	74.7	72.7	70.6	69.6	69.3	69.0	68.1	68.1	67.4	67.1	67.1	67.1	67.1	67.1	67.1
Mean*	67.8	68.2	68.1	68.0	67.4	66.5	65.3	63.5	63.0	64.3	67.7	72.3	75.7	76.8	75.4	73.1	70.9	69.6	69.5	69.2	68.9	68.9	68.6	68.5	68.5	68.5	68.5	68.5	68.5
Mean**	67.0	64.4	65.4	66.9	66.8	66.9	65.9	63.3	63.0	65.0	67.9	72.0	75.7	76.5	75.8	74.5	71.9	71.1	71.3	70.6	66.1	67.3	64.6	64.0	64.0	64.0	64.0	64.0	64.0
<b>October</b>																													
<i>10° + Tabular Quantities.</i>																													
1	55.4	67.2	65.5	66.3	65.6	67.7	72.3	66.3	64.6	66.2	70.2	74.0	74.7	75.0	73.6	71.1	69.4	68.5	65.7	60.3	64.5	67.3	67.5	65.5	65.5	65.5	65.5	65.5	65.5
2	65.1	66.7	66.6	68.0	67.4	65.9	64.8	63.5	62.1	61.1	65.3	69.4	71.7	73.4	73.5	71.9	69.4	69.0	69.3	68.7	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5
3*	68.3	68.4	69.3	66.3	66.5	66.9	66.5	64.9	63.5	64.5	68.4	72.5	76.1	79.6	78.1	76.5	74.9	72.2	71.7	72.5	69.9	69.5	66.5	69.4	69.4	69.4	69.4	69.4	69.4
4**	60.4	47.8	46.0	57.8	63.1	66.3	77.1	71.7	62.0	62.6	66.3	68.9	70.6	71.2	71.6	70.3	69.7	70.0	70.2	69.9	68.7	68.7	67.0	65.3	65.3	65.3	65.3	65.3	65.3
5	66.0	66.2	66.2	66.2	66.1	65.2	64.3	62.8	61.5	62.5	65.9	69.6	72.5	74.2	73.4	71.7	70.9	70.9	70.2	69.3	69.0	68.8	67.9	68.4	68.4	68.4	68.4	68.4	68.4
6	66.8	65.7	65.3	66.7	66.2	65.2	64.8	62.5	61.3	64.5	68.8	73.6	76.9	76.8	75.8	73.0	70.1	69.8	70.6	69.0	68.4	68.2	68.8	68.8	68.8	68.8</			

TABLE I.—HOURLY MEANS OF MAGNETIC DECLINATION AT ABINGER—*continued*.

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																													
$10^\circ +$ Tabular Quantities.																													
1	65.9	66.3	66.3	66.3	65.7	65.5	64.6	64.3	63.5	65.3	67.9	70.2	71.9	72.2	71.5	71.3	72.5	71.9	70.4	69.3	67.8	66.0	65.2	65.0	21	63.1	63.5	62.9	61.4
2	64.7	64.9	60.9	61.4	63.2	64.5	65.8	65.3	64.5	64.0	66.9	70.0	71.4	71.9	70.5	69.8	69.3	68.7	69.1	66.9	67.1	65.5	62.9	62.2	22	62.7	65.7	65.3	66.6
3	65.1	66.8	67.0	67.1	66.8	66.0	65.5	65.1	64.8	66.1	68.8	71.6	72.6	72.6	71.8	70.3	69.3	68.3	68.0	67.7	67.1	66.5	67.0	67.2	23	67.6	67.2	65.9	67.2
4*	67.4	67.1	67.0	67.0	66.6	66.0	65.5	64.8	63.9	64.2	66.9	69.6	70.5	71.0	70.6	70.1	69.4	69.0	68.1	68.0	67.3	67.0	67.1	67.1	24	67.2	67.7	67.3	66.9
5*	67.0	67.0	67.0	67.3	67.3	66.6	64.9	64.2	63.4	64.0	66.9	70.0	71.0	71.9	71.0	70.0	69.0	68.6	68.3	68.0	67.2	66.9	66.4	66.2	25	66.5	66.7	66.5	66.5
6*	66.3	66.0	66.4	66.6	66.8	66.2	66.2	64.9	63.3	63.5	66.0	69.8	71.2	71.3	70.3	69.4	69.0	68.8	68.2	67.9	67.4	67.0	66.4	65.8	26	66.3	66.6	66.3	66.4
7	65.4	65.3	66.1	64.1	64.8	65.4	65.3	64.9	63.9	65.1	68.0	69.5	70.8	71.3	71.6	70.8	69.4	69.1	69.8	66.3	65.2	65.8	60.4	61.3	27	66.3	66.5	66.6	66.6
8	57.5	58.4	62.2	63.0	65.4	64.8	65.1	65.8	65.2	66.6	68.1	68.9	70.1	70.4	69.9	68.9	68.7	69.8	67.8	68.9	66.6	62.1	61.6	63.2	28	66.3	65.8	66.0	66.3
9	64.1	64.2	63.6	64.2	64.3	65.6	66.0	66.2	67.0	68.5	69.5	73.2	72.4	70.5	69.4	69.5	68.7	68.3	67.8	67.8	66.8	66.4	65.0	65.4	29**	66.8	66.0	65.9	66.4
10	65.7	66.2	65.7	65.5	66.1	65.8	65.8	65.7	65.6	66.1	68.3	69.1	71.2	71.9	72.5	70.0	69.2	68.5	67.9	67.1	66.9	66.3	66.3	65.9	30**	66.8	66.0	65.9	66.4
11	65.2	65.4	65.7	65.6	64.8	65.2	65.0	65.2	65.6	65.8	66.8	70.2	71.2	71.5	70.6	69.6	69.6	69.6	69.5	64.7	63.1	63.5	62.9	61.4	31	66.8	66.0	66.4	66.4
12	62.3	63.3	63.4	61.8	63.4	63.8	64.7	65.3	65.2	65.5	67.9	69.3	70.6	70.2	69.4	69.1	68.5	68.0	65.1	64.9	62.7	65.7	65.3	66.6	Mean	65.3	65.4	65.2	65.1
13	66.5	66.3	66.1	65.8	65.9	65.4	65.9	65.8	65.2	65.7	66.7	68.6	69.9	70.8	70.0	69.8	69.0	68.1	63.8	67.8	67.6	67.2	67.0	67.2	Mean*	66.9	66.7	66.7	66.7
14	67.2	66.3	66.3	66.4	65.7	66.4	66.0	65.9	65.4	66.2	67.8	69.8	70.8	70.7	69.7	69.3	68.8	67.9	67.7	67.3	67.2	66.9	67.0	67.3	Mean**	64.6	64.8	64.0	64.0
15*	67.1	66.9	66.6	66.5	66.3	66.3	66.0	65.8	65.7	65.6	66.6	68.8	69.5	69.0	68.5	68.5	68.0	67.2	67.2	66.7	66.7	66.5	66.5	66.7	21	64.8	65.6	65.6	66.1
16*	66.5	66.6	66.6	66.3	65.9	65.7	65.5	65.5	65.5	65.5	66.2	67.9	69.2	69.4	68.9	68.4	68.0	67.0	66.9	66.5	66.3	66.4	66.5	66.6	22	65.1	66.1	65.5	64.9
17	66.0	66.0	66.5	66.5	66.4	66.0	65.5	65.4	65.3	65.9	67.6	70.0	72.1	73.4	72.7	73.5	73.6	69.6	68.6	66.6	66.1	65.6	64.6	63.5	23**	66.7	66.8	66.0	65.3
18**	60.2	61.2	57.5	59.9	63.7	64.6	67.7	67.7	68.3	70.1	69.0	69.2	73.8	74.7	75.9	76.8	74.0	71.8	70.3	65.5	65.0	62.2	63.2	64.6	24	66.3	65.9	65.4	65.4
19**	66.3	65.8	66.0	66.3	65.8	65.7	65.0	64.8	65.8	68.4	70.8	72.8	72.3	74.2	73.4	72.4	67.5	65.8	65.8	63.8	64.8	63.2	63.8	64.6	25	66.6	65.7	66.2	65.5
20	66.8	66.0	65.9	66.4	66.7	66.3	66.0	66.3	67.0	70.2	71.8	70.4	72.2	72.2	70.6	66.7	68.1	68.2	67.2	66.1	64.3	65.1	61.1	63.7	26	67.0	66.5	66.3	66.3
21	64.8	65.6	65.6	66.1	65.6	65.8	65.4	65.9	65.6	66.6	68.1	69.7	70.0	69.9	70.0	69.0	68.6	67.7	64.7	64.5	65.9	63.9	62.5	65.5	27*	66.5	66.8	66.7	66.7
22	65.1	66.1	65.5	64.9	66.4	65.4	65.3	65.1	65.9	68.0	70.8	72.5	72.6	72.6	67.9	70.8	73.9	73.4	67.1	62.6	56.6	59.9	60.9	62.5	28	66.3	65.9	65.4	65.4
23**	67.7	66.8	66.0	65.3	65.9	66.0	67.7	68.5	66.6	66.7	68.3	71.7	71.3	72.8	69.6	68.4	68.0	63.2	63.3	65.5	64.9	66.0	65.4	66.6	29	67.0	66.5	66.2	65.5
24	66.3	65.9	65.4	65.4	66.7	65.7	66.5	66.1	69.8	68.8	68.8	69.6	71.5	71.8	70.3	69.2	68.1	67.3	66.6	60.9	63.1	63.7	65.4	65.8	30**	66.6	65.7	66.2	65.5
25	66.6	65.7	66.2	65.5	65.4	65.4	65.4	65.3	64.9	65.4	67.1	68.5	69.3	71.0	70.4	69.3	68.4	67.6	66.4	65.4	63.4	66.1	66.7	66.4	Mean	65.3	65.4	65.2	65.1
26	67.0	66.5	66.3	66.3	66.3	65.1	65.3	65.4	65.3	65.5	66.5	67.9	69.2	69.2	68.6	68.2	67.2	67.8	67.6	67.2	67.0	66.5	65.0	66.1	Mean*	66.9	66.7	66.7	66.7
27	66.5	66.8	66.7	66.7	66.8	66.4	66.2	66.1	66.0	66.0	67.4	69.2	70.4	70.7	70.3	68.5	68.1	66.1	66.1	66.1	64.1	63.1	61.1	63.1	Mean**	64.6	64.8	64.0	64.0
28	63.8	63.2	62.4	61.4	63.5	64.6	66.2	66.5	70.0	70.8	71.0	70.8	73.0	75.8	73.1	74.9	70.3	67.2	65.9	64.3	66.0	64.5	60.5	62.2	21	64.9	65.2	66.1	65.9
29**	65.4	67.7	67.0	66.8	65.8	65.7	66.6	66.6	65.8	66.0	67.8	70.8	70.7	74.7	71.9	70.8	72.3	68.7	67.1	64.7	60.7	63.5	63.8	65.7	22	65.0	65.2	65.9	65.8
30**	63.2	62.7	63.3	61.7	62.4	63.7	64.9	65.1	66.3	68.4	68.7	69.7	71.0	71.9	72.0	72.2	74.7	65.0	70.0	72.7	58.1	57.7	58.3	58.7	23	65.2	65.8	65.9	66.2
Mean	65.3	65.4	65.2	65.1	65.5	65.5	65.7	65.6	65.7	66.4	68.1	69.9	71.2	71.8	70.8	70.2	69.7	68.3	67.4	66.4	65.1	64.9	64.2	64.8	24	66.3	65.9	65.4	65.4
Mean*	66.9	66.7	66.7	66.7	66.6	66.2	65.6	65.0	64.4	64.6	66.5	69.2	70.3	70.5	69.9	69.3	68.7	68.1	67.7	67.4	67.0	66.8	66.6	66.5	25	66.6	65.7	66.2	65.5
Mean**	64.6	64.8	64.0	64.0	64.7	65.1	66.4	66.5	66.6	67.9	68.9	70.8	71.8	73.7	72.6	72.1	71.3	66.9	67.3	66.4	62.7	62.5	62.9	64.0	26	67.0	66.5	66.3	66.3

December

$10^\circ +$  Tabular Quantities.

\* Denotes an International Quiet Day.

\*\* Denotes an International Disturbed Day.



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>	
January. 18000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																										
1*	527	526	527	526	526	526	526	526	522	517	516	514	518	524	524	524	524	527	530	530	532	532	532	532	530	
2	529	528	527	526	527	530	532	530	523	520	521	521	526	528	527	529	532	534	531	521	514	523	523	523	523	518
3	515	515	515	532	531	521	518	519	518	508	500	494	504	507	509	511	514	523	528	530	531	531	528	524	524	
4	519	519	522	522	528	527	524	519	517	506	502	501	506	506	514	519	521	519	523	522	532	535	533	530	530	
5	526	522	523	524	524	528	531	532	526	515	509	510	511	517	519	524	526	524	534	539	539	539	538	534	534	
6	528	531	526	526	530	530	536	534	527	517	510	507	512	517	524	527	529	535	539	541	541	541	543	538	538	
7**	532	528	531	532	535	538	538	537	536	530	520	519	526	529	528	525	518	491	472	469	466	452	448	460	460	
8	486	492	494	502	509	515	515	516	517	507	502	498	497	500	504	510	512	513	512	515	518	522	520	517	517	
9**	515	513	517	520	516	522	524	521	513	494	489	501	525	529	523	523	526	531	530	542	534	514	530	528	528	
10**	523	520	519	523	525	526	530	526	529	514	507	508	513	502	507	505	510	508	512	513	503	525	529	527	527	
11	521	518	518	521	527	531	527	539	536	526	521	518	521	518	515	516	514	518	520	522	520	512	562	521	521	
12	517	519	521	524	527	534	532	532	532	532	526	519	523	523	519	501	504	523	531	532	535	528	528	532	532	
13	528	524	532	543	537	537	534	532	527	519	517	518	509	513	517	517	519	525	526	528	526	526	527	529	529	
14	528	529	533	534	536	539	536	535	535	522	516	515	519	520	520	520	524	526	531	529	529	527	525	529	529	
15*	530	528	529	530	532	536	537	536	536	531	530	530	527	528	525	523	523	526	529	531	531	530	530	532	532	
16*	534	532	530	535	535	537	535	532	532	524	519	522	525	525	522	521	526	532	535	537	536	535	535	535	535	
17	534	533	535	537	540	540	539	540	532	519	518	520	528	533	530	527	533	536	538	540	537	537	533	537	537	
18	533	534	533	532	533	539	543	540	533	523	514	516	524	527	529	527	530	536	538	543	543	541	533	533	533	
19	534	532	534	534	537	539	540	539	541	538	528	522	526	530	529	529	532	532	530	532	539	539	536	529	529	
20	532	534	537	538	541	541	542	541	536	526	524	524	527	524	524	521	515	513	503	500	514	537	537	532	532	
21	524	521	522	525	531	533	538	539	539	532	522	509	511	521	532	533	524	511	513	501	514	537	510	510	510	
22	515	517	522	522	523	526	526	522	513	501	496	493	501	512	522	526	527	533	533	536	536	533	533	527	527	
23*	526	524	526	528	529	532	533	527	519	511	508	506	508	516	522	521	526	530	533	534	536	534	536	537	537	
24	533	533	533	532	533	533	533	531	523	513	502	495	497	512	521	526	530	531	533	536	535	535	538	534	534	
25*	530	529	530	530	532	535	537	533	524	512	500	492	493	511	526	528	529	530	532	536	537	537	538	539	539	
26	539	537	540	540	543	543	543	537	525	513	505	513	524	533	532	529	532	536	540	541	541	541	541	539	539	
27**	540	539	541	544	549	550	550	547	543	537	511	497	491	504	505	519	512	527	526	520	515	500	510	505	505	
28	507	507	509	515	520	520	518	518	510	506	496	506	502	501	497	497	497	502	501	490	497	506	502	491	491	
29	493	496	509	516	517	519	531	533	524	509	496	492	494	499	503	508	513	518	521	522	519	519	525	529	529	
30**	529	531	534	534	536	539	542	538	530	521	508	505	512	521	517	515	497	502	512	523	530	530	527	529	529	
31	527	525	529	529	527	528	529	525	523	515	503	496	505	511	517	518	521	527	533	536	536	536	536	534	534	
Mean	524	524	526	528	530	532	533	532	527	518	511	509	513	518	519	520	521	523	525	526	526	527	528	526	526	
Mean*	529	528	528	530	531	533	534	531	527	519	515	513	514	521	524	523	526	529	532	534	534	534	534	535	535	
Mean**	528	526	528	531	532	535	537	534	530	519	507	506	513	517	516	517	513	512	510	513	510	504	509	510	510	
February. 18000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																										
1	526	527	535	529	530	537	538	532	525	512	511	503	503	508	505	508	515	521	526	528	526	526	530	532	532	
2	532	532	533	536	538	538	536	533	529	520	505	497	500	507	512	516	522	525	528	532	534	541	545	572	572	
3**	542	567	484	470	515	531	528	501	515	510	492	486	492	491	491	496	507	473	461	441	467	488	483	478	478	
4	477	479	481	483	487	490	491	493	495	490	477	466	462	483	494	498	505	506	507	495	495	506	508	514	514	
5**	511	515	504	497	515	510	504	507	500	489	483	479	481	487	498	504	500	511	516	510	534	502	500	509	509	
6	511	507	510	510	518	524	524	521	517	506	474	483	490	491	485	491	503	509	511	514	508	512	519	521	521	
7	519	521	516	514	516	516	521	528	521	506	502	496	494	504	506	504	508	516	519	521	524	534	524	522	522	
8*	521	521	521	521	524	525	528	527	525	519	514	506	503	508	510	511	517	519	522	521	519	524	529	542	542	
9**	537	520	516	520	524	525	533	534	532	529	529	529	515	519	507	495	495	492	487	459	475	455	507	507	507	
10	504	502	503	503	507	519	513	517	521	521	516	512	508	508	503	513	511	514	518	518	516	511	502	519	519	
11	513	515	524	520	522	522	518	518	513	504	500	501	501	509	503	515	520	522	522	518	526	526	524	522	522	
12	528	531	527	526	528	532	534	533	528	531	524	522	517	520	523	512	517	509	504	506	496	525	512	508	508	
13	515	514	513	516	521	526	530	532	537	531	521	512	507	520	509	520	522	520	522	517	527	526	515	522	522	
14	533	520	517	516	515	521	515	515	511	509	510	515	518	521	523	526	521	511	506	491	495	482	495	500	500	
15	508	511	511	508	511	519	522	521	518	513	510	512	511	515	519	517	516	516	526	513	524	521	527	524	524	
16	513	532	515	521	524	530	531	525	523	521	506	483	487	489	496	499	493	514	525	525	526	527	522	524	524	
17	524	520	520	527	524	524	527	527	520	513	506	497	509	504	506	515	521	515	525	530	522	525	525	520	520	
18	520	525	527	517	521	522	522	522	520	514	510	508	502	514	512	519	519	524	530	539	530	539	534	521	521	
19**	548	538	516	522	527	527	539	542	533	529	522	512	496	479	497	501	496	470	513	535	530	533	530	538	538	
20	530	530	533	531	532	541	533	531	532	526	525	522	516	516	526	517	522	517	525	532	529	534	531	530	530	
21**	530	533	535	542	542	541	539	542	543	542	534	527	529	524	519	508	508	520	535	532	538	527	535	538	538	
22	538	536	533	531	533	531	533	535																		

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

U.T.	0h	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h	13h	14h	15h	16h	17h	18h	19h	20h	21h	22h	23h	24h				
March.																													
18000 γ + Tabular Quantities (in γ).																													
1**	514	517	522	523	526	529	527	525	534	532	514	499	504	517	521	515	521	525	533	546	524	493	467	501					
2	503	491	491	505	504	509	509	514	493	483	470	473	479	495	497	495	492	496	496	513	518	518	518	518	520				
3*	520	515	513	511	513	518	518	514	507	494	483	480	488	500	507	514	521	523	526	526	526	527	528	529					
4	528	528	531	534	534	534	531	527	518	506	501	494	496	515	518	527	527	526	527	527	530	531	532	533					
5**	530	524	525	523	539	527	530	535	540	527	498	474	506	500	479	494	493	500	500	509	511	513	520	497					
6	491	516	514	506	508	513	512	508	502	493	487	485	488	491	499	508	514	516	521	524	526	529	527	527	527				
7*	527	524	524	527	527	527	527	526	520	514	511	508	508	514	518	519	522	526	529	532	532	534	534	534	534				
8*	533	530	530	532	530	531	534	534	530	523	514	508	508	514	521	528	529	530	533	534	537	539	540	540	537				
9	542	526	527	525	538	531	531	535	537	533	528	523	528	528	533	529	530	534	537	530	528	524	524	530					
10	533	535	534	536	538	538	539	538	536	532	524	521	524	521	529	539	529	532	541	540	539	542	536	540					
11*	538	538	538	538	540	541	540	537	532	524	520	519	523	529	..	..	..	..	..	..	(549)	540	537	544	541				
12*	541	540	538	538	540	540	540	537	530	521	517	516	512	514	521	529	536	540	543	541	541	543	544	544	546				
13	547	546	546	547	..	..	..	..	..	..	530	521	535	540	543	543	540	534	535	542	543	544	516	508					
14	502	501	530	493	502	510	510	505	511	508	496	496	505	511	514	515	510	508	523	527	518	519	525	523					
15**	522	534	529	528	528	529	532	532	520	509	484	466	(471)	478	471	477	495	503	505	506	511	513	515	514					
16	518	517	517	516	518	520	521	518	516	504	495	496	496	501	507	514	517	522	516	513	524	533	523	522					
17	522	523	527	526	527	522	531	525	517	507	496	496	500	507	513	517	520	530	523	529	525	536	524	533					
18	522	524	526	526	529	532	539	532	525	509	501	502	506	514	(526)	(539)	(532)	524	531	536	537	534	530	528					
19	531	524	527	527	527	530	537	536	534	521	509	503	507	515	527	530	535	534	536	540	538	546	538	537					
20	532	532	534	531	535	531	534	536	534	526	521	518	519	526	524	528	527	528	536	540	538	537	536	534					
21	535	535	534	535	538	540	543	543	537	526	521	522	525	530	537	535	540	540	553	561	557	553	553	555					
22	543	540	543	545	550	549	559	568	565	556	539	528	480	472	482	484	497	503	519	523	529	532	548	545					
23	543	522	522	519	517	522	524	528	519	510	498	494	502	492	517	522	523	519	529	534	531	532	534	532					
24	533	532	535	532	529	532	533	531	522	511	506	505	508	508	511	523	531	531	535	537	533	537	533	537					
25	533	529	527	527	528	527	527	520	514	495	513	513	514	514	515	524	528	532	535	537	536	537	538	535					
26	539	533	533	534	535	536	537	535	529	515	507	508	512	508	512	526	523	534	534	541	544	563	553	561					
27**	539	511	522	546	553	541	539	533	528	513	499	490	488	493	502	467	474	499	503	509	506	510	514	514					
28	511	527	515	535	537	535	521	503	498	485	481	483	490	494	492	506	516	524	528	528	524	545	535	517					
29	520	517	519	528	530	526	530	525	519	504	496	496	503	512	519	525	529	530	533	537	535	542	541	528					
30	526	526	530	533	528	538	542	542	533	519	502	491	495	507	530	539	546	540	558	539	529	540	537	536					
31**	534	536	547	554	549	536	538	496	465	483	470	454	439	445	469	491	507	523	517	482	482	474	490	521					
Mean †	526	525	526	527	530	529	531	527	522	512	503	498	500	505	511	516	519	523	528	529	528	530	530	530					
Mean* ‡	530	527	526	527	528	529	530	528	522	513	506	503	504	511	517	523	527	530	533	533	534	536	537	537					
Mean**	528	524	529	535	539	532	533	524	517	513	493	477	482	487	488	489	498	510	512	510	507	500	500	509					
April.																													
18000 γ + Tabular Quantities (in γ).																													
1	507	504	502	504	..	..	..	..	..	(473)	467	477	488	504	512	521	527	527	525	537	530	521	521						
2	529	532	517	516	518	521	518	518	511	510	494	482	495	504	505	509	524	535	543	542	507	505	508	526					
3	526	525	514	512	506	517	514	497	488	472	477	486	487	506	508	522	514	524	520	527	518	516	524	525					
4	517	526	522	517	516	518	516	511	509	500	499	501	506	508	520	527	526	532	526	521	518	516	524	525					
5	521	525	527	521	525	528	528	525	516	509	501	506	511	520	524	523	528	538	533	538	534	535	537	538					
6	535	536	538	536	538	544	548	544	535	520	512	516	510	524	532	547	545	553	551	550	549	550	550	547					
7	545	544	544	544	549	548	547	542	536	531	523	518	519	517	527	(538)	(548)	(548)	549	553	556	558	562	562					
8*	557	555	553	549	546	548	549	549	546	534	524	523	531	536	538	538	542	546	553	555	557	558	555	554					
9*	552	549	545	541	542	545	547	544	540	530	523	518	524	533	536	543	548	549	549	550	549	549	549	549					
10*	548	547	547	547	548	549	549	547	542	532	522	522	524	532	541	548	548	548	547	552	553	558	553	553					
11	548	557	550	541	539	547	543	536	520	510	508	510	518	531	539	547	546	537	539	548	546	546	548	549					
12	546	547	545	542	546	551	551	548	539	540	535	541	549	540	519	535	520	522	527	529	540	517	521	524					
13	559	527	514	521	522	522	522	517	525	515	514	514	508	520	527	527	522	531	527	531	520	531	526	526					
14*	527	527	527	527	527	527	530	529																					

TABLE II.—HOURLY MEANS OF HORIZONTAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER—*continued.*

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>May.</b>																										
18000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																										
1	498	494	515	513	500	496	499	499	488	485	480	482	499	495	512	513	518	532	525	527	529	529	529	521	516	516
2	518	516	516	518	517	518	517	508	508	508	503	509	517	525	525	520	529	532	533	533	533	529	529	523	531	528
3	520	522	517	519	520	522	520	511	509	517	514	514	517	527	527	534	551	554	562	543	535	533	533	533	559	
4**	530	519	529	540	530	527	530	527	518	514	516	523	531	537	538	538	548	568	570	549	533	506	523	520	520	
5**	521	470	501	542	506	463	419	459	450	448	426	433	457	463	480	475	460	506	513	507	509	511	510	509	509	
6*	506	506	506	506	506	510	510	506	501	498	495	496	499	502	502	508	517	520	525	524	525	525	523	523	523	
7*	522	520	520	520	523	522	520	514	512	510	508	514	516	530	541	540	533	533	538	543	543	543	542	540	539	
8	534	529	529	530	529	527	527	523	514	509	508	517	523	525	527	523	530	540	544	548	547	551	551	557	557	
9	545	542	532	530	540	540	539	540	539	527	524	535	533	506	523	520	518	534	535	543	543	544	533	539	561	
10	531	538	533	525	520	527	521	522	516	510	508	516	527	544	549	543	544	543	548	(548)	531	527	536	544	544	
11	552	518	508	535	534	514	523	522	514	499	490	486	493	499	511	515	526	543	542	535	533	533	530	529	529	
12	534	532	529	531	528	527	523	520	517	517	508	499	505	511	524	531	543	543	541	547	551	549	546	545	545	
13	543	541	543	544	540	538	527	520	519	512	508	510	510	515	529	540	544	548	546	546	548	548	545	545	545	
14	543	542	544	543	546	548	544	529	531	523	512	511	503	519	519	535	562	571	552	539	552	554	546	541	541	
15	535	534	537	538	536	541	534	524	516	505	500	501	498	503	525	536	553	539	551	548	550	548	542	549	549	
16	556	533	538	537	538	541	530	519	517	513	506	506	506	500	517	540	529	543	555	547	548	546	556	550	550	
17	534	531	531	531	535	539	539	531	527	523	518	522	522	522	529	532	543	554	553	550	546	545	541	543	543	
18*	540	540	539	540	542	545	547	549	540	527	518	513	510	511	520	536	541	541	539	550	549	546	545	545	545	
19	541	539	534	534	536	526	524	509	505	492	494	489	507	492	507	528	535	542	548	546	538	534	534	533	533	
20*	532	532	532	533	535	534	524	512	503	496	500	499	509	521	532	538	541	544	544	544	544	545	542	541	541	
21	537	535	534	533	537	535	530	522	513	507	509	518	521	524	529	530	576	567	555	566	556	553	551	546	546	
22	540	539	537	538	540	540	536	531	526	522	528	527	529	528	536	537	542	550	558	551	548	545	543	544	544	
23*	545	548	548	546	552	548	540	535	529	526	516	513	518	520	537	539	553	557	554	548	540	539	541	541	541	
24	536	536	533	532	533	532	529	528	522	513	511	513	516	521	530	530	544	550	553	561	555	558	550	540	540	
25	540	543	550	551	548	527	522	508	500	493	500	496	508	518	511	519	534	542	556	548	544	542	566	531	531	
26	544	537	516	532	530	506	498	493	484	490	497	506	501	493	498	517	529	543	549	548	550	544	530	526	526	
27**	529	539	540	535	534	527	522	513	500	488	497	502	519	506	523	547	534	557	559	568	546	516	504	517	517	
28**	514	510	523	516	521	509	494	489	480	472	444	470	509	525	548	545	520	534	542	531	513	495	529	501	501	
29**	507	508	523	522	491	492	481	476	455	426	457	473	488	491	502	520	541	531	538	532	535	528	519	521	521	
30	510	511	518	516	517	516	504	505	494	483	483	491	494	497	497	509	533	536	545	545	540	531	537	540	540	
31	538	539	544	535	518	519	514	511	502	493	489	499	504	507	515	522	528	531	536	546	544	546	536	531	531	
Mean	532	527	529	531	529	524	519	515	508	502	499	503	509	512	521	528	535	543	545	544	541	536	537	536	536	
Mean*	529	529	529	529	532	532	528	523	517	511	507	507	510	517	526	532	536	539	540	542	542	539	538	538	538	
Mean**	520	509	523	531	516	504	489	493	481	470	468	480	501	504	518	525	521	539	544	537	527	511	517	514	514	
<b>June.</b>																										
18000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																										
1	533	531	529	523	529	526	531	522	505	498	497	508	518	517	506	513	520	531	548	545	548	538	535	535	535	
2	535	538	543	538	535	530	(525)	(517)	(504)	500	495	500	512	524	524	543	535	537	540	553	554	547	547	541	541	
3	546	555	537	536	537	534	530	524	518	517	521	537	540	548	553	554	547	546	546	548	548	545	541	545	545	
4	542	545	545	543	545	540	532	525	522	521	528	534	537	545	560	551	547	554	563	563	552	560	558	559	559	
5**	561	545	542	544	542	546	544	536	536	532	537	525	516	500	523	546	561	567	567	547	548	534	525	508	508	
6**	507	533	548	529	514	487	470	443	442	420	397	430	462	485	499	521	509	503	521	524	532	527	517	516	516	
7	529	519	513	518	517	516	510	498	493	498	502	509	519	519	519	520	520	522	550	553	543	539	538	539	539	
8	536	547	526	523	530	522	500	489	484	489	494	508	514	518	526	524	540	544	547	557	548	541	534	555	555	
9*	537	525	528	533	532	528	514	506	500	494	493	495	507	521	535	536	537	540	537	540	547	545	547	546	546	
10	548	545	547	547	544	570	552	539	515	528	524	524	522	523	522	527	532	537	547	549	549	545	544	543	543	
11*	547	549	536	544	545	543	529	512	507	499	492	490	494	512	511	531	546	548	555	553	544	539	537	535	535	
12*	535	536	540	542	543	539	531	523	513	510	502	511	515	518	528	532	544	543	549	549	549	549	544	545	545	
13**	548	549	554	558	561	554	547	533	520	502	477	477	485	514	502	539	552	549	545	549	550	544	542	541	541	
14	536	536	536	539	540	535	520	521	517	514	509	509	513	524	525	526	548	556	565	557	553	552	541	544	544	
15	535	535	542	541	540	536	517	525	525	518	511	509	511	515	522	532	542	551	553	551	551	552	560	551	551	
16	553	548	535	536	546	541	543	535	517	510	510	514	527	532	532	535	558	554	557	559	563	555	552	548	548	
17	542	526	529	538	538	537	536	526	510	499	(505)	(510)	515	529	546	552	545	558	567	561	561	547	545	545	545	
18	545	537	538	532	534	537	525	519	510	510	524	528	535	532	524	526	547	552	549	554	557	555	550	548	548	
19*	537	535	537	538	541	541	532	524	514	505	501	499	503	509	519	535	545	554	555	553	547	546	546	548	548	
20**	554	547	541	547	542	554	563	544	531	519	514	518	511	507	530	561	569	578	583	566	547	539	516	507	507	
21	505	510	515	516	523	531	519	505																		

TABLE II.—HOURLY MEANS OF HORIZONTAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER—*continued.*

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>	
July.																										
18000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																										
1	547	550	536	528	536	536	525	522	519	515	511	512	516	520	498	521	535	547	559	557	552	544	537	532		
2	524	530	533	533	535	537	529	525	520	518	509	506	515	521	527	540	542	545	503	574	562	543	545	537		
3*	531	530	529	533	538	534	533	517	506	502	496	500	508	519	532	538	542	546	553	554	551	547	545	541		
4	542	542	537	537	537	536	533	525	521	520	523	527	536	544	538	545	544	550	559	564	564	561	561	561		
5	507	566	555	552	549	551	543	534	525	512	502	508	516	530	533	561	574	571	571	584	578	582	580	580		
6	566	552	540	541	541	540	530	522	527	530	537	529	521	520	535	520	550	541	542	550	544	536	530	523		
7	520	511	530	530	522	524	512	518	509	490	482	495	496	513	515	523	533	540	541	555	551	546	541	540		
8*	537	537	538	539	538	534	530	524	514	499	499	510	511	514	525	544	544	545	554	563	558	552	549	551		
9	548	545	547	549	553	553	544	521	504	498	495	502	506	527	571	541	550	551	558	564	564	568	559	545		
10	532	527	542	544	542	532	517	508	492	469	453	462	485	507	521	531	542	547	549	550	548	543	541	540		
11	540	540	541	542	544	541	530	518	508	503	503	507	510	516	529	558	524	548	554	564	556	551	537	537		
12	529	529	541	542	544	541	532	516	501	493	489	489	489	496	508	528	539	541	550	549	544	540	541	540		
13	537	537	538	542	544	547	540	529	516	502	492	494	503	502	519	543	553	559	562	559	560	562	561	535		
14**	546	548	552	551	553	566	557	524	503	493	477	495	505	521	526	579	570	551	554	547	523	536	531	526		
15	526	535	526	526	522	525	510	503	488	465	459	458	468	483	501	521	544	529	552	548	540	533	532	527		
16	522	525	525	525	530	531	527	522	511	496	487	497	511	517	530	540	540	571	553	558	560	547	547	545		
17	540	543	539	537	540	544	540	527	514	504	504	500	509	526	526	532	540	549	557	562	562	558	549	543		
18	538	536	543	538	542	540	534	521	511	504	501	502	516	537	538	552	562	562	571	573	557	564	565	559		
19**	556	551	554	552	550	544	532	524	516	525	529	527	528	557	548	574	604	628	610	609	549	544	544	537		
20**	542	546	548	543	530	533	538	527	514	500	496	501	501	505	519	534	537	540	542	545	545	548	547	548		
21	549	547	546	544	542	538	532	529	517	512	508	513	511	524	525	529	537	545	567	565	557	560	553	543		
22**	547	553	548	528	529	536	508	464	450	445	436	457	465	467	488	510	528	529	524	538	538	534	516	513		
23	513	515	517	512	509	503	501	486	485	496	486	488	501	501	522	550	522	535	584	537	533	530	533	555		
24**	579	533	497	492	506	497	486	480	467	451	444	444	472	475	491	497	505	525	550	530	532	527	522	530		
25	517	512	520	522	506	523	514	501	482	458	468	470	479	499	519	503	537	550	559	579	551	535	530	531		
26	534	521	521	518	509	514	507	484	476	480	481	484	497	510	505	532	543	542	545	543	537	536	536	533		
27*	532	534	535	534	535	535	529	521	512	497	487	494	507	517	536	540	553	551	551	537	537	538	540	538		
28*	540	531	531	532	532	530	525	516	506	500	496	495	496	509	518	536	533	535	540	544	551	548	540	534		
29*	531	532	533	538	539	537	527	519	514	505	498	500	504	511	515	527	538	549	547	554	555	544	539	537		
30	536	536	536	536	542	542	534	519	506	502	496	499	514	535	539	543	538	545	552	554	556	552	544	543		
31	540	540	543	546	548	547	539	535	530	527	524	525	522	522	531	535	548	556	556	553	555	553	557	563		
Mean	539	537	536	535	535	535	527	516	505	497	493	497	504	514	524	536	544	549	556	557	551	547	544	541		
Mean*	534	533	533	535	536	534	529	519	510	501	495	500	505	514	525	537	542	545	549	550	550	546	543	540		
Mean**	554	546	540	533	534	535	524	504	490	483	476	485	494	505	514	539	549	555	556	554	537	538	532	531		
August.																										
18000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																										
1	553	540	540	540	546	544	537	529	524	518	514	523	527	524	534	532	542	571	559	563	561	561	570	568		
2**	549	542	560	568	570	489	458	476	450	471	488	476	482	494	507	523	498	531	519	514	528	518	511	510		
3**	513	512	506	508	508	505	496	499	499	492	492	479	484	491	505	505	529	535	537	551	553	548	533	527		
4**	475	498	523	517	523	512	486	454	449	454	474	476	478	488	492	487	503	517	526	529	545	542	538	538		
5	550	523	520	524	527	528	523	518	510	502	497	497	493	508	528	531	546	546	541	539	536	535	531	525		
6	531	531	528	522	525	521	511	492	485	481	485	490	497	504	505	525	543	552	555	557	546	535	..	..		
7	..	..	..	..	..	..	..	(504)	498	486	486	482	475	498	511	521	521	520	529	543	541	538	538	538		
8	536	530	531	534	536	533	525	510	499	490	483	476	482	490	500	516	528	537	538	540	541	538	533	530		
9	528	528	529	529	530	531	524	516	504	487	491	500	510	514	532	537	558	546	532	536	537	538	541	541		
10	536	533	535	537	537	535	525	514	497	484	480	489	504	505	517	529	537	547	554	547	544	540	537	534		
11	534	536	535	533	535	533	525	509	492	486	493	505	515	518	527	540	548	550	550	556	564	558	548	550		
12	545	543	546	548	548	544	536	520	500	488	486	487	494	499	513	528	545	549	554	552	564	561	558	558		
13*	552	546	544	542	551	547	537	517	503	491	487	499	515	521	532	542	545	547	552	548	552	554	553	554		
14	549	551	551	550	549	548	537	530	520	515	513	511	512	520	523	529	539	547	501	561	569	566	566	551		
15	556	565	552	548	542	524	537	528	518	511	515	520	514	529	531	530	531	533	538	544	544	545	544	542		
16*	539	535	534	535	537	536	531	521	507	498	494	506	518	519	523	528	533	538	546	552	549	548	547	540		
17	539	536	533	531	535	536	532	523	515	513	513	502	507	520	523	536	541	545	551	549	552	546	544	540		
18	536	539	539	540	542	541	533	518	513	513	516	521	518	527	533	534	546	554	554	(554)	..	..	..	..		
19.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
20	540	543	543	542	541	536	530	525	522	522	520	522	529	536	539	535	542	549	557	557	550	540	539	539		
21	541	537	541	538	539	536	539	531	521	514	508	511	523	527	534	544	544	542	542	547	550					

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

Table with columns for U.T. (0h to 24h) and rows for months (September, October) and hours. Includes sub-headers '18000 γ + Tabular Quantities (in γ)' and 'Mean', 'Mean\*', 'Mean\*\*'. Values range from 448 to 558.

\* Denotes an International Quiet Day.

\*\* Denotes an International Disturbed Day.



TABLE II.—HOURLY MEANS OF HORIZONTAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER—*continued*.

U.T.	0h	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h	13h	14h	15h	16h	17h	18h	19h	20h	21h	22h	23h	24h
<b>November.</b>																									
	18000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																								
1	530	529	531	530	532	535	534	530	520	511	507	505	505	509	514	513	512	514	521	518	519	520	518	522	522
2	526	527	546	534	532	530	535	531	517	505	502	498	500	503	501	511	520	528	530	512	519	524	524	521	521
3	524	524	528	529	531	535	533	530	524	517	508	500	500	503	507	511	520	528	531	530	528	533	534	534	534
4*	534	534	533	537	538	539	537	535	523	507	499	493	492	501	508	516	517	529	536	536	536	537	538	538	538
5*	537	535	537	539	545	545	547	540	523	506	496	494	499	505	516	522	526	532	536	537	537	537	536	536	536
6*	536	535	535	536	535	540	538	530	519	509	505	504	503	509	517	517	519	525	532	535	535	535	532	531	531
7	532	530	535	535	529	541	539	537	528	520	518	514	515	514	515	511	516	535	534	512	510	530	515	515	513
8	501	490	499	521	524	525	527	525	517	512	507	510	515	520	520	524	528	532	508	514	519	521	512	512	515
9	518	519	528	525	531	523	531	518	508	509	503	500	483	489	487	514	526	531	530	531	532	530	528	530	530
10	525	525	524	525	527	527	525	522	518	511	506	502	513	514	510	508	525	529	531	534	536	536	539	536	536
11	535	529	530	530	530	534	539	538	533	527	510	512	508	516	517	522	531	538	537	544	550	526	515	523	523
12	527	515	538	528	523	523	525	528	528	527	517	512	510	515	517	520	525	528	527	532	526	528	545	529	529
13	528	527	528	532	533	539	534	534	528	517	513	513	515	518	520	525	532	531	525	537	539	539	536	533	533
14	534	531	531	533	533	533	534	535	529	522	516	509	512	512	515	522	526	533	535	537	538	537	535	535	535
15*	533	532	532	533	534	535	536	536	531	523	517	513	515	522	524	527	529	533	538	538	539	539	539	539	539
16*	539	534	536	536	536	537	537	537	538	533	531	525	527	528	529	533	536	541	543	543	542	543	543	543	543
17	541	536	536	536	540	544	544	539	529	524	522	521	521	521	521	518	515	523	531	532	533	533	527	526	526
18**	523	525	525	521	518	512	537	532	533	525	511	494	489	498	491	500	509	507	473	470	497	490	495	514	514
19**	512	523	525	522	520	523	522	520	512	505	497	482	486	487	485	466	476	494	506	508	507	506	512	509	509
20	515	509	509	514	528	519	511	509	496	472	474	491	502	485	474	486	507	516	516	519	519	519	533	520	520
21	518	515	521	518	519	520	523	520	510	509	510	499	487	507	509	514	518	521	516	507	518	524	524	524	524
22	525	525	526	520	521	533	532	521	522	514	458	479	500	488	493	498	492	513	506	498	523	525	513	507	507
23**	524	516	516	524	519	521	522	509	500	497	491	473	473	485	494	511	515	522	534	515	538	536	528	528	528
24	527	523	520	516	528	531	536	511	509	502	493	495	473	473	489	508	516	519	514	529	530	528	525	524	524
25	524	524	521	524	526	528	526	521	520	515	510	506	507	511	509	513	519	526	526	529	523	521	526	526	526
26	525	524	523	524	526	529	531	526	519	511	510	511	513	513	516	519	526	532	537	537	537	533	546	540	540
27	530	530	530	531	533	535	537	532	526	516	513	515	516	515	513	519	525	526	526	529	522	521	526	517	517
28	516	516	524	531	526	532	526	519	500	503	501	496	488	484	491	477	474	492	498	512	514	511	518	520	520
29**	513	532	529	526	523	531	534	534	531	511	509	506	498	500	494	499	496	466	466	464	481	509	511	506	506
30**	508	502	494	529	514	515	517	508	508	506	499	485	488	479	479	487	486	466	471	451	506	490	466	471	471
Mean	525	524	526	528	529	531	532	527	520	512	505	502	502	504	506	510	515	520	521	520	525	525	525	524	524
Mean*	536	534	535	536	538	539	539	536	527	516	510	506	507	513	519	523	525	532	537	538	538	538	538	537	537
Mean**	516	520	518	524	519	520	526	521	517	509	501	488	487	490	489	493	496	491	490	482	506	506	502	506	506
<b>December.</b>																									
	18000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																								
1	467	481	497	511	527	517	508	490	476	471	471	469	468	468	466	475	479	485	493	513	517	517	515	515	515
2	514	510	512	515	535	510	517	506	516	514	514	507	502	503	501	504	506	511	517	523	525	522	515	513	513
3	526	523	527	527	524	526	527	527	517	517	514	514	512	514	518	522	525	529	527	519	516	517	520	523	523
4*	523	522	523	530	534	535	535	534	532	524	519	523	521	515	517	521	525	523	523	530	531	532	532	530	530
5	528	530	531	536	539	539	532	535	531	526	526	531	533	533	536	539	536	536	526	526	533	533	533	533	531
6	531	536	533	540	544	536	535	533	532	531	526	518	515	519	519	523	521	533	536	531	528	516	521	532	532
7	529	525	523	528	533	533	535	533	520	507	515	516	519	520	525	519	521	493	492	509	515	515	519	516	516
8	517	530	529	527	525	527	527	521	519	517	515	510	512	516	504	496	509	519	529	524	524	523	525	526	526
9	526	524	532	538	528	527	529	529	525	520	516	518	520	524	521	519	525	530	537	534	533	533	528	527	527
10	522	532	539	533	528	531	534	531	527	520	518	517	518	499	510	524	524	528	523	529	521	529	539	529	529
11	528	524	527	530	539	541	535	537	530	523	518	503	487	508	521	520	522	529	532	536	534	534	533	529	529
12	532	521	521	523	525	528	528	526	520	514	513	513	516	520	526	527	532	534	533	533	536	538	535	533	533
13*	531	530	532	533	535	539	539	535	526	506	506	512	517	522	530	535	537	539	542	543	541	543	544	542	542
14*	539	538	539	540	540	539	538	537	529	522	524	525	529	530	532	531	529	535	539	540	539	538	539	540	540
15	539	538	538	540	541	543	546	543	534	527	520	513	510	520	527	530	535	540	544	547	548	548	547	546	546
16	544	543	540	538	538	540	543	539	531	525	522	520	521	525	530	535	538	542	545	546	547	548	548	547	547
17	546	545	545	544	544	546	546	545	538	533	531	530	534	538	540	535	528	530	532	533	535	539	545	545	545
18**	546	549	548	556	552	548	548	543	542	533	519	504	510	505	506	483	457	443	454	496	475	482	477	477	477
19**	513	504	508	514	519	530	527	515	496	499	481	478	487	488	484	492	466	476	491	495	491	500	505	511	511
20**	511	517	517	526	525	532	534	523	517	499	500	500	507	500	506	510	508	512	521	524	523	527	537	523	523
21	522	522	523	523	529	536	533	531	527	524	521	520	522	525	527	528	532	526	514	532	538	544	531	527	527
22	523	525	528	532	535	542	541	527	519	523	(513)	502	505	497	499	499	506	505	514	521	527	529	526	522	522
23**																									

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>January</b> <span style="float:right">42000 γ + Tabular Quantities (in γ).</span>																										
1*	1031	1031	1031	1031	1031	1033	1032	1032	1032	1030	1030	1029	1024	1027	1029	1030	1031	1033	1033	1033	1033	1033	1033	1031	1030	1029
2	1027	1027	1027	1028	1028	1031	1031	1031	1030	1027	1026	1024	1018	1021	1024	1028	1030	1031	1033	1033	1035	1040	1039	1036	1031	1031
3	1030	1030	1030	1026	1018	1022	1025	1029	1031	1035	1037	1029	1023	1030	1035	1038	1036	1038	1038	1037	1037	1036	1035	1034	1033	1033
4	1031	1031	1031	1031	1029	1030	1030	1034	1033	1033	1033	1033	1031	1031	1035	1035	1034	1038	1038	1042	1040	1039	1036	1035	1034	1034
5	1033	1031	1031	1030	1031	1035	1034	1035	1037	1037	1038	1033	1032	1032	1036	1037	1035	1037	1040	1039	1035	1034	1033	1033	1032	1032
6	1032	1031	1030	1030	1031	1032	1034	1035	1035	1032	1027	1025	1025	1031	1036	1031	1030	1031	1033	1033	1033	1032	1031	1030	1030	1030
7**	1028	1028	1028	1027	1027	1028	1028	1029	1029	1029	1027	1025	1026	1021	1024	1030	1033	1034	1046	1066	1080	1064	1063	1067	1070	1070
8	1062	1047	1044	1044	1043	1042	1042	1041	1042	1041	1044	1043	1041	1043	1043	1040	1040	1039	1040	1039	1040	1039	1039	1038	1038	1039
9**	1037	1036	1034	1033	1033	1033	1033	1033	1032	1034	1031	1036	1038	1048	1047	1046	1042	1041	1042	1042	1042	1050	1053	1053	1053	1053
10**	1049	1045	1042	1039	1037	1035	1033	1030	1029	1030	1033	1030	1034	1035	1043	1048	1046	1048	1048	1050	1053	1058	1049	1043	1043	
11	1040	1039	1038	1037	1035	1035	1035	1033	1030	1033	1033	1028	1030	1036	1042	1039	1038	1040	1043	1042	1043	1045	1034	1026	1026	
12	1033	1034	1035	1034	1034	1035	1035	1037	1034	1033	1033	1032	1025	1031	1035	1043	1047	1043	1040	1038	1035	1035	1038	1036	1036	
13	1036	1036	1034	1028	1029	1031	1032	1031	1031	1031	1030	1030	1034	1040	1040	1038	1039	1040	1041	1039	1038	1037	1037	1035	1035	
14	1035	1034	1034	1033	1033	1034	1034	1033	1033	1033	1036	1032	1030	1035	1037	1038	1039	1038	1037	1034	1034	1032	1031	1033	1033	
15*	1031	1031	1031	1031	1030	1032	1031	1030	1029	1033	1030	1026	1025	1030	1030	1031	1032	1034	1035	1034	1033	1031	1031	1030	1030	1030
16*	1028	1028	1029	1028	1029	1030	1030	1030	1027	1028	1028	1027	1027	1031	1034	1034	1034	1034	1033	1033	1031	1030	1029	1028	1028	1028
17	1026	1026	1027	1027	1028	1028	1028	1027	1027	1025	1024	1020	1018	1020	1021	1022	1025	1027	1029	1029	1029	1028	1028	1028	1026	1026
18	1023	1023	1024	1024	1024	1028	1027	1027	1027	1026	1021	1016	1020	1024	1026	1029	1034	1036	1036	1034	1032	1031	1031	1030	1030	1030
19	1029	1027	1027	1027	1028	1029	1030	1030	1028	1026	1024	1024	1023	1026	1030	1031	1031	1034	1036	1036	1036	1034	1033	1031	1031	1031
20	1030	1028	1027	1027	1028	1030	1030	1032	1031	1030	1025	1025	1025	1030	1032	1034	1032	1040	1050	1058	1056	1047	1039	1035	1035	
21	1034	1032	1031	1030	1030	1031	1032	1032	1030	1025	1023	1022	1025	1021	1027	1028	1034	1042	1051	1055	1055	1045	1043	1045	1045	
22	1041	1037	1035	1034	1034	1036	1035	1037	1036	1034	1034	1034	1031	1033	1036	1034	1033	1034	1036	1036	1036	1036	1036	1035	1034	1034
23*	1033	1032	1030	1030	1030	1030	1031	1034	1038	1035	1033	1035	1029	1032	1035	1035	1033	1033	1033	1033	1034	1035	1033	1032	1032	
24	1031	1030	1029	1028	1028	1028	1030	1032	1035	1033	1030	1025	1025	1029	1029	1030	1031	1032	1031	1032	1032	1033	1032	1031	1031	
25*	1030	1030	1029	1029	1028	1029	1030	1033	1035	1033	1031	1027	1025	1031	1035	1033	1031	1031	1033	1032	1031	1030	1030	1030	1030	
26	1030	1029	1028	1028	1028	1028	1029	1030	1035	1030	1027	1020	1022	1029	1030	1028	1026	1028	1029	1028	1027	1027	1026	1027	1027	
27**	1026	1024	1025	1024	1023	1023	1023	1023	1025	1017	1013	1011	1016	1022	1022	1032	1036	1040	1040	1043	1047	1051	1051	1049	1049	
28	1046	1043	1039	1033	1029	1029	1030	1031	1028	1024	1019	1018	1018	1028	1036	1038	1043	1048	1051	1053	1056	1051	1047	1045	1045	
29	1038	1030	1031	1030	1030	1031	1031	1030	1028	1025	1019	1016	1014	1021	1027	1033	1035	1036	1035	1033	1032	1031	1030	1029	1029	
30**	1027	1026	1026	1026	1026	1026	1025	1026	1027	1026	1025	1013	1009	1015	1026	1034	1038	1041	1043	1042	1038	1034	1032	1030	1030	
31	1026	1026	1026	1025	1026	1026	1027	1026	1025	1024	1023	1018	1012	1015	1020	1019	1022	1026	1028	1027	1027	1026	1025	1023	1023	
<b>Mean</b>	1033	1032	1031	1030	1030	1031	1031	1031	1031	1030	1029	1026	1025	1029	1033	1034	1035	1037	1039	1039	1039	1038	1036	1035	1035	
<b>Mean*</b>	1031	1030	1030	1030	1030	1031	1031	1032	1032	1032	1030	1029	1026	1030	1033	1033	1032	1033	1033	1033	1032	1031	1031	1030	1030	
<b>Mean**</b>	1033	1032	1031	1030	1029	1029	1028	1028	1028	1027	1025	1023	1024	1029	1034	1039	1039	1043	1048	1051	1049	1051	1050	1049	1049	

<b>February</b> <span style="float:right">42000 γ + Tabular Quantities (in γ).</span>																										
1	1022	1022	1019	1020	1022	1025	1025	1026	1022	1022	1021	1016	1015	1019	1026	1028	1028	1030	1032	1032	1032	1030	1028	1026	1026	1026
2	1025	1024	1024	1024	1024	1026	1026	1025	1025	1026	1028	1022	1017	1020	1027	1032	1031	1031	1032	1032	1031	1029	1026	1022	1022	
3**	1021	1023	999	1024	1025	1024	1016	1020	1024	1022	1024	1029	1031	1039	1046	1046	1052	1068	1112	1088	1079	1065	1055	1054	1054	
4	1053	1050	1050	1050	1050	1050	1050	1048	1049	1048	1050	1049	1048	1047	1053	1054	1054	1054	1055	1060	1057	1055	1052	1049	1049	
5**	1044	1037	1031	1034	1035	1036	1039	1042	1043	1045	1042	1041	1039	1039	1045	1047	1048	1050	1050	1052	1051	1040	1042	1038	1038	
6	1033	1034	1036	1037	1036	1032	1034	1037	1039	1036	1037	1038	1037	1034	1043	1047	1044	1046	1047	1047	1048	1047	1044	1038	1038	
7	1033	1033	1034	1034	1034	1034	1034	1034	1034	1031	1030	1027	1029	1033	1037	1039	1042	1039	1039	1041	1039	1039	1037	1035	1035	
8*	1034	1034	1034	1034	1034	1035	1034	1036	1035	1031	1030	1024	1021	1023	1027	1032	1034	1036	1037	1037	1041	1041	1041	1037	1037	
9**	1032	1030	1031	1031	1031	1032	1032	1032	1029	1024	1021	1021	1019	1024	1034	1047	1052	1060	1071	1081	1077	1070	1056	1042	1042	
10	1040	1039	1041	1041	1041	1039	1038	1037	1034	1031	1028	1028	1029	1037	1051	1047	1043	1042	1042	1042	1040	1042	1044	1042	1042	
11	1039	1037	1033	1030	1029	1032	1030	1033	1032	1025	1025	1025	1029	1033	1039	1044	1040	1039	1038	1036	1040	1034	1033	1033	1033	
12	1033	1032	1030	1031	1030	1033	1030	1028	1030	1029	1028	1025	1028	1026	1028	1038	1045	1047	1048	1046	1045	1032	1028	1033	1033	
13	1034	1034	1035	1036	1034	1035	1034	1031	1030	1024	1023	1024	1028	1031	1039	1045	1044	1039	1039	1040	1039	1034	1035	1035	1035	
14	1022	1021	1024	1026	1028	1029	1029	1039	1029	1026	1024	1024	1028	1028	1028	1033	1036	1042	1049	1053	1051	1044	1045	1038	1038	
15	1036	1039	1039	1040	1041	1041	1039	1036	1036	1032	1030															

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

Table with columns for U.T. (0h to 24h) and rows for March (1st to 31st) and April (1st to 30th). The table contains magnetic intensity readings in gamma (γ) with various annotations like 1\*\*, 2, 3\*, 1\*\*, 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\*\*, Mean†, Mean\*‡, and Mean\*\*¶. A central header for each month section reads '42000 γ + Tabular Quantities (in γ)'. Some values are in parentheses to indicate disturbed days.

\* Denotes an International Quiet Day. \*\* Denotes an International Disturbed Day.

† March 11th and 27th omitted.

‡ March 11th omitted.

¶ March 27th omitted.

(†) April 29th omitted.



TABLE III.—HOURLY MEANS OF VERTICAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER—*continued.*

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>May</b>																										
42000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																										
1	1036	1027	1016	1010	1003	1019	1026	1024	1024	1016	1012	1016	1019	1026	1038	1041	1046	1052	1055	1053	1045	1042	1038	1037		
2	1035	1035	1037	1034	1035	1032	1033	1033	1031	1024	1013	1007	1006	1013	1025	1031	1037	1041	1044	1046	1045	1042	1040	1033		
3	1035	1036	1037	1038	1039	1039	1038	1037	1034	1029	1018	1009	1007	1011	1016	1026	1038	1044	1053	1050	1044	1040	1038	1033		
4**	1023	1026	1028	1024	1028	1029	1027	1025	1021	1014	1008	1012	1012	1017	1027	1034	1041	1045	1057	1064	1064	1060	1052	1046		
5**	1020	980	980	975	961	960	971	999	1015	1024	1030	1036	1056	1071	1084	1095	1090	1074	1058	1051	1049	1049	1048	1046		
6*	1046	1048	1046	1046	1049	1049	1049	1049	1044	1034	1029	1019	1019	1026	1034	1039	1044	1046	1046	1044	1042	1042	1042	1042		
7*	1042	1041	1041	1041	1044	1044	1044	1041	1035	1030	1024	1019	1019	1022	1026	1032	1038	1040	1044	1046	1045	1045	1045	1044		
8	1042	1043	1042	1041	1044	1044	1042	1040	1035	1031	1025	1019	1019	1024	1032	1038	1040	1040	1041	1040	1040	1041	1041	1041		
9	1036	1036	1038	1039	1039	1039	1034	1030	1028	1024	1020	1016	1019	1029	1039	1051	1057	1058	1057	1053	1052	1048	1046	1034		
10	1022	1026	1031	1032	1036	1036	1034	1031	1026	1021	1015	1014	1015	1023	1035	1041	1048	1057	1058	(1057)	1052	1048	1046	1044		
11	1031	1021	1020	1023	1021	1026	1031	1032	1026	1021	1010	1016	1025	1034	1041	1044	1056	1068	1064	1053	1048	1046	1044	1043		
12	1041	1038	1039	1041	1042	1043	1044	1042	1039	1033	1020	1014	1013	1021	1032	1038	1046	1048	1049	1046	1043	1043	1043	1042		
13	1042	1041	1042	1042	1047	1049	1052	1053	1047	1038	1030	1026	1024	1030	1039	1045	1052	1058	1054	1048	1044	1043	1042	1042		
14	1040	1041	1042	1042	1044	1046	1047	1046	1042	1033	1018	1009	1008	1018	1025	1037	1051	1062	1067	1058	1050	1044	1041	1038		
15	1038	1038	1039	1035	1039	1044	1043	1042	1031	1025	1021	1014	1013	1021	1029	1039	1049	1051	1053	1048	1047	1043	1039	1039		
16	1034	1025	1029	1035	1042	1044	1043	1039	1039	1031	1024	1021	1021	1031	1038	1049	1052	1053	1054	1050	1045	1042	1039	1032		
17	1031	1034	1036	1038	1039	1040	1040	1038	1031	1026	1015	1005	1008	1016	1028	1033	1039	1046	1050	1045	1043	1040	1038	1038		
18*	1037	1036	1036	1036	1039	1043	1042	1039	1034	1021	1011	1001	998	1005	1014	1028	1039	1046	1047	1043	1042	1041	1039	1036		
19	1034	1033	1033	1035	1040	1044	1039	1035	1032	1026	1021	1016	1019	1021	1030	1039	1049	1054	1054	1050	1048	1044	1043	1042		
20*	1041	1041	1041	1042	1046	1049	1051	1052	1047	1039	1030	1020	1019	1027	1036	1043	1044	1045	1047	1047	1047	1043	1042	1040		
21	1039	1040	1039	1039	1042	1044	1044	1040	1033	1024	1012	1004	1005	1017	1029	1031	1042	1045	1044	1049	1047	1043	1040	1039		
22	1038	1038	1038	1038	1040	1040	1039	1037	1034	1026	1011	999	999	1007	1021	1034	1042	1045	1047	1044	1042	1038	1037	1037		
23*	1037	1035	1036	1036	1034	1032	1032	1033	1026	1020	1011	1009	1011	1019	1031	1040	1047	1052	1054	1049	1046	1041	1039	1038		
24	1037	1037	1037	1038	1040	1040	1037	1029	1026	1021	1014	1009	1014	1023	1031	1034	1043	1048	1047	1045	1041	1039	1038	1038		
25	1038	1039	1033	1023	1013	1023	1024	1023	1026	1024	1021	1013	1013	1024	1034	1045	1054	1058	1058	1054	1049	1045	1034	1026		
26	1026	1013	1016	1024	1016	1026	1029	1026	1022	1020	1015	1011	1004	1008	1021	1029	1037	1041	1043	1046	1044	1038	1033	1033		
27**	1033	1033	1025	1028	1029	1031	1032	1030	1020	1020	1015	1003	999	1005	1026	1041	1046	1058	1067	1063	1048	1037	1035	1022		
28**	1008	1019	1024	1015	1007	1015	1015	1014	1018	1011	1008	1013	1018	1041	(1086)	1098	1094	1094	1084	1064	1052	1039	1013	1006		
29**	992	994	986	989	989	1000	1019	1031	1030	1023	1020	1015	1013	1021	1032	1041	1050	1050	1055	1054	1050	1041	1033	1023		
30	1024	1028	1031	1029	1031	1037	1038	1040	1036	1027	1017	1008	1016	1027	1037	1046	1055	1059	(1054)	(1049)	(1043)	1046	1042	1039		
31	1033	1018	1010	1010	1023	1033	1036	1041	1037	1033	1027	1023	1026	1030	1034	1039	1045	1046	1046	1046	1046	1044	1039	1031		
Mean	1033	1030	1030	1030	1030	1034	1035	1035	1031	1026	1018	1014	1015	1023	1034	1042	1049	1052	1053	1050	1047	1043	1040	1036		
Mean*	1041	1040	1040	1040	1042	1043	1044	1043	1037	1029	1021	1014	1013	1020	1028	1036	1042	1046	1048	1046	1044	1042	1041	1040		
Mean**	1015	1010	1009	1006	1003	1007	1013	1020	1021	1018	1016	1016	1020	1031	1051	1062	1064	1064	1064	1059	1053	1045	1036	1029		
<b>June</b>																										
42000 $\gamma$ + Tabular Quantities (in $\gamma$ ).																										
1	1023	1027	1025	1026	1029	1030	1028	1029	1029	1019	1009	1003	1000	1006	1016	1022	1034	1041	1050	1050	1047	1040	1037	1036		
2	1036	1035	1031	1027	1032	1032	1032	1031	1034	1027	1012	1004	1004	1011	1019	1033	1037	1040	1043	1045	1045	1041	1035	1033		
3	1034	1022	1023	1031	1036	1036	1036	1039	1035	1022	1015	1007	1005	1015	1025	1026	1033	1041	1046	1044	1039	1037	1036	1036		
4	1033	1033	1032	1033	1037	1040	1040	1036	1026	1016	1011	1001	994	1002	1016	1025	1036	1046	1046	1041	1040	1039	1037	1036		
5**	1029	1026	1029	1033	1036	1036	1035	1027	1023	1021	1021	1016	1019	1022	1030	1043	1057	1070	1079	1076	1065	1041	1036	1021		
6**	1026	1021	986	990	996	1003	1001	1004	1011	1010	1012	1022	1041	1063	1095	1111	1115	1101	1080	1066	1058	1049	1047	1044		
7	1032	1034	1037	1038	1042	1042	1041	1039	1037	1038	1040	1031	1033	1037	1047	1055	1061	1063	1064	1059	1054	1050	1046	1043		
8	1037	1028	1029	1033	1039	1037	1033	1028	1022	1017	1009	1007	1007	1022	1034	1041	1045	1048	1047	1048	1048	1045	1042	1034		
9*	1024	1029	1034	1035	1036	1037	1038	1038	1034	1025	1011	1002	1008	1018	1027	1032	1038	1041	1040	1039	1037	1035	1034	1033		
10	1034	1034	1035	1036	1039	1038	1028	1019	1013	1013	1007	1003	1007	1015	1025	1033	1041	1043	1045	1046	1043	1040	1037	1035		
11*	1034	1029	1030	1033	1039	1044	1043	1042	1036	1032	1027	1018	1016	1019	1028	1039	1043	1045	1041	1038	1038	1036	1035	1034		
12*	1034	1034	1035	1036	1040	1040	1037	1034	1032	1026	1021	1013	1009	1015	1021	1027	1034	1039	1041	1041	1040	1037	1034	1034		
13**	1034	1034	1034	1036	1038	1040	1038	1034	1026	1013	1004	1008	1018	1024	1024	1040	1051	1059	1063	1059	1054	1044	1041	1039		
14	1036	1038	1036	1041	1046	1045	1043	1036	1031	1024	1017	1013	1021	1031	1035	1040	1046	1046	1046	1045	1044	1040	1037	1035		
15	1034	1035	1035	1036	1038	1040	1042	1041	1031	1018	1007	1001	1005	1012	1020	1032	1040	1043	1042	1043	1041	1039	1037	1034		
16	1031	1017	1021	1029	1029	1028	1030	1033	1030	1021	1012	1004	995	1003	1014	1026	1033	1034	1040							

TABLE III.—HOURLY MEANS OF VERTICAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER—*continued.*

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>																										
42000 γ + Tabular Quantities (in γ).																										
1	1031	1023	1022	1025	1030	1031	1033	1032	1023	1009	1000	1004	1003	1010	1020	1026	1032	1040	1040	1042	1043	1037	1035	1032	1032	1032
2	1030	1030	1028	1027	1032	1036	1035	1032	1024	1008	1001	1006	1013	1014	1023	1035	1046	1050	1052	1052	1046	1040	1037	1031	1031	1031
3*	1031	1031	1029	1027	1031	1034	1034	1030	1021	1015	1009	1002	997	1008	1017	1025	1035	1041	1040	1040	1039	1037	1036	1035	1035	1035
4	1034	1033	1033	1033	1035	1036	1035	1036	1029	1021	1017	1010	1010	1014	1019	1030	1035	1037	1037	1037	1036	1035	1033	1032	1032	1032
5	1030	1030	1030	1030	1032	1031	1031	1032	1031	1014	1007	1006	1006	1020	1029	1036	1040	1040	1036	1033	1031	1031	1030	1030	1030	1030
6	1030	1030	1031	1033	1037	1036	1036	1034	1029	1018	1016	1012	1024	1040	1057	1065	1084	1080	1072	1067	1061	1052	1045	1040	1040	
7	1032	1031	1028	1032	1036	1040	1032	1032	1022	1017	1011	1004	1014	1027	1039	1041	1043	1045	1045	1048	1047	1045	1040	1038	1038	
8*	1037	1038	1038	1040	1042	1042	1045	1038	1029	1022	1012	999	1005	1017	1023	1032	1042	1045	1045	1044	1042	1042	1040	1037	1037	
9	1035	1035	1037	1038	1039	1037	1036	1037	1032	1017	1009	1004	1007	1019	1034	1038	1043	1043	1049	1046	1041	1040	1035	1025	1025	
10	1016	996	1007	1009	1011	1013	1025	1035	1037	1031	1024	1017	1009	1013	1028	1037	1042	1044	1047	1046	1042	1038	1037	1035	1035	
11	1035	1035	1036	1038	1040	1039	1037	1033	1029	1023	1011	1006	1011	1016	1023	1037	1047	1060	1069	1070	1063	1052	1042	1034	1034	
12	1014	1016	1023	1032	1039	1044	1044	1043	1037	1024	1015	1008	1002	1009	1020	1032	1039	1046	1050	1045	1040	1037	1034	1034	1034	
13	1033	1033	1034	1036	1041	1040	1034	1034	1028	1018	1009	1001	996	1001	1009	1024	1039	1044	1048	1045	1043	1041	1038	1034	1034	
14**	1035	1035	1038	1038	1038	1033	1024	1025	1024	1024	1028	1025	1026	1051	1076	1122	1142	1142	1127	1107	1080	1064	1054	1049	1049	
15	1048	1042	1036	1043	1051	1056	1054	1050	1045	1031	1022	1017	1016	1023	1032	1044	1060	1065	1069	1065	1060	1052	1048	1043	1043	
16	1043	1043	1043	1045	1050	1056	1054	1049	1044	1039	1031	1026	1028	1033	1036	1043	1047	1055	1050	1049	1050	1048	1045	1043	1043	
17	1041	1040	1039	1039	1046	1047	1039	1030	1025	1018	1010	1012	1011	1011	1015	1022	1027	1034	1039	1043	1044	1040	1038	1038	1038	
18	1037	1037	1036	1038	1040	1041	1036	1036	1032	1026	1026	1017	1007	1004	1017	1034	1035	1036	1041	1045	1041	1041	1036	1035	1035	
19**	1034	1034	1035	1036	1041	1044	1038	1032	1026	1016	1012	1009	1008	1015	1017	1026	1035	1046	1055	1068	1070	1058	1053	1050	1050	
20**	1042	1034	1038	1035	1029	1030	1036	1029	1022	1017	1017	1014	1012	1016	1025	1038	1043	1045	1046	1043	1040	1039	1039	1039	1039	
21	1038	1037	1037	1040	1041	1043	1040	1038	1034	1033	1032	1030	1025	1017	1021	1036	1048	1053	1051	1049	1048	1045	1043	1040	1040	
22**	1037	1024	1016	1007	1015	1013	1010	1012	1025	1035	1028	1032	1044	1066	1078	1086	1088	1077	1069	1066	1053	1034	1039	1039	1039	
23	1045	1045	1040	1041	1047	1052	1048	1043	1038	1029	1024	1024	1031	1038	1043	1049	1050	1061	1076	1070	1060	1050	1047	1044	1044	
24**	1030	990	991	1009	1024	1030	1034	1034	1031	1026	1028	1028	1030	1031	1043	1058	1061	1065	1075	1074	1070	1058	1050	1048	1048	
25	1028	1028	1041	1041	1035	1033	1041	1047	1046	1041	1029	1020	1020	1029	1046	1063	1074	1079	1074	1064	1047	1039	1041	1036	1036	
26	1035	1033	1037	(1045)	(1045)	(1045)	(1045)	(1040)	(1035)	1029	1024	1018	1016	1027	1041	1056	1061	1057	1052	1050	1047	1044	1042	1042	1042	
27*	1042	1041	1042	1043	1047	1038	1046	1043	1043	1037	1030	1026	1027	1030	1037	1043	1045	1048	1048	1047	1045	1043	1042	1040	1040	
28*	1036	1035	1038	1041	1045	1047	1044	1043	1037	1029	1023	1010	1007	1017	1024	1035	1041	1043	1045	1043	1042	1039	1036	1036	1036	
29*	1036	1037	1038	1040	1044	1045	1042	1039	1035	1029	1025	1017	1012	1021	1034	1043	1048	1049	1047	1048	1046	1043	1040	1038	1038	
30	1037	1036	1035	1037	1043	1043	1043	1035	1031	1031	1025	1018	1011	1014	1021	1031	1036	1039	1041	1039	1040	1039	1036	1035	1035	
31	1032	1033	1033	1033	1038	1039	1038	1036	1031	1027	1022	1010	1008	1011	1020	1031	1046	1053	1053	1049	1046	1043	1039	1036	1036	
Mean	1034	1031	1032	1034	1038	1039	1038	1036	1032	1024	1019	1014	1014	1021	1031	1042	1050	1054	1055	1053	1049	1044	1040	1038	1038	
Mean*	1036	1036	1037	1038	1042	1041	1042	1039	1033	1026	1020	1011	1010	1019	1027	1036	1042	1045	1045	1044	1043	1041	1039	1037	1037	
Mean**	1036	1023	1024	1025	1029	1030	1028	1026	1026	1024	1024	1021	1022	1031	1045	1064	1073	1077	1076	1072	1065	1054	1046	1045	1045	
<b>August.</b>																										
42000 γ + Tabular Quantities (in γ).																										
1	1027	1027	1029	1032	1034	1036	1036	1032	1025	1014	1006	1001	1001	1013	1028	1034	1043	1051	1048	1048	1046	1042	1038	1037	1037	
2**	1028	1032	1033	1021	990	982	982	974	974	990	995	990	1008	1042	1078	1093	1083	1095	1078	1059	1052	1051	1051	1052	1052	
3**	1051	1048	1046	1048	1048	1049	1050	1043	1039	1028	1018	1015	1023	1029	1044	1046	1049	1046	1044	1048	1054	1048	1047	1040	1040	
4**	1016	999	994	1009	1014	1024	1030	1032	1029	1029	1020	1015	1015	1022	1038	1051	1056	1059	1059	1056	1054	1048	1049	1049	1049	
5	1048	1036	1043	1047	1051	1053	1051	1047	1048	1043	1035	1028	1026	1028	1038	1051	1059	1064	1061	1061	1056	1051	1049	1048	1048	
6	1045	1043	1041	1042	1048	1052	1051	1047	1037	1027	1019	1019	1015	1022	1030	1040	1052	1062	1064	1065	1057	1050	1046	1046	1046	
7	1045	1042	1045	1046	1048	1052	1049	1045	1034	1027	1017	1014	1022	1027	1024	1036	1047	1052	1053	1055	1050	1046	1045	1043	1043	
8	1040	1041	1042	1042	1045	1048	1052	1047	1038	1033	1030	1024	1028	1031	1041	1052	1057	1060	1056	1051	1048	1046	1043	1043	1043	
9	1042	1042	1042	1044	1048	1051	1051	1047	1038	1026	1017	1013	1015	1024	1033	1040	1053	1056	1051	1046	1043	1041	1041	1038	1038	
10	1036	1037	1037	1039	1043	1047	1046	1043	1033	1019	1014	1011	1015	1017	1026	1042	1050	1056	1056	1051	1045	1040	1039	1038	1038	
11	1039	1038	1038	1041	1046	1049	1046	1041	1031	1020	1010	1008	1008	1013	1023	1032	1041	1046	1046	1043	1042	1038	1036	1035	1035	
12	1036	1036	1038	1039	1042	1044	1043	1037	1029	1021	1014	1009	1001	1003	1016	1029	1039	1042	1043	1039	1039	1036	1036	1036	1036	
13*	1034	1033	1034	1037	1037	1037	1036	1035	1030	1022	1015	1017	1015	1017	1025	1035	1041	1043	1040	1037	1038	1037	1037	1036	1036	
14	1038	1038	1037	1036	1041	1044	1044	1038	1028	1019	1011	1010	1007	1016	1028	1037	1041	1041	1042	1040	1038	1036	1037	1035	1035	
15	1038	1036	1032	1032	1034	1034	1031	1029	1029	1032	1027	1023	1022	1028	1035	1042	1043	1042	1042	1045	1044	1043	1041	1038	1038	
16*	1038	1037	1037	1038	1042	1042	103																			

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

Table with columns for U.T. (0h to 24h) and rows for months (September and October). Each cell contains magnetic intensity values (e.g., 1041, 1038, 1042) or codes for International Quiet (\*\*\*) or Disturbed (\*\*) days. Includes summary rows for Mean, Mean\*, and Mean\*\*.

\*\* Denotes an International Quiet Day.

\*\* Denotes an International Disturbed Day.

TABLE III.—HOURLY MEANS OF VERTICAL COMPONENT OF MAGNETIC INTENSITY AT ABINGER.—*continued.*

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>																																					
	42000 γ + Tabular Quantities (in γ).																																				
1	1048	1046	1045	1045	1044	1046	1047	1048	1047	1039	1034	1034	1038	1041	1047	1052	1054	1055	1057	1058	1059	1060	1061	1058													
2	1055	1052	1042	1039	1038	1040	1042	1041	1041	1039	1039	1040	1042	1040	1044	1048	1048	1048	1049	1052	1054	1052	1050	1048	1048												
3	1048	1045	1045	1045	1047	1047	1043	1045	1046	1041	1039	1040	1043	1048	1049	1051	1051	1050	1050	1048	1048	1048	1048	1047	1046	1046											
4*	1048	1046	1045	1046	1045	1046	1044	1045	1046	1042	1041	1044	1047	1051	1052	1054	1053	1051	1050	1047	1046	1046	1046	1046	1045	1044											
5*	1045	1044	1044	1044	1043	1041	1041	1041	1041	1036	1037	1040	1042	1043	1045	1046	1047	1047	1046	1045	1044	1045	1045	1045	1044	1044											
6*	1042	1042	1042	1042	1042	1042	1045	1045	1049	1044	1039	1036	1038	1041	1046	1047	1049	1048	1047	1047	1047	1047	1047	1046	1045	1045	1044										
7	1043	1042	1041	1038	1041	1040	1038	1042	1042	1034	1029	1030	1034	1039	1045	1048	1049	1047	1049	1053	1060	1055	1048	1048	1047	1047											
8	1034	1041	1050	1047	1045	1048	1048	1046	1046	1043	1041	1038	1041	1045	1047	1051	1051	1053	1058	1062	1061	1062	1056	1056	1053	1053	1049	1049									
9	1050	1050	1046	1044	1043	1043	1043	1038	1039	1040	1038	1042	1044	1052	1060	1066	1058	1058	1053	1053	1051	1051	1050	1049	1049	1049	1049	1049	1049								
10	1049	1047	1046	1046	1046	1047	1047	1049	1050	1050	1049	1049	1051	1052	1054	1056	1054	1053	1052	1050	1047	1048	1047	1044	1044	1044	1044	1044	1044	1044							
11	1045	1043	1043	1043	1043	1045	1045	1043	1045	1044	1039	1041	1038	1037	1037	1045	1047	1045	1045	1045	1043	1046	1047	1043	1043	1043	1043	1043	1043	1043	1043	1043					
12	1041	1042	1036	1032	1036	1039	1041	1041	1039	1039	1038	1038	1039	1044	1047	1046	1044	1046	1047	1047	1047	1046	1040	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038		
13	1039	1039	1039	1038	1039	1039	1039	1039	1039	1039	1039	1036	1036	1036	1039	1039	1039	1042	1042	1046	1045	1042	1042	1041	1039	1039	1039	1039	1039	1039	1039	1039	1039	1039	1039		
14	1040	1038	1038	1037	1036	1037	1037	1038	1039	1039	1035	1037	1040	1043	1045	1044	1044	1044	1043	1043	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042		
15*	1039	1039	1039	1038	1041	1041	1044	1044	1045	1040	1041	1036	1034	1036	1035	1034	1037	1038	1036	1036	1039	1040	1039	1040	1039	1039	1039	1039	1039	1039	1039	1039	1039	1039	1039		
16*	1037	1036	1036	1035	1035	1035	1036	1034	1035	1036	1035	1035	1036	1039	1042	1043	1043	1044	1042	1039	1039	1040	1040	1040	1039	1039	1039	1039	1039	1039	1039	1039	1039	1039	1039		
17	1038	1036	1035	1035	1035	1035	1036	1035	1035	1035	1030	1030	1033	1035	1040	1043	1048	1052	1052	1048	1048	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046		
18**	1042	1037	1033	1033	1032	1033	1033	1030	1030	1032	1030	1035	1037	1040	1049	1059	1060	1064	1080	1091	1080	1073	1063	1055	1051	1048	1048	1048	1048	1048	1048	1048	1048	1048			
19**	1047	1043	1040	1042	1043	1044	1044	1043	1043	1039	1038	1043	1054	1071	1083	1089	1085	1080	1072	1066	1061	1058	1055	1051	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048		
20	1047	1048	1050	1052	1049	1048	1048	1049	1047	1047	1049	1053	1052	1055	1072	1077	1075	1067	1062	1059	1057	1054	1049	1047	1047	1047	1047	1047	1047	1047	1047	1047	1047	1047	1047		
21	1048	1048	1047	1045	1045	1044	1044	1044	1043	1043	1042	1038	1042	1050	1048	1048	1051	1053	1056	1057	1057	1053	1049	1044	1044	1044	1044	1044	1044	1044	1044	1044	1044	1044	1044		
22	1042	1042	1042	1042	1043	1044	1045	1043	1042	1040	1036	1040	1043	1046	1063	1061	1070	1071	1065	1066	1061	1051	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	
23**	1039	1030	1038	1040	1043	1047	1048	1047	1046	1043	1040	1037	1048	1053	1061	1063	1060	1065	1058	1057	1056	1043	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	
24	1039	1039	1040	1043	1042	1045	1046	1046	1046	1048	1044	1042	1046	1051	1066	1066	1062	1061	1060	1062	1059	1056	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051	1051		
25	1043	1042	1043	1046	1046	1048	1049	1049	1048	1046	1043	1042	1043	1046	1048	1051	1053	1054	1054	1055	1053	1053	1051	1049	1049	1049	1049	1049	1049	1049	1049	1049	1049	1049	1049	1049	
26	1048	1046	1046	1044	1044	1046	1049	1051	1049	1048	1048	1046	1046	1048	1049	1047	1050	1051	1049	1048	1048	1047	1045	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040	
27	1040	1040	1038	1040	1040	1040	1043	1043	1046	1043	1042	1042	1043	1046	1047	1044	1048	1048	1048	1049	1051	1052	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	1042	
28	1043	1041	1038	1033	1035	1036	1037	1039	1039	1040	1044	1046	1049	1056	1067	1074	1079	1077	1072	1068	1062	1061	1061	1061	1061	1061	1061	1061	1061	1061	1061	1061	1061	1061	1061	1061	
29**	1046	1040	1037	1040	1043	1046	1047	1046	1043	1044	1042	1038	1046	1052	1057	1057	1064	1077	1080	1081	1076	1068	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	
30**	1056	1053	1053	1045	1040	1042	1046	1047	1051	1048	1048	1046	1048	1056	1068	1076	1085	1094	1099	1102	1090	1047	1056	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	
Mean	1044	1043	1042	1041	1042	1043	1043	1043	1043	1041	1040	1040	1043	1047	1052	1054	1055	1056	1056	1056	1054	1051	1049	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	
Mean*	1042	1041	1041	1041	1041	1041	1042	1042	1043	1040	1039	1038	1039	1042	1044	1045	1046	1046	1044	1043	1043	1044	1043	1043	1043	1043	1043	1043	1043	1043	1043	1043	1043	1043	1043	1043	1043
Mean**	1046	1041	1040	1040	1040	1042	1044	1043	1043	1041	1040	1040	1047	1054	1064	1069	1071	1076	1078	1079	1073	1058	1056	1052	1052	1052	1052	1052	1052	1052	1052	1052	1052	1052	1052	1052	

<b>December</b>																																					
	42000 γ + Tabular Quantities (in γ).																																				
1	1051	1043	1042	1034	1028	1023	1028	1038	1045	1051	1061	1062	1067	1074	1076	1081	1079	1079	1077	1069	1063	1060	1059	1058	1058	1058	1058	1058	1058	1058	1058	1058	1058	1058			
2	1056	1051	1046	1044	1039	1040	1043	1049	1050	1051	1051	1053	1054	1057	1058	1061	1063	1063	1063	1063	1061	1058	1056	1056	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	
3	1053	1048	1048	1046	1047	1049	1051	1051	1049	1051	1050	1050	1051	1056	1054	1053	1056	1056	1054	1054	1055	1056	1056	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053
4*	1051	1048	1048	1047	1046	1048	1049	1048	1048	1048	1049	1049	1051	1055	1055	1056	1056	1054	1053	1051	1048	1048	1047	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046	1046
5	1046	1044	1044	1043	1042	1042	1040	1040	1042	1040	1040	1040	1040	1043	1046																						



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

Date.	DECLINATION WEST.						HORIZONTAL INTENSITY.						VERTICAL INTENSITY.									
	Mean Value for the Day.		Maximum.		Minimum.		Range.	Mean Value for the Day.		Maximum.		Minimum.		Range.	Mean Value for the Day.		Maximum.		Minimum.		Range.	
	U.T. h m	U.T. h m	U.T. h m	U.T. h m	U.T. h m	U.T. h m		U.T. h m	U.T. h m	U.T. h m	U.T. h m	U.T. h m	U.T. h m		U.T. h m	U.T. h m	U.T. h m	U.T. h m	U.T. h m	U.T. h m		U.T. h m
<b>JAN.</b>	11°+		11°+		h m		18000γ+	h m	18000γ+	18000γ+	h m	γ	42000γ+	h m	42000γ+	42000γ+	h m	γ				
1*	14.7	13 21	17.4	12.3	0 4	5.1	525	18 50	537	513	11 40	24	1031	18 12	1035	1022	12 30	13				
2	14.8	13 51	19.1	4.7	23 7	14.4	525	23 10	548	492	23 39	56	1029	20 30	1043	1016	12 23	27				
3	14.5	14 11	20.5	9.3	0 31	11.2	518	3 50	553	487	11 26	66	1032	10 21	1041	1016	4 8	25				
4	14.2	12 51	17.8	10.0	2 46	7.8	519	21 52	538	497	11 48	41	1034	18 29	1044	1028	4 50	16				
5	15.0	13 41	18.9	11.4	9 2	7.5	526	19 51	541	506	10 11	35	1034	18 10	1042	1030	3 30	12				
6	15.0	12 47	19.9	12.1	8 33	7.8	529	22 34	546	506	12 10	40	1031	8 0	1038	1023	11 59	15				
7**	14.0	18 4	22.6	-2.6	19 29	25.2	511	19 34	507	427	21 55	140	1039	19 35	1120	1019	12 32	101				
8	14.7	1 14	17.7	11.0	0 0	6.7	508	21 30	528	473	0 0	55	1042	0 1	1069	1037	23 54	32				
9**	14.9	12 10	20.4	7.2	23 33	13.2	520	22 20	565	479	10 42	86	1040	22 19	1064	1029	8 47	35				
10**	16.0	13 4	23.8	7.0	21 24	16.8	517	21 43	566	477	21 8	89	1041	21 29	1066	1027	8 59	39				
11	15.5	13 40	20.2	5.1	21 54	15.1	523	22 10	597	505	21 31	92	1036	0 6	1045	1022	22 58	23				
12	14.7	12 28	19.2	10.1	23 23	9.1	525	20 20	545	482	15 57	63	1036	16 11	1053	1025	12 23	28				
13	15.1	2 55	20.5	10.7	20 32	9.8	525	3 16	550	503	12 12	47	1035	13 40	1042	1026	3 33	16				
14	15.4	11 48	18.7	12.1	22 48	6.6	527	5 10	542	509	12 1	33	1034	16 15	1042	1025	12 0	17				
15*	14.9	12 57	16.9	13.3	22 35	3.6	530	6 33	540	518	16 0	22	1031	18 40	1037	1022	12 24	15				
16*	15.4	12 30	18.3	13.0	7 59	5.3	530	5 45	540	515	10 28	25	1030	5 44	1034	1024	12 30	10				
17	15.2	12 20	18.4	11.6	22 57	6.8	533	4 40	542	510	10 13	32	1026	0 38	1028	1016	12 56	12				
18	15.1	12 30	18.2	12.3	8 20	5.9	532	6 42	545	511	10 55	34	1027	17 28	1038	1014	11 30	24				
19	15.3	12 59	19.2	11.4	22 46	7.8	533	8 20	542	520	11 39	22	1029	18 19	1038	1021	12 16	17				
20	15.9	16 56	22.0	12.1	20 10	9.9	528	6 52	544	492	19 14	52	1034	19 40	1061	1024	12 30	37				
21	15.2	12 40	22.7	6.8	22 10	15.9	523	21 7	556	490	19 47	66	1034	20 3	1060	1019	11 36	41				
22	14.5	13 18	18.9	10.1	0 1	8.8	521	20 12	540	490	11 16	50	1035	0 19	1044	1029	12 50	15				
23*	14.6	12 52	19.3	12.2	20 40	7.1	525	20 20	541	505	12 17	36	1033	8 34	1040	1027	12 34	13				
24	14.1	13 17	18.9	9.8	8 36	9.1	526	22 4	544	491	11 57	53	1030	8 46	1036	1022	11 54	14				
25*	14.4	13 23	19.6	10.1	9 18	9.5	526	23 55	541	488	12 11	53	1031	8 30	1036	1022	12 10	14				
26	14.3	12 50	18.7	9.2	9 4	9.5	534	20 18	545	503	10 42	42	1028	8 20	1037	1018	12 0	19				
27**	15.5	13 51	23.6	7.3	8 41	16.3	524	8 39	503	479	13 1	84	1029	21 45	1054	1006	11 20	48				
28	13.9	13 57	20.8	7.4	23 0	13.4	505	5 6	528	481	19 46	47	1037	20 20	1059	1014	12 10	45				
29	14.4	13 23	20.2	6.2	1 43	14.0	513	7 8	540	486	11 14	54	1029	0 2	1041	1011	12 0	30				
30**	15.7	17 4	24.6	11.1	9 24	13.5	523	6 36	548	489	16 11	59	1028	19 3	1048	1008	12 50	40				
31	14.7	13 19	18.5	11.5	8 25	7.0	524	19 8	539	493	11 24	46	1024	18 10	1030	1011	12 19	19				
Mean	14.9	—	19.9	9.6	—	10.3	524	—	547	494	—	53.0	1033	—	1047	1021	—	26.2				
Mean*	14.8	—	18.3	12.2	—	6.1	527	—	540	508	—	32.0	1031	—	1036	1023	—	13.0				
Mean**	15.2	—	23.0	6.0	—	17.0	519	—	562	470	—	91.6	1035	—	1070	1018	—	52.6				
<b>FEB.</b>	11°+	h m	11°+	11°+	h m		18000γ+	h m	18000γ+	18000γ+	h m	γ	42000γ+	h m	42000γ+	42000γ+	h m	γ				
1	14.4	12 57	19.6	8.0	3 14	11.6	522	2 11	543	496	12 16	47	1025	18 39	1034	1013	12 22	21				
2	15.1	13 22	19.1	12.2	7 27	6.9	528	23 6	600	495	11 14	105	1026	23 5	1040	1017	12 44	23				
3**	11.3	18 47	28.1	-14.3	19 10	42.4	496	1 35	652	347	19 5	305	1041	18 55	1135	989	2 24	146				
4	13.7	13 24	21.0	6.7	19 42	14.3	491	19 51	523	450	11 55	73	1051	19 19	1062	1045	23 59	17				
5**	13.2	12 53	21.2	-1.3	20 26	22.5	503	20 35	560	474	12 16	86	1042	20 20	1059	1031	2 0	28				
6	13.8	14 44	21.7	3.8	20 34	17.9	507	5 53	532	468	10 40	64	1040	20 50	1052	1030	5 6	22				
7	14.2	13 36	19.9	8.4	21 13	11.5	515	21 22	538	492	12 56	46	1035	16 30	1043	1026	11 45	17				
8*	14.0	13 56	17.8	8.0	23 33	9.8	520	23 45	553	500	12 35	53	1033	22 16	1044	1020	12 0	24				
9**	14.1	14 39	25.6	-0.2	21 58	25.8	510	0 26	546	411	20 56	135	1041	20 2	1094	1017	12 40	77				
10	14.6	13 48	22.1	7.4	23 5	14.7	512	23 7	534	480	14 13	54	1039	14 20	1057	1027	11 24	30				
11	13.7	14 2	18.7	2.1	20 16	16.6	516	5 55	543	495	12 38	48	1034	15 16	1047	1023	9 53	24				
12	13.6	14 26	18.1	4.5	21 46	13.6	521	21 12	547	479	20 18	68	1033	18 46	1053	1022	21 40	31				
13	13.8	12 46	19.5	6.6	22 46	12.9	521	24 0	554	493	14 27	61	1034	15 8	1049	1022	10 28	27				
14	11.9	12 23	17.0	1.0	20 10	16.0	512	0 3	554	472	19 33	82	1033	19 40	1059	1021	0 18	38				
15	13.7	12 57	18.5	4.4	0 0	14.1	516	18 50	530	496	19 19	34	1040	19 50	1054	1028	11 36	26				
16	14.7	12 56	23.5	6.7	0 47	16.8	515	1 24	547	452	11 40	95	1039	16 37	1060	1023	11 30	37				
17	14.1	14 6	21.8	8.6	22 22	13.2	519	3 32	537	489	11 19	48	1038	18 21	1051	1026	11 20	25				
18	13.7	14 20	20.0	1.9	21 18	18.1	521	21 25	579	499	12 14	80	1032	21 9	1045	1018	12 24	27				
19**	14.6	12 25	21.6	5.4	1 31	16.2	520	0 52	596	450	13 2	146	1036	17 20	1086	1014	12 57	72				
20	14.1	14 47	20.1	10.4	9 43	9.7	528	5 30	551	497	15 43	54	1030	0 22	1039	1017	11 29	22				
21**	13.8	14 21	18.7	5.3	19																	

TABLE IV.—DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS—continued.

Date.	DECLINATION WEST.						HORIZONTAL INTENSITY.						VERTICAL INTENSITY.					
	Mean Value for the Day.	Maximum.		Minimum.		Range.	Mean Value for the Day.	Maximum.		Minimum.		Range.	Mean Value for the Day.	Maximum.		Minimum.		Range.
		U.T. h m	U.T. h m	U.T. h m	U.T. h m			U.T. h m	U.T. h m	U.T. h m	U.T. h m			U.T. h m	U.T. h m	U.T. h m	U.T. h m	
<b>MAR.</b>	11°+		11°+				18000γ+		18000γ+	18000γ+			42000γ+		42000γ+	42000γ+		
1**	13-8	14 46	21-2	1-3	22 42	19-9	518	19 45	555	436	22 25	119	1034	22 30	1062	1011	9 50	51
2	13-9	13 45	23-0	5-9	19 37	17-1	499	19 20	550	462	11 2	88	1042	19 10	1069	1026	3 58	43
3*	13-6	13 30	19-5	8-8	8 42	10-7	513	23 9	531	479	11 2	52	1032	7 13	1040	1018	12 33	22
4	13-9	14 28	20-6	9-7	8 48	10-9	523	23 8	542	490	12 10	52	1028	7 48	1035	1019	14 40	16
5**	14-2	13 53	33-2	-2-8	22 16	36-0	512	8 26	551	445	11 35	106	1032	19 3	1058	1012	11 27	46
6	12-8	12 40	17-1	7-1	0 6	10-0	509	1 44	533	478	11 37	55	1032	7 15	1039	1024	12 5	15
7*	13-6	13 40	18-2	9-9	8 42	8-3	524	22 42	535	505	12 28	30	1029	23 13	1034	1020	13 40	14
8*	13-3	13 18	16-9	8-9	9 6	8-0	528	20 37	543	507	11 15	36	1027	8 12	1036	1013	12 12	23
9	13-3	14 7	20-3	7-4	1 32	12-9	530	0 28	547	517	11 14	30	1026	22 32	1038	1009	11 12	29
10	13-8	12 50	19-8	9-5	8 53	10-3	534	23 19	549	517	11 30	32	1024	23 6	1033	1009	12 15	24
11*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12*	13-8	13 27	19-3	8-4	8 50	10-9	534	23 27	547	510	13 15	37	1026	—	—	1010	12 35	—
13	—	13 50	19-8	-0-8	23 10	20-6	—	—	—	—	—	—	1022	19 0	1033	1002	11 26	31
14	12-0	11 58	21-0	-2-4	2 58	23-4	511	2 26	561	483	0 53	78	1023	17 40	1049	994	2 41	55
15**	14-2	13 1	25-8	8-7	4 47	17-1	507	7 4	543	451	12 48	92	1035	14 26	1074	1005	10 27	69
16	13-5	13 28	19-9	7-6	21 36	12-3	514	21 45	541	494	11 11	47	1030	18 50	1043	1014	11 12	29
17	12-4	13 54	18-9	5-8	22 1	13-1	520	21 26	560	488	10 41	72	1027	18 47	1045	1006	11 53	39
18	12-9	14 20	19-7	6-9	21 50	12-8	525	15 48	541	500	10 4	41	1027	17 46	1043	1008	11 43	35
19	13-5	13 25	21-7	9-0	21 27	12-7	529	21 33	552	501	11 12	51	1027	17 8	1042	1008	11 14	34
20	12-3	13 28	19-1	7-1	8 28	12-0	531	22 2	543	515	11 0	28	1031	19 5	1041	1013	12 20	28
21	14-1	14 40	21-2	7-8	8 30	13-4	540	18 42	567	519	10 30	48	1028	18 38	1038	1007	11 50	31
22	13-1	13 7	26-3	4-7	20 54	21-6	529	22 33	620	458	13 38	162	1032	17 5	1056	1008	11 16	48
23	13-1	13 6	23-2	6-9	2 11	16-3	520	0 21	556	474	13 37	82	1028	16 10	1042	1009	11 58	33
24	12-9	13 30	20-5	7-9	8 35	12-6	527	22 13	566	502	11 20	64	1032	16 10	1048	1016	11 40	32
25	12-9	13 43	20-1	6-8	7 58	13-3	525	22 13	544	488	9 32	56	1026	7 47	1034	1005	11 34	29
26	13-8	13 4	24-4	6-4	8 33	18-0	531	21 0	590	501	11 5	89	1024	17 12	1036	1001	24 0	35
27**	12-7	12 41	27-3	-0-6	22 36	27-9	512	4 10	566	454	15 23	112	—	14 50	1059	997	11 26	62
28	12-8	13 26	21-5	4-6	8 30	16-9	514	4 0	570	469	10 5	101	1019	21 18	1035	997	4 24	38
29	12-0	13 44	20-6	5-2	8 40	15-4	523	21 50	547	494	10 28	53	1026	17 37	1034	1005	11 57	29
30	12-9	14 17	23-3	5-1	8 52	18-2	529	19 8	573	489	11 35	84	1022	20 9	1037	998	12 35	39
31**	12-4	7 16	32-6	2-2	8 42	30-4	500	6 17	582	430	8 43	152	1032	17 43	1093	975	8 43	118
Mean	13-2	—	21-9	5-8	—	16-1	521	—	555	485	—	70-7	1028	—	1046	1008	—	37-8
Mean*	13-6	—	18-5	9-0	—	9-5	525	—	539	500	—	38-8	1029	—	1037	1017	—	19-7
Mean**	13-5	—	28-0	1-8	—	26-3	510	—	559	443	—	116-2	1033	—	1069	1000	—	69-2
<b>APRIL</b>	11°+		11°+				18000γ+		18000γ+	18000γ+			42000γ+		42000γ+	42000γ+		
1	—	—	—	—	—	—	—	—	—	—	—	—	1035	7 7	1048	1017	11 35	31
2	11-0	13 36	20-7	0-8	18 57	19-9	515	19 5	631	469	10 59	162	1031	19 4	1065	1009	13 30	56
3	11-4	12 56	22-3	-0-2	2 12	22-5	509	22 19	567	465	9 55	102	1031	18 30	1060	1003	4 21	57
4	12-3	14 10	21-5	7-4	7 49	14-1	517	1 26	538	498	9 0	40	1031	18 10	1050	1005	12 50	45
5	12-5	13 32	21-2	6-0	8 28	15-2	525	19 28	544	499	11 17	45	1026	6 50	1036	1001	12 33	35
6	13-2	13 50	22-5	6-0	8 48	16-5	538	17 32	558	507	12 22	51	1022	7 5	1031	1003	12 16	28
7	12-6	13 50	18-3	6-8	8 32	11-5	542	21 8	570	515	12 0	55	1019	8 0	1027	996	12 57	31
8*	13-2	13 28	19-3	7-7	8 0	11-6	546	0 2	560	523	11 18	37	1019	18 0	1027	1003	12 42	24
9*	13-0	13 32	20-0	7-8	7 43	12-2	542	0 19	552	515	11 37	37	1020	23 30	1028	1001	12 30	27
10*	12-7	13 30	20-2	6-7	8 48	13-5	544	21 54	561	520	10 34	41	1021	7 30	1028	1008	12 0	20
11	12-6	12 54	21-4	4-5	3 22	16-9	538	1 22	574	503	10 35	71	1018	18 20	1030	995	11 38	35
12	14-1	15 48	27-9	2-7	20 46	25-2	536	20 12	576	510	21 38	66	1033	18 15	1083	991	11 55	92
13	12-1	13 58	18-9	6-7	21 20	12-2	524	0 10	577	505	12 15	72	1028	18 40	1046	1002	11 33	44
14*	11-8	13 20	16-5	7-3	8 48	9-2	527	18 20	543	511	11 10	32	1032	18 30	1041	1012	12 38	29
15	11-8	14 5	19-5	5-9	8 30	13-6	535	22 51	553	517	13 12	36	1027	18 28	1045	998	12 34	47
16*	12-6	14 18	19-9	6-8	9 0	13-1	535	20 20	554	484	11 35	70	1024	18 15	1038	994	12 56	44
17	12-2	13 32	19-0	7-1	9 8	11-9	541	20 6	569	507	11 52	62	1021	21 30	1032	995	11 57	37
18	12-0	13 56	20-2	3-1	2 35	17-1	535	2 10	576	488	12 15	88	1022	18 20	1037	999	12 37	38
19	12-2	13 13	20-6	4-3	19 57	16-3	537	21 2	568	504	11 7	64	1023	20 8	1038	1000	12 8	38
20	12-5	13 5	19-4	7-6	7 30	11-8	537	19 53	556	499	11 16	57	1022	17 40	1033	1001	12 10	32
21	11-5	12 28	17-1	5-0	4 50	12-1	527	21 50	544	501	8 56	43	1016	17 45	1037	992	12 10	45
22	11-9	12 58	18-7	6-7	9 3	12-0	533	23 3	570	505	9 1	65	1018	17 15	1030	977	12 1	53
23	12-2	14 0	20-4	7-5	8 25	12-9	541	19 36	584	520	10 58	64	(1020)	—	—	997	11 58	—
24**	12-4	22 29	27-2	-19-4	23 32	46-6	541	19 22	618	373	22 45	245	1018	17 47	1051	904	24 0	147
25**	8-9	19 33	26-6	-18-3	0 12	44-9	498	19 32	780	338	0 8	442	1039	19 30	1105	902	0 4	203
26**	10-2	18 55	28-5	-9-5	21 55	38-0	515	18 55	703	305	23 46	398	1026	17 57	1073	807	24 0	266
27**	6-9	0 0	16-3	-15-4	21 5	31-7	463	19 40	575	340	0 1	235	1026	19 40	1083	800	0 1	283
28**	11-3	6 52	27-0	-8-3	4 5													

TABLE IV.—DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS—continued.

Date.	DECLINATION WEST.						HORIZONTAL INTENSITY.						VERTICAL INTENSITY.					
	Mean Value for the Day.	Maximum.		Minimum.		Range.	Mean Value for the Day.	Maximum.		Minimum.		Range.	Mean Value for the Day.	Maximum.		Minimum.		Range.
		U.T. h m	U.T. h m	U.T. h m	U.T. h m			U.T. h m	U.T. h m	U.T. h m	U.T. h m			U.T. h m	U.T. h m	U.T. h m	U.T. h m	
<b>MAY</b>	11°+	U.T. h m	11°+	U.T. h m		18000γ+	U.T. h m	18000γ+	18000γ+	U.T. h m	γ	42000γ+	U.T. h m	42000γ+	42000γ+	U.T. h m	γ	
1	10.0	13 0	17.5	1.8	1 8	15.7	507	18 53	542	476	11 14	66	1030	18 48	1061	998	4 2	63
2	11.2	14 2	16.8	6.1	6 8	10.7	520	22 50	542	501	10 25	41	1031	19 30	1047	1006	12 15	41
3	11.5	13 50	15.9	7.3	23 50	8.6	528	23 30	577	508	11 5	69	1033	18 20	1054	1005	12 15	49
4**	9.3	12 50	16.9	0.9	23 27	16.0	532	18 20	599	495	21 0	104	1033	20 10	1065	1007	12 0	58
5**	11.0	15 3	23.1	-6.1	2 44	29.2	481	0 36	584	395	6 34	189	1030	15 2	1106	947	3 59	159
6*	10.9	13 48	16.6	5.1	6 43	11.5	510	18 30	529	495	10 22	34	1041	7 20	1051	1017	12 0	34
7*	11.3	13 25	16.2	5.3	7 6	10.9	527	20 48	546	508	10 20	38	1037	19 20	1046	1017	12 0	29
8	11.5	13 33	17.2	4.9	7 40	12.3	531	23 38	571	506	10 18	65	1037	5 30	1045	1019	11 30	26
9	11.7	15 3	20.0	6.5	7 16	13.5	534	23 43	580	493	13 50	87	1038	17 10	1059	1014	11 54	45
10	11.8	14 15	20.3	5.7	6 32	14.6	531	23 58	562	506	10 10	56	1035	18 10	1059	1012	11 50	47
11	11.0	14 12	20.1	0.6	1 17	19.5	520	0 2	562	482	11 16	80	1035	17 40	1070	(996)	10 10	(74)
12	12.7	14 0	21.5	6.1	8 8	15.4	529	21 5	555	497	11 38	58	1038	18 15	1049	1012	12 10	37
13	10.9	14 28	19.2	1.8	6 50	17.4	534	15 53	556	506	10 40	50	1043	17 45	1060	1021	12 20	39
14	12.4	13 14	21.7	5.5	9 3	16.2	538	16 54	589	491	12 12	98	1040	18 25	1072	1006	12 10	66
15	11.7	13 38	18.2	2.1	6 24	16.1	531	16 24	572	494	12 3	78	1037	18 38	1054	1011	11 50	43
16	10.9	13 23	17.9	4.5	6 30	13.4	532	22 40	567	495	13 50	72	1038	18 20	1055	1018	11 55	37
17	11.8	14 27	18.6	6.5	8 28	12.1	535	17 50	556	515	11 6	41	1033	18 20	1052	1004	11 10	48
18*	11.0	14 36	18.9	3.8	8 33	15.1	537	19 50	561	507	12 45	54	1031	18 25	1048	996	12 10	52
19	11.1	12 28	17.7	2.3	7 46	15.4	524	18 55	551	486	11 10	65	1037	18 20	1054	1015	11 35	39
20*	10.7	12 49	17.3	4.0	6 43	13.3	528	17 55	547	495	10 14	52	1041	7 15	1053	1016	11 55	37
21	11.1	13 8	18.0	4.1	7 24	13.9	537	17 2	602	500	10 5	102	1034	19 10	1050	1000	11 50	50
22	11.2	12 50	18.4	5.3	8 55	13.1	538	18 0	566	517	11 48	49	1032	18 5	1050	994	11 50	56
23*	10.9	14 45	17.6	2.6	9 16	15.0	539	17 50	561	511	11 45	50	1034	18 10	1055	1009	12 5	46
24	10.7	14 5	18.2	2.9	8 45	15.3	534	19 40	579	510	10 15	69	1034	17 50	1049	1009	11 40	40
25	9.9	13 30	20.8	0.8	7 30	20.0	529	22 7	583	488	11 3	95	1033	17 15	1059	1009	11 50	50
26	10.0	13 15	18.0	0.5	1 36	17.5	519	1 2	564	483	13 32	81	1026	20 10	1046	1002	12 35	44
27**	9.7	12 50	22.1	-0.7	23 32	22.8	526	19 28	587	481	9 17	106	1031	19 20	1071	997	12 12	74
28**	10.1	13 20	24.4	-0.7	5 10	25.1	510	14 25	577	434	10 40	143	1036	15 12	1102	994	3 56	108
29**	10.6	1 40	18.3	1.9	8 35	16.4	502	16 10	549	418	9 25	131	1023	18 50	1057	976	0 28	81
30	10.3	13 56	16.8	3.9	8 0	12.9	515	18 45	554	472	9 38	82	1036	17 20	1059	1008	11 38	51
31	10.1	14 24	18.8	3.0	7 10	15.8	523	19 0	554	487	10 12	67	1033	18 57	1047	1008	2 2	39
Mean	10.9	—	18.8	3.2	—	15.6	525	—	565	489	—	76.5	1035	—	1058	1005	—	53.6
Mean*	11.0	—	17.3	4.2	—	13.2	528	—	549	503	—	45.6	1037	—	1051	1011	—	39.6
Mean**	10.1	—	21.0	-0.9	—	21.9	510	—	579	445	—	134.6	1031	—	1080	984	—	96.0
<b>JUNE</b>	11°+	h m	11°+	11°+	h m		18000γ+	h m	18000γ+	18000γ+	h m	γ	42000γ+	h m	42000γ+	42000γ+	h m	γ
1	11.3	13 40	21.9	5.0	7 55	16.9	524	18 50	555	491	10 20	64	1027	20 6	1053	996	11 58	57
2	11.0	15 30	17.2	—	—	—	530	21 50	563	492	10 40	71	1030	19 15	1048	1002	11 30	46
3	11.0	14 3	18.1	3.6	6 35	14.5	540	1 15	565	516	8 50	49	1030	18 30	1046	1003	12 30	43
4	11.5	14 48	21.0	2.6	7 12	18.4	545	14 48	593	517	9 0	76	1029	17 45	1051	993	12 30	58
5**	10.9	13 55	21.1	-6.5	23 50	27.6	539	18 25	575	470	23 47	105	1037	18 48	1079	1009	23 38	70
6**	11.8	13 50	23.5	-0.5	4 10	24.0	493	2 8	586	389	10 17	197	1040	16 40	1116	973	2 30	143
7	11.0	13 42	22.5	3.1	7 20	19.4	521	19 3	559	491	8 18	68	1044	18 20	1065	1028	11 30	37
8	11.3	13 40	22.1	2.7	6 37	19.4	525	23 35	569	482	8 20	87	1033	20 5	1053	1006	12 15	47
9*	10.2	14 50	18.7	3.3	7 45	15.4	526	0 3	554	490	10 18	64	1030	17 25	1042	1001	11 30	41
10	11.1	13 23	19.0	-0.4	6 2	19.4	539	5 8	580	502	8 11	78	1030	19 10	1047	1001	11 30	46
11*	10.7	13 8	18.7	3.6	6 38	15.1	529	1 23	564	487	11 9	77	1034	17 45	1046	1014	12 0	32
12*	9.9	14 12	15.9	4.8	7 27	11.1	533	18 52	558	498	10 22	60	1031	18 50	1041	1007	12 20	34
13**	11.2	13 35	20.5	0.2	8 45	20.3	533	16 50	580	458	10 40	122	1036	18 45	1065	1001	10 35	64
14	9.9	14 0	16.0	-3.0	6 17	19.0	534	18 48	570	499	6 20	71	1036	17 20	1047	1012	11 32	35
15	11.1	13 3	19.2	5.2	6 11	16.0	534	22 20	564	499	11 38	65	1031	17 20	1045	999	11 30	46
16	9.9	15 42	15.9	2.0	2 0	13.9	540	20 50	575	504	10 25	71	1026	19 40	1046	994	12 30	52
17	10.6	12 32	19.5	2.0	8 52	17.5	536	18 28	578	[492	10 0]	—	1032	19 30	1054	[1005	11 30]	—
18	10.0	13 50	19.6	0.5	6 10	19.1	536	20 14	564	506	9 0	58	1030	17 5	1046	1001	11 30	45
19*	10.7	13 25	17.7	1.4	6 30	16.3	532	18 50	563	495	11 33	68	1029	18 45	1046	1003	12 20	43
20**	11.7	14 32	21.1	-1.0	7 15	22.1	541	18 37	603	499	13 20	104	1029	18 40	1069	992	12 0	77
21	8.5	13 45	15.5	0.0	8 5	15.5	518	19 21	568	490	12 50	78	1025	20 50	1050	991	11 30	59
22	11.3	13 6	21.7	1.8	7 8	19.9	530	18 22	615	444	10 30	171	1035	18 20	1065	1005	12 35	60
23	10.3	12 20	20.4	2.1	6 40	18.3	524	19 20	557	483	12 55	74	1024	19 5	1040	993	11 30	47
24	10.0	13 35	19.6	2.8	6 40	16.8	537	18 47	586	481	13 28	105	1029	17 50	1052	1008	12 30	44
25	11.5	11 48	17.5	5.7	4 10	11.8	528	22 50	567	499	12 56	68	1029	17 25	1055	1011	8 10	44
26*	10.3	13 42	19.8	1.9	7 25	17.9	530	17 50	551	503	10 30	48	1028	18 40	1047	1006	11 0	41
27**	9.1	15 22	23.7	-2.9	7 30	26.6	548	15 23	697									

TABLE IV.—DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS—*continued.*

Date.	DECLINATION WEST.						HORIZONTAL INTENSITY.					VERTICAL INTENSITY.						
	Mean Value for the Day.	Maximum.		Minimum.		Range.	Mean Value for the Day.	Maximum.		Minimum.		Range.	Mean Value for the Day.	Maximum.		Minimum.		Range.
		U.T. h m	U.T. h m	U.T. h m	U.T. h m			U.T. h m	U.T. h m	U.T. h m	U.T. h m			U.T. h m	U.T. h m	U.T. h m	U.T. h m	
<b>JULY</b>	10°+	h m	10°+	10°+	h m		18000γ+	h m	18000γ+	18000γ+	h m	γ	42000γ+	h m	42000γ+	42000γ+	h m	γ
1	69.4	13 43	79.2	63.8	8 55	15.4	531	18 28	568	486	14 15	82	1026	20 15	1046	998	10 35	48
2	69.4	13 52	75.7	63.2	6 8	12.5	534	19 48	594	500	11 13	94	1030	19 42	1055	1001	10 0	54
3*	69.6	13 10	77.0	63.1	5 41	13.9	530	18 54	556	492	10 25	64	1027	17 40	1041	996	12 30	45
4	70.0	13 50	76.6	62.1	7 5	13.5	542	19 40	571	518	9 16	53	1029	18 16	1038	1008	12 0	30
5	71.7	13 57	80.1	62.9	7 12	17.2	551	23 36	595	495	10 53	100	1028	17 24	1042	1004	12 20	38
6	71.7	13 25	83.8	64.9	6 33	18.9	536	0 45	589	502	13 47	87	1043	16 50	1087	1011	10 56	76
7	69.4	13 30	80.1	56.0	6 45	24.1	522	19 20	561	474	10 10	87	1033	19 30	1050	1001	11 30	49
8*	70.7	14 12	79.0	62.4	8 2	16.6	534	19 50	564	493	9 40	71	1033	17 50	1047	995	11 40	52
9	71.3	14 28	84.6	61.3	8 6	23.3	540	14 33	617	491	10 20	126	1033	18 22	1050	1002	11 10	48
10	69.9	1 5	79.3	60.4	7 35	18.9	522	19 0	551	448	10 45	103	1027	18 30	1048	987	1 29	61
11	71.3	14 56	84.5	62.7	6 34	21.8	533	23 55	582	500	11 0	82	1037	19 30	1075	1005	11 45	70
12	69.8	14 27	79.7	61.0	8 4	18.7	525	19 5	554	481	11 2	73	1030	18 20	1050	1001	12 25	49
13	69.9	13 12	79.3	61.7	6 26	17.6	535	21 38	573	490	11 8	83	1029	18 20	1049	994	12 22	55
14**	71.3	14 50	82.5	62.5	7 24	20.0	535	15 57	612	470	9 48	142	1059	16 33	1150	1021	12 0	129
15	70.0	14 20	79.7	62.3	7 48	17.4	513	18 17	559	455	11 53	104	1045	19 10	1070	1014	12 0	56
16	70.0	13 33	80.0	61.1	7 25	18.9	530	17 38	575	484	10 28	91	1044	5 40	1058	1025	11 28	33
17	70.0	13 30	77.5	62.5	5 55	15.0	535	18 32	568	497	11 18	71	1031	5 0	1047	1007	11 0	40
18	70.6	14 20	79.6	62.1	6 45	17.5	540	21 47	590	499	10 20	91	1032	19 15	1046	1001	13 10	45
19**	70.6	15 50	80.3	61.2	19 53	19.1	554	18 48	671	511	8 31	160	1036	20 10	1075	1005	12 0	70
20**	69.9	14 10	78.8	57.5	6 53	21.3	530	1 16	577	479	9 48	98	1032	18 5	1047	1011	12 25	36
21	70.7	14 30	78.7	64.0	7 32	14.7	537	19 12	580	497	12 17	83	1038	17 40	1053	1014	13 45	39
22**	70.5	14 10	78.7	62.0	8 12	16.7	506	1 3	568	418	10 10	150	1041	17 10	1090	1000	3 50	90
23	70.3	14 40	80.1	59.1	5 55	21.0	517	18 28	596	479	7 45	117	1046	18 30	1080	1023	10 50	57
24**	69.9	14 10	82.1	52.3	2 8	29.8	501	0 27	593	439	11 5	154	1038	20 10	1086	981	1 50	105
25	69.4	14 2	80.3	60.4	8 25	19.9	515	19 45	591	454	9 25	137	1043	17 28	1080	1016	0 29	64
26	69.1	14 5	77.8	60.8	6 40	17.0	516	16 30	549	473	8 20	76	1040	16 30	1063	1014	12 15	49
27*	69.2	14 15	76.7	60.3	6 8	16.4	529	16 36	562	483	10 42	79	1041	18 20	1049	1024	11 38	25
28*	69.5	13 0	79.6	61.7	7 42	17.9	526	20 28	554	492	11 35	62	1035	5 0	1047	1004	12 5	43
29*	69.8	13 25	78.2	63.8	7 0	14.4	529	19 50	556	497	10 46	59	1037	17 30	1050	1012	12 16	38
30	69.2	14 33	78.2	61.5	6 40	16.7	533	16 0	566	493	10 40	73	1033	4 50	1045	1008	12 40	37
31	70.2	14 40	76.6	65.0	7 0	11.6	541	23 48	571	518	12 10	53	1034	18 20	1055	1006	12 0	49
Mean	70.1	—	79.5	61.5	—	18.0	530	—	578	484	—	93.7	1036	—	1060	1006	—	54.2
Mean*	69.8	—	78.1	62.3	—	15.8	530	—	558	491	—	67.0	1035	—	1047	1006	—	40.6
Mean**	70.4	—	80.5	59.1	—	21.4	525	—	604	463	—	140.8	1041	—	1090	1004	—	86.0
<b>AUG.</b>	10°+	h m	10°+	10°+	h m		18000γ+	h m	18000γ+	18000γ+	h m	γ	42000γ+	h m	42000γ+	42000γ+	h m	γ
1	69.5	12 54	77.6	61.8	7 36	15.8	543	21 52	580	510	10 15	70	1030	17 45	1053	1000	11 20	53
2**	73.5	14 28	88.5	63.2	0 47	25.3	510	3 40	594	437	6 30	157	1031	15 10	1107	965	8 4	142
3**	68.7	14 20	79.0	54.0	24 0	25.0	513	20 56	566	471	11 31	95	1042	20 50	1061	1013	11 8	48
4**	67.5	1 34	77.3	51.1	0 10	26.2	501	20 26	570	441	9 11	129	1032	17 55	1061	967	1 52	94
5	69.1	13 10	77.6	61.9	7 50	15.7	523	0 51	573	490	12 28	83	1047	17 30	1066	1024	12 50	42
6	—	13 14	78.2	59.9	6 24	18.3	—	19 46	569	476	9 44	93	1043	19 45	1067	1013	12 35	54
7	—	14 12	80.5	62.4	7 55	18.1	—	19 25	546	457	12 8	89	1040	19 5	1057	1014	11 25	43
8	69.3	14 0	77.8	61.5	8 10	16.3	519	20 25	543	475	11 20	68	1043	17 30	1061	1023	11 40	38
9	69.3	13 10	80.0	59.8	7 45	20.2	526	16 26	566	483	9 43	83	1039	17 20	1057	1012	12 0	45
10	70.4	12 44	81.1	62.6	7 38	18.5	525	18 27	560	477	10 0	83	1037	18 20	1058	1011	11 28	47
11	70.2	13 10	79.6	61.4	7 36	18.2	531	21 0	571	484	9 40	87	1034	5 35	1051	1007	11 20	44
12	69.9	13 27	79.3	61.4	7 42	17.9	532	20 44	573	482	10 20	91	1031	5 10	1045	1000	12 30	45
13*	69.9	13 38	80.3	61.3	7 10	19.0	535	0 0	563	483	9 50	80	1032	17 10	1045	1012	13 0	33
14	69.8	13 18	77.4	62.1	6 25	15.3	540	20 50	587	509	11 5	78	1033	6 30	1044	1006	12 20	38
15	69.1	11 50	74.7	64.1	3 36	10.6	535	1 52	567	508	11 28	59	1035	20 0	1046	1019	12 20	27
16*	69.2	12 45	75.7	62.3	7 45	13.4	530	19 52	556	493	10 20	63	1033	15 15	1043	1013	10 30	30
17	69.5	13 30	77.5	62.6	6 45	14.9	532	20 0	556	498	11 23	58	1034	17 20	1047	1012	10 55	35
18	—	13 30	76.4	63.3	6 58	13.1	—	—	—	510	8 35	—	1031	5 35	1040	1010	10 50	30
19	—	—	—	—	—	—	—	—	—	—	—	—	1033	16 0	1046	1012	10 30	34
20	69.2	13 0	75.1	64.9	6 52	10.2	537	18 27	561	517	8 40	44	1034	21 30	1039	1017	13 20	22
21	68.3	12 32	76.2	61.3	5 56	14.9	536	21 19	571	504	11 0	67	1032	15 50	1042	1016	10 30	26
22**	70.5	11 30	85.5	52.0	8 20	33.5	488	5 7	601	[300†]	9 30	(301)	1030	20 23	1072	953	9 27	119
23	68.6	12 28	76.2	62.0	5 48	14.2	487	22 40	522	442	11 7	80	1050	5 8	1060	1027	11 50	33
24*	68.5	13 22	76.3	64.2	6 40	12.1	504	20 8	534	462	10 27	72	1044	5 0	1052	1017	11 40	35
25*	69.3	12 54	77.7	63.1	7 0	14.6	513	21 5	545	465	10 30	80	1041	5 20	1051	1021	10 55	30
26	—	—	—	—	—	—	—	—	—	—	—	—	1034	19 40	1054	1002	11 28	52
27**	68.9	14 8	78.1	62.2	19 37	15.9	526	13 0	569	482	11 38	87	1040					



TABLE IV.—DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS—continued.

Table with columns for Date, Declination West (Mean, Maximum, Minimum, Range), Horizontal Intensity (Mean, Maximum, Minimum, Range), and Vertical Intensity (Mean, Maximum, Minimum, Range). Rows are organized by month (SEP, OCT) and day, with specific magnetic values and U.T. times.

\* Denotes an International Quiet Day.

\*\* Denotes an International Disturbed Day.

TABLE IV.—DAILY MEAN AND EXTREME VALUES OF MAGNETIC ELEMENTS—continued.

Date.	DECLINATION WEST.						HORIZONTAL INTENSITY.						VERTICAL INTENSITY.					
	Mean Value for the Day.	Maximum.		Minimum.		Range.	Mean Value for the Day.	Maximum.		Minimum.		Range.	Mean Value for the Day.	Maximum.		Minimum.		Range.
	10°+	U.T. h m	10°+	10°+	U.T. h m		18000γ+	U.T. h m	18000γ+	18000γ+	U.T. h m	γ	42000γ+	U.T. h m	42000γ+	42000γ+	U.T. h m	γ
<b>NOV.</b>																		
1	67.8	16.32	72.8	63.3	8 35	9.5	520	6 5	536	502	11 20	34	1048	21 10	1062	1034	10 40	28
2	66.3	13 50	72.3	57.8	2 46	14.5	520	2 8	555	497	11 30	58	1045	0 20	1058	1038	10 50	20
3	67.9	13 10	73.0	64.4	8 45	8.6	523	5 52	539	497	11 20	42	1046	15 48	1053	1038	10 40	15
4*	67.6	13 0	71.4	63.7	9 8	7.7	525	5 40	542	489	12 30	53	1047	15 30	1056	1040	11 10	16
5*	67.5	13 55	71.9	63.1	8 35	8.8	528	6 20	548	489	11 45	59	1043	17 15	1049	1035	9 50	14
6*	67.3	12 30	71.5	63.0	8 40	8.5	526	5 40	541	500	11 50	41	1044	16 45	1052	1036	10 55	16
7	66.7	13 50	72.4	58.8	23 5	13.6	524	5 30	543	499	20 8	44	1043	20 18	1064	1028	10 25	36
8	65.8	14 10	72.3	54.7	0 18	17.6	516	17 16	545	477	1 41	68	1049	21 20	1064	1024	0 20	40
9	67.2	12 0	75.4	61.9	2 50	13.5	518	6 30	541	463	1 0	78	1048	15 7	1071	1036	7 15	35
10	67.5	14 10	73.3	65.1	3 20	8.2	523	22 50	541	497	15 10	44	1049	15 45	1058	1044	22 55	14
11	66.6	13 50	73.7	58.5	19 50	15.2	528	20 0	573	493	10 50	80	1043	23 5	1050	1034	13 20	16
12	65.9	12 58	71.0	60.7	1 56	10.3	525	22 6	554	507	12 33	47	1041	19 6	1052	1031	2 44	21
13	67.2	13 30	71.4	62.0	18 30	9.4	528	5 45	542	512	10 45	30	1040	18 48	1050	1033	10 52	17
14	67.5	12 57	71.2	65.1	2 38	6.1	528	19 35	540	506	11 50	34	1040	14 40	1047	1035	11 0	12
15*	67.1	13 3	69.9	65.2	9 33	4.7	531	23 40	543	512	11 25	31	1039	8 30	1045	1033	12 26	12
16*	66.8	12 50	69.6	64.9	8 56	4.7	536	23 5	545	525	11 40	20	1038	17 25	1044	1034	11 40	10
17	67.8	16 10	75.3	61.4	23 56	13.9	530	6 40	546	505	16 25	41	1040	18 0	1056	1028	11 10	28
18**	67.4	14 22	78.8	56.6	2 38	22.2	508	6 25	544	453	19 3	91	1048	19 10	1097	1029	10 35	68
19**	67.3	13 8	80.8	61.4	21 52	19.4	504	2 17	529	447	15 34	82	1056	15 40	1095	1037	10 30	58
20	67.3	13 16	74.3	59.5	22 34	14.8	505	22 21	556	446	14 0	110	1055	15 45	1084	1046	8 30	38
21	66.5	12 25	71.6	61.3	22 18	10.3	514	21 59	532	482	12 10	50	1047	19 45	1060	1038	11 25	22
22	66.7	12 52	76.3	52.1	20 15	24.2	510	16 54	545	447	10 26	98	1050	16 50	1083	1034	10 12	49
23**	67.2	13 20	74.3	52.8	17 48	21.5	512	18 0	588	451	11 55	137	1048	17 50	1071	1030	1 30	41
24	67.0	12 55	73.8	55.0	19 40	18.8	513	19 48	554	458	12 40	96	1051	13 55	1069	1038	0 20	31
25	66.7	13 25	71.5	61.9	20 10	9.6	520	19 25	535	499	11 55	36	1048	19 15	1057	1040	11 32	17
26	66.8	13 35	69.6	63.5	22 57	6.1	525	22 52	553	508	10 20	45	1047	7 30	1053	1038	24 0	15
27	66.6	12 30	72.0	57.8	22 32	14.2	524	6 20	540	508	20 30	32	1044	21 40	1055	1037	22 25	18
28	67.2	13 10	80.1	57.6	22 18	22.5	507	3 10	540	464	15 56	76	1052	17 5	1080	1030	3 34	50
29**	67.4	13 35	77.8	58.9	20 25	18.9	507	11 11	538	443	19 30	95	1054	19 14	1103	1033	11 35	70
30**	65.9	16 32	76.7	48.4	21 15	28.3	493	20 40	584	434	20 10	150	1060	19 40	1104	1038	4 8	66
Mean	67.0	—	73.5	60.0	—	13.5	519	—	547	484	—	63.4	1047	—	1065	1035	—	29.8
Mean*	67.3	—	70.9	64.0	—	6.9	529	—	544	503	—	40.8	1042	—	1049	1036	—	13.6
Mean**	67.0	—	77.7	55.6	—	22.1	505	—	557	446	—	111.0	1053	—	1094	1033	—	60.6
<b>DEC.</b>																		
1	66.3	13 45	72.7	54.3	1 32	18.4	492	4 45	543	451	0 30	92	1056	16 45	1082	1020	5 32	62
2	66.7	13 27	73.0	61.8	1 24	11.2	513	4 25	542	496	14 36	46	1053	17 40	1065	1036	4 50	29
3	65.9	13 12	71.4	62.0	19 55	9.4	521	17 50	530	507	20 40	23	1052	13 12	1059	1044	4 8	15
4*	66.5	13 28	70.1	63.7	1 45	6.4	526	6 20	536	513	13 55	23	1050	15 48	1058	1045	4 42	13
5	67.1	18 20	71.8	64.3	22 37	7.5	533	17 52	541	515	18 35	26	1045	20 0	1054	1038	11 20	16
6	66.9	13 48	71.5	62.0	23 2	9.5	529	3 58	548	514	12 12	34	1046	21 27	1058	1033	4 55	25
7	66.9	17 28	73.4	60.4	20 35	13.0	519	6 47	541	465	17 42	76	1052	18 20	1079	1039	4 22	40
8	66.3	16 30	72.2	59.5	20 36	12.7	520	1 40	538	490	15 50	48	1051	17 35	1064	1040	2 40	24
9	66.1	13 55	70.4	61.2	20 38	9.2	527	3 27	546	511	10 40	35	1046	18 45	1053	1035	4 2	18
10	66.3	13 0	72.1	62.8	0 10	9.3	525	22 30	551	492	13 38	59	1046	19 5	1058	1036	2 53	22
11	66.8	12 50	73.6	61.2	0 52	12.4	526	7 4	547	479	12 12	68	1046	14 35	1055	1039	4 35	16
12	66.8	12 20	71.0	64.9	1 8	6.1	526	0 33	548	510	10 15	38	1045	14 36	1051	1037	1 0	14
13*	66.7	12 10	70.6	64.5	7 15	6.1	532	22 30	549	501	9 50	48	1045	14 5	1052	1039	2 40	13
14*	66.7	13 5	68.9	64.5	8 5	4.4	535	23 15	544	520	9 35	24	1042	8 50	1048	1037	3 53	11
15	66.8	12 28	71.7	64.6	8 35	7.1	536	19 50	550	507	12 50	43	1042	13 10	1049	1034	4 20	15
16	66.5	13 25	69.2	63.9	8 24	5.3	527	21 25	550	519	11 12	31	1041	8 30	1046	1033	2 51	13
17	66.9	15 52	69.3	64.5	8 48	4.8	539	2 59	548	526	17 25	22	1040	18 15	1046	1033	4 13	13
18**	68.0	16 50	83.6	57.0	22 12	26.6	511	3 45	558	430	17 2	128	1056	17 43	1124	1029	4 16	95
19**	66.3	13 25	73.7	53.1	17 10	20.6	499	5 35	536	444	16 50	92	1056	17 30	1081	1043	1 15	38
20**	65.9	12 47	72.2	52.1	17 48	20.1	517	18 3	556	484	17 37	72	1050	18 0	1069	1039	5 38	30
21	65.9	12 52	68.9	60.5	21 26	8.4	527	21 35	556	503	18 10	53	1046	18 25	1058	1040	11 20	18
22	66.3	13 6	70.8	61.0	20 55	9.8	519	5 48	546	486	13 55	60	1051	18 20	1068	1041	1 45	27
23**	66.7	13 27	78.4	53.8	19 40	24.6	498	1 22	549	415	13 38	134	1064	18 10	1137	1034	1 52	103
24**	64.9	18 48	71.7	56.1	18 30	15.6	495	18 42	568	444	19 33	124	1064	18 30	1095	1055	1 37	40
25	65.7	12 22	71.3	59.5	23 38	11.8	507	20 30	524	476	12 35	48	1061	13 50	1070	1055	21 56	15
26	65.9	12 38	72.5	59.9	0 16	12.6	511	5 33	558	469	11 48	89	1056	15 2	1070	1038	5 50	32
27*	65.9	14 0	67.6	64.0	5 10	3.6	524	23 0	533	515	10 0	18	1050	10 5	1057	1046	12 15	11
28*	66.3	13 20	70.5	64.2	8 20	6.3	528	22 10	536	515	15 10	21	1048	14 5	1054	1043	3 45	11
29	65.6	13 12	69.2	60.6	0 52	8.6	528	19 5	542	508	11 12	34	1045	7 36	1049	1041	12 5	8
30	66.3	13 25	71.7	64.2	22 0	7.5	532	18 33	547	510	11 37	37	1043	17 10	1052	1036	12 15	16
31	66.9	18 50	75.2	59.2	23 38	16.0	529	6 7	579	493	19 27	86	1047	20 10	1077	1036	9 33	41
Mean	66.4	—	71.9	60.8	—	11.1	521	—	546	491	—	55.9	1050	—	1066	1039	—	27.2
Mean*	66.4	—	69.5	64.2	—	5.4	529	—	540	513	—	26.8	1047	—	1054	1042	—	11.8
Mean**	66.4	—	75.9	54.4	—	21.5	504	—	553	443	—	110.0	1058	—	1101	1040	—	61.2

\* Denotes an International Quiet Day.

\*\* Denotes an International Disturbed Day.

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

“ All ” Days.

DECLINATION WEST.

Table with columns for Month and Season (1937), Universal Time (0-23), and Declination West values for each month and season.

INCLINATION.

Table with columns for Month and Season, and Inclination values for each month and season.

HORIZONTAL INTENSITY.

Table with columns for Month and Season, and Horizontal Intensity values for each month and season.

TABLE V.—continued.—MEAN DIURNAL INEQUALITIES OF GEOGRAPHICAL COMPONENTS OF MAGNETIC INTENSITY.

"All" Days.

NORTH COMPONENT.

Month and Season, 1937.	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.
Jan.	+2.3	+1.4	+3.0	+5.2	+7.2	+9.2	+10.2	+9.6	+6.0	-3.6	-11.9	-15.5	-13.3	-9.6	-7.0	-5.9	-5.2	-2.5	-0.2	+1.8	+3.5	+4.9	+6.4	+4.1
Feb.	+7.5	+8.0	+4.3	+3.5	+7.4	+10.0	+9.8	+9.1	+7.6	+0.5	-7.4	-13.2	-15.8	-13.5	-12.9	-9.9	-7.1	-6.3	-1.2	-0.9	+3.2	+4.6	+5.9	+7.4
Mar.	+7.7	+5.6	+7.4	+8.1	+10.5	+10.2	+11.3	+8.8	+5.1	-5.1	-17.5	-25.7	-26.4	-23.0	-16.3	-9.5	-4.2	+0.9	+6.1	+8.4	+7.0	+10.3	+10.6	+10.4
Apr.	+4.8	+4.3	+2.4	+4.1	+2.9	+3.1	+2.9	-2.8	-5.9	-13.6	-21.6	-27.4	-25.2	-19.2	-10.6	-3.3	+4.2	+9.8	+19.4	+21.8	+17.8	+15.3	+12.9	+4.7
May	+7.7	+3.8	+5.8	+7.4	+5.8	+3.0	-1.1	-5.0	-11.6	-19.7	-25.7	-25.3	-21.6	-19.9	-10.3	-3.0	+6.2	+15.2	+19.2	+18.3	+15.6	+11.2	+11.8	+11.6
June	+6.5	+6.4	+5.7	+6.8	+9.9	+10.2	+3.2	-5.8	-15.5	-22.7	-28.3	-27.4	-25.6	-20.7	-13.6	-2.0	+5.7	+14.0	+22.5	+20.9	+18.3	+13.7	+9.7	+8.4
July	+9.6	+8.2	+8.8	+7.9	+8.7	+10.7	+3.8	-6.9	-17.8	-28.3	-35.9	-35.8	-32.0	-23.6	-14.6	-0.3	+8.9	+16.4	+24.2	+28.0	+20.4	+16.6	+13.3	+11.1
Aug.	+13.3	+11.4	+13.3	+13.7	+13.7	+11.4	+4.7	-3.9	-20.2	-32.2	-34.4	-36.4	-31.6	-25.1	-14.7	-4.9	+3.7	+11.8	+15.6	+18.1	+20.9	+18.3	+16.6	+15.8
Sept.	+13.9	+13.0	+9.7	+9.8	+10.2	+13.3	+10.1	+0.4	-9.5	-20.5	-28.7	-29.3	-24.7	-18.7	-11.8	-6.9	+0.3	+3.9	+9.8	+10.3	+11.1	+12.0	+11.5	+11.7
Oct.	+14.1	+11.7	+13.1	+13.6	+13.3	+13.2	+12.6	+9.5	-3.6	-18.3	-29.9	-37.4	-36.5	-28.5	-19.9	-14.5	-5.4	+4.0	+10.3	+13.1	+14.5	+18.1	+17.4	+16.0
Nov.	+7.8	+6.4	+9.0	+10.7	+10.8	+12.8	+13.6	+9.2	+2.4	-6.1	-14.7	-19.7	-21.2	-19.5	-16.9	-11.7	-6.3	-0.3	+1.0	+1.2	+8.0	+8.5	+8.4	+6.9
Dec.	+3.9	+4.4	+5.4	+8.2	+10.9	+12.4	+11.5	+8.3	+2.3	-4.4	-8.9	-13.6	-14.0	-13.8	-10.3	-8.0	-9.2	-5.4	-2.7	+2.0	+4.1	+5.5	+5.9	+5.6
Year	+8.3	+7.1	+7.3	+8.3	+9.3	+10.0	+7.7	+2.5	-5.1	-14.5	-22.1	-25.6	-24.0	-19.6	-13.2	-6.7	-0.7	+5.1	+10.3	+11.8	+12.0	+11.6	+10.9	+9.5
Winter	+5.4	+5.1	+5.4	+6.9	+9.1	+11.1	+11.3	+9.1	+4.6	-3.4	-10.7	-15.5	-16.1	-14.1	-11.8	-8.9	-7.0	-3.6	-0.8	+1.0	+4.7	+5.9	+6.7	+6.0
Equinox	+10.1	+8.7	+8.2	+8.9	+9.2	+10.0	+9.2	+4.0	-3.5	-14.4	-24.4	-30.0	-28.2	-22.4	-14.7	-8.6	-1.3	+4.7	+11.4	+13.4	+12.6	+13.9	+13.1	+10.7
Summer	+9.3	+7.5	+8.4	+9.0	+9.5	+8.8	+2.7	-5.4	-16.3	-25.7	-31.1	-31.2	-27.7	-22.3	-13.3	-2.6	+6.1	+14.4	+20.4	+20.8	+18.8	+15.0	+12.9	+11.7

WEST COMPONENT.

Jan.	-7.9	-6.2	-3.8	-1.4	-1.8	-2.3	-3.0	-7.6	-12.1	-11.5	-5.6	+4.2	+13.9	+17.8	+14.4	+12.0	+11.7	+11.5	+8.0	+1.2	-3.2	-7.5	-9.7	-10.5
Feb.	-6.7	-6.2	-10.0	-9.4	-8.6	-7.4	-6.3	-6.6	-5.6	-3.3	+1.2	+10.6	+17.6	+21.2	+19.3	+13.0	+10.6	+7.7	+7.1	-2.9	-9.1	-10.0	-9.0	-6.6
Mar.	-11.2	-10.5	-9.8	-8.1	-9.2	-8.5	-6.0	-12.1	-22.0	-18.7	-5.7	+11.5	+25.6	+32.6	+30.0	+21.6	+13.4	+6.8	+3.1	+0.9	-0.7	-5.4	-10.0	-7.5
Apr.	-11.4	-14.4	-17.2	-15.5	-14.6	-14.0	-15.5	-21.9	-25.0	-21.1	-8.5	+10.7	+28.5	+37.6	+35.5	+27.7	+21.7	+14.6	+10.8	+6.8	+1.5	-2.2	-4.0	-9.4
May	-6.4	-9.0	-9.9	-7.0	-12.4	-19.9	-27.2	-29.2	-30.4	-22.9	-5.9	+12.0	+27.8	+34.2	+33.0	+28.7	+21.6	+14.3	+7.1	+3.7	+1.6	+0.1	-0.4	-3.2
June	-2.7	-3.3	-8.8	-11.2	-16.1	-23.0	-32.1	-36.8	-34.1	-22.1	-5.9	+14.5	+30.1	+37.8	+37.6	+30.9	+21.4	+12.9	+7.8	+3.6	+1.7	+1.7	-1.8	-2.3
July	-1.4	-7.1	-12.2	-14.1	-17.5	-27.0	-33.7	-39.8	-37.3	-26.6	-11.0	+9.2	+27.8	+39.9	+41.6	+35.8	+26.2	+16.2	+11.5	+7.6	+3.7	+5.6	+3.6	+0.4
Aug.	-6.1	-4.8	-7.1	-9.3	-13.3	-21.3	-28.1	-32.6	-33.8	-19.2	-1.4	+18.3	+31.7	+34.5	+32.7	+22.0	+11.7	+6.0	+4.4	+4.3	+4.9	+4.1	+2.3	-0.3
Sept.	-3.8	-7.7	-9.5	-9.1	-8.8	-9.8	-15.7	-24.1	-26.9	-21.5	-6.6	+14.4	+30.6	+35.3	+30.7	+20.9	+10.5	+5.8	+5.4	+3.4	-0.9	-1.2	-4.8	-6.4
Oct.	-10.9	-10.4	-8.1	-5.4	-4.9	-4.9	-4.4	-11.2	-22.4	-20.6	-5.2	+11.3	+25.2	+29.7	+28.9	+21.0	+10.1	+6.4	+5.1	+1.8	-3.2	-9.7	-8.5	-10.4
Nov.	-7.7	-7.4	-8.0	-7.6	-5.9	-5.7	-4.4	-5.7	-6.8	-4.4	+3.0	+11.8	+18.6	+22.4	+17.5	+15.1	+13.4	+7.0	+2.5	-3.2	-8.9	-10.0	-13.8	-10.8
Dec.	-7.6	-6.9	-5.7	-4.2	-3.6	-2.3	-1.1	-3.4	-4.1	-2.8	+1.6	+7.5	+16.1	+17.5	+12.9	+11.3	+9.6	+3.3	+1.7	-5.4	-8.1	-9.0	-8.4	-8.0
Year	-7.0	-7.8	-9.2	-8.5	-9.7	-12.2	-14.8	-19.3	-21.7	-16.2	-4.2	+11.3	+24.5	+30.0	+27.8	+21.7	+15.2	+9.4	+6.2	+1.8	-1.7	-3.6	-5.4	-6.3
Winter	-7.5	-6.7	-6.9	-5.7	-5.0	-4.4	-3.7	-5.8	-7.2	-5.5	+0.1	+8.5	+16.6	+19.7	+16.0	+12.9	+11.3	+7.4	+4.8	-2.6	-7.3	-9.1	-10.2	-9.0
Equinox	-9.3	-10.8	-11.2	-9.5	-9.4	-9.3	-10.4	-17.3	-24.1	-20.5	-6.5	+12.0	+27.5	+33.8	+31.3	+22.8	+13.9	+8.4	+6.1	+3.2	-0.8	-4.6	-6.8	-8.4
Summer	-4.2	-6.1	-9.5	-10.4	-14.8	-22.8	-30.3	-34.6	-33.8	-22.7	-6.1	+13.5	+29.4	+36.6	+36.2	+29.4	+20.2	+12.4	+7.7	+4.8	+3.0	+2.9	+0.9	-1.4

VERTICAL COMPONENT.

Jan.	+0.8	-0.8	-1.4	-2.4	-2.9	-1.9	-1.6	-1.1	-1.3	-2.5	-4.0	-6.5	-7.7	-3.4	0.0	+1.3	+2.0	+4.2	+6.4	+6.8	+6.0	+5.1	+3.6	+2.3
Feb.	-0.2	-2.0	-3.5	-2.7	-2.5	-1.6	-2.3	-2.0	-2.0	-4.8	-7.4	-9.6	-9.3	-6.4	-1.2	+2.9	+5.6	+8.3	+10.9	+9.8	+8.8	+5.9	+4.1	+2.1
Mar.	+0.7	-0.4	-1.3	-1.4	-2.2	-1.1	-0.7	+1.2	-0.3	-6.3	-12.6	-15.4	-13.9	-8.8	-2.0	+4.5	+8.4	+10.5	+10.8	+9.3	+7.9	+7.1	+5.0	+1.7
Apr.	-8.3	-3.5	-4.6	-4.1	-4.9	-2.7	+0.1	+1.2	+0.8	-4.0	-10.7	-17.0	-17.7	-10.7	-0.9	+6.7	+11.6	+14.9	+16.6	+15.0	+13.0	+10.1	+2.0	-3.1
May	-1.9	-4.2	-4.6	-4.9	-4.1	-1.0	+0.2	0.0	-3.2	-9.0	-16.3	-21.0	-19.8	-11.7	-0.6	+7.5	+14.2	+17.6	+18.8	+15.7	+12.1	+8.6	+5.2	+1.7
June	-0.1	-2.3	-3.3	-1.5	+1.1	+1.8	+0.7	-1.1	-4.6	-11.3	-18.1	-23.1	-21.7	-14.2	-3.7	+6.2	+13.8	+17.7	+18.7	+16.7	+13.4	+7.8	+4.8	+2.0
July	-1.5	-4.7	-3.9	-1.9	+1.7	+2.7	+1.9	0.0	-4.3	-11.5	-17.0	-22.0	-22.1	-15.2	-5.0	+6.5	+14.3	+18.3	+18.9	+17.0	+13.2	+8.2	+4.3	+1.9
Aug.	+1.4	+0.3	+0.1	+0.8	+2.7	+4.1	+3.4	-0.2	-6.0	-12.9	-19.9	-22.0	-19.1	-11.9	-1.2	+7.7	+11.9	+13.2	+11.5	+10.7	+9.2	+6.6	+5.4	+3.6
Sept.	+0.4	-2.1	-1.7	-2.0	+0.1	+1.9	+2.9	+3.2	+0.8	-4.9	-13.2	-18.2	-17.1	-11.7	-3.5	+4.3	+9.7	+9.9	+9.3	+10.3	+9.3	+6.1	+4.3	+2.8
Oct.	-5.5	-7.1	-7.0	-8.9	-8.4	-6.3	-3.6	-1.4	-1.4	-4.9	-9.0	-11.3	-7.5	-1.1	+5.3	+12.6	+14.6	+13.2	+12.0	+10.0	+8.5	+6.8	+2.3	-1.2
Nov.	-2.8	-4.2	-4.9	-5.5	-5.3	-4.3	-3.6	-3.8	-3.5	-5.6	-7.8	-6.9	-4.2	+0.2	+4.9	+7.2	+8.5	+9.3	+9.2	+9.1	+7.4	+4.1	+2.0	-0.5
Dec.	-2.7	-5.1	-5.9	-7.0	-7.9	-7.0	-5.6	-4.0	-3.0	-1.6	-1.1	-2.9	-2.1	+2.0	+4.4	+4.5	+7.1	+10.2	+11.1	+8.5	+5.3	+3.2	+0.8	-0.8
Year	-1.6	-3.0	-3.5	-3.5	-2.7	-1.3	-0.7	-0.7	-2.3	-6.6	-11.4	-14.7	-13.5	-7.7	-0.3	+6.0	+10.1	+12.3	+12.9	+11.6	+9.5	+6.6	+3.7	+1.0
Winter	-1.2	-3.0	-3.9	-4.4	-4.7	-3.7	-3.3	-2.7	-2.5	-3.6	-5.0	-6.5	-5.8	-1.9	+2.0	+4.0	+5.8	+8.0	+9.4	+8.6	+6.9	+4.6	+2.6	+0.8
Equinox	-3.2	-3.3	-3.7	-4.1	-3.9	-2.1	-0.3	+1.1	-0.0	-5.0	-11.4	-15.5	-14.1	-8.1	-0.3	+7.0	+11.1	+12.1	+12.2	+11.2	+9.7	+7.5	+3.4	+0.1
Summer	-0.5	-2.7	-2.9	-1.9	+0.4	+1.9	+1.6	-0.3	-4.5	-11.2	-17.8	-22.0	-20.7	-13.3	-2.6	+7.0	+13.6	+16.7	+17.0	+15.0	+12.0	+7.8	+4.9	+2.3

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

International Quiet Days.

DECLINATION WEST.

Table with columns for Month and Season, 1937, and Universal Time (0-23). Rows include monthly data (Jan-Dec), Year, Winter, Equinox, and Summer.

INCLINATION.

Table with columns for Month and Season, 1937, and Universal Time (0-23). Rows include monthly data (Jan-Dec), Year, Winter, Equinox, and Summer.

HORIZONTAL INTENSITY.

Table with columns for Month and Season, 1937, and Universal Time (0-23). Rows include monthly data (Jan-Dec), Year, Winter, Equinox, and Summer.

TABLE VI.—*continued.*—MEAN DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC INTENSITY.

International Quiet Days.

NORTH COMPONENT.

Month and Season, 1937.	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.
Jan.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Feb.	+3.1	+1.3	+1.4	+2.7	+4.0	+6.6	+7.2	+5.2	+1.5	-6.4	-11.7	-15.2	-15.5	-9.3	-5.6	-5.2	-2.8	+0.7	+3.8	+6.3	+7.8	+7.4	+7.9	+8.0
Mar.	+5.2	+4.0	+2.6	+4.3	+6.2	+7.0	+5.7	+7.1	+8.3	+1.1	-6.6	-10.7	-15.3	-15.2	-13.4	-10.4	-7.3	-3.7	+0.9	+1.6	+4.5	+6.9	+10.4	+10.6
Apr.	+6.4	+3.2	+2.3	+3.2	+3.8	+5.7	+6.9	+5.8	+1.1	-7.7	-16.7	-22.9	-24.4	-18.8	-11.9	-4.6	+0.9	+3.8	+7.1	+8.0	+8.8	+10.7	+11.5	+11.8
May	+7.3	+6.0	+5.1	+3.8	+4.4	+6.7	+8.9	+8.6	+4.9	-5.9	-17.8	-28.8	-24.5	-17.9	-13.3	-6.4	+0.3	+5.0	+7.0	+7.6	+8.1	+9.5	+8.0	+8.5
June	+0.9	+1.3	+1.3	+1.3	+5.1	+6.9	+5.4	+1.1	-5.0	-11.5	-18.4	-22.7	-22.4	-17.2	-7.8	-0.5	+5.4	+9.3	+11.1	+13.0	+13.1	+9.7	+9.0	+9.0
July	+10.3	+7.3	+5.0	+9.1	+12.1	+12.1	+4.2	-5.6	-14.4	-23.0	-30.2	-31.8	-29.3	-22.4	-14.5	-2.1	+9.8	+15.0	+17.9	+17.2	+15.1	+12.8	+11.5	+11.9
Aug.	+5.5	+4.7	+5.5	+8.0	+10.6	+9.5	+5.5	-3.7	-13.5	-25.3	-33.1	-32.3	-30.5	-23.2	-11.6	+1.6	+8.4	+13.4	+18.0	+19.6	+20.1	+15.9	+12.9	+10.6
Sept.	+10.3	+9.1	+8.7	+8.4	+11.1	+10.7	+5.7	-4.0	-16.9	-30.9	-39.6	-35.9	-27.7	-21.6	-12.8	-2.5	+5.1	+10.9	+15.7	+18.6	+19.7	+19.5	+18.9	+18.4
Oct.	+10.9	+8.5	+7.8	+9.3	+11.1	+13.2	+12.7	+4.9	-8.1	-22.5	-31.4	-33.6	-31.6	-25.8	-16.4	-9.9	-0.5	+7.5	+12.3	+15.8	+16.6	+16.9	+18.4	+18.2
Nov.	+12.3	+5.8	+5.5	+5.8	+8.1	+9.0	+9.2	+6.3	-0.7	-12.8	-22.7	-30.1	-26.6	-20.4	-14.4	-10.1	-3.3	+3.4	+7.2	+10.3	+14.2	+16.0	+14.9	+13.5
Dec.	+7.1	+5.4	+6.0	+7.6	+9.1	+11.1	+11.5	+8.7	+0.8	-10.4	-18.3	-24.8	-24.5	-19.1	-12.7	-8.0	-5.0	+2.1	+7.4	+8.5	+8.9	+9.5	+9.1	+9.0
Year	+0.3	-0.4	+0.7	+2.8	+4.6	+7.2	+6.4	+5.9	-0.1	-9.7	-11.8	-10.7	-9.1	-8.5	-6.1	-5.4	-3.2	+0.3	+3.2	+5.7	+6.4	+7.2	+7.1	+6.0
Winter	+6.6	+4.7	+4.3	+1.4	+7.5	+8.8	+7.4	+3.4	-3.5	-13.8	-21.5	-24.8	-23.5	-18.3	-11.7	-5.3	+0.7	+5.6	+9.3	+11.0	+11.9	+11.8	+11.6	+11.3
Equinox	+3.9	+2.6	+2.7	+4.4	+6.0	+8.0	+7.7	+6.7	+2.6	-6.4	-12.1	-15.4	-16.1	-13.0	-9.5	-7.3	-4.6	-0.2	+3.8	+5.5	+6.9	+7.8	+8.6	+8.4
Summer	+9.2	+5.9	+5.2	+5.5	+6.9	+8.7	+9.4	+6.4	-0.7	-12.2	-22.2	-28.4	-26.8	-20.7	-14.0	-7.8	-0.7	+4.9	+8.4	+10.4	+11.9	+13.3	+13.2	+13.0
Year	+6.8	+5.6	+5.1	+6.7	+9.7	+9.8	+5.2	-3.1	-12.5	-22.7	-30.3	-30.7	-27.5	-21.1	-11.7	-0.9	+7.2	+12.2	+15.7	+17.1	+17.0	+14.5	+13.1	+12.5

WEST COMPONENT.

Jan.	-4.6	-3.3	-0.9	-0.5	-1.6	-2.5	-3.7	-8.0	-10.8	-10.3	-5.8	+2.5	+11.4	+14.3	+10.8	+6.7	+5.8	+6.1	+4.4	+1.0	-2.4	-4.8	-3.8	-2.5
Feb.	-2.8	-2.5	-3.7	-7.5	-9.0	-9.6	-10.2	-11.1	-13.1	-10.8	-4.7	+7.8	+16.7	+20.3	+20.8	+12.6	+6.3	+5.5	+3.9	+2.3	-0.0	-1.7	-2.9	-7.3
Mar.	-3.9	-3.4	-4.1	-4.8	-5.3	-7.6	-9.1	-13.9	-21.5	-22.1	-11.4	+3.6	+16.5	+21.6	+19.1	+11.7	+6.9	+6.5	+5.5	+3.2	+2.9	+2.9	+2.2	+0.6
Apr.	-3.2	-4.6	-6.4	-8.2	-9.8	-10.1	-13.2	-22.2	-27.4	-24.3	-13.6	+4.7	+21.4	+30.8	+28.6	+22.7	+16.1	+10.8	+6.2	+3.9	+3.4	+2.4	-0.4	-6.0
May	-0.6	-1.3	-2.3	-2.6	-8.1	-16.6	-27.5	-31.6	-32.8	-28.9	-14.7	+5.7	+21.8	+28.9	+30.5	+23.6	+15.3	+8.6	+4.9	+4.7	+6.9	+5.7	+5.3	+3.8
June	-1.8	-5.1	-4.9	-7.8	-14.2	-23.6	-34.3	-37.1	-34.1	-23.4	-8.1	+11.4	+27.9	+34.7	+34.7	+28.6	+18.9	+10.1	+4.4	+4.7	+4.3	+5.5	+4.9	+3.8
July	-4.2	-7.3	-9.6	-11.7	-18.6	-25.7	-32.3	-34.4	-31.4	-21.7	+10.3	+9.8	+28.9	+37.4	+36.6	+30.8	+21.7	+13.1	+9.2	+8.5	+5.8	+3.0	+1.9	+1.2
Aug.	-1.6	-2.8	-7.0	-9.8	-12.9	-19.2	-27.1	-33.2	-32.7	-23.5	-6.2	+14.8	+30.2	+35.4	+29.3	+18.2	+6.3	+2.6	+6.1	+8.3	+8.0	+7.7	+5.3	+2.8
Sept.	-4.5	-2.7	-3.5	-4.0	-6.7	-11.3	-18.2	-29.2	-35.0	-30.2	-13.7	+11.6	+30.4	+37.4	+32.0	+20.3	+10.1	+4.6	+4.8	+3.7	+2.7	+2.3	+0.9	+0.7
Oct.	-2.5	-6.7	-6.1	-6.9	-7.1	-7.6	-8.4	-12.7	-21.6	-21.1	-7.9	+8.2	+20.2	+22.0	+20.7	+16.3	+10.8	+7.5	+4.1	+1.8	+2.3	-0.4	-2.3	-2.1
Nov.	-0.7	-1.8	-1.7	-1.3	-1.9	-3.8	-6.7	-10.4	-15.7	-16.7	-7.5	+6.0	+11.9	+14.3	+11.9	+9.6	+6.9	+5.2	+4.2	+2.6	+0.3	-0.8	-1.9	-2.4
Dec.	-4.2	-3.8	-2.2	-3.5	-3.4	-3.8	-4.2	-6.5	-6.6	-4.4	+0.5	+6.1	+10.4	+11.7	+6.9	+4.4	+4.3	+3.0	+2.0	+0.7	-2.1	-2.7	-1.5	-1.9
Year	-2.9	-3.8	-4.4	-5.7	-8.2	-11.8	-16.2	-20.9	-23.6	-19.8	-8.6	+7.7	+20.6	+25.7	+23.5	+17.1	+10.8	+7.0	+5.0	+3.8	+2.7	+1.6	+0.6	-0.8
Winter	-3.1	-2.9	-2.1	-3.2	-4.0	-4.9	-6.2	-9.0	-11.6	-10.6	-4.4	+5.6	+12.6	+15.2	+12.6	+8.3	+5.8	+5.0	+3.6	+1.7	-1.1	-2.6	-2.5	-3.5
Equinox	-3.5	-4.4	-5.0	-6.0	-7.2	-9.2	-12.2	-19.5	-26.4	-24.4	-11.7	+7.0	+22.1	+27.8	+25.1	+17.8	+11.0	+7.4	+5.2	+3.2	+2.8	+1.8	+0.1	-1.7
Summer	-2.1	-4.1	-6.0	-8.0	-13.5	-21.3	-30.3	-34.1	-32.8	-24.4	-9.8	+10.4	+27.2	+34.1	+32.8	+25.3	+15.6	+8.6	+6.2	+6.6	+6.3	+5.5	+4.4	+2.9

VERTICAL COMPONENT.

Jan.	-0.6	-0.8	-1.2	-1.4	-1.6	-0.4	-0.4	+0.6	+1.0	+0.6	-0.8	-2.4	-5.2	-1.0	+1.4	+1.4	+1.0	+1.8	+2.2	+1.8	+1.2	+0.2	-0.6	-1.4
Feb.	+3.2	+2.2	+1.8	+0.6	+0.4	+1.6	+1.0	+2.2	+1.4	-2.2	-6.2	-9.4	-11.0	-8.2	-5.4	-2.2	+1.2	+3.2	+4.4	+3.4	+4.4	+4.2	+3.6	+3.0
Mar.	+3.0	+1.5	+1.8	+2.3	+2.3	+3.3	+3.3	+5.5	+5.3	-0.7	-7.2	-11.5	-12.2	-9.5	-5.0	-0.2	+1.3	+2.0	+3.3	+2.5	+2.3	+2.8	+1.5	+1.8
Apr.	+2.8	+2.4	+2.0	+2.2	+1.2	+1.8	+3.4	+4.6	+3.0	-2.2	-7.8	-14.6	-18.4	-15.0	-9.2	-3.4	+2.0	+6.4	+7.6	+7.6	+6.2	+5.6	+5.0	+5.0
May	+3.8	+3.4	+3.2	+3.4	+5.6	+6.6	+6.8	+6.0	+0.4	-8.0	-15.8	-23.2	-23.6	-17.0	-8.6	-0.4	+5.6	+9.0	+10.8	+9.0	+7.6	+5.6	+4.6	+3.2
June	-2.6	-2.0	+0.6	+2.6	+5.4	+7.2	+6.8	+5.6	-0.6	-7.0	-14.0	-21.2	-20.8	-13.2	-5.0	+2.6	+8.6	+12.0	+12.4	+10.0	+7.4	+4.2	+2.6	+1.8
July	+1.8	+1.8	+2.4	+3.6	+7.2	+6.6	+7.6	+4.0	-1.6	-8.2	-14.8	-23.8	-25.0	-16.0	-7.6	+1.0	+7.6	+10.6	+10.4	+9.8	+8.2	+6.2	+4.2	+2.6
Aug.	+3.0	+2.8	+3.2	+4.2	+6.4	+7.0	+6.2	+3.4	-2.0	-8.6	-15.6	-18.6	-16.8	-9.4	-1.2	+5.0	+6.4	+5.6	+3.8	+4.8	+4.0	+2.8	+2.8	+1.8
Sept.	+1.6	+1.8	+1.6	+1.6	+3.2	+4.8	+7.2	+7.4	+5.2	-1.8	-11.8	-19.0	-18.8	-14.4	-6.0	+1.4	+5.8	+6.4	+5.0	+5.2	+5.0	+4.8	+3.4	+2.2
Oct.	-0.4	-1.6	-0.8	-0.8	-0.4	+0.2	+1.0	+3.4	+3.6	-1.2	-6.0	-8.0	-7.0	-5.4	-2.0	+2.8	+2.8	+4.6	+4.2	+3.2	+2.6	+2.2	+1.8	+0.6
Nov.	0.0	-0.8	-1.0	-1.2	-1.0	-0.2	-0.4	+1.0	-2.6	-3.6	-4.0	-2.8	-2.8	-0.2	+1.8	+2.6	+3.6	+3.4	+2.0	+0.6	+0.8	+1.4	+1.0	+0.2
Dec.	-1.1	-2.9	-3.3	-4.1	-4.1	-3.1	-1.3	+0.1	+1.3	+1.7	+2.1	+0.5	+0.1	+2.9	+3.5	+2.3	+2.9	+2.3	+2.1	+1.1	+0.1	-0.5	-1.5	-2.3
Year	+1.2	+0.7	+0.9	+1.1	+2.1	+2.9	+3.5	+3.5	+1.5	-3.4	-8.5	-12.9	-13.5	-8.9	-3.6	+1.1	+4.1	+5.6	+5.7	+4.9	+4.2	+3.3	+2.4	+1.5
Winter	+0.4	-0.6	-0.9	-1.5	-1.6	-0.8	-0.2	+0.6	+1.2	-0.6	-2.1	-3.8	-4.7	-1.6	+0.3	+1.0	+2.2	+2.7	+2.7	+1.7	+1.6	+1.3	+0.6	-0.1
Equinox	+1.8	+1.0	+1.2	+1.5	+1.6	+2.5	+3.7	+5.2	+4.3	-1.5	-8.2	-13.3	-14.1	-11.1	-5.6	+0.2	+3.0	+4.9	+5.0	+4.6	+4.0	+3.9	+2.9	+2.4
Summer	+1.5	+1.5	+2.4	+3.5	+6.2	+6.9	+6.9	+4.8	-1.0	-8.0	-15.1	-21.7	-21.6	-13.9	-5.6	+2.1	+7.1	+9.3	+9.4	+8.4	+6.8	+4.7	+3.6	+2.4



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

International Disturbed Days.

DECLINATION WEST.

Table with columns for Month and Season (1937), Universal Time (0-23), and Hour commencing. Rows include monthly data (Jan-Dec), Year, Winter, Equinox, and Summer.

INCLINATION.

Table with columns for Month and Season (1937) and Universal Time (0-23). Rows include monthly data (Jan-Dec), Year, Winter, Equinox, and Summer.

HORIZONTAL INTENSITY.

Table with columns for Month and Season (1937) and Universal Time (0-23). Rows include monthly data (Jan-Dec), Year, Winter, Equinox, and Summer.

TABLE VII.—continued.—MEAN DIURNAL INEQUALITIES OF GEOGRAPHICAL COMPONENTS OF MAGNETIC INTENSITY.

International Disturbed Days.

NORTH COMPONENT.

Month and Season, 1937.	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.
Jan.	+10.2	+7.7	+9.6	+11.7	+13.3	+16.4	+18.8	+16.6	+14.1	+2.7	-11.1	-14.4	-8.9	-6.5	-6.6	-5.0	-10.0	-10.9	-11.2	-5.2	-8.5	-11.2	-5.0	-4.9
Feb.	+23.3	+25.5	+3.6	+1.4	+15.3	+15.9	+17.1	+13.5	+11.9	+7.0	+1.3	-8.3	-13.4	-15.8	-14.4	-15.0	-14.8	-21.4	-13.6	-14.9	+0.2	-7.8	+1.3	+3.2
Mar.	+20.7	+17.9	+21.1	+26.7	+32.6	+25.5	+22.8	+13.5	+10.4	+4.6	-18.4	-38.3	-36.1	-31.9	-28.7	-26.1	-15.5	-0.6	+2.8	+2.2	-0.7	-5.8	-1.8	+4.1
Apr.	-8.5	-4.6	-8.9	+8.3	+0.0	-12.3	-15.0	-35.4	-30.3	-28.6	-31.3	-39.7	-28.1	-17.7	-10.5	-2.1	+16.1	+16.2	+58.7	+61.8	+56.4	+48.0	+31.6	-18.8
May	+11.7	+1.6	+17.1	+23.9	+8.5	-3.0	-15.8	-13.8	-25.0	-37.7	-43.4	-34.9	-17.2	-14.5	+1.1	+7.9	+6.0	+25.4	+32.7	+27.6	+19.2	+4.4	+9.0	+7.4
June	+11.7	+10.9	+15.1	+18.2	+16.5	+15.0	+12.9	+0.5	-8.4	-23.3	-39.9	-40.6	-33.4	-20.0	+7.6	+11.0	+21.3	+28.9	+20.5	+17.8	+9.4	-4.8	-8.3	
July	+29.0	+24.2	+18.8	+11.3	+10.8	+14.5	+4.5	-13.5	-28.2	-37.8	-47.7	-42.3	-36.6	-28.6	-19.7	+5.6	+18.0	+26.1	+28.5	+28.0	+13.2	+11.7	+6.7	+6.4
Aug.	+22.9	+22.1	+31.2	+33.6	+29.9	+20.5	+2.5	-6.5	-42.1	-52.7	-31.8	-41.1	-32.4	-30.8	-20.5	-10.8	-4.4	+7.1	+12.4	+16.0	+25.7	+19.9	+14.7	+16.6
Sept.	+16.3	+13.4	+6.9	+7.9	+6.8	+17.7	+14.5	+4.2	-7.7	-22.6	-34.6	-33.5	-23.9	-17.6	-8.9	+1.1	+10.5	+6.6	+11.9	+7.0	+5.0	+7.1	+2.2	+5.4
Oct.	+20.0	+16.7	+24.9	+19.2	+15.3	+3.5	-2.0	-1.2	-4.0	-22.2	-31.2	-41.2	-37.9	-26.1	-10.9	-19.9	-6.9	+4.8	+14.2	+13.8	+15.6	+16.0	+22.9	+17.1
Nov.	+13.5	+16.8	+15.9	+22.4	+16.1	+17.3	+21.3	+16.1	+12.3	+3.0	-5.3	-20.4	-22.6	-21.6	-21.6	-17.2	-12.6	-13.4	-14.9	-22.2	+5.4	+6.0	+1.9	+3.9
Dec.	+16.0	+18.3	+17.3	+22.4	+24.4	+27.5	+27.4	+21.1	+10.7	-0.0	-7.0	-12.3	-11.0	-22.9	-15.6	-9.9	-31.3	-29.5	-23.5	-10.9	-8.4	-4.3	+0.5	+0.4
Year	+15.6	+14.2	+14.4	+17.3	+15.8	+13.2	+9.1	+1.3	-7.2	-17.3	-25.3	-30.2	-25.7	-22.3	-14.7	-7.0	-2.8	+2.6	+10.6	+10.3	+11.7	+7.8	+6.6	+2.7
Winter	+15.8	+17.1	+11.6	+14.5	+17.3	+19.3	+21.2	+17.0	+12.3	+3.2	-6.2	-13.9	-14.0	-16.7	-14.6	-11.8	-17.2	-18.8	-15.8	-13.3	-2.8	-4.3	-0.3	+0.7
Equinox	+12.1	+10.9	+11.0	+15.5	+13.7	+8.6	+5.1	-4.7	-7.9	-17.2	-28.9	-38.2	-31.5	-23.3	-14.8	-11.8	+1.1	+6.8	+21.9	+21.2	+19.1	+16.3	+13.7	+2.0
Summer	+18.8	+14.7	+20.6	+21.8	+16.4	+11.8	+1.0	-8.3	-25.9	-37.9	-40.7	-38.7	-31.7	-26.8	-14.8	+2.6	+7.7	+20.0	+25.6	+23.0	+19.0	+11.4	+6.4	+5.5

WEST COMPONENT.

Jan.	-6.1	-1.8	-0.3	+0.9	+0.9	-0.4	-3.6	-7.9	-13.7	-13.0	-5.7	+6.1	+16.4	+23.2	+18.4	+17.5	+17.8	+18.5	+12.6	-2.7	-5.7	-20.0	-28.0	-22.9
Feb.	-7.4	-13.6	-24.7	-17.4	-13.8	-5.3	-2.0	-1.0	+4.0	+3.9	+5.7	+13.5	+18.8	+17.5	+22.8	+17.3	+18.4	+10.5	+18.5	-11.4	-18.7	-18.5	-12.9	-6.9
Mar.	-12.0	-15.4	-7.9	-6.3	-14.6	-12.5	+5.3	+6.0	-13.8	-7.9	+6.7	+23.9	+38.1	+42.5	+35.5	+23.9	+18.1	+4.2	-4.7	-8.0	-12.4	-22.6	-40.3	-23.2
Apr.	-43.2	-46.8	-40.4	-35.4	-25.4	-21.8	-15.0	-20.5	-19.5	-16.6	-5.7	+9.1	+33.2	+44.8	+42.3	+37.2	+43.9	+35.2	+43.1	+27.3	+14.9	+0.4	-11.6	-27.0
May	-7.9	-13.3	-19.5	-14.0	-11.3	-19.2	-28.8	-20.0	-26.8	-19.2	+1.8	+22.0	+39.3	+44.2	+36.5	+37.2	+23.5	+21.5	+10.9	+0.7	-9.6	-17.2	-10.9	-20.4
June	+2.6	+0.6	-3.3	-10.0	-12.7	-16.2	-28.7	-44.3	-32.2	-23.8	-4.7	+15.8	+31.7	+42.0	+43.2	+43.8	+30.2	+18.2	+9.6	-1.4	-6.6	-9.4	-20.3	-21.3
July	+1.8	-14.2	-20.4	-16.3	-11.3	-22.3	-28.5	-42.7	-39.6	-27.7	-10.7	+5.7	+25.9	+41.3	+44.9	+42.8	+31.4	+19.7	+15.1	+5.8	-4.0	+6.0	+1.4	-3.5
Aug.	-22.2	-6.7	-10.5	-8.3	-9.1	-15.4	-21.3	-23.0	-36.1	-13.1	+4.3	+23.9	+31.3	+29.4	+37.1	+25.0	+17.6	+11.6	+6.4	+0.5	-0.9	-3.7	-7.3	-9.9
Sept.	-5.2	-19.7	-15.6	-7.1	-7.8	-5.3	-10.6	-27.7	-31.6	-23.4	-9.9	+12.7	+35.0	+40.4	+38.4	+33.0	+20.6	+15.6	+17.7	+13.1	-12.3	-5.2	-20.8	-23.6
Oct.	-16.6	-35.1	-36.4	-15.5	-0.6	+0.5	+12.0	+2.4	-22.1	-28.9	-11.2	+7.0	+25.5	+29.8	+43.1	+32.4	+9.6	+9.6	+9.1	+6.4	+0.1	-0.1	-8.4	-12.9
Nov.	-10.9	-8.8	-13.8	-12.3	-9.6	-7.0	+0.6	+0.2	-0.2	+5.5	+9.4	+16.9	+21.9	+32.2	+26.2	+24.6	+21.0	-3.3	-1.4	-7.6	-22.7	-23.6	-22.3	-15.7
Dec.	-1.8	+1.2	-0.9	+1.2	-4.0	+0.4	+2.9	+2.5	+2.9	+2.3	+3.4	+11.7	+24.2	+25.7	+17.1	+17.2	+15.1	-8.6	-10.2	-28.8	-19.5	-20.8	-19.2	-14.6
Year	-11.2	-14.5	-16.1	-11.7	-9.9	-10.4	-9.8	-14.7	-19.1	-13.5	-1.4	+13.9	+28.4	+34.4	+33.8	+29.3	+22.3	+12.7	+10.6	-0.5	-8.1	-11.2	-16.7	-16.8
Winter	-6.6	-5.8	-9.9	-6.9	-6.6	-3.1	-0.5	-1.6	-1.8	-0.3	+3.2	+12.1	+20.3	+24.6	+21.1	+19.1	+18.1	+4.3	+4.9	-12.6	-6.7	-20.7	-20.6	-15.0
Equinox	-19.3	-29.3	-25.1	-16.1	-12.1	-9.8	-2.1	-10.0	-21.8	-19.2	-5.0	+13.0	+33.0	+39.4	+39.8	+31.6	+23.1	+16.2	+16.3	+9.7	-2.4	-6.9	-20.3	-21.7
Summer	-7.7	-8.4	-13.4	-12.2	-11.1	-18.3	-26.8	-32.5	-33.7	-21.0	-2.3	+16.9	+32.1	+39.2	+40.4	+37.2	+25.7	+17.8	+10.5	+1.4	-5.3	-6.1	-9.3	-13.8

VERTICAL COMPONENT.

Jan.	-2.0	-3.6	-4.4	-5.6	-6.2	-6.4	-7.0	-7.2	-7.0	-8.6	-10.0	-12.2	-11.8	-6.6	-1.8	+3.2	+3.8	+7.8	+12.4	+16.0	+13.4	+15.8	+15.0	+13.6
Feb.	-3.8	-8.8	-14.2	-8.2	-8.0	-7.8	-9.4	-8.0	-6.6	-8.8	-10.6	-11.2	-11.8	-8.4	-2.6	+3.8	+10.2	+20.2	+29.4	+24.2	+19.6	+12.6	+7.6	+3.2
Mar.	-2.8	-3.8	-5.8	-6.5	-7.5	-8.8	-12.0	-15.8	-16.0	-19.5	-21.3	-18.0	-8.3	+1.0	+10.7	+14.5	+17.7	+22.2	+22.0	+18.7	+16.2	+13.2	+10.2	+1.5
Apr.	-53.8	-17.6	-18.4	-17.4	-22.4	-16.0	-9.6	-9.4	-0.8	+2.8	-2.8	-5.2	-3.6	+9.2	+18.6	+26.2	+29.6	+27.6	+30.2	+31.8	+30.6	+22.2	-14.6	-37.2
May	-15.4	-20.2	-22.0	-24.4	-27.8	-23.6	-17.8	-10.8	-9.8	-12.2	-14.4	-14.8	-11.0	+0.4	+20.4	+31.2	+33.6	+33.6	+33.6	+28.6	+22.0	+14.6	+5.6	-2.0
June	-3.8	-6.0	-12.0	-10.0	-9.4	-10.2	-13.4	-13.8	-15.2	-19.6	-23.2	-25.0	-20.0	-9.8	+3.2	+18.6	+28.2	+34.6	+34.6	+30.6	+23.2	+9.0	+4.4	-0.2
July	-5.6	-17.8	-17.6	-16.2	-11.8	-11.2	-12.8	-14.8	-15.6	-17.6	-17.2	-20.4	-19.6	-9.8	+4.2	+23.2	+32.2	+36.0	+34.8	+31.0	+24.0	+13.2	+4.8	+3.8
Aug.	-1.4	-4.8	-6.6	-5.6	-10.4	-14.0	-14.8	-20.2	-25.6	-26.4	-31.0	-29.4	-19.0	-6.4	+15.0	+27.6	+30.8	+31.2	+26.4	+22.6	+21.6	+16.2	+15.0	+9.8
Sept.	-1.2	-7.6	-6.0	-8.6	-4.8	-1.0	-1.8	0.0	-1.8	-7.8	-15.4	-20.8	-20.0	-15.2	-5.4	+5.0	+13.2	+13.2	+14.8	+22.2	+20.0	+8.6	+8.6	+6.4
Oct.	-7.5	-10.9	-15.7	-29.5	-31.1	-27.3	-20.7	-12.7	-5.7	-5.5	-6.1	-9.3	-3.5	+5.7	+17.1	+27.1	+30.1	+23.9	+20.7	+17.9	+16.5	+12.9	+8.5	+4.7
Nov.	-7.1	-12.5	-12.9	-13.1	-12.9	-10.7	-9.5	-10.5	-10.5	-11.9	-13.5	-13.3	-6.5	+1.3	+10.5	+15.7	+17.7	+22.9	+24.7	+26.3	+19.5	+4.7	+2.7	-1.5
Dec.	-9.1	-12.5	-12.9	-13.9	-14.7	-14.1	-12.3	-11.9	-10.7	-7.5	-6.7	-9.3	-6.3	+0.3	+6.5	+8.1	+15.3	+31.1	+34.7	+23.7	+12.7	+8.9	+2.5	-1.3
Year	-9.5	-10.5	-12.4	-13.3	-13.9	-12.6	-11.8	-11.3	-10.4	-11.9	-14.4	-15.7	-11.8	-3.2	+8.0	+17.0	+21.9	+25.4	+26.5	+24.5	+19.9	+12.7	+5.9	+0.1
Winter	-5.5	-9.4	-11.1	-10.2	-10.5	-9.8	-9.6	-9.4	-8.7	-9.2	-10.2	-11.5	-9.1	-3.4	+3.2	+7.7	+11.8	+20.5	+25.3	+22.6	+16.3	+10.5	+7.0	+3.5
Equinox	-16.3	-10.0	-11.5	-15.5	-16.5	-13.3	-11.0	-9.5	-6.1	-7.5	-11.4	-13.3	-8.9	+0.2	+10.3	+18.2	+22.7	+21.7	+21.9	+22.7	+20.8	+14.2	+3.2	-6.2
Summer	-6.6	-12.2	-14.6	-14.1	-14.9	-14.8	-14.7	-14.9	-16.6	-19.0	-21.4	-22.4	-17.4	-6.4	+10.5	+25.2	+31.2	+33.9	+32.4	+28.2	+22.7	+13.3	+7.5	+2.9



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

Values of a\_n, b\_n, in the Series Σ (a\_n cos nt + b\_n sin nt), t being reckoned in hours from O^h U.T. and converted into arc at the rate of 15° to each hour.

Table VIII: Harmonic components of the diurnal inequality of magnetic intensity. Includes columns for North, West, and Vertical components, and rows for months (1937 Jan-Dec), Year, W. Eq., and S. Sub-sections include 'ALL' DAYS, INTERNATIONAL QUIET DAYS, and INTERNATIONAL DISTURBED DAYS.

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

Values of c\_n, alpha\_n, in the series Σ (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 apparent local time may be obtained from the tabulated angles by applying corrections alpha, 2alpha, 3alpha, 4alpha, respectively, where alpha has the following values:—

Table IX: Corrections for phase-angles. Lists months (January to December) and seasons (Winter, Equinox, Summer) with corresponding alpha values.

Table IX: Harmonic components of the diurnal inequality of magnetic intensity. Includes columns for North, West, and Vertical components, and rows for months (1937 Jan-Dec), Year, W. Eq., and S. Sub-sections include 'ALL' DAYS, INTERNATIONAL QUIET DAYS, and INTERNATIONAL DISTURBED DAYS.

TABLE X.—RANGE OF MEAN DIURNAL INEQUALITIES for the MONTHS, YEAR and SEASONS of 1937.

Month and Season.	" All " Days.			Quiet Days.			Disturbed Days.			" All " Days.			Quiet Days.			Disturbed Days.		
	D.	I.	H.	D.	I.	H.	D.	I.	H.	N.	W.	V.	N.	W.	V.	N.	W.	V.
January	6.01	1.46	23.8	4.96	1.44	21.8	9.38	2.86	32.6	25.7	29.9	14.5	23.5	25.1	7.4	33.2	51.2	28.2
February	6.33	1.22	20.5	6.94	1.05	21.4	9.28	3.64	41.4	25.8	31.2	20.5	25.9	33.9	15.4	46.9	47.5	43.6
March	10.94	1.79	32.9	8.55	1.89	33.5	16.16	4.03	62.4	37.7	54.6	26.2	36.2	43.7	17.7	70.9	82.8	43.5
April	11.87	2.32	47.5	11.32	1.79	35.2	17.14	5.91	104.4	49.2	62.6	34.3	36.3	57.7	26.0	101.5	91.6	85.6
May	12.09	2.15	46.5	11.68	1.68	35.4	13.24	4.53	76.4	44.9	64.6	39.8	35.8	63.3	34.4	76.1	73.0	61.4
June	14.11	2.51	52.5	13.68	2.60	49.6	16.92	3.40	70.2	50.8	74.6	41.8	49.7	71.8	33.6	69.5	88.1	59.6
July	15.10	3.35	64.3	13.78	3.05	55.2	16.18	4.89	79.6	61.9	81.4	41.0	53.2	71.8	35.6	76.7	87.6	56.4
August	12.98	3.18	56.7	13.12	3.56	60.8	12.56	5.16	85.6	57.3	67.8	33.5	59.3	68.6	25.6	86.3	73.2	62.2
September	11.66	2.47	42.3	13.80	3.06	51.6	13.46	3.11	52.2	43.2	62.2	28.5	52.0	72.4	26.4	52.3	72.0	43.0
October	10.39	3.09	50.4	8.62	2.65	43.6	15.74	4.29	60.0	55.5	52.1	25.9	46.1	43.6	12.6	66.1	79.4	61.2
November	7.59	1.98	29.7	6.16	2.16	33.4	11.14	4.02	44.2	34.8	36.2	16.6	36.3	31.0	7.6	45.0	55.8	39.8
December	5.51	1.74	23.6	3.82	1.35	18.2	10.36	5.19	58.0	26.4	26.5	19.0	19.0	18.3	7.6	58.8	54.5	49.4
Year	10.38	2.27	40.9	9.70	2.19	38.1	13.46	4.25	63.9	42.8	53.6	28.5	39.4	50.1	20.8	65.3	71.4	52.8
Winter	6.36	1.60	24.4	5.47	1.50	23.7	10.04	3.93	44.0	28.2	31.0	17.7	26.2	27.1	9.5	46.0	52.3	40.3
Equinox	11.22	2.42	43.3	10.57	2.35	41.0	15.63	4.33	69.8	46.4	57.9	28.7	42.7	54.4	20.7	72.7	81.5	58.3
Summer	13.57	2.80	55.0	13.07	2.72	50.3	14.73	4.50	78.0	53.7	72.1	39.0	49.5	68.9	32.3	77.2	80.5	59.9

TABLE XI.—NON-CYCLIC CHANGE (24<sup>h</sup>—0<sup>h</sup>).

Month, 1937.	" All " Days.			Quiet Days.			Disturbed Days.		
	Declination West.	Horizontal Intensity.	Vertical Intensity.	Declination West.	Horizontal Intensity.	Vertical Intensity.	Declination West.	Horizontal Intensity.	Vertical Intensity.
January	+0.01	Y	Y	+0.40	Y	Y	-1.48	Y	Y
February	-0.11	-0.4	+0.5	-0.98	+4.8	-2.0	+0.64	-17.4	+12.4
March	-0.01	-0.1	-0.4	+0.15	+4.4	-0.6	-0.94	-21.8	+ 5.0
April	-0.21	-0.6	+0.5	-0.72	+7.0	-2.5	+0.34	-23.4	+ 2.3
May	+0.17	+1.2	-0.4	+0.14	-0.6	+1.2	+0.10	- 8.8	- 2.4
June	+0.05	+0.4	+0.1	+0.66	+6.0	-1.4	-1.94	- 9.8	+ 1.8
July	-0.03	+0.4	+0.0	+0.34	+1.0	+3.2	-0.40	-22.6	+ 1.6
August	-0.03	-1.6	+0.3	+0.22	+4.6	-0.4	-0.28	-19.8	+ 4.4
September	-0.41	-3.9	-0.0	+0.16	+5.6	-2.2	-2.56	-16.2	+ 5.2
October	+0.28	+1.7	+0.3	+0.82	+5.8	-1.4	+0.64	-19.0	+ 3.2
November	-0.24	-2.0	+0.1	-0.52	+5.2	-1.6	+0.04	- 5.4	+ 6.0
December	+0.12	+2.3	-0.3	-0.08	+1.2	-1.0	-0.20	- 9.6	+ 1.4
Year 1937	—	—	—	+0.05	+5.4	-2.8	-0.50	- 9.6	+ 5.0

TABLE XII.—MEAN MONTHLY AND ANNUAL VALUES of TERRESTRIAL MAGNETIC ELEMENTS at the ABINGER MAGNETIC STATION.

Month, 1937.	Declination (West).	Inclination.	Horizontal Intensity.	North Intensity.	West Intensity.	Vertical Intensity.	Total Intensity.
January .. ..	II 14.9	66 42.5	.18524	.18168	.03613	.43028	.46846
February .. ..	II 13.8	66 42.9	.18518	.18163	.03606	.43030	.46846
March .. ..	II 13.2	66 42.5	.18521	.18167	.03604	.43024	.46842
April .. ..	II 11.8	66 42.2	.18524	.18171	.03597	.43020	.46839
May .. ..	II 10.9	66 42.5	.18525	.18173	.03592	.43030	.46848
June .. ..	II 10.7	66 41.9	.18531	.18179	.03592	.43026	.46847
July .. ..	II 10.1	66 42.1	.18530	.18179	.03589	.43031	.46851
August .. ..	II 9.3	66 42.5	.18522	.18172	.03583	.43023	.46840
September .. ..	II 8.7	66 42.2	.18526	.18177	.03581	.43023	.46842
October .. ..	II 7.7	66 44.2	.18505	.18157	.03572	.43045	.46854
November .. ..	II 7.0	66 43.2	.18519	.18172	.03571	.43042	.46857
December .. ..	II 6.4	66. 43.2	.18521	.18174	.03568	.43045	.46860
Year 1937 .. ..	II 10.4	66 42.7	.18522	.18171	.03589	.43031	.46848

TABLE XIII.—DAILY MEAN VALUE OF THE BASE-LINE OF THE DECLINATION MAGNETOGRAMS AT ABINGER MAGNETIC STATION.

1937 Day	January	February	March	April	May	June	July	August	September	October	November	December
1	10. 58.4	10. 57.1	10. 55.6	10. 57.9	{ 10. 57.9 56.8	10. 57.9	10. 59.3	10. 59.6	II. 1.2	II. 0.4	10. 59.5	10. 47.1
2	58.5	57.2	{ 55.1 56.1	58.4	57.0	58.6	59.6	59.8	1.5	0.6	59.6	47.5
3	58.7	57.7	{ 56.3 55.7	58.5	57.4	58.7	60.0	60.2	1.4	0.5	59.2	47.1
4	58.8	57.8	55.6	58.9	{ 57.7 59.2	58.9	60.1	60.5	0.7	0.3	59.1	47.0
5	58.7	58.3	55.8	59.1	59.1	59.2	59.7	60.9	0.3	10. 59.8	59.0	46.8
6	58.4	58.0	55.5	59.2	58.5	59.5	59.7	61.1	0.4	59.8	{ 58.9 49.1	46.3
7	58.8	57.3	55.8	59.5	58.9	59.8	59.8	61.3	0.6	59.5	48.9	46.1
8	58.6	57.5	55.5	60.0	59.3	59.8	59.7	61.2	0.9	59.3	48.9	46.1
9	57.7	57.6	55.5	59.9	59.2	59.5	59.3	61.0	0.1	59.2	48.7	46.2
10	57.3	57.2	55.0	60.1	59.4	59.5	59.5	61.2	10. 59.8	58.9	47.9	46.0
11	56.8	57.0	55.2	60.1	60.1	59.7	59.4	61.8	59.1	58.7	47.5	46.4
12	57.0	56.5	56.0	60.0	60.1	60.1	59.5	61.8	59.0	58.9	47.2	46.3
13	58.0	56.8	58.3	60.0	59.9	60.1	59.8	62.0	59.2	58.6	46.9	46.0
14	58.0	57.1	58.2	60.0	60.0	60.1	60.3	62.2	59.2	58.2	46.8	46.3
15	58.7	57.4	58.0	60.0	60.1	60.0	60.4	61.2	59.2	58.4	46.3	46.1
16	58.4	57.6	57.7	60.1	59.9	59.8	60.2	60.4	59.3	58.3	46.6	45.9
17	58.4	57.6	57.9	60.1	59.7	{ 59.9 II. 3.9	60.1	60.7	59.4	58.4	46.4	46.0
18	58.3	{ 57.6 56.8	58.4	59.9	59.7	3.2	60.5	60.7	59.4	58.5	46.7	45.9
19	58.3	56.9	58.5	59.6	{ 59.8 58.8	3.1	60.9	60.5	59.2	58.6	46.9	{ 46.1 45.2
20	58.0	56.7	58.6	{ 59.8 60.5	59.0	3.1	60.9	60.2	59.5	58.6	46.7	45.2
21	58.3	56.3	58.6	{ 61.2 59.8	58.9	3.1	60.7	59.9	59.0	58.5	46.4	45.1
22	58.4	56.5	58.6	60.0	58.8	3.1	60.4	59.9	59.1	58.8	46.6	{ 45.4 45.9
23	58.2	56.2	58.3	60.3	59.0	3.3	60.2	59.9	59.8	58.8	46.8	46.6
24	58.3	56.0	58.3	60.5	59.3	3.3	60.0	60.1	59.9	58.5	47.4	47.3
25	58.5	56.0	58.4	60.1	59.8	3.2	59.8	60.3	II. 0.0	58.6	47.4	47.6
26	58.5	56.1	58.1	60.1	60.7	3.4	59.6	61.2	0.4	58.7	47.1	47.8
27	58.2	56.2	58.0	59.7	60.3	3.8	59.6	61.0	0.9	59.1	47.1	{ 47.8 47.5
28	57.8	55.8	58.0	59.9	{ 59.8 58.3	3.9	59.6	60.6	1.1	59.4	46.9	47.0
29	56.8		57.8	59.9	58.1	3.7	59.4	60.6	0.6	59.5	46.6	46.9
30	56.5		58.2	{ 60.0 57.8	58.6	{ II. 3.3 10. 58.7	59.4	60.8	0.5	59.5	46.7	46.5
31	56.8		58.1		58.5		59.5	61.0		59.6		46.3

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.

U.T., 1937.				U.T., 1937.				U.T., 1937.						
		No. of Obs.	Observed Horizontal Intensity.			No. of Obs.	Observed Horizontal Intensity.			No. of Obs.	Observed Horizontal Intensity.	Deduced Value of Base Line.		
			γ				γ				γ	γ		
h	m	h	m	h	m	h	m	h	m	h	m	h	m	
Jan. 1.	10 43-10 54	8	18518	18608	Mar. 4.	11 30-11 42	8	18493	18628	April 29.	11 18-11 31	8	18481	18669
2.	12 34-12 46	8	18530	18610	5.	15 40-15 53	8	18502	18629		13 28-13 33	4	18500	18670
4.	16 59-17 11	8	18523	18608	6.	10 17-10 27	8	18483	18627		15 12-15 24	8	18511	18669
5.	16 45-16 56	8	18525	18607	8.	11 10-11 22	8	18507	18629	30.	11 28-11 39	8	18484	18669
6.	11 9-11 22	8	18508	18607	9.	10 17-10 28	8	18527	18630		16 9-16 21	8	18527	18710
7.	10 49-10 59	8	18517	18606	10.	15 37-15 51	8	18537	18631					
8.	10 51-11 0	8	18501	18607	11.	11 27-11 39	8	18521	18631					
9.	10 54-11 4	8	18487	18606										
11.	16 55-17 14	8	18517	18602	12.	11 42-11 59	8	18513	18638					
12.	10 54-11 5	8	18521	18603						May 1.	11 47-11 57	8	18494	18665
	11 49-12 1	8	18519	18604	13.	11 48-11 58	8	18532	18745	3.	9 33-9 45	8	18517	18665
13.	10 47-10 59	8	18520	18605		12 15-12 26	8	18535	18733		16 27-16 32	4	18507	18667
14.	12 56-13 8	8	18522	18602	15.	16 22-16 34	8	18494	18733	4.	11 47-11 58	8	18526	18661
15.	10 52-11 4	8	18530	18604	16.	10 49-10 59	8	18496	18733	5.	9 49-9 59	8	18434	18658
16.	10 51-11 1	8	18523	18604	17.	10 12-10 16	4	18503	18734		16 6-16 14	6	18441	18661
18.	18 19-18 31	8	18539	18604		10 34-10 47	8	18488	18662	6.	9 4-9 16	8	18498	18660
19.	11 3-11 14	8	18524	18605	18.	10 48-10 59	8	18502	18661	7.	9 29-9 39	8	18511	18662
20.	10 40-10 51	8	18524	18605	19.	10 39-10 52	8	18505	18662	8.	9 36-9 47	8	18506	18661
21.	10 28-10 40	8	18523	18607	20.	10 47-11 0	8	18518	18662	10.	13 49-14 4	8	18557	18662
22.	10 42-10 53	8	18498	18607	22.	14 42-14 53	8	18482	18661					
23.	10 23-10 34	8	18507	18605	23.	10 47-10 59	8	18494	18663	11.	9 43-9 53	8	18493	18638
25.	16 30-16 44	8	18528	18603	24.	10 48-11 0	8	18507	18663		15 41-15 52	8	18518	18640
26.	10 52-11 3	8	18504	18603	25.	9 57-10 32	10	18511	18662	12.	7 33-7 39	4	18521	18639
27.	10 44-10 56	8	18507	18605	27.	12 41-12 53	8	18477	18664	13.	9 11-9 27	8	18515	18637
	11 26-11 40	8	18494	18604	29.	10 16-10 26	8	18495	18663	14.	9 51-10 1	8	18518	18637
28.	10 50-11 1	8	18500	18603	30.	15 20-15 34	8	18540	18664	15.	9 46-9 57	8	18502	18639
29.	10 52-11 3	8	18488	18601	31.	10 53-11 4	8	18474	18664	17.	10 13-10 24	8	18516	18641
30.	10 52-11 3	8	18503	18601						18.	11 34-11 45	8	18514	18642
										19.	9 37-9 45	8	18491	18642
Feb. 1.	15 43-15 54	8	18513	18602	April 1.	10 50-11 2	8	18471	18673	20.	11 42-11 53	8	18502	18637
2.	15 28-15 41	8	18519	18601	2.	15 25-15 38	8	18508	18674	21.	11 46-11 57	8	18518	18634
3.	16 39-16 52	8	18507	18599	3.	10 46-10 57	8	18479	18673	22.	9 52-10 2	8	18522	18633
4.	15 22-15 33	8	18495	18599	5.	16 27-16 38	8	18529	18672	24.	11 41-11 52	8	18513	18634
5.	15 22-15 34	8	18503	18599	6.	10 40-10 51	8	18511	18671	25.	11 37-11 49	8	18504	18634
6.	9 53-10 4	8	18493	18599	7.	10 31-10 43	8	18520	18670					
8.	17 7-17 20	8	18515	18599	8.	9 38-9 49	8	18530	18671	26.	15 37-15 50	8	18525	18657
9.	15 25-15 37	8	18492	18601	9.	10 45-10 58	8	18521	18672	27.	9 51-10 1	8	18497	18658
10.	10 50-11 3	8	18516	18599	10.	10 46-10 58	8	18520	18669		14 45-14 57	8	18434	18658
11.	11 41-11 47	8	18501	18601	12.	15 9-15 20	8	18546	18672	28.	11 52-12 4	8	18509	(18664)
12.	11 58-12 9	8	18515	18601	13.	10 44-10 55	8	18512	18670	29.	9 35-9 47	8	18427	18658
13.	11 31-11 45	8	18513	18602	14.	10 42-10 54	8	18512	18670	31.	9 52-10 3	8	18492	18660
15.	15 39-15 51	8	18516	18601		11 22-11 35	8	18514	18671		15 22-15 34	8	18523	18660
16.	10 43-10 55	8	18496	18600	15.	12 28-12 47	8	18516	18669					
	11 33-11 42	6	18481	18602	16.	10 47-10 57	8	18505	18668	June 1.	9 35-9 46	8	18498	18662
	12 35-12 47	8	18485	18627	17.	10 51-11 1	8	18516	18670		11 52-12 5	8	18513	18661
17.	10 48-10 59	8	18510	18629	19.	15 4-15 16	8	18530	18670	2.	9 46-9 57	8	18497	18672
18.	10 43-11 2	8	18511	18628	20.	11 26-11 37	8	18508	18669	3.	9 24-9 41	8	18517	18672
19.	10 52-11 3	8	18517	18627		15 39-15 47	6	18534	18666	5.	9 12-9 24	8	18531	18671
20.	11 40-11 53	8	18517	18626	21.	11 43-11 48	4	18515	18671	7.	16 21-16 32	8	18518	18672
22.	15 39-15 51	8	18490	18625		15 29-15 35	4	18516	18671	8.	9 43-9 54	8	18492	18671
23.	11 40-11 50	8	18518	18627	22.	9 54-10 3	8	18504	18666	9.	9 35-9 46	8	18495	18671
24.	10 15-10 27	8	18537	18626	23.	9 40-9 52	8	18530	18667	10.	9 42-9 53	8	18533	18671
25.	10 18-10 39	12	18524	18627	24.	11 12-11 24	8	18510	18666	11.	12 2-12 11	8	18492	18670
26.	11 58-12 8	8	18511	18628	26.	15 23-15 33	8	18511	18670	12.	9 56-10 16	8	18500	18669
27.	10 55-11 5	8	18499	18625	27.	11 39-11 50	8	18447	18670	14.	16 17-16 28	8	18549	18672
						14 1-14 17	8	18461	18668	15.	9 37-9 49	8	18516	18670
Mar. 1.	16 19-16 31	8	18522	18627	28.	9 35-9 50	8	18408	18670	16.	9 44-9 54	8	18511	18670
2.	12 49-13 0	8	18495	18629		13 27-13 33	4	18437	18672		10 21-10 32	8	18511	18671
3.	15 2-15 13	8	18510	18628		15 19-15 30	8	18423	18669					

May 26. Temperature raised to 21°0'.

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—*continued.*

U.T., 1937.				U.T., 1937.				U.T., 1937.			
	No. of Obs.	Observed Horizontal Intensity.	Deduced Value of Base Line.		No. of Obs.	Observed Horizontal Intensity.	Deduced Value of Base Line.		No. of Obs.	Observed Horizontal Intensity.	Deduced Value of Base Line.
June 17.		γ	γ	Aug. 12.		γ	γ	Oct. 1.		γ	γ
h m h m				h m h m				h m h m			
9 37- 9 47	8	18500	18670	9 45- 9 57	8	18487	18694	9 45- 9 56	8	18475	18622
14 14-14 26	8	*18544	18638	14 59-15 12	8	18511	18696	9 37- 9 46	8	18482	18623
18. 9 27- 9 44	8	18510	18638	13. 9 54-10 6	8	18484	18693	10 43-10 53	8	18407	18621
19. 9 39- 9 50	8	18504	18638	14. 11 26-11 38	8	18502	18691	15 32-15 43	8	18488	18623
21. 16 32-16 43	8	18525	18637	16. 14 59-15 11	8	18528	18694	10 18-10 28	8	18450	18622
22. 9 46- 9 57	8	18476	18636	17. 9 54-10 3	8	18511	18693	10 45-10 55	8	18463	18623
23. 9 24- 9 41	8	18503	18638	18. 9 39- 9 51	8	18514	18692	15 22-15 36	8	18493	18623
24. 9 30- 9 43	8	18536	18637	19. 9 34- 9 46	8	18533	18692	10 48-10 58	8	18487	18622
25. 9 51-10 1	8	18508	18637	20. 9 40- 9 52	8	18522	18690	15 44-15 56	8	18478	18623
26. 9 36- 9 47	8	18507	18636	21. 9 43- 9 55	8	18513	18691	10 37-10 48	8	18463	18622
28. 9 46- 9 57	8	18478	18637	23. 10 58-11 9	8	18446	18690	13. 16 21-16 33	8	18502	18600
29. 9 34- 9 45	8	18497	18637	11 35-11 47	8	18446	18603	14. 11 32-11 44	8	18472	18600
30. 11 32-11 43	8	18509	18633	24. 9 40- 9 52	8	18465	18601	15. 10 33-10 44	8	18471	18598
				25. 9 38- 9 49	8	18470	18601	16. 12 18-12 35	8	18485	18598
				26. 9 41- 9 46	4	18505	18607	18. 17 39-17 51	8	18528	18598
				15 48-15 54	4	18525	18610	19. 10 39-10 50	8	18501	18601
				27. 9 25- 9 36	4	18508	18607	20. 12 33-12 44	8	18512	18601
								21. 10 40-10 51	8	18501	18600
July 1. 9 25- 9 41	8	18513	18629	11 45-11 50	4	18484	18603	22. 10 41-10 52	8	18496	18599
2. 9 41- 9 52	8	18518	18630	15 41-15 47	4	18562	18602	23. 10 45-10 55	8	18475	18600
3. 9 36- 9 45	8	18501	18629	28. 9 38- 9 49	8	18490	18597	25. 16 10-16 23	8	18484	18600
5. 15 56-16 9	8	18567	18632	11 46-11 51	4	18459	18599	26. 10 42-10 52	8	18466	18599
6. 9 41- 9 53	8	18531	18630	30. 15 18-15 30	8	18516	18598	27. 10 44-10 55	8	18461	18599
7. 9 26- 9 42	8	18486	18631	31. 14 19-14 31	8	18526	18600	28. 11 40-11 51	8	18471	18600
8. 9 26- 9 41	8	18495	18628					29. 10 44-10 54	8	18479	18599
9. 10 12-10 22	8	18493	18631					30. 10 47-10 57	8	18490	18598
10. 9 41- 9 51	8	18461	18629								
12. 10 35-10 46	8	18488	18629	Sept. 1. 11 5-11 17	8	18511	18600				
13. 9 47- 9 59	8	18500	18629	2. 9 48- 9 59	8	18495	18598				
14. 9 26- 9 41	8	18499	18630	3. 10 33-10 47	8	18499	18597	Nov. 1. 16 41-16 51	8	18513	18597
15. 9 37- 9 47	8	18459	18627	4. 9 48- 9 59	8	18487	18597	2. 15 48-16 1	8	18515	18597
16. 11 44-11 55	8	18506	18628	6. 15 56-16 7	8	18537	18599	3. 16 43-16 53	8	18523	18597
17. 9 48- 9 59	8	18504	18628	7. 9 42- 9 53	8	18502	18599	4. 10 38-10 48	8	18498	18599
19. 14 5-14 16	8	18547	18629	8. 15 52-16 5	8	18524	18600				
20. 10 11-10 22	8	18496	18626	9. 13 47-13 59	8	18529	18603	5. 15 36-15 47	8	18523	18601
21. 9 33- 9 43	8	18518	18626	10. 9 39- 9 50	8	18509	18600	6. 10 32-10 42	8	18506	18602
22. 9 55-10 7	8	18427	18625	11. 9 42- 9 53	8	18463	18599				
10 27-10 38	8	18436	18628					8. 12 51-13 3	8	18520	18550
23. 9 38- 9 49	8	18499	18627	12. 10 47-10 58	8	18480	18606	9. 16 42-16 53	8	18527	18535
24. 9 37- 9 47	8	18444	18626	13. 17 5-17 17	8	18531	18603				
26. 11 30-11 42	8	18487	18628	14. 10 40-10 52	8	18478	18603	10. 12 24-12 34	8	18512	18591
27. 9 39- 9 50	8	18496	18628	15. 9 40- 9 53	8	18518	18604	11. 14 55-15 7	8	18517	18591
28. 9 38- 9 48	8	18498	18628	16. 9 34- 9 47	8	18525	18604	12. 17 29-17 41	8	18525	18591
15 35-15 49	8	18540	18629	17. 9 36- 9 45	8	18494	18604	13. 12 2-12 18	8	18514	18591
29. 9 26- 9 41	8	18504	18629	18. 14 49-15 4	8	18532	18606	15. 12 53-13 4	8	18519	18592
30. 9 25- 9 42	8	18501	18627					16. 10 33-11 3	8	18539	18591
31. 9 26- 9 44	8	18529	18628	20. 9 3- 9 14	8	18502	18543	17. 10 29-10 39	8	18533	18592
								18. 10 34-10 43	8	18509	18591
Aug. 2. 11 14-11 25	8	18478	18626	21. 14 41-14 51	8	18519	18624	19. 10 16-10 26	8	18503	18590
3. 19 47-19 57	8	18549	18627	22. 11 42-11 53	8	18511	18624	20. 12 52-13 3	8	18502	18591
4. 9 48-10 0	8	18463	18623	23. 8 54- 9 6	8	18506	18624	22. 17 1-17 11	8	18520	18592
5. 9 37- 9 48	8	18502	18625	24. 9 43- 9 54	8	18487	18624	23. 11 25-11 34	4	18478	18592
6. 10 12-10 23	8	18487	18626	25. 9 41- 9 52	8	18491	18623	16 0-16 11	8	18515	18592
7. 9 41- 9 52	8	18483	18698	27. 15 58-16 11	8	18515	18624	24. 10 37-10 48	8	18493	18592
9. 9 52-10 1	8	18485	18697	28. 15 17-15 28	8	18502	18623	25. 10 37-10 47	8	18505	18592
10. 9 20- 9 38	8	18484	18698	29. 9 46- 9 57	8	18498	18623	26. 10 9-10 19	8	18509	18590
11. 9 51-10 1	8	18485	18694	30. 9 56-10 7	8	18511	18623				
14 52-15 4	8	18484	18698								

TABLE XIV.—RESULTS of the DETERMINATIONS of the ABSOLUTE VALUE of HORIZONTAL INTENSITY from OBSERVATIONS made with the SCHUSTER-SMITH COIL MAGNETOMETER, at the MAGNETIC PAVILION at ABINGER, with the DEDUCED VALUES of the BASE-LINE of the HORIZONTAL INTENSITY MAGNETOGRAMS—*continued.*

U.T., 1937.				U.T., 1937.				U.T., 1937.			
	No. of Obs.	Observed Horizontal Intensity.	Deduced Value of Base Line.		No. of Obs.	Observed Horizontal Intensity.	Deduced Value of Base Line.		No. of Obs.	Observed Horizontal Intensity.	Deduced Value of Base Line.
h m h m		γ	γ	h m h m		γ	γ	h m h m		γ	γ
Nov. 27.	8	18513	18591	Dec. 8.	8	18512	18600	Dec. 20.	8	18500	18596
29.	8	18496	18593	9.	8	18514	18600	21.	8	18520	18595
30.	8	18503	18593	10.	8	18518	18600	22.	8	18511	18594
				11.	8	18518	18600				
				12.	8	18512	18599		8	18503	18597
Dec. 1.	8	18469	18593	13.	8	18514	18599	23.	8	18501	18599
				14.	8	18524	18597	24.	8	18490	18598
	4	18471	18599	15.	8	18519	18598	25.	8	18485	18598
2.	8	18523	18598	16.	8	18522	18599	27.	8	18520	18598
3.	8	18514	18597	17.	8	18533	18598		8	18519	18599
4.	8	18523	18598	18.	8	18515	18598	28.	8	18522	18598
6.	8	18529	18599					29.	8	18522	18598
7.	8	18515	18598	19.	4	18480	18599	30.	8	18521	18597
								31.	8	18528	18597

TABLE XIV (A).—RESULTS of the DETERMINATIONS of the ABSOLUTE VALUE of HORIZONTAL INTENSITY from OBSERVATIONS made with the UNIFILAR MAGNETOMETER CASSELLA 181 at ABINGER, with the DEDUCED VALUES of the BASE-LINE of the HORIZONTAL INTENSITY MAGNETOGRAMS.

U.T., 1937.		Observed Horizontal Force.	Deduced Value of Base Line.	U.T., 1937.		Observed Horizontal Force.	Deduced Value of Base Line.	U.T., 1937.		Observed Horizontal Force.	Deduced Value of Base Line.
h	m	γ	γ	h	m	γ	γ	h	m	γ	γ
Jan. 15.	14 20-15 16	18520	18598	May 20.	8 59-9 59	18489	18629	Aug. 4.	10 43-11 43	18475	18626
				21.	9 8-10 0	18500	18630	5.	14 33-15 26	18528	18629
				22.	10 33-11 29	18527	18631	6.	13 48-15 11	18513	18634
				24.	13 39-15 2	18524	18629				
				25.	13 58-14 56	18514	18634	7.	11 3-12 14	18478	18698
Mar. 16.	14 51-16 2	18513	18732					9.	14 35-15 25	18541	18701
18.	11 39-12 34	18499	18656	27.	10 44-11 42	18498	18653	13.	14 39-15 32	18539	18695
19.	11 41-12 50	18498	18654	28.	15 4-15 56	18548	18661	14.	8 51-9 50	18514	18691
20.	11 39-12 34	18511	18656	29.	10 33-11 30	18466	18663	17.	10 37-11 54	18505	18692
22.	15 27-16 21	18485	18657					18.	10 37-11 51	18519	18691
23.	11 33-12 35	18492	18656	June 1.	10 36-11 37	18503	18660	19.	13 36-14 32	18556	18697
24.	11 49-12 52	18505	18660					20.	10 46-11 47	18520	18691
25.	9 55-11 20	18507	18659	3.	10 51-11 59	18532	18668	21.	10 41-11 36	18506	18688
30.	16 0-16 51	18544	18663	4.	10 34-11 47	18527	18667				
31.	11 41-12 43	18442	18664	8.	10 29-11 33	18497	18666	24.	10 29-11 57	18472	18604
				9.	10 40-12 9	18504	18678	25.	10 33-11 32	18477	18609
April 2.	16 14-16 58	18526	18670	10.	10 38-11 42	18529	18674				
3.	11 25-12 25	18475	18666	11.	10 40-11 39	18489	18669				
6.	11 34-12 31	18511	18671	12.	10 37-11 39	18512	18676	Sept. 7.	10 54-11 59	18518	18603
7.	10 4-11 10	18513	18663	15.	11 4-12 7	18503	18665	8.	10 55-11 55	18493	18594
8.	9 47-11 11	18524	18671	16.	10 42-12 2	18514	18670				
9.	11 40-12 35	18513	18664	18.	10 34-11 31	18526	18637	18.	9 2-9 52	18507	18601
10.	11 38-12 32	18515	18663	19.	10 48-11 52	18501	18640				
12.	15 27-16 20	18520	18663	23.	10 30-11 54	18499	18637	24.	10 39-11 42	18476	18623
13.	11 34-12 33	18501	18663	24.	10 46-11 41	18529	18639	25.	10 37-11 38	18485	18620
15.	14 45-15 36	18527	18666	25.	11 2-11 50	18514	18639				
16.	11 28-12 41	18485	18659	26.	10 33-11 55	18510	18640	Dec. 14.	14 58-16 1	18534	18601
17.	11 29-12 29	18500	18659	28.	14 19-15 16	18534	18638	15.	11 54-13 7	18512	18600
19.	13 29-14 26	18526	18671	29.	10 33-11 52	18497	18636	16.	11 43-12 45	18521	18598
22.	11 6-12 4	18509	18660					18.	11 40-12 42	18508	18597
23.	10 36-11 40	18519	18664	July 19.	14 45-15 36	18563	18632	21.	11 38-12 38	18515	18590
27.	8 54-9 59	18430	18663	26.	14 24-15 20	18508	18630	23.	11 39-12 39	18493	18594
May 14.	9 11-10 40	18519	18640	27.	10 39-11 42	18484	18623				
19.	13 34-14 31	18497	18638	28.	10 34-11 57	18495	18627				
				29.	10 29-11 42	18501	18631				
				30.	10 29-11 29	18499	18631				
				31.	10 31-11 28	18526	18628				

May 26. Temperature raised to 21.0°.

October 13. Temperature lowered to 16.0°.









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 of Month	January	February	March	April	May	June	July	August	September	October	November	December
	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ
1	43182	43200	43193	43282	43272	43246	43230	—	43235	43210	43191	43200
2	177	191	189	283	—	258	224	—	228	213	197	200
3	—	—	187	283	269	255	223	43225	234	—	197	197
4	177	182	192	—	43347	256	—	221	230	219	190	203
5	180	184	181	281	43247	255	227	219	—	206	196	—
6	179	174	194	282	253	—	222	220	223	217	200	204
7	187	—	—	277	236	259	227	217	221	218	—	198
8	186	182	195	042	245	249	217	—	227	214	197	201
9	182	183	196	205	—	253	220	211	218	213	198	201
10	—	183	196	206	242	256	228	224	222	—	201	199
11	192	185	192	—	—	253	—	223	225	218	—	203
12	180	184	285	209	—	255	223	221	—	216	205	—
13	182	187	288	208	218	—	227	222	200	202	198	203
14	192	—	—	207	226	257	223	225	197	194	—	204
15	181	186	283	213	224	252	225	—	197	189	202	—
16	184	181	283	211	—	256	213	226	197	189	197	—
17	—	180	290	209	—	213	214	227	215	—	200	—
18	193	187	295	—	224	215	—	229	204	193	198	—
19	178	193	285	212	231	219	210	230	—	187	197	—
20	183	194	286	218	231	—	215	240	203	193	197	—
21	192	—	—	227	224	215	220	233	205	190	—	—
22	197	196	284	231	229	217	—	—	208	195	206	—
23	193	193	(268)	234	—	218	218	241	209	190	202	—
24	—	196	288	219	225	224	223	238	203	—	196	—
25	178	192	273	—	223	216	—	237	208	199	206	—
26	184	185	—	194	232	222	218	238	—	186	203	—
27	183	199	—	257	267	—	219	235	207	191	206	—
28	189	—	—	(232)	220	223	227	237	205	194	—	—
29	201	—	290	252	241	220	227	—	204	192	206	—
30	196	—	287	259	246	219	225	233	208	197	202	—
31	—	—	289	—	—	—	226	231	—	—	—	—

May 26. Temperature raised to 21.0°.

October 13. Temperature lowered to 16.0°.

An adjustment of the bearings of the axis of the rotating coil was made on July 15, December 4 and December 10.

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	1914	15 6.3	0.1853	0.4333	66 50.8
1870	19 53.0	0.1784	0.4392	67 52.5	1915	14 56.5	0.1851	0.4331	66 51.6
1871	19 41.9	0.1786	0.4389	67 50.3	1916	14 46.9	0.1848	0.4326	66 52.2
1872	19 36.8	0.1789	0.4383	67 47.8	1917	14 37.1	0.1848	0.4330*	66 53.0
1873	19 33.4	0.1793	0.4386	67 45.8	1918	14 27.8	0.1846	0.4325	66 52.8
1874	19 28.9	0.1797	0.4387	67 43.6	1919	14 18.2	0.1845	0.4324	66 53.3
1875	19 21.2	0.1797	0.4383	67 42.4	1920	14 8.6	0.1845	0.4325	66 53.6
1876	19 8.3	0.1799	0.4383	67 41.0	1921	13 57.6	0.1845	0.4322	66 53.0
1877	18 57.2	0.1800	0.4381	67 39.7	1922	13 46.7	0.1844	0.4318	66 52.3
1878	18 49.3	0.1802	0.4382	67 38.2	1923	13 35.1	0.1843	0.4314	66 51.9
1879	18 40.5	0.1805	0.4382	67 37.0	1924	13 22.8	0.1843	0.4311	66 51.6
1880	18 32.6	0.1805	0.4380	67 35.7	1925	13 9.9	0.1841	0.4308	66 51.4
1881	18 27.1	0.1807	0.4379	67 34.7					

In 1818, 1819 and 1820 numerous observations of Declination were made with a Dollond needle. See Introduction, p. D19.

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 the suspension of complete Declination Observations. From 1914 the Dip was determined with an Inductor.

N.B.—In the above table the values 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.

MEAN ANNUAL VALUES OF MAGNETIC ELEMENTS DETERMINED AT THE ABINGER MAGNETIC STATION,  
 . FOR THE YEARS 1925-1937.

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

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.

## MAGNETIC DISTURBANCES.

The following notes briefly summarise, month by month, the magnetic conditions exhibited by the traces of Declination, Horizontal Intensity and Vertical Intensity at the Abinger Magnetic Station in the year 1937.

**January.**—There was no disturbance of more than minor importance during the month. Small waves occurred in all traces between 2<sup>d</sup>.18<sup>h</sup> and 3<sup>d</sup>.6<sup>h</sup>. Periods of minor disturbance were shown extending between 7<sup>d</sup>.16<sup>h</sup> and 8<sup>d</sup>.2<sup>h</sup>; 9<sup>d</sup>.9<sup>h</sup> and 10<sup>d</sup>.2<sup>h</sup>; 10<sup>d</sup>.9<sup>h</sup> and 11<sup>d</sup>.0<sup>h</sup>; 11<sup>d</sup>.20<sup>h</sup> and 12<sup>d</sup>.2<sup>h</sup>. Periods of general unsteadiness lasted from 12<sup>d</sup>.12<sup>h</sup> to 13<sup>d</sup>.12<sup>h</sup>; from 21<sup>d</sup>.10<sup>h</sup> to 22<sup>d</sup>.6<sup>h</sup>; from 27<sup>d</sup>.8½<sup>h</sup> to 29<sup>d</sup>.6<sup>h</sup> and from 30<sup>d</sup>.15<sup>h</sup> to 31<sup>d</sup>.2<sup>h</sup>. During the first mentioned disturbance a conspicuous wave occurred in D (−20′) and in H (+120γ) at 7<sup>d</sup>.19<sup>h</sup>.15<sup>m</sup>, the time coinciding with the appearance of an aurora further north in Britain. There was a movement of the “sudden commencement” type in all traces at 30<sup>d</sup>.15<sup>h</sup>.10<sup>m</sup>, but it was not followed by any definite disturbance,—merely by a few hours of unsteadiness.

The range in declination during the month was from 10°.57′.4 on 7th to 11°.24′.6 on 30th; in horizontal intensity, from .18427 on 7th to .18597 on 11th; in vertical intensity, from .43006 on 27th to .43120 on 7th.

**February.**—In contrast with the previous month, this was a period of almost continuous minor disturbance. The first two days were quiet. At 2<sup>d</sup>.23<sup>h</sup>.4<sup>m</sup> a sudden movement in all traces marked the beginning of lively activity in which a range of over 40′ in D and over 200γ in H occurred, and which was accompanied by a widely seen aurora in its later stages. The traces are reproduced in Plate I. Unsteadiness remained general until 7<sup>d</sup>.12<sup>h</sup>, when a relatively quiet interval began, lasting until 8<sup>d</sup>.23<sup>h</sup>. Between 9<sup>d</sup>.18<sup>h</sup> and 10<sup>d</sup>.0<sup>h</sup> there were ranges of 20′ in D and 100γ in H. Smaller movements constantly occurred each succeeding day. At 18<sup>d</sup>.19<sup>h</sup> activity notably increased and several conspicuous waves in H occurred during the next 24 hours. V also showed an upward surge of 50γ between 19<sup>d</sup>.15<sup>h</sup> and 19<sup>d</sup>.17½<sup>h</sup>. A second period of comparative quiet lasted from 23<sup>d</sup>.6<sup>h</sup> to 27<sup>d</sup>.2<sup>h</sup> interrupted, however, by occasional small movements. Unsteadiness then gradually increased and was general by 28<sup>d</sup>.2<sup>h</sup>.

The extreme ranges during the month all occurred on 3rd. They were: in D, from 10°.45′.7 to 11°.28′.1; in H, from .18347 to .18652; in V, from .42989 to .43135.

**March.**—A brisk disturbance between 1<sup>d</sup>.19<sup>h</sup> and 2<sup>d</sup>.2<sup>h</sup> included a range of 20′ in D and 120γ in H. A quiet period followed, lasting from 3<sup>d</sup>.0<sup>h</sup> to 9<sup>d</sup>.0<sup>h</sup>, but interrupted temporarily by a day of minor disturbance, 5<sup>d</sup>.4<sup>h</sup> to 6<sup>d</sup>.4<sup>h</sup>. Short periods of unsteadiness occurred during ensuing days, but there was nothing to note until 13<sup>d</sup>.21<sup>h</sup> when a fairly active period lasting for about six hours provided movements of 15′ in D and 80γ in H. Unsteadiness then prevailed in varying degree throughout the remainder of the month. There was a conspicuous wave in H (+95γ) at 22<sup>d</sup>.22½<sup>h</sup>; also a movement of the “sudden commencement” type at 26<sup>d</sup>.20<sup>h</sup>.57<sup>m</sup>. The latter was followed by moderate activity for about 48 hours, but the largest movements did not exceed 50γ and it could not be classed as a disturbance. Another, and more pronounced sudden movement in all traces took place at 31<sup>d</sup>.3<sup>h</sup>.19<sup>m</sup>. This, again, was not followed by any considerable disturbance. There were, however, ranges of 25′ in D and 140γ in H during the next six hours; and further activity between 17<sup>h</sup> and 23<sup>h</sup> included movements of nearly 100γ in H and 75γ in V. The traces for March 31 are reproduced in Plate II.

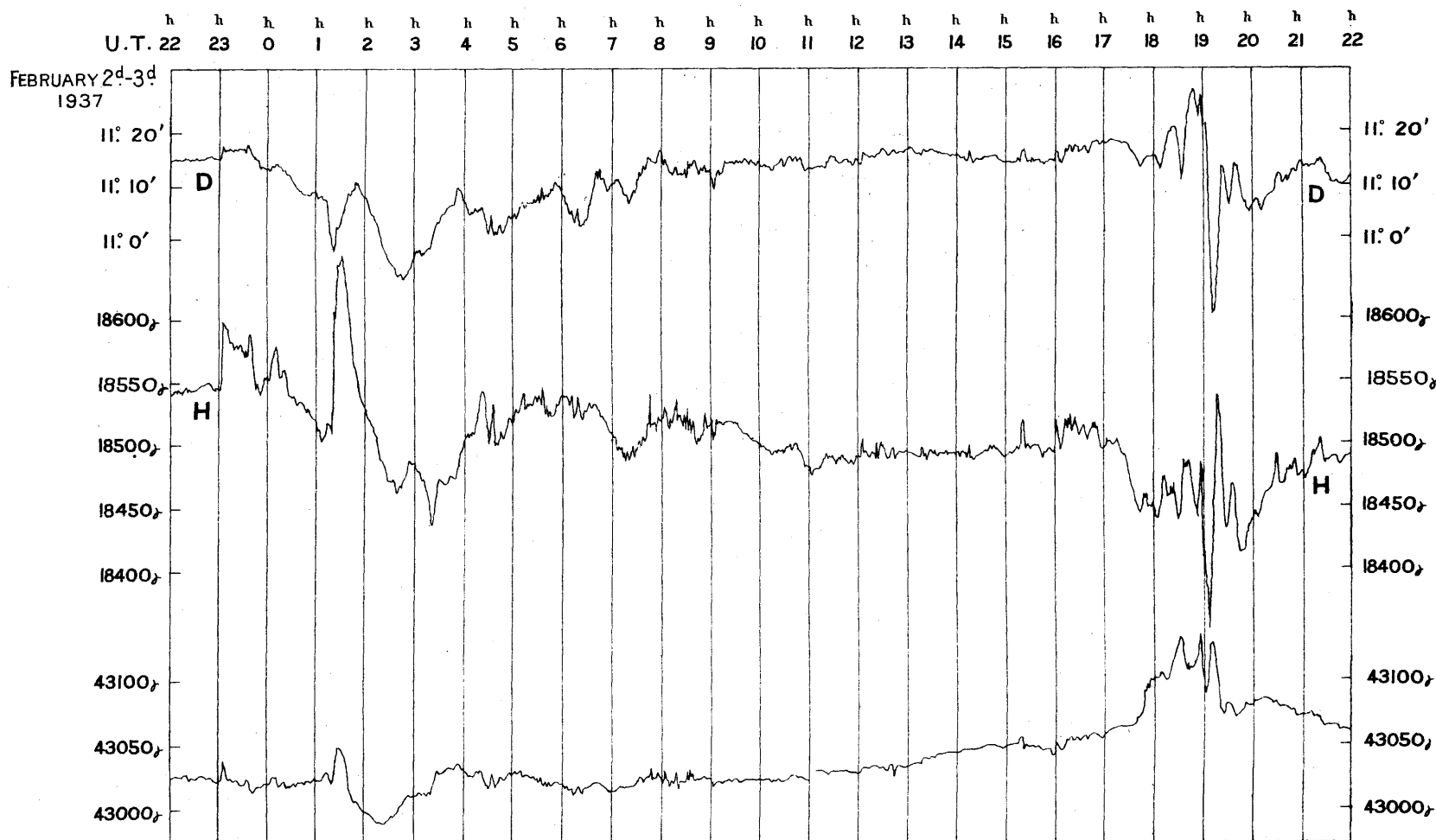
The range in declination during the month was from 10°.57′.2 to 11°.33′.2, both on 5th; in horizontal intensity, from .18430 on 31st to .18620 on 22nd; in vertical intensity from .42975 to .43093, both on 31st.

**April.**—A state of considerable unsteadiness existed during the first few days, and especially on 2nd and 3rd. A conspicuous wave in H (+120γ) occurred at 2<sup>d</sup>.19<sup>h</sup> (with associated but smaller movements in D and V) and another (+60γ) at 3<sup>d</sup>.22<sup>h</sup>. Nearly quiet conditions were shown from 8<sup>d</sup>.6<sup>h</sup> to 11<sup>d</sup>.0<sup>h</sup>. Then further unsteadiness developed (though of small extent except on 12th) and persisted, generally, until 24th. At 24<sup>d</sup>.12<sup>h</sup>.0<sup>m</sup> a period of exceptional activity began with a sudden movement in H and D. The disturbance developed slowly and lasted for four and a half days. It comprised four distinct outbursts with intervening periods of comparative quiescence. The latter periods were roughly between the following time limits: 25<sup>d</sup>.4<sup>h</sup> to 25<sup>d</sup>.15<sup>h</sup>.46<sup>m</sup>; 26<sup>d</sup>.2<sup>h</sup> to 26<sup>d</sup>.17<sup>h</sup>.41<sup>m</sup>; 27<sup>d</sup>.6<sup>h</sup> to 28<sup>d</sup>.19<sup>h</sup>. The traces are reproduced in Plates III-VII. The disturbance, considered as a whole, was the most active and prolonged since August 1927. After 29<sup>d</sup>.0<sup>h</sup> it rapidly subsided to a condition of unsteadiness and irregular movement which lasted to the end of the month.

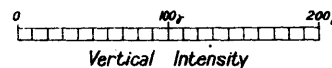
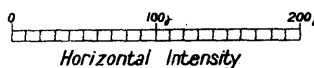
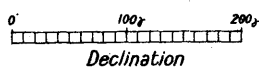
The range in declination during the month was from 10°.40′.6 on 24th to 11°.28′.5 on 26th; in horizontal intensity from a little below .18281 (the trace being off the sheet for a few minutes) on 28th to .18780 on 25th; in vertical intensity, from .42800 on 27th to .43139 on 28th.

**May.**—Unsteadiness at the beginning of the month increased and then developed into a moderate disturbance which, beginning rather abruptly at 4<sup>d</sup>.16<sup>h</sup>.53<sup>m</sup>, included several movements exceeding 100γ in H, and one of 80γ in V. The disturbance rapidly died out after 5<sup>d</sup>.17<sup>h</sup>. The traces are reproduced in Plate VIII. Three days of nearly quiet conditions followed, terminated by a period of fluctuating values, scarcely sufficient to qualify as a disturbance, which lasted until 12<sup>d</sup>.8<sup>h</sup>. The principal movements were in H, but a wave in V (−25γ) occurred at 10<sup>d</sup>.0<sup>h</sup> and one in D (−15′) at 11<sup>d</sup>.0<sup>h</sup>—2<sup>h</sup>. Slight general unsteadiness of an oscillatory character prevailed during 13th, increasing markedly after 14<sup>d</sup>.12<sup>h</sup>. There was a short quiet period from 19<sup>d</sup>.18<sup>h</sup> to 21<sup>d</sup>.15<sup>h</sup>. Then, at 21<sup>d</sup>.15<sup>h</sup>.58<sup>m</sup>, an abrupt movement in H (+50γ) seemed to presage a disturbance; but after some rapid oscillations occupying less than eight hours and of quite small amplitude, normal unsteadiness was restored and prevailed until 24<sup>d</sup>.18<sup>h</sup>.

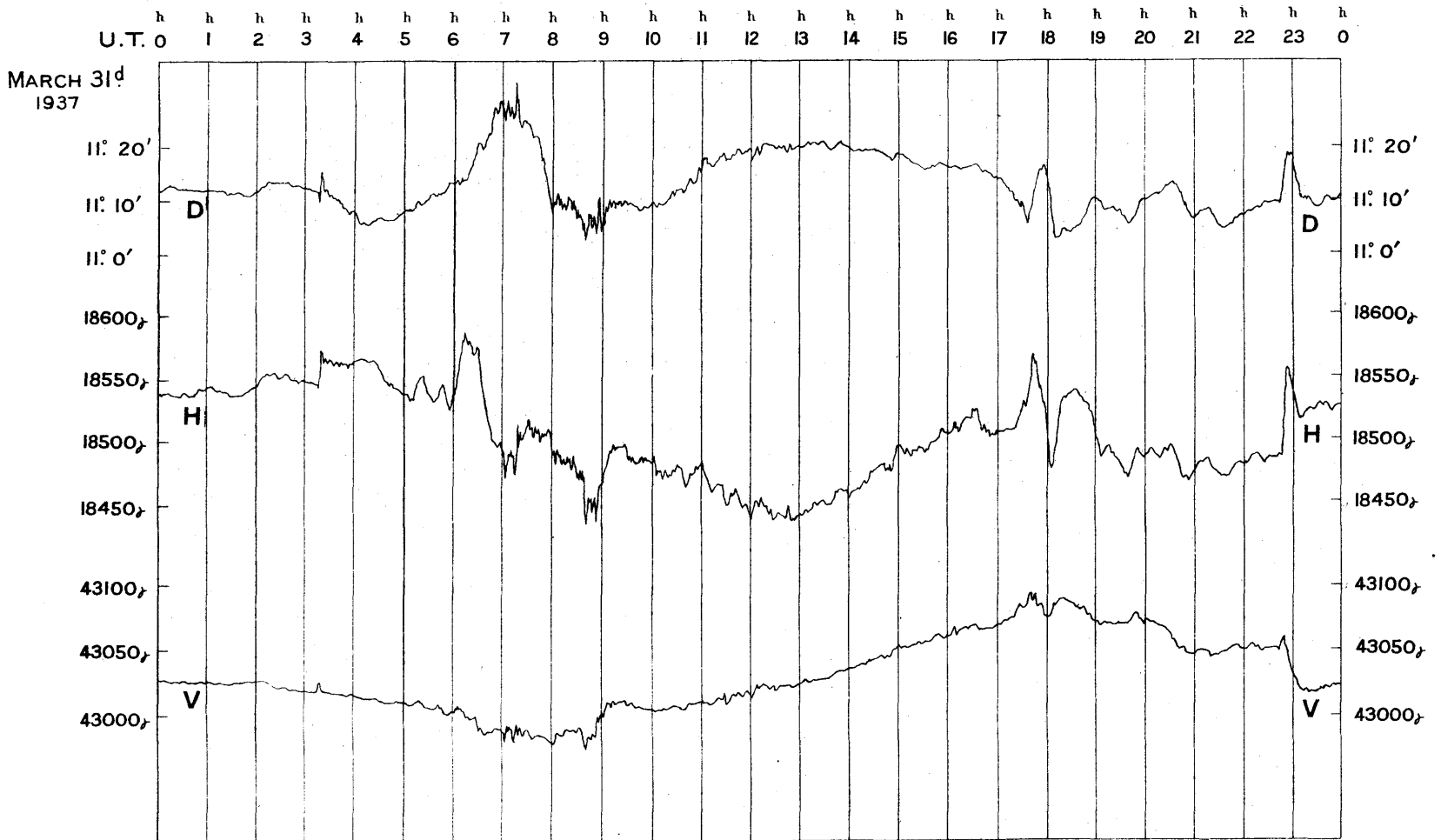
MAGNETIC DISTURBANCES AS RECORDED AT THE  
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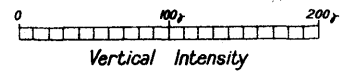
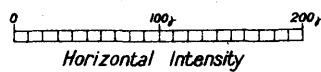
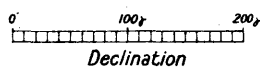
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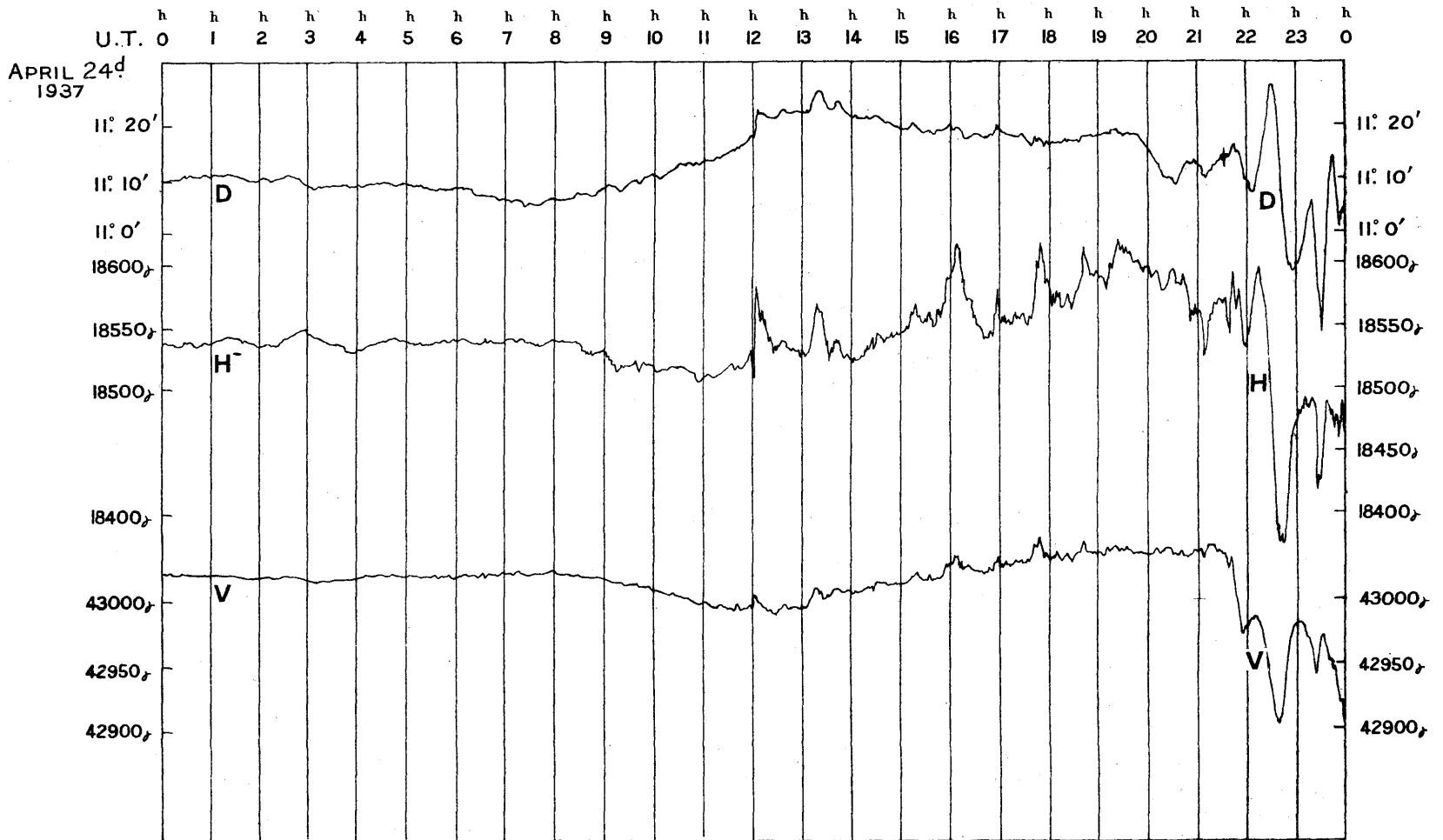
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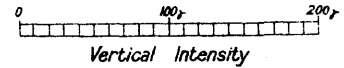
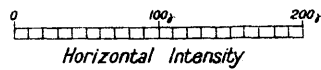
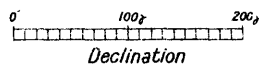
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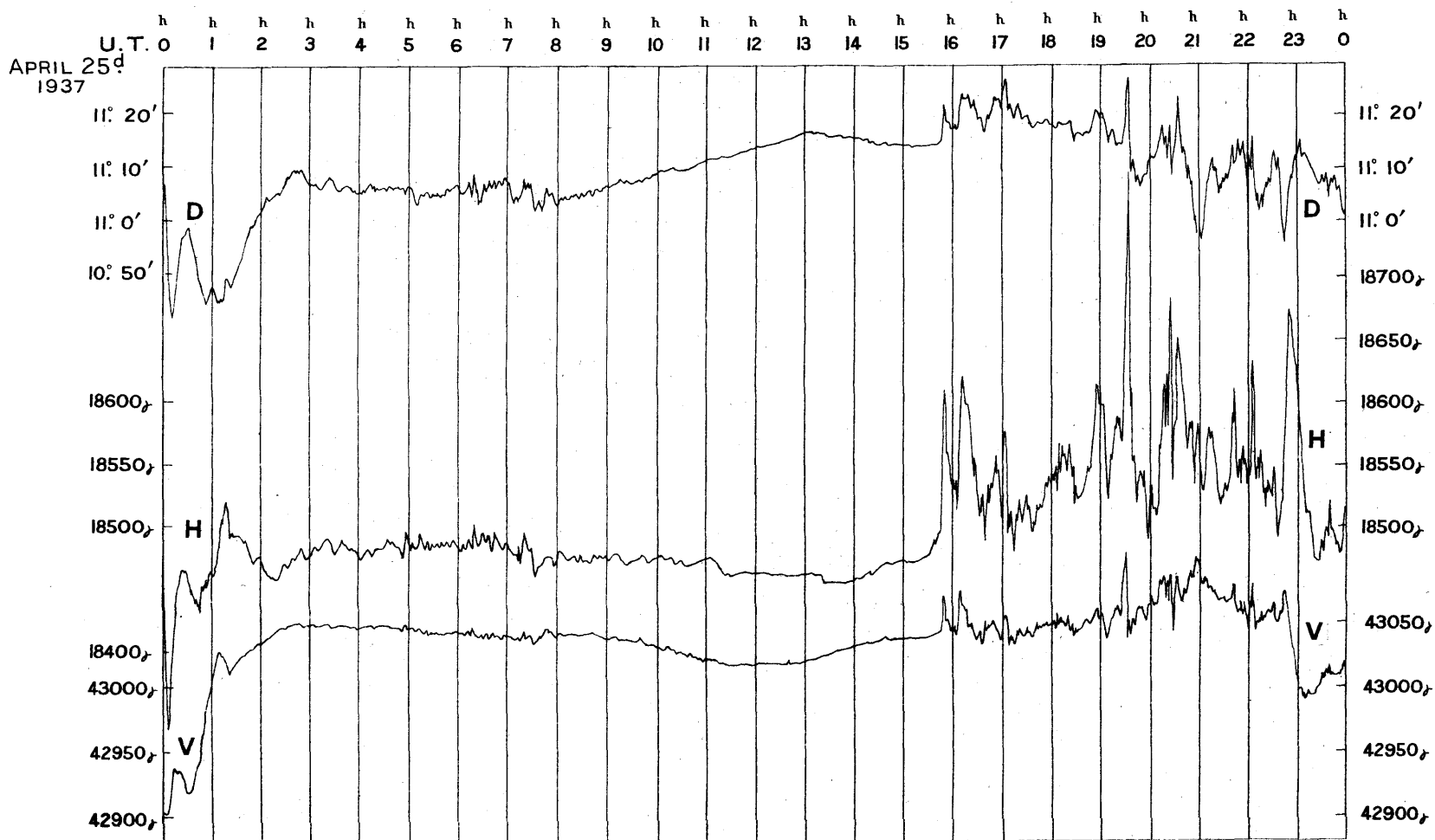


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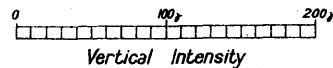
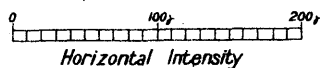
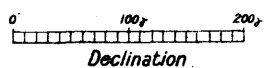




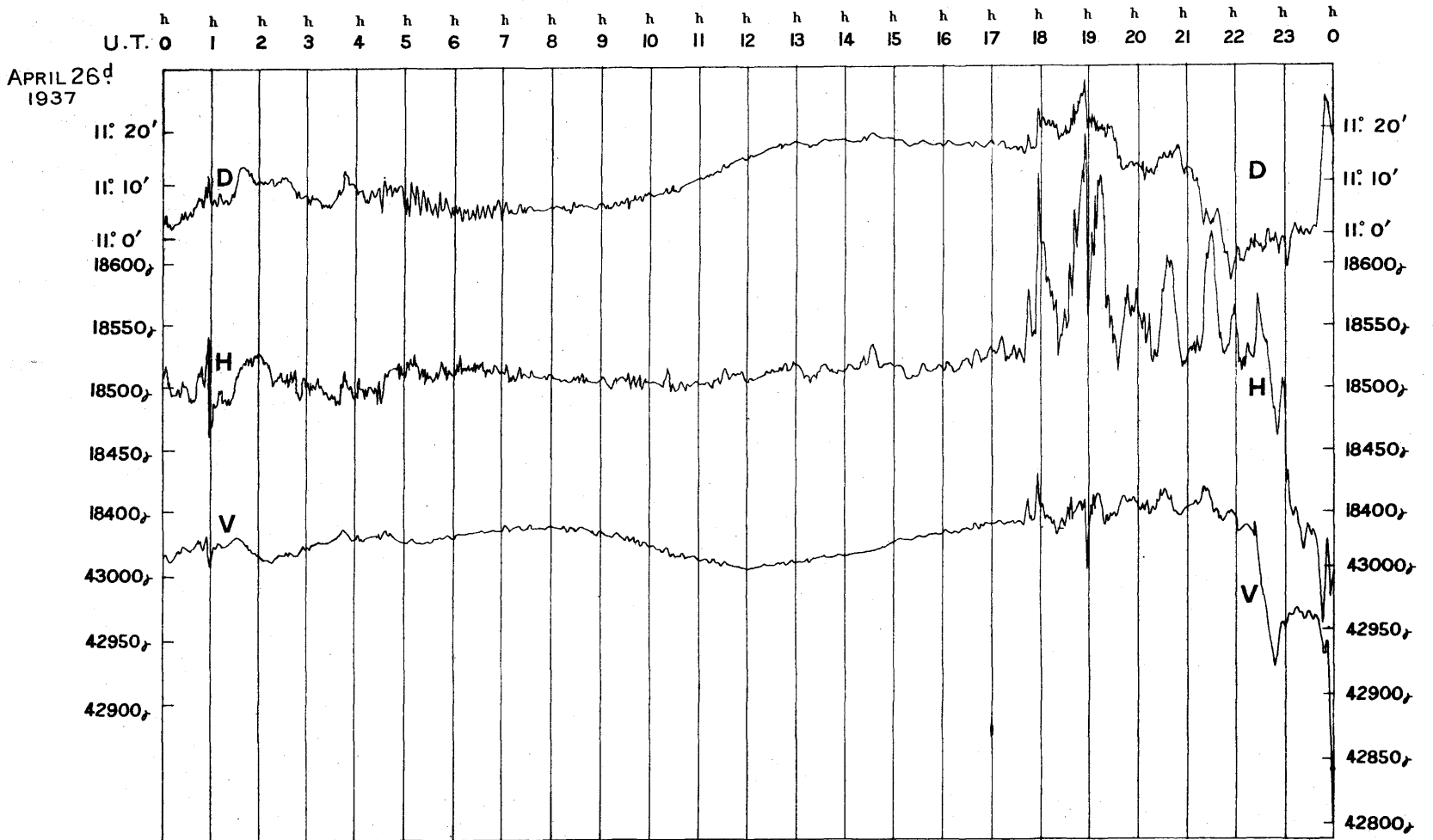
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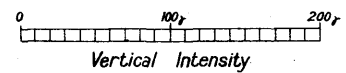
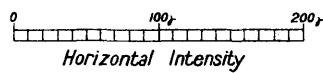
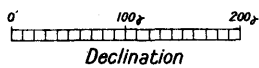
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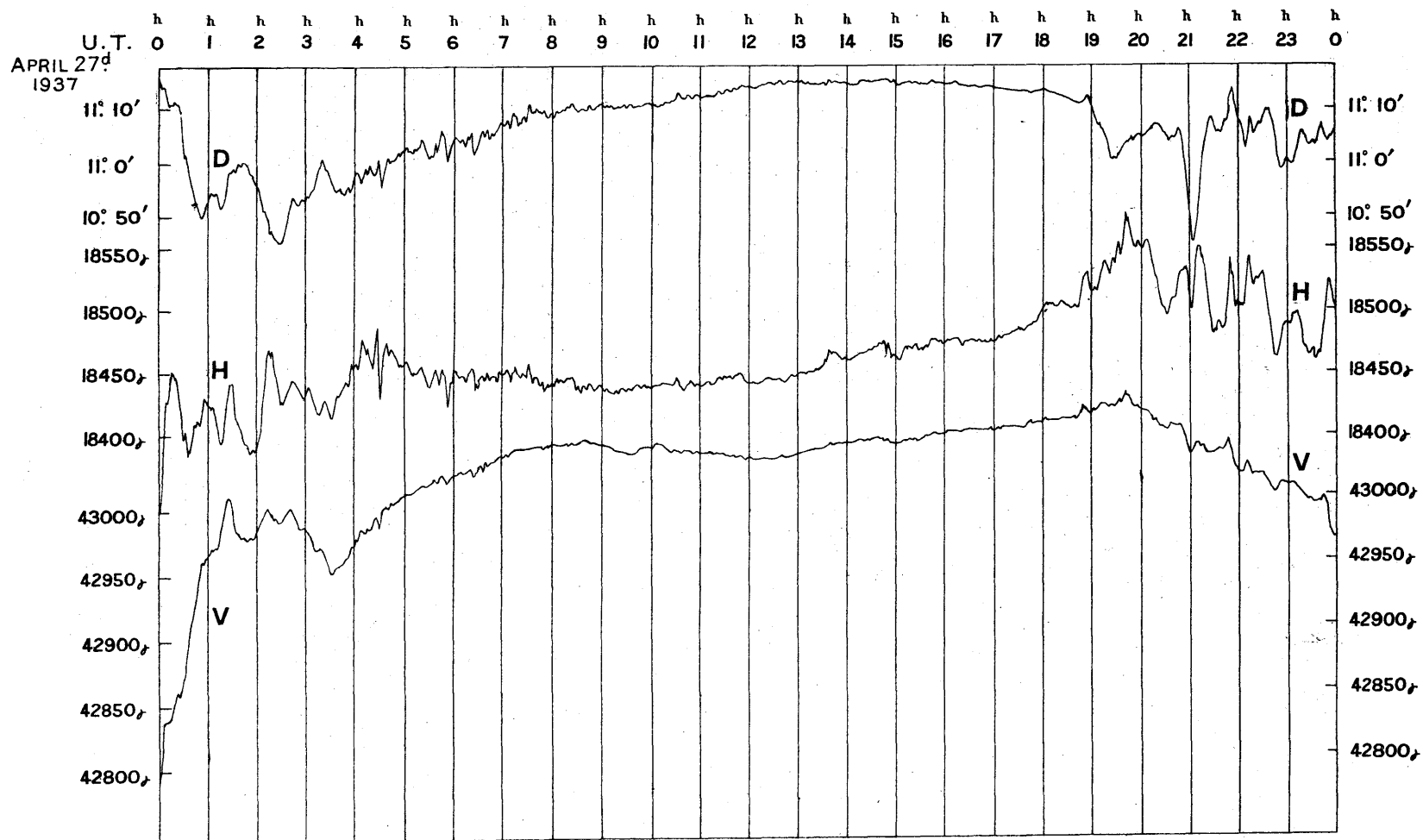
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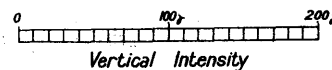
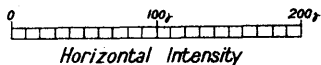
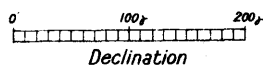
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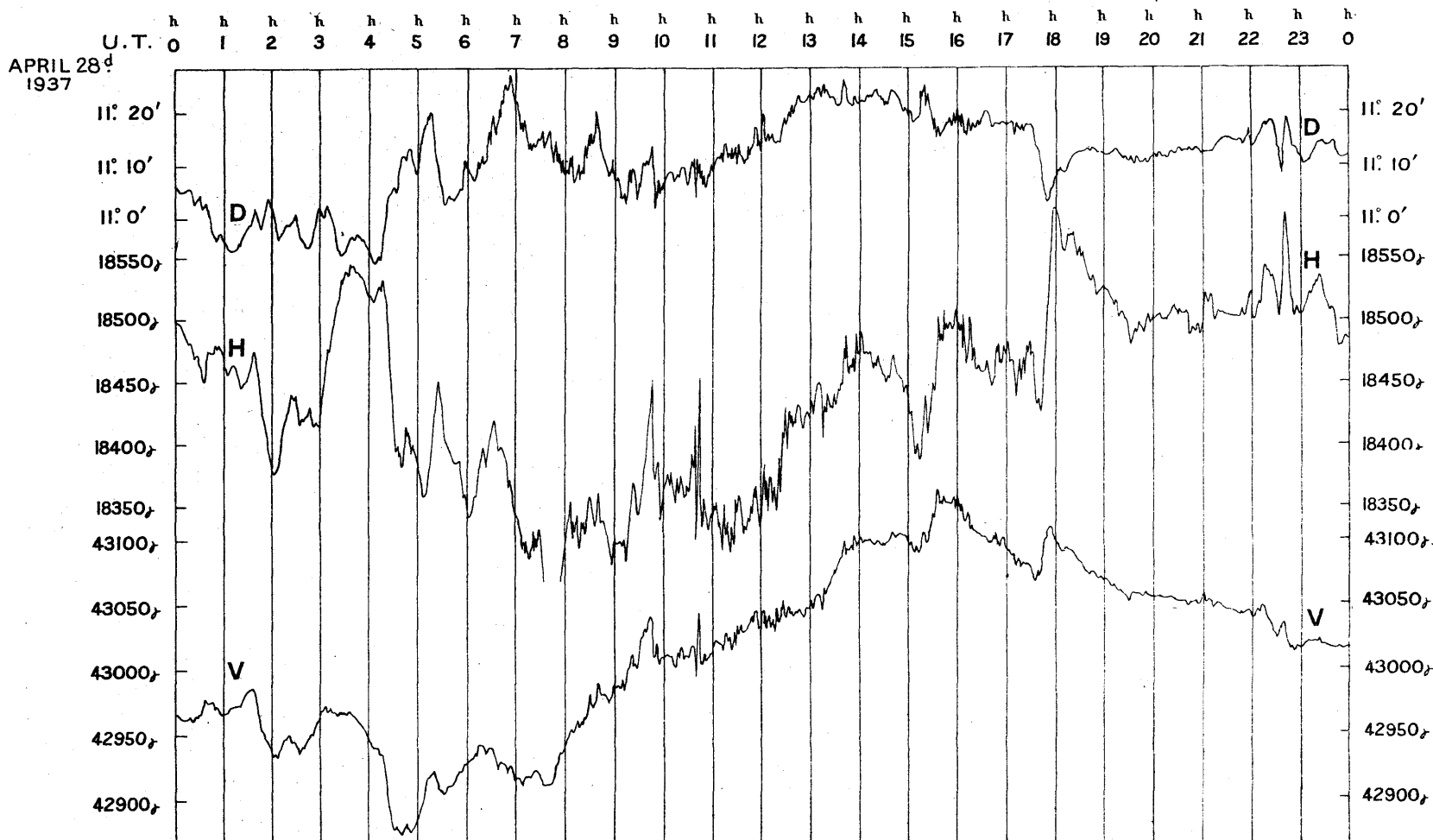
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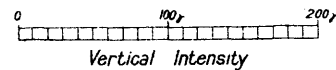
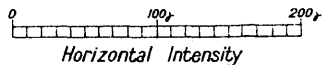
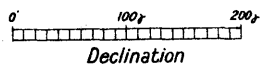
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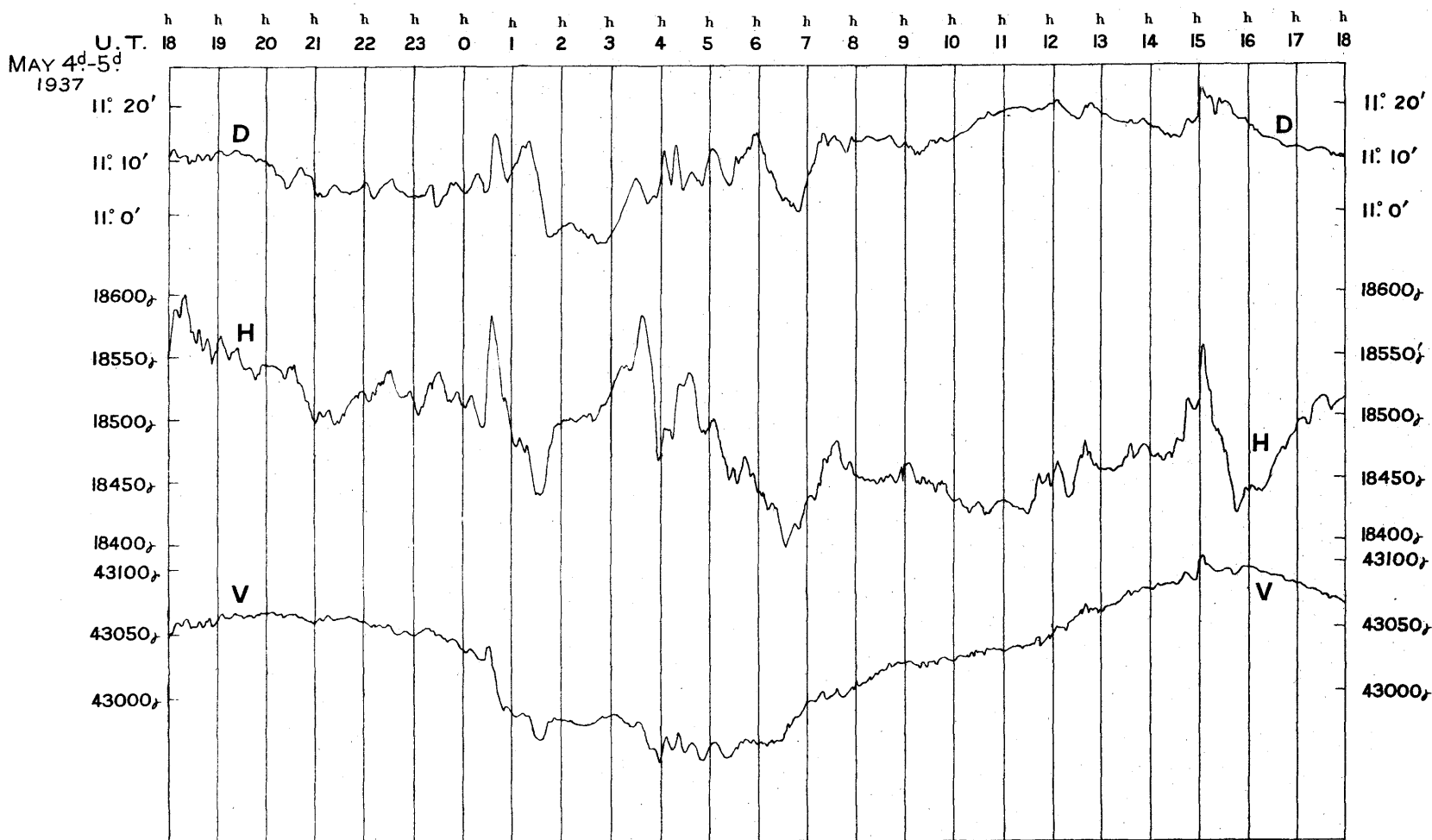
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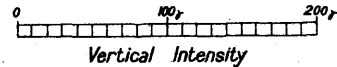
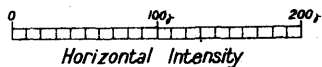
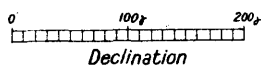
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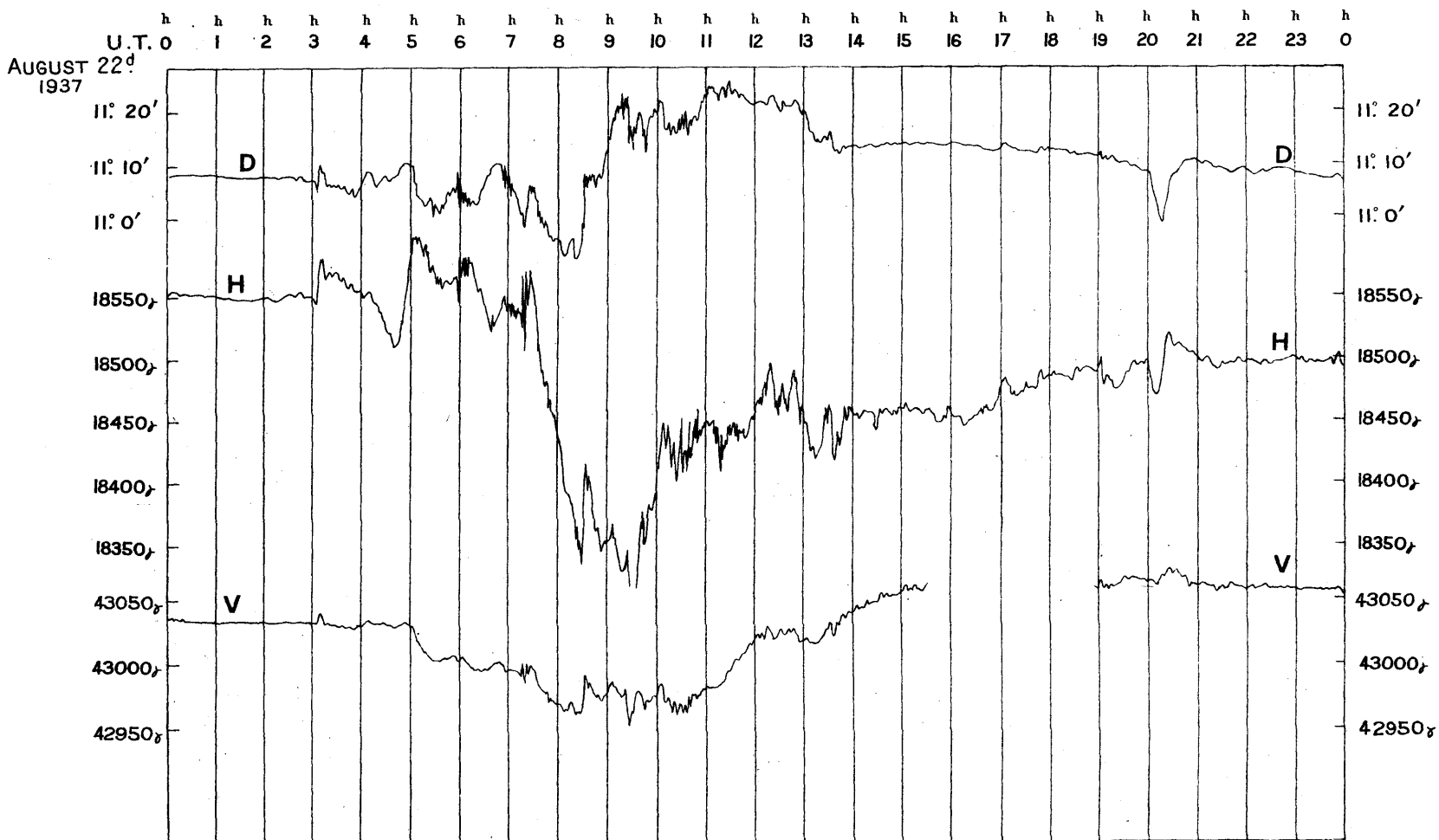
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ABINGER MAGNETIC STATION.



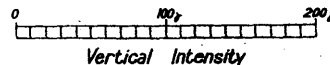
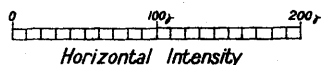
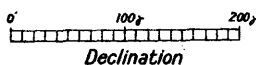
SCALES FOR MAGNETIC ELEMENTS IN C.G.S. UNITS.



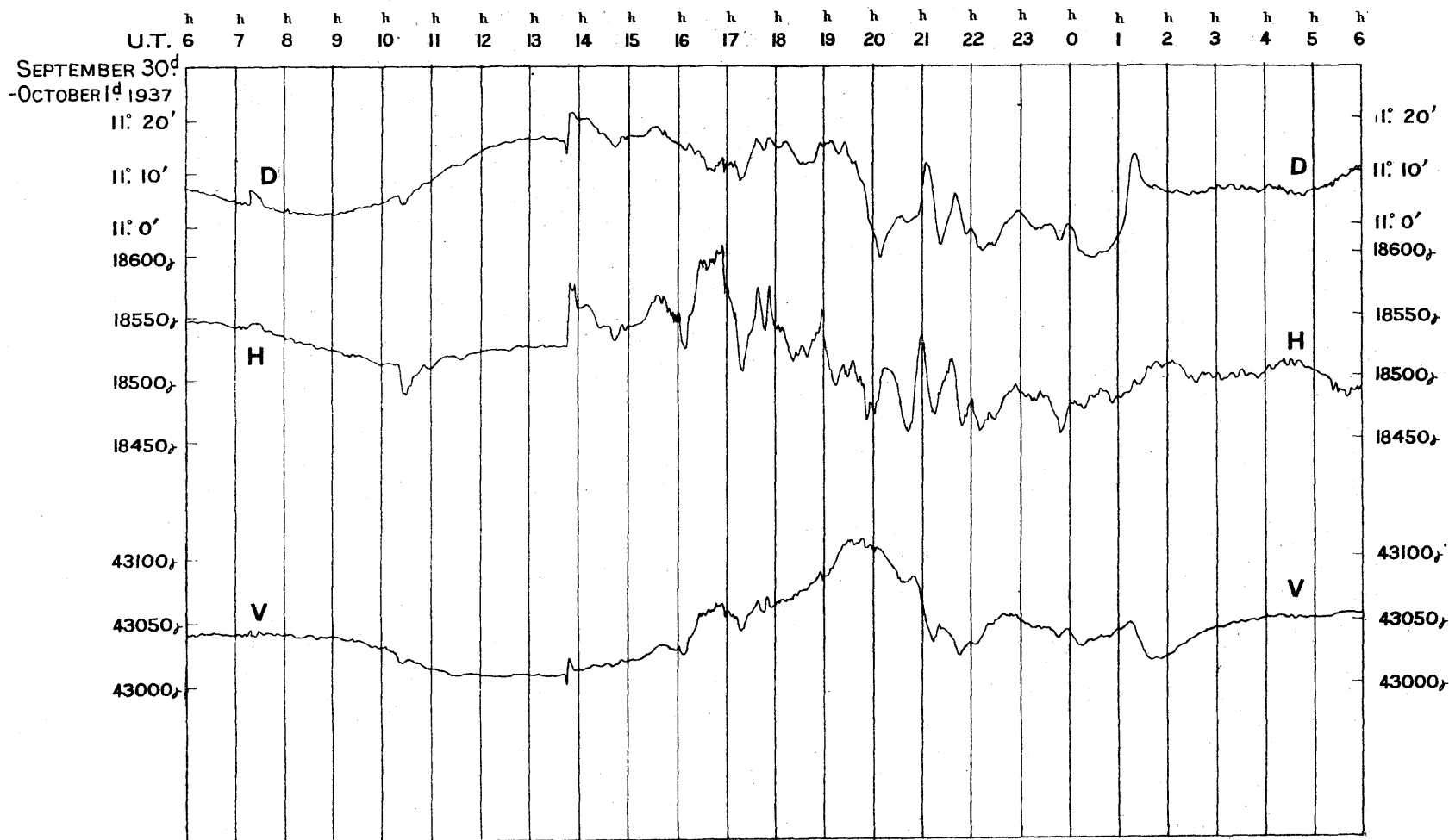
MAGNETIC DISTURBANCES AS RECORDED AT THE  
ABINGER MAGNETIC STATION.



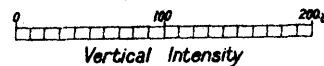
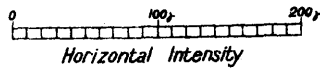
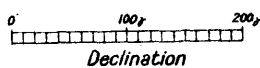
SCALES FOR MAGNETIC ELEMENTS IN C.G.S. UNITS.



MAGNETIC DISTURBANCES AS RECORDED AT THE  
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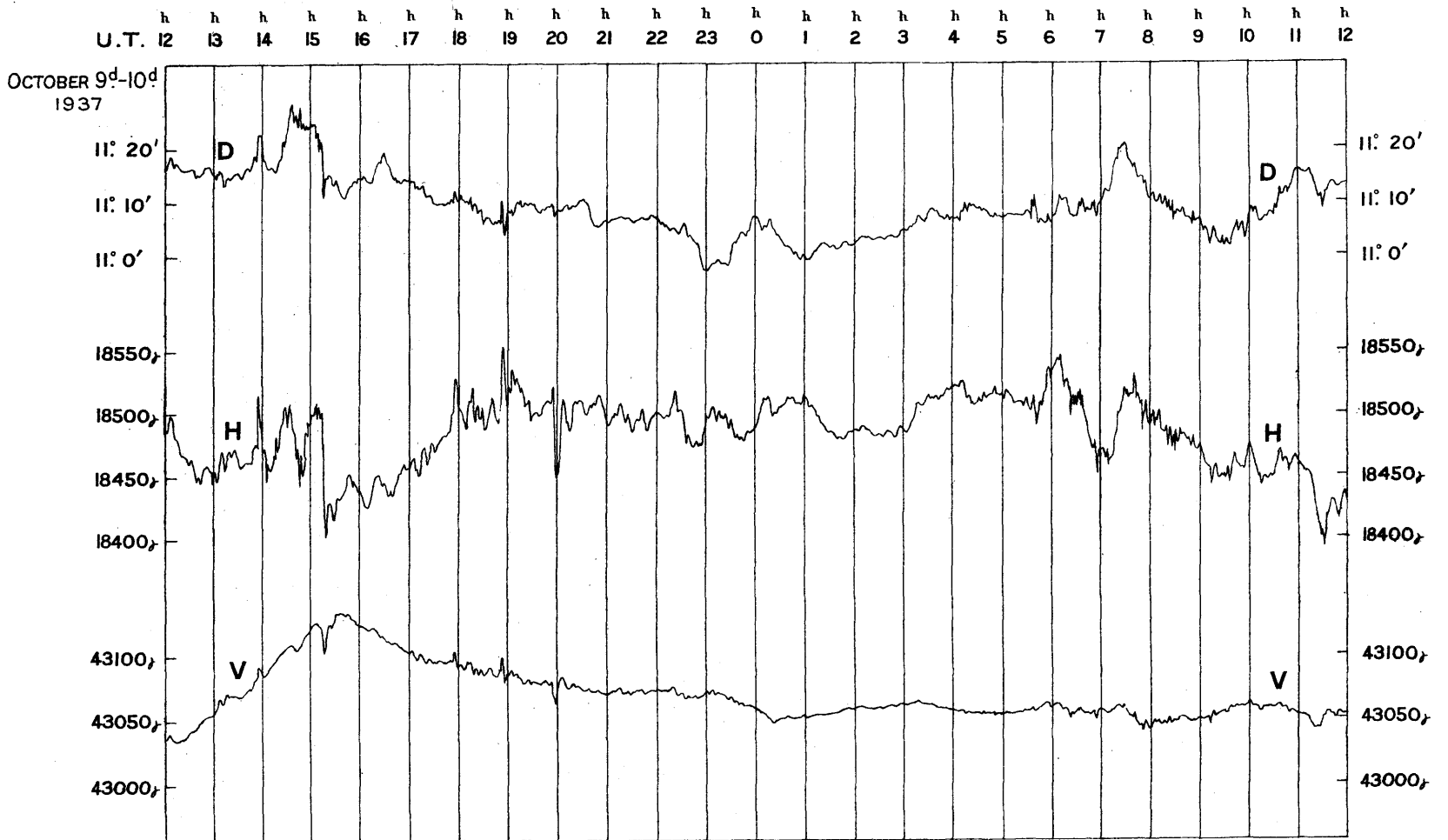


SCALES FOR MAGNETIC ELEMENTS IN C.G.S. UNITS.

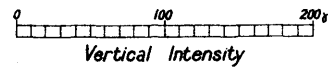
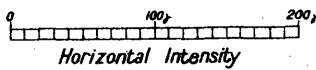
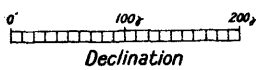




MAGNETIC DISTURBANCES AS RECORDED AT THE  
ABINGER MAGNETIC STATION.



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





During the following days movements increased and ultimately attained the quality of a minor disturbance. This condition lasted from about 27<sup>d</sup>.10<sup>h</sup> to 29<sup>d</sup>.6<sup>h</sup>. Oscillation of moderate amplitude (i.e., 8' to 10' in D, 50γ in H) was nearly continuous, while V at first increased 70γ and, after 27<sup>d</sup>.19<sup>h</sup>, slowly subsided, in oscillation, repeating the movement in an even more marked degree a day later. The largest oscillations in H and D took place between 28<sup>d</sup>.21<sup>h</sup> and 29<sup>d</sup>.4<sup>h</sup>. The whole day's range of 140γ in H occurred in the short space of three and a half hours on the 28th. For the remainder of the month slight general unsteadiness was the characteristic.

The range in declination during the month was from 10°.53'.9 on 5th to 11°.24'.4 on 28th; in horizontal intensity, from .18418 on 29th to .18602 on 21st; in vertical intensity, from .42947 to .43106, both on 5th.

**June.**—During the earlier part of the month the traces were affected by many irregular movements, few of which, however, call for special comment. At 4<sup>d</sup>.14<sup>h</sup>.30<sup>m</sup> a marked change in character occurred. The movements were of an oscillatory type, and increased in number considerably. Between 5<sup>d</sup>.22<sup>h</sup> and 6<sup>d</sup>.1<sup>h</sup> there was a temporary decrease of 15' in D, with prominent fluctuations in H and V. These were followed by a steady decrease in H amounting to 150γ which, after 6<sup>d</sup>.10<sup>h</sup>, was succeeded by a similar recovery. During the same period V was at first below its normal value and then showed an accentuated increase, smooth but more than double the normal daily inequality. General unsteadiness continued in a moderate degree throughout the remainder of the month. Notable increases in unsteadiness were shown at 10<sup>d</sup>.5<sup>h</sup> (short-lived, but commencing with an abrupt movement at 5<sup>h</sup>.4<sup>m</sup>), at 13<sup>d</sup>.13<sup>h</sup>—17<sup>h</sup>, at 20<sup>d</sup>.5<sup>h</sup>—23<sup>h</sup> and at 24<sup>d</sup>.12<sup>h</sup>—20<sup>h</sup>. Between 10<sup>h</sup> and 18<sup>h</sup> on 22nd a general increase of 170γ was registered. A period of considerable activity was that between 10<sup>h</sup> and 22<sup>h</sup> on 27th. The movements were principally in H, with small counterparts in V, and included a remarkable surge in both components at 27<sup>d</sup>.15<sup>h</sup>.18<sup>m</sup>, when, within eight minutes, H rose and fell again 150γ and V, similarly, 45γ.

The range in declination during the month was from 10°.53'.5 on 5th to 11°.23'.7 on 27th; in horizontal intensity, from .18389 on 6th to .18697 on 27th; in vertical intensity, from .42973 to .43116 both on 6th.

**July.**—General unsteadiness, frequently of an oscillatory type, prevailed throughout the month, and it cannot be said that any day was completely quiet, although the period from 27th to 29th was nearly so. Large movements, nevertheless, were not numerous. The most conspicuous are mentioned. At 9<sup>d</sup>.14<sup>h</sup> a wave in H (+80γ); at 14<sup>d</sup>.6<sup>h</sup> a rapid decrease in H (100γ), followed at 14<sup>d</sup>.12<sup>h</sup> by a rapid increase in V (125γ), both changes being reversed to normal again by 14<sup>d</sup>.21<sup>h</sup>; at 19<sup>d</sup>.12<sup>h</sup>.53<sup>m</sup> an abrupt movement in all traces, followed by a general increase in H (140γ) which subsided rapidly after 19<sup>h</sup>; between 22<sup>d</sup>.6<sup>h</sup> and 16<sup>h</sup> a temporary decrease in H (100γ); at 24<sup>d</sup>.0<sup>h</sup>—3<sup>h</sup> waves in all traces, -20' in D, +100γ in H and -60γ in V.

The range in declination during the month was from 10°.52'.3 on 24th to 11°.24'.6 on 9th; in horizontal intensity from .18418 on 22nd to .18671 on 19th; in vertical intensity, from .42981 on 24th to .43150 on 14th.

**August.**—Some unsteadiness, on 1st was followed by a period of moderate disturbance beginning at 2<sup>d</sup>.0<sup>h</sup> and continuing, with intermissions, until 4<sup>d</sup>.4<sup>h</sup>. The movements in D during this period were seldom greater than 10', the largest being one of 28' at 4<sup>d</sup>.0<sup>h</sup>—1<sup>h</sup>. In H there was a rapid decrease of 150γ at 2<sup>d</sup>.4<sup>h</sup>—6<sup>h</sup> and several oscillations exceeding 50γ occurred subsequently, the largest being one of -80γ at 4<sup>d</sup>.0<sup>h</sup>, which was also associated with a wave in V (-75γ). Between 2<sup>d</sup>.12<sup>h</sup> and 2<sup>d</sup>.15<sup>h</sup> V increased temporarily by 120γ. After the disturbance had passed, a period of relative quiescence set in lasting from 4<sup>d</sup>.12<sup>h</sup> until 22<sup>d</sup>.3<sup>h</sup>. On most of the days included in this period, however, there were small irregular movements, the 16th being the only truly quiet day. A disturbance on 22nd began with an abrupt movement in all traces at 3<sup>h</sup>.6<sup>m</sup>. It was remarkable for the number of small and very rapid oscillations superimposed on the general outlines, and for the large decrease in H (250γ) which occurred between 7<sup>h</sup> and 8<sup>h</sup>. The ranges in D and V were relatively small, however, and the disturbance was over in less than twelve hours. The traces are reproduced in Plate IX. Thereafter, until the end of the month nearly quiet conditions prevailed, interrupted by a period of general unsteadiness from 26<sup>d</sup>.16<sup>h</sup> to 29<sup>d</sup>.6<sup>h</sup>.

The range in declination during the month was from 10°.51'.1 on 4th to 11°.28'.5 on 2nd; in horizontal intensity, from .18300 to .18601 both on 22nd; in vertical intensity, from .42953 on 22nd to .43107 on 2nd.

**September.**—There were only two occasions in the whole month on which the traces showed more than casual irregularities. The first of these began at 10<sup>d</sup>.17<sup>h</sup>.53<sup>m</sup> with an abrupt movement in H which was followed during the next twelve hours by several conspicuous waves in all traces. The largest in H (-120γ) was at 10<sup>d</sup>.22<sup>h</sup>, and in D (-25') at 11<sup>d</sup>.2<sup>h</sup>, while two consecutive waves in V (-50γ) occurred between 11<sup>d</sup>.0<sup>h</sup> and 11<sup>d</sup>.5<sup>h</sup>. The second occasion was on 30th, when a small abrupt movement at 7<sup>h</sup>.15<sup>m</sup> followed, later, by a typical "sudden commencement" at 13<sup>h</sup>.46<sup>m</sup> was the signal for a brisk disturbance lasting, once more, for about twelve hours. The range at the sudden commencement was 8' in D, 85γ in H and 23γ in V; there were many oscillations exceeding 50γ in H, two of 20' in D, while in V there was an oscillatory increase of 100γ between 16<sup>h</sup> and 20<sup>h</sup> followed by a rapid decline to normal at 22<sup>h</sup>. The traces are reproduced in Plate X. Apart from these two occasions the varying amount of unsteadiness to be seen on the traces calls for little comment. Nearly quiet days were 2nd, 3rd, 12th, 29th. 1st, 14th, 16th, 17th, 18th, 24th were days of marked unsteadiness.

The range in declination during the month was from 10°.48'.9 on 11th to 11°.21'.1 on 30th; in horizontal intensity, from .18440 on 11th to .18607 on 30th; in vertical intensity, from .42977 on 11th to .43115 on 30th.

**October.**—A condition of general disturbance persisted through the first two weeks, reaching considerable dimensions on 4th, 8th and 11th. On 4th the greatest activity occurred between 0<sup>h</sup> and 8<sup>h</sup>, when a range of more than 40' was registered in D, 170γ in H and 100γ in V. A feature of this and even more of the succeeding disturbances was the rapid oscillation superposed on the main movements; and the oscillation remained after the larger movements had ceased. The disturbance on 8th culminated at 4<sup>h</sup> with a temporary decrease in H (120γ) and V (60γ). It continued, after a short quiet interval between 9<sup>d</sup>.0<sup>h</sup> and 9<sup>d</sup>.6<sup>h</sup>, through the next four days. From 9<sup>d</sup>.12<sup>h</sup> to 9<sup>d</sup>.15<sup>h</sup> there was a prominent upward surge in V (100γ), the associated oscillation in H being particularly rapid. See Plate XI. Further periods of intensified activity were 11<sup>d</sup>.14<sup>h</sup> to 17<sup>h</sup>, 12<sup>d</sup>.10<sup>h</sup> to 12<sup>h</sup>, and 12<sup>d</sup>.19<sup>h</sup> to

24<sup>h</sup>. Later, the movements were of rapidly diminishing extent, and although a conspicuous solitary wave appeared on all traces at 15<sup>d</sup>.20<sup>h</sup> (+120γ in H, -20' in D) this may not have been connected with the declining disturbance. The succeeding days until 23rd were days of slight general unsteadiness. At about 23<sup>d</sup>.12<sup>h</sup> the unsteadiness began to increase to the dimensions of a minor disturbance and several steep waves occurred in all traces between 23<sup>d</sup>.22<sup>h</sup> and 24<sup>d</sup>.2<sup>h</sup>. In V there was a temporary decrease of 60γ; in H, a wave of +120γ; in D, movements of nearly 30'. Marked unsteadiness continued until the end of 28th. Thereafter a spell of nearly quiet conditions set in, though small undulations still showed from time to time on the traces.

The range in declination during the month was from 10°.42'.0 on 23rd to 11°.28'.6 on 9th and 11th; in horizontal intensity from .18362 on 4th to .18618 on 11th; in vertical intensity, from .42946 on 4th to .43134 on 9th.

**November.**—The tendency to continuous undulation previously noted remained during the first three days, together with slight general unsteadiness. From 4th to 6th conditions were quiet. On 7th a series of irregular movements began which later, from about 8<sup>d</sup>.6<sup>h</sup>, modified to fluctuations of a more or less regular type. The movements practically ceased on 10th but were resumed on 11th and did not finally disappear until 14<sup>d</sup>.12<sup>h</sup>. After three days of quiet conditions a further series of irregular oscillations began at 17<sup>d</sup>.18<sup>h</sup>. These were accompanied by notable diurnal ranges in V and continued, with occasional intermission, until the end of 24th. There followed a nearly quiet period until 27<sup>d</sup>.18<sup>h</sup>. In the concluding days of the month activity steadily increased, and on 30th quite large movements occurred. The most noteworthy of these were: a steady increase in V (50γ) between 13<sup>d</sup>.12<sup>h</sup> and 20<sup>h</sup>, followed by a rapid fall until 22<sup>h</sup>; a steep triple wave in H (+150γ) between 13<sup>d</sup>.20<sup>h</sup> and 22<sup>h</sup>, and associated movements in D (-25').

The range in declination during the month was from 10°.48'.4 on 30th to 11°.20'.8 on 19th; in horizontal intensity, from .18434 on 30th to .18588 on 23rd; in vertical intensity, from .43024 on 8th to .43104 on 30th.

**December.**—The month was not marked by any notable disturbance but there were prolonged periods of unsteady conditions, the unsteadiness being on several occasions definitely oscillatory in character. On 18th a rapid increase in V (80γ) between 15<sup>h</sup> and 17½<sup>h</sup> accompanied strongly marked oscillation in D and H. Prominent isolated movements were recorded at 19<sup>d</sup>.17<sup>h</sup> and 20<sup>d</sup>.17¾<sup>h</sup>. The most active period of the month extended from 23<sup>d</sup>.12<sup>h</sup> to 21<sup>h</sup>. In V there was a fluctuating increase of 90γ until 18<sup>h</sup>, followed by a steady decline; in H many irregular movements, with a total range of 100γ; in D a range of 25'. On 24th at 18½<sup>h</sup> there was a very steep wave in H (+120γ) and movements in D approaching 15'. The oscillatory character of the continuous small movements was apparent on nearly all days after the middle of the month. The period from 12<sup>d</sup>.12<sup>h</sup> to 18<sup>d</sup>.0<sup>h</sup> was substantially quiet.

The range in declination, during the month was from 10°.52'.1 on 20th to 11°.23'.6 on 18th, in horizontal intensity, from .18430 on 18th to .18579 on 31st; in vertical intensity, from .43020 on 1st to .43137 on 23rd.

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

Declination: 11°.33'.2 on March 5th; 10°.40'.6 on April 24th.

Horizontal intensity: .18780 on April 25th; a little less than .18281 (probably about .18250) on April 28th.

Vertical intensity: .43150 on July 14th; .42800 on April 27th.

# GREENWICH METEOROLOGICAL OBSERVATIONS. 1937.

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## INTRODUCTION.

### *Meteorological Instruments.*

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 thermometers used for ordinary eye observations, the photographic wet-bulb and dry-bulb thermometers, thermometers for solar and terrestrial radiation, two earth thermometers, and two rain-gauges.

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).

### *Subjects of Observation in the year 1937.*

The observations comprise eye observations of the ordinary meteorological instruments, including the barometer, dry-bulb and wet-bulb thermometers, radiation and earth thermometers; continuous photographic 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 Pole; general record of ordinary atmospheric changes of weather, including numerical estimation of the amount of cloud, estimations of "visibility", and occasional phenomena. Beginning on 1935 January 1, continuous record of the electric current discharged from a point 30 feet above the surface of the ground has been in operation. Registration of atmospheric potential gradient was discontinued at the end of June, 1933. On 1935 January 1, daily measurement was begun of the amount of sulphur dioxide polluting the air. Registration and measurement of the pollution of the air by suspensoids was commenced on 1934 July 1, the instrument employed being an Owens automatic filter.

*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. E. 7).

STANDARD BAROMETER.—The standard barometer is Newman No. 64. Its tube is 0.565 inches in diameter, and the depression of the mercury due to capillary action is 0.002 inches, 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 inches, subdivided by vernier to 0.002 inches. 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. E 9.)

The barometer is read at 9h., 12h. (noon), 15h., 21h., 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. On the short lever is mounted the moving mirror of the instrument horizontally in a suitable frame attached to the lever, just above the pivots of the latter. 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 lamp to a focus on the drum. A base-line mirror, similar to the moving mirror, is mounted in a vertical plane behind the lower half of this lens. Provision is made for all 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 appreciably depressing it.

The instrument is 12 feet from the recording drum. At this distance the calculated scale value of the record is 3 in. on the sheet for 1 in. change of height of the mercury column of the standard barometer. (Both arms are, near the surface of the mercury, 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 four daily readings of the latter 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 change of zero is unnecessary.

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

Since 1899 January 4 this stand has occupied an open position in the Christie Enclosure.

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  $-0^{\circ}\cdot4$  has been applied to the readings of this thermometer. The wet-bulb thermometer used throughout the year was Negretti and Zambra, No. 94737. The correction  $-0^{\circ}\cdot2$  has been applied to the readings of this thermometer.



#### E 4 INTRODUCTION TO GREENWICH METEOROLOGICAL OBSERVATIONS, 1937.

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

PHOTOGRAPHIC DRY-BULB AND WET-BULB THERMOMETERS.—The apparatus, which has been in use since 1887, was designed by Sir William Christie. Until 1917 it stood in substantially the same position in the Observatory grounds, to the north of the New Observatory. It was transferred to the Christie Enclosure on 1917 February 21. It is placed in a shed 8 feet square, standing upon posts about 8 feet high, and open to the north. The apparatus is screened from the direct rays of the sun, without impeding the circulation of the air. The recording mechanism is similar in general plan to that described in connection with the magnetometers. The traces consist of broad bands, due to the free passage of light (above the mercury column of the dry-bulb thermometer, and through an air bubble in that of the wet-bulb thermometer) to the drum, crossed by fine lines caused by the shadows of the graduations of the thermometer tubes. The two traces fall on the same part of the cylinder as regards time scale. The stems of the thermometers are placed close together, each being covered by a vertical metal plate having a fine vertical slit, so that light passes through only at such parts of the bore of the tube as do not contain mercury. Further details of the thermometers and recording arrangements may be found in the volume for 1912. The scale value of the records is approximately 10° per inch.

RADIATION THERMOMETERS.—These thermometers are placed in 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 thermometers employed were Negretti and Zambra, No. K2254 until October 10, Casella No. 24331 until November 21, and Negretti and Zambra No. CG10221 during the remainder of the year. The thermometer for radiation to the sky is a spirit minimum thermometer, Negretti and Zambra, No. D11197. The thermometers are laid on short grass, freely exposed to the sky.

EARTH THERMOMETERS.—There are two thermometers now 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'S ANEMOMETER.**—This self-registering anemometer, devised by Mr. A. F. Osler, for continuous registration of the direction and pressure of the wind and of the amount of rain, is fixed above the north-western turret of the ancient part of the Observatory. The direction of the wind is registered by means of a large vane (9ft. 2in. in length), connected by gearing with a rack-work carrying a pencil; the latter marks on a flat horizontally moving sheet of paper. The vane is 25 feet above the roof of the Octagon Room, 60 feet above the adjacent ground, and 215 feet above the mean level of the sea. A fixed mark on the north-eastern turret, in a known azimuth, as determined by celestial observation, is used for examining at any time the position of the direction plate over the registering table, to which reference is made by means of a direction pointer when adjusting a new sheet on the travelling board.

A circular pressure plate with an area of 192 square inches is attached 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 heavy 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, ordinarily 15mm. to the hour, can be increased 24-fold by altering the gearing.

**ROBINSON'S 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 changed daily at noon.

## E 6 INTRODUCTION TO GREENWICH METEOROLOGICAL OBSERVATIONS, 1937.

The velocity recorded by the instrument is three times the actual velocity  $v$  of the cups. From tests made by Mr. W. H. Dines at Hershham in 1889, on his whirling machine, it would appear that the relation between the velocity of the wind  $V$  and the velocity of the cups  $v$  is approximately

$$V=4.0+2.0v$$

and that the instrument fails to record wind velocities less than 4 miles per hour. The values of the wind velocity given by the formula  $V=3v$  would thus be too high when  $V$  exceeds 12. Since the two formulæ agree, however, for  $V=12$ , the mean values of the wind velocity (which seldom differ much from 12) will be approximately correct in either case. Until 1931, for the sake of continuity and simplicity the formula  $V=3v$  was retained in use, although the greatest hourly measures according to the revised formula were given in a table at the end of the volumes. From 1932 January all measures have been calculated from the revised formula.

RAIN GAUGES.—During the year 1937 three rain gauges were employed, placed at different elevations above the ground.

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 was brought into use 1908 January 1, being fixed SW by W from No. 6 with a clear space of 6 feet between the rims. No. 6 is the standard gauge, and is read daily at 9h., 15h., and 21h. No. 8 is used as a check on the readings of No. 6 and is read at 9h. only as a rule. The gauges are also read at midnight on the last day of each calendar month.

The erection in the Christie Enclosure of a building to the north-west of gauges 6 and 8 to accommodate a large equatorial telescope made desirable the removal of these gauges to new positions. The removal was carried out on 1932 September 29, the new sites being approximately 42 feet east of the old ones.

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 E 46 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 on September 13, 1926, and was found to be in satisfactory condition. It now 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, and with this in view independent measures of nine selected sunshine cards taken from the months of January, July and September, 1937, have been made at the Meteorological Office. These showed good agreement with the Greenwich estimations.

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 driven hard from the north. The photographic plates used are ordinary quarter-plate ( $3\frac{1}{4}$  inches by  $4\frac{1}{4}$ ). Exposure is intended to be made during the period that the sun remains more than  $10^\circ$  below the horizon. The period thus centres approximately to 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 of  $\delta$  Ursæ 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.

#### *Meteorological Reductions.*

The results given in the Meteorological Section refer to the day commencing at 0h. U.T., except in the case of the Night-Sky Recorder, 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 photographic records, excepting that the maximum and minimum values of air temperature are those given by eye-observation of the ordinary maximum and minimum thermometers at 9h., 15h., and 21h., reference being made, however, to the photographic 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 photographic curves, and reduced so as to be based fundamentally, both as regards scale and zero, on the readings of the standard barometer, dry-bulb and wet-bulb thermometers.

The barometer results are not reduced to sea-level, neither are they corrected for the effect of gravity, by reduction to the latitude of  $45^{\circ}$ . The monthly mean barometer reading is, however, corrected for the effect of the change of site of April 1917 before deducing the deviation from the mean of sixty-five years 1841-1905 (pp. E 14-36). 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 (pages E 41 and E 42) have been calculated from the corresponding mean hourly values of air and evaporation temperatures (pages E 40 and E 41).

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 found by smoothing the accidental irregularities of the daily means reduced from the observations for the sixty-five years 1841-1905. In this series the mean daily temperature from 1841 to 1847 depends usually on 12 observations daily, in 1848 on 6 observations daily, and from 1849 to 1905 on 24 hourly readings from the photographic record. The smoothed numbers are given in Table VII, *Reduction of the Greenwich Meteorological Observations*, Part IV and also in the introduction for 1910.

The daily register of rain contained in column 16 is that recorded by the gauge No. 6, whose receiving surface is 5 inches above the ground. This gauge is read at 9h., 15h., and 21h. The continuous record of Osler's self-registering gauge shows whether the amounts measured at 9h. are to be placed to the same, or to the preceding day; and in cases in which rain fell both before and after midnight, also gives the means of ascertaining the proper proportion of the 9h. amount which should be placed to each day. The number of days of rain given in the footnotes, and in the abstract tables, pages E 39 and E 46, 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  $0^{\text{in}}.005$ .

## E 10 INTRODUCTION TO GREENWICH METEOROLOGICAL OBSERVATIONS, 1937.

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

With regard to the "Proportions of Wind referred to the cardinal points" in the monthly summary on pp. E 14—37, formerly the figures were such that the whole month was represented by the number of days in the month. In the 1933 volume a change was made, and the whole month is now represented by 100, so that the figures are the equivalent of "percentages."

The mean amount of cloud given in the footnotes on the right-hand pages E 15 to E 37, and in the abstract table, page E 39, is the mean found from observations made at 9h., 12h. (noon), 15h., and 21h. each day.

As regards the notation for clouds and weather, several changes were made in the 1934 volume in order to bring the symbols into general accordance with those in use at the British Meteorological Office.

The following are the symbols which have been adopted. Where a change from the symbol previously in use has been made, an asterisk (\*) is placed after the word or words for which the symbol stands.

### 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  
 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 *o* indicates "slight"

A letter repeated indicates "continuous"

CLOUD FORMS (\*)

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

ADDITIONAL SYMBOLS

*lu-ha*, lunar halo  
*prhn*, parhelion

*so-ha*, solar halo

1938, September 14.

H. SPENCER JONES,  
 ASTRONOMER ROYAL.



ROYAL OBSERVATORY, GREENWICH.

Results of  
Meteorological Observations  
1937

GREENWICH MAGNETIC AND METEOROLOGICAL RESULTS 1937.

MONTH and DAY, 1937.	BARO-METER. 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 Sunshine.	Sun above Horizon.
		Of the Air.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. De-duced Mean Daily Value.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
Jan. 1	29.850	50.5	40.0	10.5	47.1	+ 8.5	46.2	45.1	2.0	4.9	1.2	93	52.2	35.0	46.4	0.691	0.0	7.9
2	29.945	50.8	37.6	13.2	44.7	+ 6.3	42.6	39.8	4.9	7.2	2.7	83	58.9	30.2	46.5	0.001	0.1	7.9
3	30.113	53.0	47.9	5.1	50.5	+12.2	48.6	46.6	3.9	5.6	2.2	87	60.8	42.2	46.4	0.000	0.0	8.0
4	29.924	49.6	39.8	9.8	47.3	+ 9.0	45.6	43.6	3.7	4.9	2.6	87	49.9	36.1	46.5	0.041	0.0	8.0
5	29.899	44.5	34.3	10.2	40.1	+ 1.9	37.3	32.7	7.4	11.1	4.1	75	65.2	27.5	46.6	0.000	4.7	8.0
6	29.581	53.5	42.3	11.2	50.1	+12.0	47.9	45.5	4.6	6.2	2.1	84	59.2	37.5	46.8	0.205	0.0	8.0
7	29.842	50.0	39.9	10.1	45.1	+ 7.1	41.1	35.2	9.9	14.3	5.5	69	68.7	32.6	46.7	0.000	4.8	8.1
8	30.367	42.1	30.0	12.1	35.9	- 2.0	34.5	32.1	3.8	9.3	0.8	86	42.8	22.0	46.5	0.000	0.3	8.1
9	30.354	43.6	30.7	12.9	36.8	- 1.1	35.6	33.6	3.2	7.7	0.0	88	63.4	19.9	46.5	0.003*	2.2	8.1
10	30.192	42.9	29.5	13.4	35.9	- 2.0	33.5	29.1	6.8	15.5	2.8	76	69.5	19.1	46.2	0.005*	6.6	8.1
11	30.112	47.0	29.8	17.2	40.2	+ 2.3	39.3	38.0	2.2	5.3	0.7	92	76.7	20.6	46.0	0.013	0.6	8.2
12	29.973	48.2	32.7	15.5	41.9	+ 4.0	41.0	39.9	2.0	3.5	0.0	92	59.3	23.9	45.8	0.012	0.0	8.2
13	29.905	52.0	44.7	7.3	48.7	+10.7	47.2	45.5	3.2	6.3	1.2	89	57.7	40.2	45.6	0.117	0.0	8.2
14	29.969	44.7	36.0	8.7	41.3	+ 3.3	40.0	38.3	3.0	5.4	1.0	89	50.3	31.0	45.5	0.135	0.0	8.3
15	29.835	40.4	34.3	6.1	37.1	- 1.0	36.2	34.7	2.4	5.0	0.0	91	50.5	28.0	45.4	0.000	0.2	8.3
16	29.568	44.6	32.2	12.4	39.8	+ 1.5	38.0	35.4	4.4	11.2	1.8	84	62.9	22.8	45.5	0.086	2.4	8.4
17	29.500	47.0	31.2	15.8	40.1	+ 1.6	38.8	37.0	3.1	8.6	0.6	88	62.0	22.0	45.4	0.109	2.3	8.4
18	29.034	49.4	39.6	9.8	44.3	+ 5.7	43.1	41.7	2.6	7.3	1.8	90	67.0	33.2	45.3	0.297	0.1	8.5
19	29.257	42.7	33.1	9.6	38.5	- 0.2	37.0	34.8	3.7	7.6	1.7	86	59.0	26.6	45.2	0.030	3.6	8.5
20	29.523	46.0	30.2	15.8	38.4	- 0.4	37.0	34.9	3.5	11.8	1.2	87	63.7	22.0	45.2	0.040	4.8	8.6
21	29.369	51.1	42.3	8.8	47.1	+ 8.3	45.4	43.4	3.7	6.1	2.7	87	64.7	35.8	45.1	0.230	1.7	8.6
22	29.544	51.7	45.1	6.6	49.6	+10.8	48.1	46.4	3.2	6.3	1.8	89	58.3	37.0	45.1	0.221	0.0	8.6
23	29.632	52.1	43.9	8.2	47.5	+ 8.6	46.0	44.3	3.2	9.3	0.4	88	57.2	35.0	45.1	0.415	0.0	8.7
24	29.182	52.6	44.0	8.6	49.1	+10.2	47.3	45.3	3.8	7.8	1.6	87	56.9	39.0	45.3	0.395	0.0	8.7
25	29.180	49.6	40.8	8.8	45.4	+ 6.3	44.3	43.0	2.4	6.2	1.4	91	60.8	36.3	45.3	0.000	0.0	8.8
26	29.365	40.8	33.5	7.3	35.7	- 3.6	35.1	34.1	1.6	3.3	0.6	94	36.2	31.0	45.3	0.062	0.0	8.8
27	29.156	44.2	33.5	10.7	37.8	- 1.7	36.3	34.0	3.8	6.3	1.1	86	67.5	31.0	45.4	0.000	0.3	8.9
28	28.944	37.8	30.8	7.0	34.0	- 5.6	33.2	31.8	2.2	5.1	1.0	92	34.7	30.4	45.2	0.029	0.0	9.0
29	29.076	30.8	28.3	2.5	29.7	-10.0	28.8	26.7	3.0	4.0	0.3	88	35.4	28.0	45.1	0.059	0.0	9.0
30	29.105	44.7	29.3	15.4	35.6	- 4.1	34.5	32.6	3.0	5.1	0.5	89	43.5	28.6	45.0	0.161	0.0	9.0
31	29.187	49.0	40.3	8.7	44.8	+ 5.1	43.5	41.9	2.9	5.3	0.2	89	59.0	32.2	45.1	0.213	1.8	9.1
Means	29.628	46.7	36.4	10.3	41.9	+ 3.3	40.4	38.3	3.6	7.2	1.5	87.0	57.2	30.2	45.7	Sum 3.570	1.2	8.4
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day, 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 photographic 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 photographic 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 January 9 and 10 are derived from hoar frost.

The mean reading of the Barometer for the month was 29.628 in., being 0.173 in. lower than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 53.5 on January 6; the lowest in the month was 28.3 on January 29; and the range was 25.2. The mean of all the highest daily readings in the month was 46.7, 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 36.4, being 2.7 higher than the average for the 65 years, 1841-1905. The mean of the daily ranges was 10.3, being 0.9 greater than the average for the 65 years, 1841-1905. The mean for the month was 41.9, being 3.3 higher than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.					CLOUDS AND WEATHER.			
	POLARIS		8 URSAE MINORIS.		OSLER'S.			Robinson's					
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.		Pressure on the Square Foot.						
					A.M.	P.M.	Greatest.	Mean of 24 Hourly Measures.					
Jan. 1	8-7	0-62	8-3	0-59	SW : SSW	SW : WSW	5-4	0-52	404	c d, rr	rr c Nbst	rr Nbst	rr, b
2	2-10	0-16	0-8	0-06	WSW	WSW	7-7	0-64	435	b	c Frst Acu	c Nbst Stcu i d.	c r, d.
3	0-0	0-00	0-0	0-00	W : WSW	W : WSW	2-9	0-25	366	c	c Ast Acu m.	c m.	o
4	6-8	0-50	6-5	0-47	WSW : SW	SW : NW : W	4-7	0-57	362	o	c Nbst i d.	c Nbst i d.	c d, r d
5	3-10	0-22	1-1	0-08	W : WSW	W : WSW	2-0	0-36	372	c b x m	b m b Frcu	b c Ast	c b c
6	6-10	0-45	5-6	0-41	SW : W	W	6-6	2-21	559	c r r.	r r, c Nbst	c Nbst	c d, r.
7	12-00	0-87	11-9	0-86	WNW : W	WNW	6-3	1-82	497	c b	b Frcu	b y c Frcu b	b
8	13-7	1-00	13-7	1-00	W : Calm	Calm : SW	0-1	0-02	202	b x	b x f	b Acu f m	b m x
9	9-4	0-70	7-5	0-56	Calm : S	S : SSE	1-0	0-07	239	b x	bc Ci	c Ast b	b c
10	10-00	0-74	9-2	0-68	S	S : Calm	0-2	0-03	201	c b x	b x m	b y	b f
11	7-5	0-55	7-2	0-53	Calm	Calm	0-1	0-00	160	b c r	c o St m	c b c Stca	c b
12	0-10	0-01	0-1	0-01	Calm : SSW	S : SSW	1-7	0-17	298	b x c	c Stcu	c Frst Stcu d.	c d.
13	0-10	0-01	0-0	0-00	SSW : SW	WSW : Calm : NE	2-6	0-13	267	d, d, rr	rr d, m	c St m	c d, c
14	2-7	0-20	0-9	0-07	NE : NNE	NNE	0-5	0-04	231	c r, rr	r d, m	c Nbst d, m.	c b c
15	2-5	0-18	0-6	0-04	NE : Calm	Calm : SSE	0-1	0-00	161	c	c b Acu Ci f	b f c Cist so-ha	c b c
16	12-8	0-97	11-6	0-88	S : W	W : SSW	2-7	0-23	332	c d,	r r, c Stcu	c Stcu b m	b m x
17	0-6	0-05	0-3	0-02	SSE : S	S	3-6	0-34	337	b x c	c Frcu Ci	c Ast Frst d.	r r, c r r
18	10-7	0-81	10-7	0-81	SW : S	SW : WNW : WSW	12-1	0-93	432	rr c	c Nbst r R r	r b c r c Nbst	c b
19	9-0	0-68	8-1	0-61	WSW	Calm : WSW	1-6	0-05	266	b x	b c Stcu f b Ci m	b c Ci m	c r c b m
20	0-5	0-04	0-4	0-03	WSW : SW	S : SSW	5-2	0-33	335	b x	b f b Acu	bc Cist so-ha pr hnc r	c d
21	1-2	0-09	1-0	0-08	SSW : SW	SSW : S	5-0	0-83	422	rr d.	r b Frcu c Stcu	c p c Stcu	b c d.
22	2-2	0-16	1-0	0-08	SSW	SSW : SW	5-7	0-95	438	d, r r.	r, d r	rr c Nbst	c
23	5-3	0-42	5-0	0-39	Calm : E : SE	SSE : S	2-5	0-18	268	c d r	R r r f m.	r r, c	r c b
24	1-7	0-13	0-5	0-04	S : SSE	SSE : S	4-9	0-46	325	b c d	d r c r.	rr Nbst	rr c
25	0-0	0-00	0-0	0-00	S : SSW	Calm : E	0-6	0-02	204	c	c Stcu	c Stcu	c d.
26	0-0	0-00	0-0	0-00	E : NE : Calm	Calm : E	0-2	0-00	199	d, r d d.	d, rs d c m	c d, m	c m.
27	0-0	0-00	0-0	0-00	E	E : ENE	8-5	0-74	387	c m	c m c Cist so-ha	c Stcu	c
28	0-0	0-00	0-0	0-00	ENE	NE	15-7	2-23	559	c r s r c	c o	s, o	o s.
29	0-0	0-00	0-0	0-00	NE	NE : E	5-4	0-48	366	o	o s s.	s s.	s, s, o
30	9-0	0-72	8-7	0-70	E : NE	ESE : SSW	1-7	0-05	242	o s, o	o f	o f r r	r r, b lu-ha w
31	2-8	0-23	1-8	0-15	SSW	Calm : SE : S	1-5	0-06	246	b c b	b Frst c Nbst	c Nbst	R r c
Means	4-5	0-34	4-0	0-30	..	..	..	0-47	326				
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28	29	30	31

The mean Temperature of Evaporation for the month was 40°.4, being 3°.2 higher than the average for the 65 years, 1841-1905.  
 The mean Temperature of the Dew Point for the month was 33°.3, being 3°.2 higher than the average for the 65 years, 1841-1905.  
 The mean Degree of Humidity for the month was 87.0, being 0.2 greater than the average for the 65 years, 1841-1905.  
 The mean Elastic Force of Vapour for the month was 0.232in., being 0.027in. greater than the average for the 65 years, 1841-1905.

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

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.140. The maximum daily amount of Sunshine was 6.6 hours on January 10.

The highest reading of the Solar Radiation Thermometer was 76°.7 on January 11; and the lowest reading of the Terrestrial Radiation Thermometer was 19°.1 on January 10.

The Proportions of Wind referred to the cardinal points were N. 7, E. 14, S. 38, W. 28, calm or nearly calm conditions, 13, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 15.7 lbs. on the square foot on January 28. The mean daily Horizontal Movement of the Air for the month was 326 miles; the greatest daily value was 559 miles on January 6 and 28, and the least daily value was 160 miles on January 11.

Rain (0.005in. or over) fell on 21 days in the month, amounting to 3.570ins., as measured by gauge No. 6 partly sunk below the ground; being 1.689in. greater than the average fall for the 65 years, 1841-1905.

MONTH and DAY, 1937.	BARO-METER. 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 Sunshine.	Sun above Horizon.
		Of the Air.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. Deducted Mean Daily Value.	Of Radiation.									
		Highest.	Lowest.	Daily Range.	Mean of 24 Hourly Values.	Excess above Average of 65 Years.			Highest in Sun's Rays.	Lowest on the Grass.	Of the Earth 4 ft. below the Surface of the Soil.							
Feb. 1	29.246	52.8	44.0	8.8	46.9	+ 7.3	44.7	42.1	4.8	12.6	1.7	83	89.0	37.1	44.9	0.000	5.2	9.1
2	29.537	51.4	39.2	12.2	46.6	+ 7.1	45.4	43.9	2.7	6.4	0.6	91	64.7	28.5	44.8	0.093	0.1	9.2
3	29.464	54.6	49.0	5.6	51.1	+ 11.6	48.7	46.1	5.0	13.3	1.6	83	73.0	43.6	44.9	0.064	0.0	9.3
4	29.336	53.6	47.2	6.4	49.5	+ 10.0	47.8	45.9	3.6	8.8	1.7	87	75.7	42.9	45.0	0.145	0.9	9.3
5	29.037	49.0	41.3	7.7	46.0	+ 6.4	44.2	42.0	4.0	8.3	0.2	86	50.2	34.7	45.1	0.536	0.0	9.4
6	29.596	48.3	35.2	13.1	40.9	+ 1.3	37.4	31.8	9.1	14.2	3.9	69	81.1	28.2	45.2	0.000	6.4	9.4
7	29.343	44.2	34.9	9.3	39.5	+ 0.0	38.7	37.5	2.0	4.6	0.0	93	43.9	27.7	45.2	0.652	0.0	9.5
8	28.964	53.2	41.3	11.9	47.4	+ 8.1	46.0	44.4	3.0	10.1	0.0	89	87.4	36.8	45.3	0.042	1.4	9.5
9	29.411	44.3	36.3	8.0	40.0	+ 0.9	36.5	30.7	9.3	17.4	3.1	69	63.1	29.3	45.1	0.052	4.2	9.6
10	29.511	45.2	35.3	9.9	40.5	+ 1.6	37.1	31.6	8.9	15.4	2.5	70	68.5	28.0	45.1	0.000	3.7	9.7
11	29.558	42.8	35.9	6.9	39.5	+ 0.7	36.5	31.3	8.2	13.0	3.3	73	57.8	27.9	45.0	0.000	0.8	9.7
12	29.704	42.3	29.3	13.0	36.5	- 2.3	34.3	30.3	6.2	13.2	1.1	78	49.2	22.4	44.8	0.209	0.9	9.8
13	29.595	44.0	35.8	8.2	40.1	+ 1.1	39.2	37.9	2.2	4.2	0.2	92	51.1	30.2	44.6	0.066	0.0	9.9
14	29.862	54.9	39.7	15.2	47.9	+ 8.6	47.0	46.0	1.9	3.9	0.2	93	75.0	37.8	44.6	0.025	0.0	9.9
15	29.911	57.4	48.0	9.4	51.4	+ 12.0	49.9	48.4	3.0	6.7	0.4	89	94.2	40.2	44.5	0.071	1.2	10.0
16	29.547	51.9	35.5	16.4	45.4	+ 5.9	43.6	41.3	4.1	13.0	1.4	86	71.3	29.3	44.6	0.190	1.5	10.1
17	29.529	48.0	35.7	12.3	41.7	+ 2.1	38.6	33.7	8.0	10.0	3.4	73	62.2	29.5	44.8	0.005	0.2	10.1
18	29.798	49.1	34.0	15.1	42.4	+ 2.9	40.9	38.8	3.6	7.8	1.0	87	59.1	24.9	44.8	0.038	0.0	10.2
19	29.519	53.8	44.8	9.0	48.6	+ 9.1	46.1	43.3	5.3	13.0	0.8	81	56.2	36.0	44.9	0.088	0.0	10.2
20	29.605	47.8	38.9	8.9	43.1	+ 3.6	38.6	31.2	11.9	16.1	5.3	63	78.3	31.3	44.9	0.013	3.8	10.3
21	29.607	46.2	37.2	9.0	42.3	+ 2.7	39.6	35.5	6.8	13.9	2.0	77	69.0	29.7	44.9	0.001	3.6	10.4
22	29.255	43.7	35.2	8.5	40.6	+ 0.9	38.7	36.0	4.6	13.7	0.4	83	70.6	28.9	44.8	0.639	1.1	10.4
23	29.504	44.8	31.6	13.2	37.5	- 2.3	34.6	29.4	8.1	14.2	2.2	73	86.0	25.3	44.7	0.000	4.4	10.5
24	29.389	45.0	32.6	12.4	39.0	- 1.0	37.3	34.8	4.2	7.8	0.2	85	62.9	26.3	44.6	0.356	0.0	10.6
25	29.301	52.5	39.5	13.0	44.1	+ 4.0	43.1	41.9	2.2	7.8	0.0	92	74.6	33.5	44.5	0.321	0.1	10.6
26	29.194	51.8	38.9	12.9	43.9	+ 3.7	42.1	39.8	4.1	9.4	1.2	86	79.2	32.3	44.3	0.144	0.3	10.7
27	28.871	49.8	32.3	17.5	42.3	+ 2.0	39.7	35.8	6.5	10.4	4.1	78	97.4	28.4	44.3	0.130	2.0	10.8
28	28.791	37.0	30.5	6.5	34.0	- 6.3	32.3	29.1	4.9	10.3	0.3	82	48.9	26.2	44.2	0.061	0.0	10.8
Means	29.428	48.5	37.8	10.7	43.2	+ 3.6	41.0	37.9	5.3	10.7	1.5	81.8	69.3	31.3	44.8	Sum 3.941	1.5	10.0
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day, 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 photographic 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 photographic 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 29.428 in., being 0.38 in. lower than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 57.4 on February 15; the lowest in the month was 29.3 on February 12; and the range was 28.1. The mean of all the highest daily readings in the month was 48.5, being 3.3 higher than the average for the 65 years, 1841-1905. The mean of all the lowest daily readings in the month was 37.8, being 3.6 higher than the average for the 65 years, 1841-1905. The mean of the daily ranges was 10.7, being 0.3 less than the average for the 65 years, 1841-1905. The mean for the month was 43.2, being 3.6 higher than the average for the 65 years, 1841-1905.

MONTH and DAY 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.							CLOUDS AND WEATHER.			
	POLARIS		δ URSÆ MINORIS.		OSLER'S.						ROBINSON'S.				
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.				Pressure on the Square Foot.		Horizontal Movement 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.	lbs.	lbs.					
Feb. 1	12.4	0.99	12.4	0.99	SSW : SW	SW	2.7	0.29	360	c	c bc <i>Acu Frcu</i>	bc <i>Stcu</i> b	b		
2	0.0	0.00	0.0	0.00	SW : SSW	SSW	3.5	0.46	368	b c	c r c <i>Cist so-ha</i>	c <i>Nbst</i> r <sub>o</sub> r <sub>o</sub>	r <sub>o</sub> c		
3	1.3	0.10	0.3	0.02	SSW : SW	SSW	3.7	0.72	418	d <sub>o</sub> c d r	c d c <i>Cist</i>	c p c <i>Cist so-ha</i>	c		
4	0.0	0.00	0.0	0.00	SSW : SW	SW : SSW	4.9	0.85	423	c r r <sub>o</sub>	c <i>Nbst</i> r c <i>Frcu</i>	c <i>Ci</i> <i>Cist</i> r <sub>o</sub>	c r <sub>o</sub>		
5	9.4	0.75	6.7	0.53	S : WSW : N	N : NNW	4.7	0.24	286	rr c m	rr f m	d <sub>o</sub> m <sub>o</sub> c <i>Stcu</i>	c		
6	8.6	0.72	6.7	0.56	NW : WSW	W : SW	3.1	0.19	324	c b x	b m b <i>Frcu</i> y	b bc <i>Frcu</i> y	b c		
7	1.1	0.09	0.9	0.08	S : SE	ESE : Calm	1.3	0.09	246	c	c r <sub>o</sub> d <sub>o</sub> r	rr m	rr f c		
8	5.1	0.43	4.6	0.38	SSW	SW : WNW	4.4	0.27	312	c i r	i r c d c	c <i>Nbst</i>	c d <sub>o</sub>		
9	11.5	0.96	11.1	0.92	W : WSW	WNW : WSW	6.0	0.84	462	c b	b c h r b	c b <i>Frcu</i> y	b c b		
10	6.6	0.55	5.6	0.46	WSW : W	WNW : WSW	2.9	0.24	366	b x	b c <i>Frcu</i> <i>Ci</i> y	c <i>Ci</i> <i>so-ha</i> y	c b		
11	10.7	0.89	9.7	0.81	WSW : NW	NW : WNW	2.7	0.27	358	b	b c <i>Frcu</i> m	c <i>Stcu</i> m <sub>o</sub>	c b m <sub>o</sub>		
12	0.0	0.00	0.0	0.00	W : Calm	Calm : S	0.5	0.02	219	b x	b x f m	b c <i>Acu</i> m	c r r		
13	0.6	0.05	0.0	0.00	Calm : NNW	NNW : Calm : SSE	0.4	0.02	187	i r	c m	c m <sub>o</sub>	c d <sub>o</sub> d m <sub>o</sub>		
14	1.0	0.09	0.7	0.06	Calm : S	WSW	0.1	0.01	212	dd c m <sub>o</sub>	c <i>Acu</i> m	c m	c r m		
15	0.1	0.01	0.0	0.00	WSW	SW	1.0	0.05	255	c r c	c <i>Acu</i> m m <sub>o</sub>	c <i>Stcu</i> m <sub>o</sub> c	c d r		
16	8.6	0.73	7.5	0.63	SW	WSW : W	13.0	0.42	384	d r d c	c <i>so-ha</i> p r	c q R c b	b		
17	9.1	0.77	8.1	0.69	WSW : WNW	NW : NNW	7.3	0.64	420	b c d	c <i>Nbst</i>	r <sub>o</sub> c <i>Nbst</i>	c b <i>lu-ha</i>		
18	1.3	0.11	0.8	0.07	SW	SSW : WSW	2.3	0.13	310	b x	c <i>so-ha</i> r <sub>o</sub> m	dd m <sub>o</sub> p c	c		
19	9.7	0.83	9.1	0.78	WSW : SW	WSW : WNW	6.0	0.71	429	c	c <i>Nbst</i> r r <sub>o</sub>	r <sub>o</sub> d c	c b		
20	6.7	0.59	5.7	0.50	W	WNW : W	7.0	1.05	485	b	b c <i>Stcu</i> y	c r c	c r b c		
21	0.0	0.00	0.0	0.00	W	W : WSW	4.5	0.56	405	c b	b c <i>Acu</i> y	c r <sub>o</sub>	c r <sub>o</sub> c		
22	10.5	0.94	10.5	0.94	Calm : NE : N	NW : WNW	4.9	0.28	314	c r r	rr r <sub>o</sub> c	c p c <i>Stcu</i>	b		
23	4.3	0.39	3.7	0.33	W : WSW : NW	NW : SW	2.2	0.18	320	b x	b x m c <i>Stcu</i>	c b <i>Frcu</i> y c	c f <i>lu-ha</i>		
24	0.0	0.00	0.0	0.00	SE	SE : ESE	1.5	0.09	241	c	c r <sub>o</sub> c	c r r	rr		
25	9.7	0.86	9.4	0.84	Calm : SE	S : WSW	5.7	0.20	284	c r	rr r <sub>o</sub> c	c <i>Nbst</i> r c	c b		
26	10.3	0.91	10.1	0.90	SW : SSW	SSW : SW	12.3	0.79	418	b c	c r r <sub>o</sub>	rr r <sub>o</sub> c	b		
27	5.1	0.47	4.3	0.40	SW : SSW	SW : WSW	11.5	0.93	461	b c	c r bc <i>Frcu</i>	c i r h c	c b		
28	0.3	0.03	0.0	0.00	SW	NNW	13.7	1.64	488	b c	c ss f	f c s <sub>o</sub>	c		
Means	5.1	0.44	4.6	0.39	..	..	..	0.43	348						
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28	29	30	31		

The mean Temperature of Evaporation for the month was 41°·0, being 3°·3 higher than the average for the 65 years, 1841-1905.

The mean Temperature of the Dew Point for the month was 37°·9, being 2°·9 higher than the average for the 65 years, 1841-1905.

The mean Degree of Humidity for the month was 81·8, being 1·8 less than the average for the 65 years, 1841-1905.

The mean Elastic Force of Vapour for the month was 0·228in., being 0·024in. greater than the average for the 65 years, 1841-1905.

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7·6.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0·150. The maximum daily amount of Sunshine was 6·4 hours on February 6.

The highest reading of the Solar Radiation Thermometer was 97°·4 on February 27; and the lowest reading of the Terrestrial Radiation Thermometer was 22°·4 on February 12.

The Proportions of Wind referred to the cardinal points were N. 10, E. 5, S. 32, W. 47, calm or nearly calm conditions, 6, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 13·7 lbs. on the square foot on February 28. The mean daily Horizontal Movement of the Air for the month was 348 miles; the greatest daily value was 488 miles on February 28, and the least daily value was 187 miles on February 13.

Rain (0·005in. or over) fell on 22 days in the month, amounting to 3·94in., as measured by gauge No. 6 partly sunk below the ground; being 2·46in. greater than the average fall for the 65 years, 1841-1905.



MONTH and DAY 1937.	BARO-METER. Mean of 24 Hourly Values (corrected to 32° and reduced to 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.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. Deducted Mean Daily Value.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
Mar. 1	29.238	40.0	31.9	8.1	35.9	- 4.5	33.9	30.2	5.7	13.8	1.6	80	74.1	28.7	44.1	0.000	1.2	10.9
2	29.312	44.0	34.4	9.6	38.5	- 1.9	36.3	32.7	5.8	14.8	2.4	79	70.3	28.2	44.1	0.031	1.5	11.0
3	29.406	50.1	33.7	16.4	39.6	- 0.9	37.1	33.1	6.5	17.4	3.6	77	104.1	24.7	44.0	0.000	1.5	11.0
4	29.300	44.7	33.2	11.5	37.9	- 2.8	35.4	31.0	6.9	13.0	2.7	76	73.6	24.5	43.9	0.000	0.3	11.1
5	29.370	39.2	33.6	5.6	36.0	- 4.9	34.6	32.2	3.8	8.5	0.6	86	49.0	27.9	43.8	0.250	0.0	11.1
6	29.601	40.6	33.0	7.6	35.5	- 5.5	34.4	32.5	3.0	6.2	0.5	89	57.2	28.3	43.7	0.066	0.0	11.2
7	29.435	36.8	32.6	4.2	34.6	- 6.4	33.8	32.4	2.2	4.7	0.2	92	52.1	30.0	43.5	0.717	0.0	11.3
8	29.498	35.7	33.2	2.5	34.0	- 7.1	32.1	28.4	5.6	8.0	3.1	80	42.6	30.2	43.2	0.003	0.0	11.4
9	29.387	38.4	30.3	8.1	34.3	- 6.7	31.7	26.9	7.4	17.3	0.9	74	62.0	23.4	43.6	0.000	0.9	11.4
10	29.383	42.8	23.7	19.1	33.9	- 7.0	31.8	27.5	6.4	18.6	0.8	78	88.1	14.9	43.0	0.004	3.6	11.5
11	28.974	52.1	34.5	17.6	42.6	+ 1.6	41.4	39.8	2.8	7.3	0.7	90	79.6	30.0	43.0	0.511	0.3	11.5
12	28.901	51.7	37.7	14.0	42.5	+ 1.4	40.5	37.6	4.9	11.0	2.9	83	103.3	29.2	42.9	0.087	4.4	11.6
13	28.944	48.2	35.8	12.4	41.9	+ 0.6	38.6	33.5	8.4	18.2	3.4	72	89.6	26.3	42.9	0.000	4.8	11.7
14	28.845	42.8	35.0	7.8	38.3	- 3.2	37.1	35.3	3.0	4.9	0.2	89	52.6	26.6	42.8	0.491	0.0	11.7
15	29.610	45.3	29.2	16.1	38.6	- 3.1	34.5	26.7	11.9	21.7	5.2	62	99.0	20.9	42.9	0.002	7.5	11.8
16	29.717	48.1	27.6	20.5	39.6	- 2.3	37.4	34.0	5.6	10.2	2.1	80	67.4	19.8	42.9	0.184	0.1	11.9
17	29.395	57.0	44.3	12.7	48.6	+ 6.6	46.2	43.5	5.1	15.6	2.0	82	107.8	35.3	42.9	0.178	2.3	11.9
18	29.386	57.0	40.7	16.3	49.0	+ 7.0	45.5	41.2	7.8	15.1	3.3	74	117.2	30.7	43.0	0.018	5.1	12.0
19	29.439	57.5	40.3	17.2	46.0	+ 4.1	44.0	41.5	4.5	12.1	0.9	84	116.5	30.0	43.2	0.029	3.2	12.1
20	29.419	60.7	36.3	24.4	46.5	+ 4.6	43.2	39.0	7.5	20.0	0.2	75	122.4	26.1	43.3	0.000	8.0	12.1
21	29.446	46.1	39.3	6.8	42.2	+ 0.3	40.4	37.9	4.3	6.2	1.0	84	73.8	34.6	43.4	0.071	0.0	12.2
22	29.427	42.2	31.6	10.6	37.3	- 4.7	34.2	28.5	8.8	19.6	2.5	71	79.0	23.0	43.5	0.027	2.1	12.3
23	29.541	43.4	30.8	12.6	36.0	- 6.2	33.4	28.6	7.4	18.5	2.5	74	102.1	23.1	43.7	0.000	5.4	12.3
24	29.792	49.7	30.2	19.5	40.9	- 1.5	37.0	30.5	10.4	19.6	3.3	67	92.7	20.8	43.8	0.008	4.9	12.4
25	29.691	50.7	36.4	14.3	43.3	+ 0.6	39.0	32.1	11.2	21.7	2.3	65	117.3	29.3	43.7	0.115	5.4	12.5
26	29.587	46.2	31.9	14.3	37.2	- 5.8	34.0	28.1	9.1	24.1	1.9	69	95.3	26.5	43.7	0.095	7.8	12.5
27	29.711	47.0	30.9	16.1	37.6	- 5.7	34.8	29.8	7.8	17.2	1.3	74	85.2	24.8	43.7	0.017	5.3	12.6
28	29.900	47.8	28.8	19.0	37.8	- 5.9	34.8	29.5	8.3	18.0	0.8	72	103.6	22.3	43.7	0.000	4.4	12.7
29	30.095	47.4	31.4	16.0	38.6	- 5.5	35.6	30.3	8.3	17.0	0.2	72	98.7	22.5	43.7	0.000	2.9	12.7
30	30.163	46.1	31.4	14.7	38.9	- 5.6	35.3	28.9	10.0	13.9	1.6	67	87.2	20.3	43.6	0.000	0.0	12.8
31	29.935	53.9	32.2	21.7	42.3	- 2.6	38.9	33.7	8.6	19.0	3.0	71	113.2	19.2	43.6	0.000	8.8	12.8
Means	29.479	46.9	33.4	13.5	39.5	- 2.4	37.0	32.8	6.7	14.6	1.9	77.0	86.3	25.9	43.4	Sum 2.904	3.0	11.9
Number of Column for Reference.	I	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 photographic 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 photographic 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 29.479in., being 0.274in. lower than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 60.7 on March 20; the lowest in the month was 23.7 on March 10; and the range was 37.0.  
 The mean of all the highest daily readings in the month was 46.9, being 2.9 lower than the average for the 65 years, 1841-1905.  
 The mean of all the lowest daily readings in the month was 33.4, being 1.7 lower than the average for the 65 years, 1841-1905.  
 The mean of the daily ranges was 13.5, being 1.2 less than the average for the 65 years, 1841-1905.  
 The mean for the month was 39.5, being 2.4 lower than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.							CLOUDS AND WEATHER.			
	POLARIS		3 URSA MINORIS.		OSLER'S.					ROBINSON'S.					
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.		Pressure on the Square Foot.			Horizontal Movement 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.	Miles.						
Mar. 1	1.30	0.12	0.50	0.05	NW : NNW	NW : W : WSW	4.10	0.25	350	c	c s, c	c <i>Stcu Frst</i>	c		
2	0.00	0.00	0.00	0.00	WSW	WSW : SSW	0.60	0.03	254	c d	c b m c <i>Acu</i>	c d, d	r, r, c		
3	9.60	0.89	8.50	0.79	SSW : S	S : ESE	0.70	0.03	221	c	c <i>Acu</i>	c p, c b	b x c		
4	8.10	0.75	7.60	0.71	E	ENE : NE	..	..	342	c	c <i>Ast</i>	c <i>Ast</i>	c b		
5	0.00	0.00	0.00	0.00	NE	NE : NNW	..	..	280	b c	c m c <i>Nbst</i>	c rr	rr		
6	0.00	0.00	0.00	0.00	N	SSE : E	..	..	184	rs c	c m	c m bc <i>Stcu</i>	c r		
7	0.40	0.04	0.20	0.02	E : NE	NE	2.50	0.20	348	rr ss	ss s,	s, c <i>Stcu</i>	c		
8	0.00	0.00	0.00	0.00	NE	NE	1.80	0.24	351	c	c <i>Nbst s,</i>	c s, c	c		
9	7.30	0.71	5.30	0.52	NE	NE	1.20	0.11	293	c s,	c <i>Stcu</i>	c <i>Acu y</i>	c x		
10	1.30	0.12	0.50	0.05	Calm	SE : ESE	0.40	0.01	177	b x	b c <i>Acu Ci</i>	c r, s, c	c b c		
11	7.20	0.70	7.00	0.69	E : SE : S	S : SSW	1.20	0.11	266	c rr	rr c ir	c rr	rr c b		
12	5.30	0.51	4.80	0.47	SSW	SSW	4.10	0.40	369	b	b c <i>Stcu</i>	c r, r b	b c p,		
13	3.60	0.37	2.20	0.22	SW	WSW : SW	3.00	0.26	327	c p, c	b c <i>Ci Frcu y</i>	c y b	b x c		
14	1.20	0.12	0.90	0.09	E	N : NW	4.90	0.50	349	c rr	h rr d f	f r r,	d, c		
15	9.60	0.98	7.80	0.80	WNW	WNW : Calm	4.30	0.56	389	c	c s, bc <i>Frcu y</i>	bc <i>Frcu y b</i>	b x f		
16	3.30	0.34	2.80	0.29	S : SE	SSE : SSW	3.90	0.32	311	b x	b c d, c	c r, rr	rr c		
17	6.90	0.71	6.20	0.64	SSW	SSW	5.00	0.31	317	c ir	c i r c	c r c <i>Stcu</i>	c i r		
18	9.40	0.96	9.40	0.96	SSW	SSW : S	3.80	0.45	351	c p c	c d,	c <i>Frcu Cu b</i>	b w		
19	9.50	0.97	9.50	0.97	SSW	SSW : S	2.10	0.13	252	b w	b c	i r c bc	bc b w		
20	1.10	0.12	0.30	0.04	Calm	SSW : Calm	0.20	0.04	131	b	b bc <i>Frcu y</i>	bc c <i>Frcu y</i>	c		
21	0.00	0.00	0.00	0.00	ENE : NE	N : NNE	0.80	0.07	232	c d d,	r c	c <i>Stcu</i>	c		
22	5.00	0.54	3.70	0.41	NNE	NNE : NNW	3.20	0.18	288	c r, c	c s s, r,	c <i>Cist so-ha b y</i>	b		
23	1.60	0.17	1.60	0.17	Calm : NE	NNE	2.60	0.17	248	c s,	s, c <i>Frcu y</i>	c b c <i>Frcu y</i>	c d, r, s,		
24	1.60	0.17	1.60	0.17	N : Calm : WSW	W : WSW	1.70	0.13	290	c b	b f m,	b <i>Ci c y</i>	c r, s,		
25	0.00	0.00	0.00	0.00	WNW : NW	NW : Calm	2.00	0.14	287	c	c <i>Frcu y</i>	c y	c rr		
26	8.00	0.87	7.40	0.80	N : NW	NW : W	6.00	0.33	336	c r s c	c b bc <i>Frcu y</i>	bc y c i s	i s b		
27	9.00	1.00	9.00	1.00	W : NNW	NNW : NNE	2.90	0.07	271	b c s, b	b c <i>Stcu y</i>	c y r, s,	c b x		
28	7.10	0.79	6.40	0.71	Calm : NE	NNE	0.50	0.02	197	b x	b c m, c y	c bc <i>Cu y</i>	b x c		
29	6.40	0.71	5.80	0.64	Calm : NNE	ENE : E	0.50	0.03	208	c	c b m c y	c <i>Stcu y</i>	c		
30	0.20	0.02	0.10	0.01	Calm : NE	ESE	0.60	0.04	215	b x c	c <i>Stcu</i>	c <i>Stcu</i>	c		
31	7.80	0.87	7.80	0.87	Calm : ESE	ESE	0.80	0.06	205	c	c b c <i>Cist so-ha</i>	c <i>Cist so-ha b</i>	b x		
Means	4.30	0.44	3.80	0.39	..	..	..	0.19	279						
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28	29	30	31		

The mean Temperature of Evaporation for the month was 37°.0, being 2°.4 lower than  
 The mean Temperature of the Dew Point for the month was 32°.8, being 2°.8 lower than  
 The mean Degree of Humidity for the month was 77.0, being 1.1 less than  
 The mean Elastic Force of Vapour for the month was 0.186in., being 0.023in. less than

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

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7.3.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.249. The maximum daily amount of Sunshine was 8.8 hours on March 31.

The highest reading of the Solar Radiation Thermometer was 122°.4 on March 20; and the lowest reading of the Terrestrial Radiation Thermometer was 14°.9 on March 10.

The Proportions of Wind referred to the cardinal points were N. 24, E. 23, S. 21, W. 18, calm or nearly calm conditions, 14, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 6.0 lbs. on the square foot on March 26. The mean daily Horizontal Movement of the Air for the month was 279 miles; the greatest daily value was 389 miles on March 15, and the least daily value was 131 miles on March 20.

Rain (0.005in. or over) fell on 17 days in the month, amounting to 2.904in., as measured by gauge No. 6 partly sunk below the ground; being 1.384in. greater than the average fall for the 65 years, 1841-1905.

MONTH and DAY 1937.	BARO-METER. 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 Sunshine.	Sun above Horizon.
		Of the Air.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. Deducted Mean Daily Value.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
April 1	29.647	53.0	31.3	21.7	40.2	- 5.1	38.5	36.1	4.1	13.6	0.0	85	100.8	19.0	43.6	0.001*	2.2	12.9
2	29.239	52.9	38.5	14.4	45.4	- 0.3	44.3	43.0	2.4	5.7	0.0	91	74.4	31.8	43.6	0.583	0.0	13.0
3	29.339	64.8	42.0	22.8	50.4	+ 4.4	47.2	43.5	6.9	18.3	0.7	77	131.0	29.3	43.8	0.000	7.7	13.0
4	29.570	57.8	36.4	21.4	46.6	+ 0.4	44.4	41.7	4.9	12.9	0.0	83	86.3	27.8	44.0	0.000	1.1	13.1
5	29.637	59.3	38.3	21.0	47.5	+ 1.2	45.2	42.5	5.0	15.7	0.2	82	113.6	26.7	44.2	0.000	2.8	13.2
6	29.752	62.5	41.3	21.2	50.2	+ 3.9	47.9	45.4	4.8	17.4	0.4	84	96.3	31.9	44.3	0.000	0.3	13.2
7	29.725	58.0	49.3	8.7	52.0	+ 5.7	50.6	49.1	2.9	7.2	1.2	90	92.1	40.6	44.6	0.052	0.1	13.3
8	29.744	61.3	47.2	14.1	53.7	+ 7.6	50.3	46.9	6.8	16.0	3.2	78	97.0	38.6	45.0	0.000	0.7	13.4
9	29.608	63.7	47.4	16.3	54.8	+ 8.8	51.7	48.7	6.1	15.0	1.8	80	104.9	39.0	45.2	0.000	0.1	13.4
10	29.207	62.4	49.6	12.8	54.3	+ 8.4	52.3	50.4	3.9	9.1	1.0	87	114.5	44.7	45.3	0.304	1.5	13.5
11	29.420	59.1	40.0	19.1	49.5	+ 3.7	45.8	41.3	8.2	21.2	1.0	73	120.8	27.6	45.8	0.182	3.9	13.6
12	29.519	57.9	40.2	17.7	48.5	+ 2.6	44.9	40.4	8.1	17.3	2.5	73	116.3	27.8	46.1	0.000	5.2	13.6
13	29.391	56.8	39.1	17.7	47.4	+ 1.3	45.2	42.6	4.8	10.6	1.7	83	93.1	35.1	46.2	0.003	0.7	13.7
14	29.290	56.9	44.1	12.8	50.1	+ 3.7	48.6	46.9	3.2	7.3	1.0	89	88.6	40.2	46.5	0.011	0.1	13.8
15	29.547	50.8	43.8	7.0	46.5	- 0.3	45.2	43.6	2.9	6.0	0.8	90	63.3	40.0	46.6	0.038	0.0	13.8
16	29.228	57.5	45.6	11.9	49.9	+ 2.7	47.1	43.9	6.0	12.3	1.2	80	108.9	40.0	46.8	0.245	4.7	13.9
17	29.504	48.9	42.6	6.3	45.9	- 1.7	43.9	41.4	4.5	9.0	1.9	84	61.7	40.5	46.7	0.286	0.0	14.0
18	29.628	50.9	42.4	8.5	46.1	- 1.9	43.5	40.2	5.9	9.1	2.6	80	67.3	40.2	46.9	0.036	0.0	14.0
19	29.671	63.0	43.1	19.9	49.4	+ 1.1	45.2	40.0	9.4	22.6	2.0	70	125.1	35.2	47.0	0.005	5.5	14.1
20	29.345	57.6	44.3	13.3	49.1	+ 0.6	48.1	47.2	1.9	5.6	1.5	93	89.1	41.2	47.0	0.334	0.3	14.1
21	29.729	56.8	40.3	16.5	48.0	- 0.7	42.6	34.9	13.1	22.3	3.3	60	117.0	33.3	47.1	0.006	9.1	14.2
22	29.837	61.4	44.1	17.3	53.3	+ 4.6	50.7	48.0	5.3	10.8	0.4	83	95.7	42.5	47.2	0.070	0.2	14.3
23	29.978	62.4	47.4	15.0	53.6	+ 5.0	48.9	43.8	9.8	17.7	1.8	69	118.2	39.0	47.3	0.000	7.6	14.3
24	29.997	60.1	44.1	16.0	51.7	+ 3.1	46.4	39.9	11.8	24.0	4.8	64	104.7	36.1	47.4	0.000	1.3	14.4
25	29.960	56.2	38.0	18.2	46.6	- 2.0	41.1	32.9	13.7	19.3	4.0	58	123.9	28.3	47.7	0.000	13.0	14.5
26	29.931	51.9	37.9	14.0	44.1	- 4.5	39.8	33.1	11.0	15.6	5.6	66	91.3	30.3	47.7	0.000	3.5	14.5
27	29.907	61.4	36.6	24.8	49.3	+ 0.6	45.2	40.1	9.2	17.7	0.8	70	117.8	26.3	48.0	0.180	4.2	14.6
28	30.028	54.5	42.7	11.8	49.2	+ 0.4	48.0	46.7	2.5	8.8	0.6	91	100.1	37.9	48.1	0.095	0.7	14.7
29	30.245	47.8	41.4	6.4	43.9	- 5.1	41.8	39.0	4.9	7.4	2.6	83	77.1	37.1	48.1	0.000	0.0	14.7
30	30.244	57.2	43.1	14.1	47.5	- 1.6	44.7	41.3	6.2	12.9	1.3	79	116.9	38.8	48.0	0.000	5.4	14.8
Means	29.662	57.5	42.1	15.4	48.8	+ 1.6	46.0	42.5	6.3	13.6	1.7	79.2	100.3	34.9	46.2	Sum 2.431	2.7	13.9
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day 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 photographic 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 photographic 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 April 1 is derived from wet fog.

The mean reading of the Barometer for the month was 29.662in., being 0.093in. lower than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 64.8 on April 3; the lowest in the month was 31.3 on April 1; and the range was 33.5.  
 The mean of all the highest daily readings in the month was 57.5, being 0.3 higher than the average for the 65 years, 1841-1905.  
 The mean of all the lowest daily readings in the month was 42.1, being 3.1 higher than the average for the 65 years, 1841-1905.  
 The mean of the daily ranges was 15.4, being 2.8 less than the average for the 65 years, 1841-1905.  
 The mean for the month was 48.8, being 1.6 higher than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.							CLOUDS AND WEATHER.			
	POLARIS		♄ URSAE MINORIS.		OSLER'S.				ROBINSON'S.			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>
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.					
					A.M.	P.M.	Greatest.	Mean of 24 Hourly Measures.	Miles.						
April 1	4.0	0.44	1.3	0.14	Calm	ESE	0.9	0.07	195	b x Fe	Fe b f c Acu	c Stcu m.	b c		
2	2.5	0.28	1.9	0.21	ESE	Calm	1.1	0.07	225	c r.	r. rr m	c m	rr		
3	8.5	1.00	8.5	1.00	S	Calm	0.4	0.03	183	c	c b c Ci Frcu	c y b	b w m		
4	6.7	0.79	6.6	0.78	Calm	Calm	0.1	0.01	106	b m f	b c Cist f m	c m r. c Stcu	c b w		
5	3.8	0.45	3.6	0.42	Calm	Calm	0.1	0.00	109	b o	o c bc f	c f c Stcu	b c		
6	0.7	0.08	0.5	0.06	Calm	SSW : SW	0.5	0.02	143	c w f	c f c Stcu	c Stcu	c b c		
7	2.7	0.31	1.4	0.16	SSW : SW	SW	3.2	0.16	291	c	c Nbst r	d r c	c b c		
8	2.4	0.28	1.1	0.13	SW : WSW	WSW : SW	2.6	0.26	334	c	c d c Stcu	c r. c	c b c		
9	1.1	0.12	0.8	0.10	SW : S	S : SSE	1.5	0.13	248	c	c Stcu	c Ast Frst	c		
10	0.0	0.00	0.0	0.00	SSW : SW	SSW	1.5	0.07	231	c rr	rr i r. c	c r c p c b	b c		
11	4.6	0.57	3.9	0.49	SW : WNW : WSW	WSW : SW	1.7	0.14	273	c r p	c p p.	c p.	b w c		
12	7.3	0.92	7.0	0.87	Calm : NE	ENE	1.1	0.08	206	c	c m c b c so-ha	c r. bc b	b		
13	2.4	0.30	1.0	0.13	NE : NNE	ENE	1.0	0.08	258	b c	c m. r. c	c Cist so-ha c	c d		
14	0.0	0.00	0.0	0.00	NE	NNE : N	1.3	0.10	264	c	c St m.	c r c r.	o d. d.		
15	0.1	0.01	0.1	0.01	N : NNW	SW : SSW	1.4	0.09	245	d. d. m.	d. d. m. f	o f m.	c r. r		
16	0.0	0.00	0.0	0.00	SSW : SW	SW : W	3.8	0.45	372	c r c	c Stcu	c Nbst m. r bc	c r d.		
17	0.0	0.00	0.0	0.00	WNW : NW	NW : W	5.9	1.05	449	d. rr	r r. c m.	d. r. r c	c r r.		
18	1.4	0.19	0.7	0.10	W : WNW	NNW	0.6	0.13	290	r. r c	c r. c Nbst	c Nbst	c r. c		
19	0.0	0.00	0.0	0.00	NW : W	WSW : SW	1.9	0.14	279	c	c m c Frcu y	c Cist Frcu so-ha y	c i r		
20	2.1	0.28	1.9	0.25	SSW : SW	SW : NNW	4.7	0.44	358	i r c	c Nbst r	rr c t l r	c d. d. b		
21	0.0	0.00	0.0	0.00	WNW : NW	WNW : WSW	4.2	0.66	405	b	b c Ci Frcu y	c Stcu Cu y	c r.		
22	6.3	0.84	6.2	0.82	SW : WSW	W	3.0	0.23	348	i r	d. m. c	c Stcu	c b		
23	2.4	0.32	0.9	0.12	WSW : NNW	N : Calm	1.9	0.10	242	b c	c Frcu y	c bc Frcu y c	c		
24	6.3	0.89	5.5	0.78	Calm	NNW : NNE	0.9	0.05	221	c b c	c Stcu	c y	c b		
25	5.6	0.80	5.1	0.73	NNW : N	N : NNE	1.7	0.13	271	b	b Frcu y	b Frcu y	b y c		
26	6.5	0.92	6.2	0.89	NNW	NNW : NNE	1.7	0.17	294	c b	b c Stcu	c b Frcu y	b c b		
27	0.0	0.00	0.0	0.00	NNW : Calm	NW : Calm	1.0	0.02	184	b x	b m b Ci y	c Ci Acu y	c r r		
28	0.9	0.13	0.7	0.10	NNW : ENE	ENE : E	3.0	0.09	225	r i d m	i d c m.	c Stcu	c d. b c		
29	0.0	0.00	0.0	0.00	E : NE	NNE : NE	0.7	0.03	231	c	c Stcu	c Stcu	c		
30	0.0	0.00	0.0	0.00	NNE : NE	NE : E	0.3	0.05	229	c	c Stcu	c b Frcu	b c		
Means	2.6	0.33	2.2	0.28	..	..	..	0.17	257						
Number of Column for Reference	19	20	21	22	23	24	25	26	27	28	29	30	31		

The mean Temperature of Evaporation for the month was 46°.0, being 2°.1 higher than the average for the 65 years, 1841-1905.  
 The mean Temperature of the Dew Point for the month was 42°.5, being 2°.9 higher than the average for the 65 years, 1841-1905.  
 The mean Degree of Humidity for the month was 79.2, being 4.7 greater than the average for the 65 years, 1841-1905.  
 The mean Elastic Force of Vapour for the month was 0.273in., being 0.029in. greater than the average for the 65 years, 1841-1905.

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 8.1.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.197. The maximum daily amount of Sunshine was 13.0 hours on April 25.

The highest reading of the Solar Radiation Thermometer was 131°.0 on April 3; and the lowest reading of the Terrestrial Radiation Thermometer was 19°.0 on April 1.

The Proportions of Wind referred to the cardinal points were N. 24, E. 13, S. 18, W. 25, calm or nearly calm conditions, 20, the whole month] being represented by 100.

The Greatest Pressure of the Wind in the month was 5.9 lbs. on the square foot on April 17. The mean daily Horizontal Movement of the Air for the month was 257 miles; the greatest daily value was 449 miles on April 17, and the least daily value was 106 miles on April 4.

Rain (0.005in. or over) fell on 15 days in the month, amounting to 2.43in., as measured by gauge No. 6 partly sunk below the ground; being 0.865in. greater than the average fall for the 65 years, 1841-1905.

MONTH and DAY, 1937.	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 Sunshine.	Sun above Horizon.
		Of the Air.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. Deducted Mean Daily Value.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
May 1	30.149	58.4	42.1	16.3	48.4	- 0.9	46.3	43.9	4.5	10.7	0.5	84	131.1	42.0	48.1	0.000	4.0	14.8
2	29.971	63.6	45.0	18.6	50.3	+ 0.8	47.9	45.3	5.0	12.8	0.8	83	121.7	34.9	48.2	0.000	6.9	14.9
3	29.692	71.5	42.9	28.6	56.0	+ 6.2	51.8	47.7	8.3	21.9	0.7	74	133.2	33.1	48.4	0.280	7.0	14.9
4	29.773	65.6	48.4	17.2	54.4	+ 4.4	50.7	47.0	7.4	17.7	0.8	75	120.1	40.1	48.5	0.000	3.6	15.0
5	29.987	59.9	43.2	16.7	51.6	+ 1.3	44.4	34.5	17.1	28.5	2.6	52	127.3	34.1	48.9	0.000	11.6	15.0
6	30.115	63.3	39.1	24.2	51.6	+ 1.1	46.2	39.5	12.1	24.1	3.5	64	124.3	27.2	49.0	0.003	4.6	15.1
7	30.017	65.5	49.7	15.8	56.3	+ 5.6	53.4	50.8	5.5	11.6	0.8	82	102.9	39.6	49.1	0.149	1.7	15.2
8	29.952	55.8	44.2	11.6	49.4	- 1.6	47.9	46.2	3.2	9.3	0.4	89	112.3	38.2	49.2	0.000	1.0	15.2
9	29.707	51.4	43.1	8.3	47.2	- 4.0	46.2	45.0	2.2	4.9	0.5	92	62.9	38.0	49.4	0.232	0.0	15.3
10	29.649	63.2	47.1	16.1	53.6	+ 2.1	50.4	47.2	6.4	15.8	1.0	79	134.0	40.6	49.6	0.002	0.9	15.3
11	29.532	60.9	43.6	17.3	50.8	- 1.0	49.5	48.2	2.6	12.0	0.7	91	93.1	30.3	49.5	0.772	2.5	15.4
12	29.547	56.2	42.5	13.7	49.3	- 2.8	48.4	47.5	1.8	6.1	0.0	93	86.6	29.0	49.7	0.475	0.0	15.4
13	29.584	55.7	46.7	9.0	49.9	- 2.5	48.4	46.7	3.2	8.0	0.2	89	80.0	43.8	49.7	0.208	0.0	15.5
14	29.660	63.2	44.0	19.2	52.8	+ 0.2	50.8	48.9	3.9	11.0	0.4	86	109.0	33.0	49.9	0.003	2.0	15.6
15	29.753	53.0	47.1	5.9	50.2	- 2.6	47.6	44.7	5.5	7.5	1.8	81	72.5	44.0	49.8	0.000	0.0	15.6
16	29.887	53.7	44.2	9.5	48.3	- 4.7	45.5	42.1	6.2	9.3	2.4	79	95.8	35.1	49.9	0.000	0.7	15.7
17	29.823	60.0	44.0	16.0	51.1	- 2.0	47.5	43.4	7.7	13.4	4.0	75	126.9	36.2	50.0	0.000	9.1	15.7
18	29.743	54.0	41.4	12.6	48.6	- 4.7	46.7	44.6	4.0	8.6	0.2	86	85.7	34.6	50.0	0.163	0.0	15.7
19	29.588	59.0	47.2	11.8	50.7	- 2.8	49.8	48.9	1.8	7.1	0.4	93	81.7	36.6	50.0	0.217	0.5	15.8
20	29.556	67.0	43.4	23.6	54.4	+ 0.6	51.5	48.7	5.7	13.2	0.2	80	130.5	32.1	50.1	0.104	5.7	15.8
21	29.505	65.0	45.6	19.4	54.3	+ 0.1	51.3	48.4	5.9	19.2	0.2	80	128.4	35.2	50.2	0.618	5.5	15.9
22	29.857	62.2	44.5	17.7	52.8	- 1.8	50.8	48.9	3.9	11.2	1.7	86	122.7	34.0	50.2	0.013	0.3	15.9
23	29.941	74.9	55.7	19.2	63.2	+ 8.3	58.3	54.3	8.9	15.8	3.5	73	139.0	48.9	50.6	0.000	10.7	16.0
24	29.906	74.9	53.2	21.7	63.6	+ 8.3	58.4	54.2	9.4	16.0	1.7	72	138.9	40.3	50.8	0.000	11.9	16.0
25	29.900	81.6	54.7	26.9	67.7	+ 12.2	60.6	55.3	12.4	29.1	0.9	64	144.4	40.0	51.1	0.033	11.3	16.1
26	29.885	77.1	53.9	23.2	62.4	+ 6.6	58.8	56.1	6.3	15.7	1.8	80	135.3	45.6	51.3	0.130	2.3	16.1
27	30.107	71.6	48.3	23.3	59.0	+ 3.0	53.8	48.9	10.1	19.1	2.7	69	140.4	38.9	51.0	0.000	8.8	16.1
28	30.140	76.9	47.0	29.9	62.0	+ 5.8	55.6	49.8	12.2	25.9	1.2	65	141.3	33.0	52.2	0.000	13.8	16.2
29	30.051	81.9	49.7	32.2	66.1	+ 9.7	58.9	53.1	13.0	28.0	2.2	63	145.7	37.1	52.5	0.000	11.2	16.2
30	29.950	79.3	53.3	26.0	66.4	+ 9.7	59.8	54.7	11.7	17.3	2.6	66	140.7	38.9	52.9	0.000	7.4	16.2
31	29.901	72.9	54.0	18.9	61.7	+ 4.6	53.1	44.4	17.3	22.5	7.1	53	142.2	41.4	53.1	0.000	12.4	16.3
Means	29.833	65.1	46.7	18.4	55.0	+ 1.9	51.3	47.7	7.3	15.3	1.5	77.4	117.8	37.3	50.1	3.402	5.1	15.6
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day, 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 photographic 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 photographic 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 29.833in., being 0.032in. higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 81.9 on May 29; the lowest in the month was 39.1 on May 6; and the range was 42.8.

The mean of all the highest daily readings in the month was 65.1, 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 46.7, being 3.0 higher than the average for the 65 years, 1841-1905.

The mean of the daily ranges was 18.4, being 1.8 less than the average for the 65 years, 1841-1905.

The mean for the month was 55.0, being 1.9 higher than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.							CLOUDS AND WEATHER.			
	POLARIS		8 URSÆ MINORIS.		OSLER'S.			Robin son's							
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.		Pressure on the Square Foot.								
					A.M.	P.M.	Greatest.	Mean of 24 Hourly Measures.	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>			
May 1	0.0	0.00	0.0	0.00	Calm	E	lbs. 1.1	lbs. 0.04	miles. 196	c f	c f c Ci so-ha	c	c		
2	3.7	0.59	2.5	0.40	NE : ENE	ENE : ESE	1.3	0.10	257	c	c Ast	b	b w		
3	4.8	0.77	4.5	0.72	NE : Calm	NE : SSW	0.5	0.03	183	b w	c b m c b	b c H R t c	b c		
4	3.4	0.54	2.8	0.45	SW : WSW	WSW	1.3	0.10	262	c	c m m.	c Stcu	b c		
5	6.3	1.00	6.3	1.00	WSW : NW	WNW : W	5.2	0.45	375	c b w	b Frcu y	bc Frcu y	b		
6	0.0	0.00	0.0	0.00	WSW	WSW	2.0	0.09	270	b x	b c Acu y	c Stcu y	c d. r.		
7	2.7	0.44	2.2	0.35	WSW : W	NNW : Calm	1.0	0.07	215	r. rr	c Stcu	c p. c	c b		
8	0.0	0.00	0.0	0.00	Calm : E	E	0.7	0.06	204	b c f	c d. f c	c	c		
9	0.9	0.15	0.6	0.10	E	ESE : Calm	2.3	0.07	218	c rr	r r.	r r. c m	c m		
10	3.3	0.57	3.2	0.56	SW : Calm	Calm : E	0.2	0.00	132	c	c r. bc Acu	bc c Stcu	c b c		
11	4.1	0.71	4.0	0.70	NE : ENE	E : Calm	2.0	0.06	209	c r.	r. RR r r. m	r. c m b	b		
12	0.0	0.00	0.0	0.00	Calm : NE	Calm	0.1	0.01	139	b w f c	c Stcu	c R rr	c r R r		
13	0.0	0.00	0.0	0.00	W	W : Calm	0.3	0.03	202	r r.	c St m.	c St m.	c		
14	0.0	0.00	0.0	0.00	Calm	Calm : ENE	0.1	0.00	157	c m	c f m.	c Nbst r. m.	c m.		
15	0.0	0.00	0.0	0.00	NE : NNE	NNE	1.6	0.17	309	c	c m.	c Stcu	c		
16	0.0	0.00	0.0	0.00	NNE	NE : E	0.3	0.03	198	c d.	c Stcu	c bc c	c		
17	..	..	..	..	E : ENE	ENE : E	1.2	0.09	249	c	c b Frst	b Frcu	b w		
18	0.0	0.00	0.0	0.00	NE : NNE	NNE : NE	1.6	0.14	295	b c	c r.	c r.	rr		
19	4.3	0.77	3.7	0.67	NNE : Calm	Calm : S	0.5	0.00	134	rr	d. r m f	o f g c	b c		
20	0.0	0.00	0.0	0.00	SSW : Calm	E	0.6	0.04	179	b w	b c Stcu	c Stcu Frcu	c rr		
21	4.7	0.86	4.7	0.86	NW : WSW	WSW : SW : SSW	4.1	0.33	311	r R r	r. c Frcu	c p. b	b		
22	0.0	0.00	0.0	0.00	S : SSW	SSW	5.1	0.31	321	b c r.	c d	c id.	c id. c		
23	1.4	0.28	1.0	0.20	SSW	SSW : SW	2.5	0.22	269	c	c bc Frcu	bc Frcu b y	c		
24	3.1	0.63	3.0	0.60	Calm : SW	SW : SSW	1.7	0.05	211	c	c b c Cu Ci	c b Ci y	b		
25	1.8	0.35	1.7	0.34	SE : SW	SSW : Calm	1.9	0.15	217	c r c	c b Acu y	b Ci Cicu y	c b c l		
26	4.5	0.90	4.5	0.90	NNW : NE : E	SE : WNW : WSW	5.8	0.23	256	c l t r c	c Ci so-ha	c l t R c	c b		
27	5.0	1.00	5.0	1.00	WSW	WSW : SW	1.0	0.11	261	b w	b c so-ha y	c Frcu Ci y	c b		
28	4.0	0.80	4.0	0.80	Calm	ESE : Calm	0.8	0.03	150	b lu-ha w	b c Ci so-ha y	bc Cist so-ha y	b		
29	4.7	1.00	4.7	1.00	Calm : ESE	S : SSW	0.8	0.02	151	b w z.	b z. y	b y	c b		
30	2.6	0.54	2.1	0.45	Calm : SW	WNW : NNW	0.9	0.04	205	b w	bc c z. y	c Cist so-ha y	c y		
31	3.7	0.77	3.7	0.77	N : NNW	WNW : NNW	1.3	0.10	244	c	c bc Frcu y	bc b Frcu y	b y c		
Means	2.3	0.42	2.1	0.40	..	..	..	0.10	225						
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28	29	30	31		

The mean *Temperature of Evaporation* for the month was 51°.3, being 2°.3 higher than the mean *Temperature of the Dew Point* for the month was 47°.7, being 2°.9 higher than the mean *Degree of Humidity* for the month was 77.4, being 3.5 greater than the mean *Elastic Force of Vapour* for the month was 0.332in., being 0.034in. greater than the average for the 65 years, 1841-1905.

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

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0.325. The maximum daily amount of *Sunshine* was 13.8 hours on May 28.

The highest reading of the *Solar Radiation Thermometer* was 145°.7 on May 29; and the lowest reading of the *Terrestrial Radiation Thermometer* was 27°.2 on May 6.

The *Proportions of Wind* referred to the cardinal points were N. 16, E. 19, S. 17, W. 21, calm or nearly calm conditions, 27, the whole month being represented by 100.

The *Greatest Pressure of the Wind* in the month was 5.8 lbs. on the square foot on May 26. The mean daily *Horizontal Movement of the Air* for the month was 225 miles; the greatest daily value was 375 miles on May 5, and the least daily value was 132 miles on May 10.

*Rain* (0.005in. or over) fell on 13 days in the month, amounting to 3.402in., as measured by gauge No. 6 partly sunk below the ground; being 1.487in. greater than the average fall for the 65 years, 1841-1905.



MONTH and DAY, 1937.	BAROMETER. Mean of 24 Hourly Values (corrected and reduced to 32° and 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.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. Deducted Mean Daily Value.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
June 1	29.886	66.8	49.2	17.6	56.7	- 0.7	49.5	41.4	15.3	22.0	6.3	57	138.9	36.2	53.2	0.000	6.7	16.3
2	29.963	66.2	47.0	19.2	55.1	- 2.7	49.1	42.5	12.6	20.4	1.8	62	139.2	38.2	53.4	0.000	4.4	16.3
3	29.902	67.3	44.6	22.7	56.0	- 2.1	50.5	44.8	11.2	20.7	1.4	65	135.2	32.1	53.6	0.000	9.0	16.4
4	29.868	74.2	54.6	19.6	62.5	+ 4.2	57.6	53.6	8.9	16.4	4.6	73	144.3	45.3	53.7	0.000	5.3	16.4
5	29.897	76.9	51.0	25.9	62.4	+ 4.0	56.9	52.2	10.2	22.3	2.1	70	146.9	41.1	53.8	0.000	8.3	16.4
6	29.843	83.6	49.8	33.8	67.2	+ 8.9	59.5	53.5	13.7	29.0	1.8	61	144.9	38.2	54.0	0.000	14.5	16.5
7	29.793	84.0	57.1	26.9	68.5	+ 10.3	61.7	56.8	11.7	23.4	4.9	66	148.0	46.3	54.1	0.000	13.0	16.5
8	29.852	69.2	48.5	20.7	57.9	- 0.2	53.6	49.7	8.2	21.2	3.2	74	134.2	38.9	54.2	0.065	5.5	16.5
9	29.853	72.6	44.2	28.4	57.4	- 0.6	52.9	48.7	8.7	21.1	0.9	72	143.7	32.3	54.5	0.010	7.8	16.5
10	29.759	76.9	52.3	24.6	63.1	+ 5.0	58.3	54.5	8.6	18.9	1.0	74	131.9	44.0	54.7	0.312	7.4	16.5
11	29.760	85.1	57.4	27.7	68.7	+ 10.5	62.6	58.4	10.3	25.5	0.3	70	143.0	51.1	55.0	0.000	10.3	16.6
12	29.919	74.8	59.6	15.2	66.5	+ 8.1	61.7	58.4	8.1	22.1	2.3	75	126.8	52.9	55.0	0.034	4.7	16.6
13	29.979	72.8	54.9	17.9	60.4	+ 1.9	58.1	56.3	4.1	13.5	1.3	87	133.3	46.7	55.0	0.368	4.4	16.6
14	30.064	71.6	53.3	18.3	61.8	+ 3.1	57.9	54.8	7.0	13.9	0.7	77	114.9	43.0	55.2	0.000	2.2	16.6
15	30.116	66.2	48.0	18.2	58.5	- 0.3	53.8	49.5	9.0	12.9	2.0	72	124.4	35.0	55.2	0.002	2.8	16.6
16	30.101	64.7	48.3	16.4	55.6	- 3.3	52.3	49.2	6.4	12.4	1.9	79	117.3	35.3	55.4	0.033	0.4	16.6
17	30.007	61.9	44.9	17.0	52.8	- 6.2	49.2	45.4	7.4	12.0	0.2	75	109.9	31.1	55.2	0.008	2.4	16.6
18	29.880	63.7	46.6	17.1	54.0	- 5.2	48.6	42.6	11.4	19.4	1.8	65	124.1	33.4	55.2	0.618	3.0	16.6
19	29.761	61.4	44.9	16.5	52.8	- 6.7	49.1	45.1	7.7	15.0	0.1	75	128.0	36.6	55.1	0.180	3.0	16.6
20	29.815	63.0	45.4	17.6	52.2	- 7.7	49.8	47.3	4.9	14.6	0.0	83	119.7	31.9	55.0	0.194	3.0	16.6
21	29.909	70.7	42.8	27.9	57.5	- 2.8	52.0	46.5	11.0	21.6	0.0	67	138.0	28.7	55.1	0.000	10.2	16.6
22	29.837	75.2	50.1	25.1	61.3	+ 0.7	55.3	49.9	11.4	23.7	0.5	66	140.6	38.7	55.1	0.037	9.9	16.6
23	29.818	70.1	53.1	17.0	60.7	- 0.2	53.5	46.5	14.2	20.6	2.6	59	136.3	44.9	55.1	0.000	7.9	16.6
24	29.825	65.6	49.9	15.7	57.3	- 3.9	52.6	48.1	9.2	18.4	2.8	71	131.9	39.8	55.1	0.000	1.0	16.6
25	29.919	73.8	45.9	27.9	59.4	- 2.0	54.2	49.4	10.0	19.0	1.8	70	133.7	31.3	55.2	0.000	3.0	16.6
26	29.957	70.9	53.2	17.7	62.3	+ 0.8	57.6	53.8	8.5	15.3	2.4	74	115.6	40.6	55.2	0.000	0.9	16.6
27	29.881	74.3	57.6	16.7	64.9	+ 3.3	59.2	54.8	10.1	17.3	3.5	70	124.3	46.7	55.2	0.000	2.9	16.6
28	29.714	79.0	51.5	27.5	63.9	+ 2.3	57.7	52.6	11.3	23.7	2.1	67	142.2	37.0	55.7	0.003	7.9	16.6
29	29.669	64.9	51.6	13.3	58.0	- 3.6	51.3	44.3	13.7	20.8	4.8	61	128.2	41.9	55.6	0.005	6.9	16.6
30	29.862	64.5	46.8	17.7	57.4	- 4.1	52.9	48.7	8.7	17.6	3.8	72	120.0	35.2	55.7	0.000	2.8	16.6
Means	29.880	71.1	50.1	20.9	59.8	+ 0.4	54.6	50.0	9.8	19.2	2.1	70.3	132.0	39.1	54.8	Sum 1.869	5.7	16.5
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day, 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 photographic 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 photographic 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 29.880in., being 0.058in. higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 85.1 on June 11; the lowest in the month was 42.8 on June 21; and the range was 42.3.  
 The mean of all the highest daily readings in the month was 71.1, being 0.4 higher than the average for the 65 years, 1841-1905.  
 The mean of all the lowest daily readings in the month was 50.1, being 0.2 higher than the average for the 65 years, 1841-1905.  
 The mean of the daily ranges was 20.9, being 0.1 greater than the average for the 65 years, 1841-1905.  
 The mean for the month was 59.8, being 0.4 higher than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.						CLOUDS AND WEATHER.			
	POLARIS		URSÆ MINORIS.		OSLER'S.				ROBINSON'S.					
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.		Pressure on the Square Foot.		Horizontal Movement 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.						lbs.
June 1	2.0	0.43	1.7	0.36	NNW : WNW	NW : WNW	1.6	0.13	261	c b	b c Frcu y	c Stcu y	c	
2	3.9	0.81	3.9	0.81	W : NW	NW : Calm	0.9	0.08	218	c	c Frcu y	c Frcu Stcu y	c	
3	0.1	0.02	0.0	0.00	Calm : SW : W	WSW : SW	1.8	0.25	281	bc c	bc Cist so-ha	c Acu Frcu y	c r, c	
4	4.7	1.00	4.7	1.00	SW : WSW	WSW : SW	2.3	0.33	307	c	c Stcu	c Acu Cu	c b	
5	4.5	1.00	4.5	1.00	SW	SW	1.3	0.09	231	b c	c b Frcu y	b y	b	
6	3.7	0.81	3.4	0.75	Calm : SSW	SSW : SW	1.5	0.09	189	b	b Frcu y	b y	b c	
7	3.9	0.86	3.7	0.82	WSW : Calm	WSW	2.1	0.16	234	c b	b c b Acu y	b Frcu y	b c	
8	4.5	1.00	4.5	1.00	WSW	SSW	0.7	0.12	237	c b c	c bc c r,	r c Cist Acu	c b	
9	3.7	0.83	3.6	0.80	Calm : SE	ESE	0.6	0.05	191	b	b c Acu Ci y	c Nbst r, c	c b	
10	2.2	0.49	1.9	0.42	ENE	ENE	3.5	0.30	291	b c	c r, bc Ci Cicu	bc c Ci	c R r r t l c	
11	0.9	0.21	0.5	0.10	SE : SW	Calm : Variable	0.4	0.02	163	c b c	c b Ci y	b Ci c y	c	
12	0.9	0.20	0.8	0.17	Calm	E : SW	1.1	0.04	190	c	c z z,	c r c	c	
13	3.7	0.83	3.7	0.83	Calm	S : SSW	1.1	0.06	214	bc	c r r c	c Frcu	c b	
14	1.1	0.23	0.9	0.19	SW : WSW : WNW	NW : NNW	1.3	0.07	253	b c	c Stcu	c Stcu	c	
15	3.9	0.86	3.1	0.69	NW : NNW	NNW : NNE : Calm	3.6	0.20	284	c p, c	c Stcu Nbst	c i r, c Stcu	c b	
16	3.7	0.81	3.5	0.79	SW : NW	NW : NNE	1.0	0.07	243	b	c Stcu	c Nbst r, r c	c b	
17	1.0	0.22	0.9	0.20	Calm : NNW	N : NNE	1.4	0.06	212	b bc	c Stcu	c i r c	c	
18	0.0	0.00	0.0	0.00	NNW : W : NW	NNW : Calm	2.1	0.11	242	c	c Stcu	c Stcu	c t l RR	
19	0.0	0.00	0.0	0.00	Calm : NE	NE : Calm	..	..	178	RR c	c Frst	c y	c	
20	4.5	1.00	4.5	1.00	Calm	Calm	..	..	151	c r r	r, c	c t l r c	c b	
21	3.1	0.68	2.5	0.56	Calm	NW : NNW	..	..	179	b	b c Frcu	c Frcu Stcu y	c b	
22	0.6	0.13	0.4	0.10	Calm : W	W : Calm	1.1	0.06	221	bc b	b c Frcu y	c Frcu y t	c r r,	
23	3.9	0.86	3.3	0.74	N	N	0.3	0.02	218	c	c b Acu y	b c Frcu y	c b c	
24	4.3	0.96	4.1	0.92	Calm : ENE	ENE : E	1.3	0.06	243	c	c prhn c Acu	c Acu Cist	c	
25	3.0	0.67	2.9	0.63	Calm	SW	0.7	0.03	181	c	c Acu y	c Acu Frcu y	c b	
26	0.0	0.00	0.0	0.00	SW : Calm	NNW : Calm	0.1	0.01	158	b c	c Stcu	c Acu Ci	c	
27	4.3	0.97	4.3	0.97	Calm	Calm : NNW	0.2	0.00	130	c	b c Stcu	c Frcu y	c	
28	0.2	0.05	0.1	0.03	Calm : SW	WSW	2.9	0.18	277	c b	b bc Frcu Ci y	c Ast Cunb y	c r, c	
29	4.5	1.00	4.5	1.00	WSW : NW	W : NW	4.7	0.25	351	c b	b c Frcu y	c Nbst p, c	c b	
30	0.1	0.02	0.1	0.01	NW : SW	SW	2.7	0.24	311	b	b c Stcu	c St Frst	c	
Means	2.6	0.57	2.4	0.53	..	..	..	0.11	228					
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28	29	30	31	

The mean *Temperature of Evaporation* for the month was 54°.6, being 0°.3 lower than the mean *Temperature of the Dew Point* for the month was 50°.0, being 0°.8 lower than the mean *Degree of Humidity* for the month was 70.3, being 2.9 less than the mean *Elastic Force of Vapour* for the month was 0.363in., being 0.012in. less than

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

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

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0.346. The maximum daily amount of *Sunshine* was 14.5 hours on June 6.

The highest reading of the *Solar Radiation Thermometer* was 148°.0 on June 7; and the lowest reading of the *Terrestrial Radiation Thermometer* was 28°.7 on June 21.

The *Proportions of Wind* referred to the cardinal points were N. 18, E. 8, S. 16, W. 27, calm or nearly calm conditions, 31, the whole month being represented by 100.

The *Greatest Pressure of the Wind* in the month was 4.7 lbs. on the square foot on June 29. The mean daily *Horizontal Movement of the Air* for the month was 228 miles; the greatest daily value was 351 miles on June 29, and the least daily value was 130 miles on June 27.

*Rain* (0.005in. or over) fell on 12 days in the month, amounting to 1.869in., as measured by gauge No. 6 partly sunk below the ground; being 0.169in. less than the average fall for the 65 years, 1841-1905.



MONTH and DAY, 1937.	BARO-METER. 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.					Of Evaporation.	Of the Dew Point.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
July 1	29.894	77.6	60.0	17.6	66.8	+ 5.3	61.7	58.1	8.7	17.4	2.8	74	132.4	56.1	55.9	0.007	6.4	16.6
2	29.919	80.1	61.3	18.8	67.9	+ 6.3	63.3	60.2	7.7	17.8	3.1	77	130.3	52.6	55.9	0.000	3.4	16.6
3	29.746	86.6	61.6	25.0	73.1	+ 11.3	65.3	60.2	12.9	27.6	4.5	65	148.2	52.8	56.1	0.000	9.7	16.5
4	29.854	64.1	56.4	7.7	59.7	- 2.4	55.9	52.7	7.0	12.6	4.7	78	89.6	54.4	56.0	0.000	0.0	16.5
5	29.967	71.5	50.1	21.4	60.3	- 2.0	54.7	49.7	10.6	17.9	1.9	68	126.2	37.9	56.2	0.000	3.8	16.5
6	29.796	69.9	53.9	16.0	60.8	- 1.6	57.8	55.4	5.4	11.8	1.1	82	113.2	52.3	56.3	0.167	0.8	16.5
7	29.789	72.0	57.3	14.7	62.5	+ 0.1	58.1	54.7	7.8	15.2	0.9	75	131.2	49.2	56.4	0.000	2.1	16.4
8	29.960	74.7	52.1	22.6	62.5	+ 0.1	53.9	45.5	17.0	26.2	3.9	53	136.2	42.3	56.6	0.000	11.1	16.4
9	29.820	67.3	53.3	14.0	59.3	- 3.1	55.3	51.9	7.4	15.1	4.1	77	108.4	45.8	56.5	0.003	0.1	16.4
10	29.781	69.0	52.6	16.4	58.6	- 3.9	53.0	47.6	11.0	20.9	2.5	67	124.6	43.8	56.4	0.083	4.0	16.4
11	29.883	73.2	51.2	22.0	60.7	- 2.0	56.1	52.2	8.5	22.7	0.0	73	137.2	38.8	56.9	0.012	6.0	16.4
12	29.827	70.0	59.0	11.0	64.1	+ 1.2	62.3	61.1	3.0	7.7	0.7	90	111.3	57.1	56.7	0.014	0.1	16.3
13	29.850	82.0	61.6	20.4	69.6	+ 6.5	64.2	60.7	8.9	18.0	1.9	73	136.4	49.9	56.8	0.000	6.3	16.3
14	29.807	85.6	56.4	29.2	70.5	+ 7.2	64.1	59.8	10.7	17.1	0.7	69	145.0	43.1	57.1	0.000	10.5	16.2
15	29.540	89.5	57.9	31.6	69.1	+ 5.7	64.7	61.9	7.2	16.4	0.7	78	148.1	47.3	57.2	0.270	5.1	16.2
16	29.751	73.9	55.6	18.3	63.8	+ 0.4	56.9	51.1	12.7	24.5	1.6	63	132.3	43.8	57.2	0.085	11.3	16.2
17	30.036	78.0	52.0	26.0	63.8	+ 0.4	59.0	55.3	8.5	23.6	2.3	74	145.0	38.9	57.4	0.000	1.9	16.1
18	30.049	81.7	57.3	24.4	68.0	+ 4.7	62.8	59.2	8.8	20.0	2.1	74	144.7	45.5	57.6	0.000	1.5	16.1
19	29.947	77.5	57.4	20.1	67.4	+ 4.2	62.9	59.8	7.6	17.0	1.3	77	120.8	46.9	57.8	0.001	1.1	16.1
20	29.930	74.4	56.9	17.5	64.8	+ 1.6	59.3	55.0	9.8	19.3	0.8	71	127.9	49.6	57.9	0.000	6.3	16.0
21	29.746	74.6	56.3	18.3	61.7	- 1.5	58.3	55.7	6.0	19.3	0.3	81	128.3	44.9	57.9	0.030	2.0	16.0
22	29.683	67.2	53.5	13.7	60.5	- 2.6	54.5	49.0	11.5	18.7	3.1	65	106.6	47.0	57.9	0.000	4.3	15.9
23	29.593	72.7	53.7	19.0	60.6	- 2.4	57.4	54.8	5.8	11.7	1.1	81	116.4	46.0	57.9	0.034	2.6	15.9
24	29.598	72.5	51.8	20.7	62.6	- 0.3	55.9	49.9	12.7	21.6	3.6	64	138.8	44.6	58.0	0.000	9.0	15.8
25	29.688	69.1	55.0	14.1	60.8	- 1.9	56.4	52.7	8.1	13.3	3.6	74	122.4	50.3	57.9	0.000	0.7	15.8
26	29.859	67.0	56.7	10.3	61.3	- 1.2	55.4	50.1	11.2	15.6	6.5	67	113.8	54.1	57.9	0.000	0.5	15.7
27	29.895	66.3	55.8	10.5	59.7	- 2.7	54.1	49.0	10.7	16.7	7.5	68	99.3	53.1	57.8	0.000	0.0	15.7
28	29.854	69.5	54.4	15.1	59.8	- 2.5	54.7	50.1	9.7	20.1	4.1	70	134.4	44.9	57.9	0.000	1.6	15.6
29	29.831	69.5	50.6	18.9	59.3	- 3.0	54.7	50.6	8.7	17.8	1.9	73	121.9	40.7	57.9	0.000	4.5	15.6
30	29.841	66.6	49.4	17.2	58.3	- 4.0	55.0	52.1	6.2	13.1	0.9	80	100.6	35.4	57.8	0.000	0.0	15.6
31	29.908	72.6	54.3	18.3	59.7	- 2.5	56.3	53.5	6.2	12.6	1.5	80	103.4	41.7	57.7	0.000	1.2	15.5
Means	29.827	73.7	55.3	18.4	63.1	+ 0.5	58.2	54.2	9.0	17.7	2.4	72.9	125.0	46.8	57.1	Sum 0.706	3.8	16.1
Number of Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day 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 photographic 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 photographic 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 29.827in., being 0.021in. higher than the average for the 65 years, 1841-1905.

**TEMPERATURE OF THE AIR.**

The highest in the month was 89°.5 on July 15; the lowest in the month was 49°.4 on July 30; and the range was 40°.1.  
 The mean of all the highest daily readings in the month was 73°.7, being 0°.5 lower than the average for the 65 years, 1841-1905.  
 The mean of all the lowest daily readings in the month was 55°.3, being 2°.0 higher than the average for the 65 years, 1841-1905.  
 The mean of the daily ranges was 18°.4, being 2°.5 less than the average for the 65 years, 1841-1905.  
 The mean for the month was 63°.1, being 0°.5 higher than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.							CLOUDS AND WEATHER.			
	POLARIS		S U R R E MINORIS.		OSLER'S.				ROBINSON'S						
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.		Pressure on the Square Foot.			Horizontal Movement 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.	Miles.						
July 1	2.10.47	1.90.43	SW : W	WSW	WSW	3.20.29	344	c		c <i>Acu Cu</i>	c p b y	b c			
2	2.30.52	2.20.49	WSW : SW	SSW : S	SSW	0.90.05	229	c		c <i>Frst Cunb</i>	c <i>Acu y</i>	c			
3	0.30.06	0.20.04	SSE : S	S : SSE	S	3.70.33	285	c b		b <i>Ci Frcu y</i>	b y c	c			
4	0.00.00	0.00.00	S : SW	WSW	WSW	4.80.75	366	c		c <i>Stcu</i>	c <i>Stcu</i>	c			
5	0.10.02	0.00.00	WSW : Calm	SW : SSW	SW	0.50.05	226	c		c <i>Ast Frst</i>	c <i>Acu</i>	c			
6	0.30.07	0.00.00	SSW : SW	SSW : Calm	SSW	0.60.07	207	c rr		r c <i>Stcu</i>	c <i>Stcu</i>	c r c			
7	2.20.49	2.10.47	Calm : WSW	NNW	NNW	2.00.10	239	c		c	c	c			
8	0.90.20	0.70.16	W : NW	WSW : SW	WSW	1.20.06	236	c b		b <i>Ci Frcu y</i>	b c <i>Frcu y</i>	c			
9	1.80.39	1.60.36	Calm : SW	SW : NW	SW	3.10.18	254	c		c <i>Stcu</i>	c i r c	c b			
10	0.10.01	0.10.01	WSW : W	WNW : NW	WNW	6.20.63	369	b c		c <i>Nbst Cunb p t</i>	c y	c			
11	0.00.00	0.00.00	NNW : WSW	SW : Calm	SW	2.50.10	235	c b		b c <i>Frcu Acu y</i>	c <i>Ast Frst y</i>	c i d.			
12	0.40.08	0.30.05	WSW : Calm	Calm : WSW	Calm	0.50.01	156	c		c d.	c d d c	c			
13	5.01.00	5.01.00	WSW : W	WSW : W	WSW	1.20.16	290	c		c <i>Ast</i>	c b y	b			
14	4.50.91	4.50.91	Calm : WSW	SSW : Calm	SSW	1.00.05	197	b c		c b <i>Frcu y</i>	b <i>Cicu c y</i>	c b			
15	0.00.00	0.00.00	Calm	Calm : NNW : NW	Calm	7.00.09	194	b		b c <i>Ci so-ha</i>	c t l r c	c rr			
16	5.01.00	5.01.00	NW : WNW	NW : NNW : WSW	NW	5.30.79	370	rr		c bc b <i>Cu y</i>	b <i>Frcu y</i>	b			
17	2.30.42	2.20.41	SW : Calm	SW : Calm	SW	0.90.03	167	b c		c <i>Acu Stcu y</i>	c y	c b c			
18	5.00.91	4.70.85	Calm	SW : Calm	SW	0.20.01	127	c		c <i>Stcu</i>	c <i>Stcu</i>	c b			
19	1.20.21	0.90.16	SSW : Calm	W : Calm : N	W	0.50.02	190	b c		c <i>Ast Frcu</i>	c r <sub>o</sub> so-ha c d.	c r <sub>o</sub> t l c			
20	2.50.46	2.30.41	NNW : Calm	Calm : ENE	Calm	0.20.03	180	c		b bc z <sub>o</sub>	c <i>Frcu z<sub>o</sub></i>	c			
21	4.50.82	4.30.79	Calm : SW	SW : WSW	SW	3.00.23	264	c		c <i>Ast Acu</i>	c r <sub>o</sub> c	c b c			
22	1.30.24	0.90.17	WSW	WSW	WSW	4.20.73	396	c b		b c <i>Stcu y</i>	c <i>Stcu y</i>	c			
23	0.60.11	0.10.03	SW	SW : WSW	SW	5.80.55	323	c d		dd c d c	c bc c <i>Stcu</i>	c			
24	1.10.17	0.50.08	W : WSW	WNW : WSW	WNW	3.30.29	337	c b		b c <i>Acu Cu y</i>	c y	c			
25	0.00.00	0.00.00	WSW : W	W : NNW	W	1.50.18	293	c		c <i>Stcu</i>	c v	c r c			
26	0.00.00	0.00.00	NW : NNW	W : NW	W	1.60.13	264	c		c <i>Stcu</i>	c <i>Stcu</i>	c			
27	0.50.08	0.30.06	NNW : WNW	WSW : NW	WSW	0.50.02	209	c		c <i>Stcu</i>	c	c			
28	1.30.22	1.00.16	NW : NNW	N : Calm	N	0.70.04	201	c		c <i>Stcu y</i>	c <i>Stcu y</i>	c			
29	4.50.76	3.70.61	Calm	NE : Calm	NE	0.40.03	168	c		c <i>Stcu Acu</i>	c bc y	b			
30	0.00.00	0.00.00	NE : Calm	ENE	ENE	1.50.05	212	b c		c <i>Ast</i>	c <i>Ast</i>	c			
31	3.30.53	3.20.51	ENE : NE	NNE : NE	NNE	0.60.07	236	c		c <i>Stcu</i>	c	c b			
Means	1.70.33	1.50.30	..	..	..	0.20	250								
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28	29	30	31		

The mean *Temperature of Evaporation* for the month was 58°.2, being 0°.3 higher than the average for the 65 years, 1841-1905.  
 The mean *Temperature of the Dew Point* for the month was 54°.2, being 0°.1 higher than the average for the 65 years, 1841-1905.  
 The mean *Degree of Humidity* for the month was 72.9, being 0.3 less than the average for the 65 years, 1841-1905.  
 The mean *Elastic Force of Vapour* for the month was 0.423in., being 0.002in., greater than the average for the 65 years, 1841-1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0 and an overcast sky by 10) was 7.9.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0.236. The maximum daily amount of *Sunshine* was 11.3 hours on July 16.

The highest reading of the *Solar Radiation Thermometer* was 148°.2 on July 3; and the lowest reading of the *Terrestrial Radiation Thermometer* was 35°.4 on July 30.

The *Proportions of Wind* referred to the cardinal points were N. 15, E. 5, S. 19, W. 38, calm or nearly calm conditions, 23, the whole month being represented by 100.

The *Greatest Pressure of the Wind* in the month was 7.0 lbs. on the square foot on July 15. The mean daily *Horizontal Movement of the Air* for the month was 250 miles; the greatest daily value was 336 miles on July 22, and the least daily value was 127 miles on July 18.

*Rain* (0.005in. or over) fell on 9 days in the month, amounting to 0.706in., as measured by gauge No. 6 partly sunk below the ground; being 1.693in. less than the average fall for the 65 years, 1841-1905.

MONTH and DAY, 1937.	BARO-METER. 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 Sunshine.	Sun above Horizon.
		Of the Air.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. Deducted Mean Daily Value.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
Aug. 1	30.023	77.3	54.3	23.0	62.5	+ 0.3	58.0	54.5	8.0	21.1	0.7	75	134.9	41.0	57.8	0.000	8.1	15.4
2	30.039	78.8	54.9	23.9	63.1	+ 1.0	59.3	56.5	6.6	18.7	0.7	79	132.7	41.8	57.8	0.000	7.1	15.4
3	29.961	81.0	52.3	28.7	66.0	+ 3.9	61.4	58.2	7.8	18.0	0.2	76	117.7	40.7	58.0	0.000	5.1	15.3
4	29.894	84.7	57.0	27.7	67.9	+ 5.8	63.6	60.8	7.1	22.0	0.3	78	129.0	44.9	58.0	0.137	4.7	15.3
5	29.896	82.2	60.2	22.0	69.6	+ 7.5	63.6	59.6	10.0	22.9	0.3	71	137.2	49.5	58.0	0.000	4.9	15.2
6	29.862	91.9	56.2	35.7	73.1	+10.9	64.0	57.8	15.3	31.4	1.3	59	148.1	46.0	58.2	0.000	12.3	15.2
7	29.801	85.8	62.2	23.6	72.8	+10.6	64.5	58.9	13.9	23.5	4.6	62	135.5	51.2	58.3	0.000	12.3	15.1
8	29.916	79.7	56.4	23.3	66.3	+ 4.0	58.7	52.5	13.8	25.0	2.4	61	139.7	48.1	58.6	0.000	10.7	15.1
9	29.961	86.6	52.9	33.7	68.5	+ 6.2	59.5	52.4	16.1	30.3	4.3	56	149.7	41.6	58.8	0.000	9.0	15.0
10	29.881	80.2	62.8	17.4	67.8	+ 5.5	63.8	61.2	6.6	15.6	1.5	79	123.9	58.2	58.9	0.036	2.1	14.9
11	29.775	83.0	61.6	21.4	69.5	+ 7.1	64.3	60.9	8.6	20.5	1.2	74	131.8	55.8	59.0	0.001	3.5	14.9
12	29.728	79.8	57.8	22.0	68.3	+ 5.8	63.2	59.7	8.6	21.1	1.4	75	138.6	49.6	59.1	0.000	9.2	14.8
13	29.610	74.5	62.1	12.4	65.5	+ 3.0	63.5	62.3	3.2	10.5	0.8	89	126.1	57.8	59.1	0.098	1.6	14.8
14	29.592	69.4	56.4	13.0	62.5	- 0.0	61.2	60.3	2.2	9.2	0.7	93	94.7	53.4	59.2	0.196	0.0	14.7
15	29.704	69.1	51.3	17.8	59.5	- 2.9	52.3	44.9	14.6	24.0	5.0	59	126.2	45.8	59.3	0.000	11.2	14.7
16	29.645	74.2	47.4	26.8	59.4	- 2.9	55.9	53.0	6.4	20.9	0.0	79	135.2	36.1	59.2	0.204	6.3	14.6
17	29.567	75.8	61.4	14.4	66.2	+ 4.1	61.0	57.2	9.0	19.0	0.8	73	131.2	57.3	59.2	0.000	7.9	14.6
18	29.811	76.1	57.9	18.2	65.1	+ 3.2	59.9	56.0	9.1	18.8	3.1	73	124.9	51.2	59.2	0.000	2.8	14.5
19	29.922	71.9	55.5	16.4	62.8	+ 1.1	55.6	49.1	13.7	25.9	2.9	61	132.4	47.9	59.3	0.000	10.0	14.4
20	29.991	70.2	53.8	16.4	61.0	- 0.5	55.1	49.8	11.2	21.1	4.3	67	130.8	47.7	59.2	0.000	3.7	14.4
21	29.921	67.8	54.8	13.0	60.1	- 1.2	56.3	53.1	7.0	12.9	2.4	78	118.1	48.2	59.3	0.000	2.8	14.3
22	29.979	74.5	54.7	19.8	62.4	+ 1.3	57.2	52.8	9.6	20.8	0.9	71	130.7	43.7	59.2	0.000	7.6	14.3
23	29.988	76.4	48.5	27.9	62.4	+ 1.5	56.8	52.0	10.4	22.1	1.3	69	125.1	38.6	59.3	0.000	7.5	14.2
24	29.966	80.2	52.6	27.6	65.7	+ 4.9	60.3	56.2	9.5	24.7	1.4	72	134.0	43.1	59.3	0.000	7.3	14.1
25	29.986	77.9	55.7	22.2	65.6	+ 4.9	60.8	57.4	8.2	22.9	0.7	75	130.2	47.6	59.4	0.000	1.0	14.0
26	30.097	71.9	57.3	14.6	62.9	+ 2.2	59.9	57.6	5.3	13.1	0.1	83	109.0	48.1	59.2	0.000	0.1	14.0
27	30.127	65.1	56.8	8.3	60.4	- 0.2	57.0	54.2	6.2	10.6	2.4	80	87.6	50.5	59.2	0.000	0.2	13.9
28	30.006	72.3	52.1	20.2	60.4	- 0.0	57.3	54.8	5.6	11.2	0.4	82	118.4	41.0	59.2	0.000	1.1	13.9
29	29.972	74.4	54.7	19.7	62.4	+ 2.1	59.0	56.4	6.0	17.4	0.5	81	124.9	44.9	59.3	0.000	1.1	13.8
30	29.967	76.8	54.8	22.0	63.1	+ 3.0	60.0	57.7	5.4	17.7	0.0	83	138.7	43.8	59.3	1.008	3.3	13.7
31	29.902	79.9	55.6	24.3	64.9	+ 5.0	61.1	58.4	6.5	18.3	0.0	79	133.2	48.1	59.4	0.003*	7.3	13.7
Means	29.887	77.1	55.9	21.2	64.8	+ 3.1	59.8	56.0	8.8	19.7	1.5	73.9	128.1	47.2	58.9	1.683	5.5	14.6
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day, 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 photographic 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 photographic 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 August 31 is derived from dew.

The mean reading of the Barometer for the month was 29.887in., being 0.097in. higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 91.9 on August 6; the lowest in the month was 47.4 on August 16; and the range was 44.5. The mean of all the highest daily readings in the month was 77.1, being 4.4 higher than the average for the 65 years, 1841-1905. The mean of all the lowest daily readings in the month was 55.9, being 2.9 higher than the average for the 65 years, 1841-1905. The mean of the daily ranges was 21.2, being 1.5 greater than the average for the 65 years, 1841-1905. The mean for the month was 64.8, being 3.1 higher than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.				CLOUDS AND WEATHER.					
	POLARIS		δ URSÆ MINORIS.		OSLER'S.				ROBINSON'S					
	General Direction.		Pressure on the Square Foot.		A.M.		P.M.		Greatest.		Mean of 24 Hourly Measures.		Horizontal Movement of the Air.	
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	Greatest.		Mean of 24 Hourly Measures.		Greatest.		Mean of 24 Hourly Measures.		Horizontal Movement of the Air.	
Aug. 1	2.5	0.40	2.5	0.40	NNE	NNE : Calm	0.6	0.05	206	b c	c Stcu b	b Ci y	b	
2	5.7	0.92	5.6	0.89	Calm : NE	N : ENE : Calm	0.3	0.01	159	b c	c bc Ci Cicu	b c b y	b bc	
3	6.3	1.00	6.3	1.00	Calm	Calm : S	0.2	0.00	136	bc c m	c m b z.	b c b Frcu z. y	b	
4	1.4	0.22	0.9	0.15	Calm	E : Calm	0.2	0.01	122	b w	b Ci z.	b c p t l R	c	
5	6.1	0.98	5.9	0.94	Calm	Calm	0.1	0.00	119	c	c p. c	r. bc Acu	bc b	
6	6.3	1.00	6.0	0.96	Calm	SSW : S	1.6	0.04	170	b	b Ci	b Cicu y	b	
7	6.7	1.00	6.7	1.00	SSE : Calm	N : NNE	1.0	0.07	195	b bc z.	b z. y	b z. y	b	
8	5.6	0.83	4.9	0.73	NNE : NE	N : NE : ESE	0.6	0.05	197	b	b Ci y	b c Cicu b y	b	
9	2.7	0.41	2.1	0.30	Calm : SW	SW : W	1.0	0.10	198	b c	c bc c Cu Acu	c Acu y	b c	
10	0.0	0.00	0.0	0.00	WSW	WSW : Calm	1.9	0.05	208	c p c	c Stcu	c r	i r. c	
11	5.3	0.79	3.5	0.53	Calm	Calm	0.3	0.01	157	c p c	c Stcu Frcu y	c Ci Frcu y	c	
12	1.3	0.19	1.0	0.15	Calm	E	1.2	0.09	203	c b c	c b Frcu Ci y	b Ci y c	c	
13	0.0	0.00	0.0	0.00	ENE : Calm	Var. : Calm	0.7	0.02	124	c	c r c m.	c r t c m.	c	
14	2.9	0.40	2.3	0.32	Calm : SW	NNW : NW	3.5	0.17	231	c m.	c i r. r m.	c i R t e r	c	
15	7.0	0.97	6.7	0.92	WNW : NW	NW : WSW	4.2	0.67	379	c b	b bc Frcu v y	c Frcu v y	c b	
16	0.0	0.00	0.0	0.00	WSW : SW	SW : S	2.7	0.12	248	b	b c Ci so-ha	c r. r	rr	
17	1.7	0.23	0.9	0.12	SW : WSW	W : NW	4.3	0.38	337	c b	b c Stcu	c b c Stcu y	c	
18	6.0	0.83	5.9	0.82	SW : WSW	SW	4.5	0.15	266	c	c Stcu y	c Stcu y	c b	
19	0.2	0.02	0.2	0.02	WSW : WNW	NW	2.7	0.30	331	b	b Frcu y	b c Cu y	c	
20	1.2	0.17	1.0	0.14	NW : NNW	NNW	0.9	0.12	261	c b c	c Stcu	c Stcu y	c	
21	4.2	0.52	4.0	0.50	NNW	NNW : NNE	4.1	0.39	323	c	c Stcu Nbst	c p. c	c b	
22	8.0	1.00	8.0	1.00	NNE : N	NNW : Calm	0.7	0.07	217	b c	c b Frcu	b Frcu y	b	
23	7.1	0.89	6.7	0.84	Calm	Calm	0.5	0.00	141	b w	b z y	b Frcu z.	b m.	
24	4.0	0.50	2.8	0.35	Calm	S : Calm	0.5	0.02	159	b c b z.	b bc z.	c b z. y	b c	
25	3.1	0.39	2.3	0.28	Calm	Calm	0.0	0.00	126	c w lu-ha	c m m.	c Acu	c	
26	0.0	0.00	0.0	0.00	Calm : NNE	NE : NNE	1.2	0.09	218	c m w	c Stcu m.	c Stcu	c	
27	4.5	0.56	3.8	0.48	NE : NNE	NNE : ENE	0.7	0.06	226	c	c Stcu	c Stcu bc	c b	
28	4.6	0.54	4.6	0.54	Calm : NNE	Calm	0.1	0.00	162	b c	c Ast	c b	b	
29	6.4	0.75	6.3	0.74	Calm	Calm	0.0	0.00	112	b c	c d. m.	c Frcu b	b	
30	5.3	0.63	5.0	0.59	Calm	NE : ESE : Calm	0.2	0.02	160	b c m	c m bc Acu Ci	c r R h t l c	c b	
31	4.8	0.56	4.1	0.48	Calm	S	0.2	0.03	153	b ff	ff b	b bc Cu b	b c	
Means	3.9	0.54	3.5	0.49	..	..	..	0.10	201					

Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28	29	30	31
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The mean Temperature of Evaporation for the month was 59°.8, being 2°.3 higher than the average for the 65 years, 1841-1905.  
 The mean Temperature of the Dew Point for the month was 56°.0, being 1°.7 higher than the average for the 65 years, 1841-1905.  
 The mean Degree of Humidity for the month was 73.9, being 2.9 less than the average for the 65 years, 1841-1905.  
 The mean Elastic Force of Vapour for the month was 0.452in., being 0.028in. greater than the average for the 65 years, 1841-1905.

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 5.9.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.263. The maximum daily amount of Sunshine was 12.3 hours on August 6.

The highest reading of the Solar Radiation Thermometer was 149°.7 on August 9; and the lowest reading of the Terrestrial Radiation Thermometer was 36°.1 on August 16.

The Proportions of Wind referred to the cardinal points were N. 18, E. 10, S. 12, W. 16, calm or nearly calm conditions 44, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 4.5 lbs. on the square foot on August 18. The mean daily Horizontal Movement of the Air for the month was 201 miles; the greatest daily value was 379 miles on August 15, and the least daily value was 112 miles on August 29.

Rain (0.005in. or over) fell on 6 days in the month, amounting to 1.683in., as measured by gauge No. 6 partly sunk below the ground; being 0.66in. less than the average fall for the 65 years, 1841-1905.

MONTH and DAY, 1937.	BARO-METER. 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 Sunshine.	Sun above Horizon.
		Of the Air.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. Deduced Mean Daily Value.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
Sept. 1	29.776	76.7	58.1	18.6	64.9	+ 5.1	61.3	58.8	6.1	15.1	1.1	80	127.6	51.1	59.4	0.000	1.3	13.6
2	29.807	78.2	58.0	20.2	66.0	+ 6.3	61.9	59.1	6.9	15.4	1.9	79	130.4	51.1	59.6	0.036	6.1	13.5
3	29.911	76.6	54.7	21.9	64.7	+ 5.1	59.6	55.8	8.9	22.8	0.5	73	141.1	43.5	59.7	0.081	8.9	13.5
4	30.063	75.7	47.2	28.5	59.7	+ 0.2	53.8	48.3	11.4	26.5	2.2	66	137.2	34.6	59.3	0.000	10.0	13.4
5	29.969	77.6	46.9	30.7	61.5	+ 2.1	55.4	49.9	11.6	24.0	2.0	66	134.9	37.0	59.8	0.000	9.1	13.3
6	29.912	81.8	55.0	26.8	65.0	+ 5.8	58.0	52.2	12.8	24.0	1.1	63	134.6	38.4	59.8	0.000	7.2	13.3
7	29.904	82.5	61.3	21.2	68.6	+ 9.6	63.2	59.6	9.0	17.8	2.5	73	134.3	55.2	59.8	0.000	5.5	13.2
8	30.032	70.0	54.0	16.0	63.0	+ 4.2	56.1	50.0	13.0	27.9	1.8	63	128.8	38.9	59.8	0.051	7.6	13.2
9	29.980	63.3	46.1	17.2	52.6	- 6.0	49.7	46.6	6.0	18.4	0.6	81	90.2	35.1	59.6	0.240	0.5	13.1
10	29.939	61.2	46.3	14.9	52.4	- 6.0	47.8	42.6	9.8	18.2	0.6	69	113.1	38.4	59.8	0.000	5.9	13.0
11	29.946	57.5	44.8	12.7	51.5	- 6.6	47.2	42.3	9.2	12.6	3.6	70	94.2	38.8	59.5	0.000	3.3	12.9
12	29.896	59.7	48.8	10.9	52.9	- 5.1	49.0	44.9	8.0	17.1	1.6	74	115.0	45.0	59.3	0.016	1.8	12.9
13	29.460	59.7	49.6	10.1	53.1	- 4.7	51.6	50.1	3.0	7.2	0.4	90	100.5	47.8	59.1	0.210	0.3	12.8
14	29.430	61.8	47.7	14.1	54.3	- 3.4	50.3	46.2	8.1	19.8	1.7	74	120.0	38.1	59.0	0.010	4.1	12.8
15	29.696	67.7	50.1	17.6	57.9	+ 0.3	55.2	52.9	5.0	13.9	0.9	83	123.4	39.7	58.9	0.051	4.0	12.7
16	29.103	64.6	42.3	22.3	52.5	- 5.0	49.8	47.0	5.5	14.8	0.6	82	127.0	31.1	58.6	0.016	2.9	12.7
17	29.038	64.7	50.4	14.3	54.4	- 2.8	53.0	51.7	2.7	13.2	0.8	91	116.2	42.6	58.4	0.235	2.3	12.6
18	29.303	67.8	46.4	21.4	55.0	- 1.9	51.5	48.0	7.0	17.9	0.6	77	129.3	35.5	58.4	0.000	10.1	12.5
19	29.403	58.3	45.7	12.6	51.6	- 4.9	50.1	48.6	3.0	8.1	0.4	89	83.3	34.4	58.2	0.069	0.0	12.4
20	29.614	60.0	46.1	13.9	51.4	- 4.8	48.7	45.8	5.6	10.6	1.4	81	109.6	37.4	58.1	0.044	1.9	12.4
21	29.817	58.9	37.8	21.1	50.4	- 5.5	47.4	44.0	6.4	12.2	0.7	79	88.2	27.3	58.0	0.000	1.8	12.3
22	29.785	70.4	47.7	22.7	56.4	+ 0.8	52.8	49.4	7.0	18.0	0.4	77	123.9	36.9	57.9	0.000	4.5	12.3
23	29.992	71.2	42.6	28.6	55.4	- 0.0	51.4	47.5	7.9	21.1	0.2	75	123.1	30.8	57.8	0.000	8.0	12.2
24	29.975	68.5	44.0	24.5	56.9	+ 1.6	52.8	48.9	8.0	16.0	2.4	75	123.1	32.4	57.7	0.008	8.0	12.1
25	29.941	58.2	53.8	4.4	56.0	+ 0.8	55.3	54.7	1.3	2.2	0.0	95	68.1	52.4	57.3	0.160	0.0	12.1
26	29.914	71.9	53.0	18.9	61.3	+ 6.1	58.1	55.6	5.7	17.1	0.0	82	119.0	42.2	57.5	0.007	10.0	12.0
27	29.808	71.9	48.7	23.2	60.5	+ 5.4	58.7	57.4	3.1	10.1	0.4	89	118.3	37.3	57.4	0.029	0.5	11.9
28	29.886	65.2	50.1	15.1	59.6	+ 4.7	55.3	51.5	8.1	18.5	1.2	74	118.0	38.2	57.4	0.000	6.0	11.9
29	30.012	67.9	43.3	24.6	55.0	+ 0.3	51.9	48.9	6.1	18.1	0.0	80	119.7	33.5	57.4	0.000	6.2	11.8
30	29.863	68.5	45.1	23.4	55.9	+ 1.5	52.9	50.1	5.8	17.6	0.0	81	121.2	31.1	57.4	0.000	6.9	11.7
Means	29.756	67.9	48.9	19.1	57.3	+ 0.1	53.7	50.3	7.1	16.5	1.1	77.7	117.1	39.2	58.7	1.263	4.8	12.7
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day, 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 photographic 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 photographic 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 29.756in., being 0.062in. lower than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 82°.5 on September 7; the lowest in the month was 37°.8 on September 21; and the range was 44°.7. The mean of all the highest daily readings in the month was 67°.9, being 0°.6 higher than the average for the 65 years, 1841-1905. The mean of all the lowest daily readings in the month was 48°.9, being 0°.2 lower than the average for the 65 years, 1841-1905. The mean of the daily ranges was 19°.1, being 0°.9 greater than the average for the 65 years, 1841-1905. The mean for the month was 57°.3, being 0°.1 higher than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.							CLOUDS AND WEATHER.			
	POLARIS		8 URSA MINORIS.		OSLER'S.				Robinson's			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>
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.		Pressure on the Square Foot.			Horizontal Movement of the Air.					
					A.M.	P.M.	Greatest.	Mean of 24 Hourly Measures.	Miles.						
Sept. 1	3.0	0.35	2.7	0.32	SW	SSW : SW	2.5	0.20	266	c w	c Ast Frst	c p c	c p c		
2	1.5	0.18	1.1	0.14	SW	SW : SSW	3.5	0.30	290	c bc	bc c Nbst	c Cu Cunb p b	c r		
3	8.5	1.00	8.5	1.00	Calm : WSW	WSW	1.8	0.12	253	rr c	c bc Ci Acu y	bc Ci Cu b y	b		
4	9.0	1.00	9.0	1.00	Calm : WSW	WSW : SW : SSW	0.8	0.03	200	b w	b y	bc Frcu y	b		
5	..	..	..	..	Calm : SW	SW : SSW	1.5	0.07	236	b	b Ci	b v y	b		
6	5.1	0.56	4.5	0.50	Calm : SW	SW : SSW	2.0	0.17	257	b c m	c bc b y	b Ci Cu	b		
7	3.7	0.41	3.2	0.36	SSW : SW	SW	1.6	0.19	297	b c	bc Acu	bc Cicu Acu	b c		
8	7.6	0.84	6.6	0.74	SW : NNW	NNW	4.8	0.14	260	c r.	c b Ci y	b Ci y	b		
9	6.3	0.70	6.2	0.69	Calm : W	W : Calm : NNW	0.7	0.01	157	b c	c Nbst r	c rr	c d, b		
10	9.0	1.00	9.0	1.00	NNW	N : NNW	4.3	0.27	306	b	b bc Frcu	bc c Frcu	b		
11	2.9	0.31	1.9	0.20	NNW : N	N : NNW	6.2	1.12	412	b	b c Stcu	bc Stcu	c		
12	0.0	0.00	0.0	0.00	NNW	NNW : SW : Calm	1.7	0.13	251	c	c Stcu	c Stcu	d c d.		
13	0.3	0.03	0.0	0.00	Calm	Calm : WSW : NNW	0.5	0.02	168	c d.	c	c rr t l	c		
14	1.5	0.16	1.5	0.16	NNW	NW : SSW	1.0	0.11	263	c b c	c r c	bc c Acu y	c		
15	9.0	0.95	8.8	0.92	SSW : SW	SSW : SW	4.3	0.36	326	c i r c	c bc	bc c r, r c	c r, b		
16	4.9	0.51	4.9	0.51	SSW : S	S : SE	0.6	0.04	228	b	c r, c Ast Cunb	c Cunb p, c	c		
17	6.6	0.69	6.3	0.66	SE	S : Calm : SW	2.8	0.07	229	c i r	c Cunb r R	c i r R c	c r, m b		
18	7.0	0.72	6.6	0.68	SW : WSW	SSW	2.7	0.19	291	b	b Frcu	bc Frcu	bc b		
19	7.0	0.72	6.4	0.65	Calm	N : NNW	2.6	0.10	225	b c	c d, m	c P d.	c b		
20	9.7	1.00	9.7	1.00	NNW	NNW	2.7	0.12	267	b c	c m, c Stcu	c p, c r c	b		
21	1.0	0.11	0.0	0.00	NW : WSW	SW : SSW	1.4	0.03	223	b x	c m c Acu	c Ast	c		
22	8.5	0.87	7.3	0.74	S : SSW	SSW : Calm	0.3	0.02	196	c	c Stcu Cu	c Acu b	b lu-ha c b		
23	9.7	1.00	9.7	1.00	Calm	Calm : SW	0.1	0.00	162	b w m	b f b Frcu Ci	bc Stcu b y	b w m.		
24	0.0	0.00	0.0	0.00	SW	WSW : SW	1.3	0.09	266	b w	b Frcu Ci	b c Acu	c d		
25	0.3	0.03	0.1	0.01	WSW : NNE	Calm : E	0.2	0.02	196	c d r	c d d, c	i d, d c	d c d.		
26	10.3	1.00	10.3	1.00	Calm : SE	SSE : ESE	0.5	0.03	188	c d, c	c b bc Frcu	bc b Frcu	b		
27	1.2	0.11	1.1	0.10	Calm	Calm : S	0.0	0.00	159	b m w	c f c r.	c r, c	c d r		
28	8.9	0.87	7.3	0.71	WSW : W : NW	NW : Calm	2.1	0.10	255	c	c Stcu Cist	bc b y	b c		
29	7.7	0.75	7.7	0.75	Calm	SSW : Calm	0.2	0.01	182	c w f	c m c Acu Cist	bc Frcu Ci b	b w		
30	8.1	0.79	7.1	0.69	Calm : S	SSW : Calm	1.0	0.03	195	b w c f	c f bc Frcu	bc Ci Frcu c.	c b		
Means	5.5	0.57	5.1	0.54	..	..	..	0.14	240						
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28	29	30	31		

The mean *Temperature of Evaporation* for the month was 53°.7, being 0°.4 lower than the mean *Temperature of the Dew Point* for the month was 50°.3, being 0°.8 lower than the mean *Degree of Humidity* for the month was 77.7, being 2.2 less than the mean *Elastic Force of Vapour* for the month was 0.367in., being 0.012in. less than

the average for the 65 years, 1841-1905.

The mean amount of *Cloud* for the month (a clear sky being represented by 0 and an overcast sky by 10) was 6.0.

The mean proportion of *Sunshine* for the month (constant sunshine being represented by 1) was 0.381. The maximum daily amount of *Sunshine* was 10.1 hours on September 18.

The highest reading of the *Solar Radiation Thermometer* was 141°.1 on September 3; and the lowest reading of the *Terrestrial Radiation Thermometer* was 27°.3 on September 21.

The *Proportions of Wind* referred to the cardinal points were N. 20, E. 2, S. 29, W. 26, calm or nearly calm conditions, 23, the whole month being represented by 100.

The *Greatest Pressure of the Wind* in the month was 6.2 lbs. on the square foot on September 11. The mean daily *Horizontal Movement of the Air* for the month was 240 miles; the greatest daily value was 412 miles on September 11, and the least daily value was 157 miles on September 9.

*Rain* (0.005in. or over) fell on 16 days in the month, amounting to 1.263in., as measured by gauge No. 6 partly sunk below the ground; being 0.885in. less than the average fall for the 65 years, 1841-1905.



MONTH and DAY 1937.	BARO-METER. 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.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. Deduced Mean Daily Value.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
Oct. 1	29.728	68.8	46.8	22.0	56.4	+ 2.3	52.9	49.6	6.8	17.9	0.4	78	117.4	33.1	57.4	0.000	5.1	11.7
2	29.729	68.7	49.9	18.8	58.3	+ 4.6	55.6	53.3	5.0	14.6	0.5	84	113.1	43.1	57.4	0.000	3.3	11.6
3	29.963	58.2	52.0	6.2	56.1	+ 2.8	54.6	53.3	2.8	7.0	0.6	91	71.0	40.9	57.3	0.013	0.0	11.5
4	30.294	62.3	46.4	15.9	53.5	+ 0.5	49.1	44.4	9.1	19.4	1.2	71	115.9	36.9	57.2	0.000	7.9	11.4
5	30.236	59.4	47.9	11.5	54.4	+ 1.6	51.4	48.5	5.9	8.3	3.9	80	69.0	40.0	57.1	0.000	0.0	11.4
6	30.056	56.8	49.8	7.0	54.1	+ 1.6	50.1	45.9	8.2	12.6	3.4	74	73.5	42.9	57.0	0.000	0.0	11.3
7	29.803	56.1	50.2	5.9	52.5	+ 0.2	50.6	48.8	3.7	8.2	0.9	87	62.0	46.5	56.9	0.063	0.0	11.3
8	29.851	60.4	51.0	9.4	54.3	+ 2.3	51.2	48.2	6.1	11.1	2.6	80	97.3	41.2	56.8	0.000	1.0	11.2
9	30.156	60.8	45.1	15.7	53.9	+ 2.3	50.0	46.0	7.9	15.6	2.4	74	107.8	31.1	56.8	0.000	2.1	11.2
10	30.254	59.1	40.6	18.5	48.3	- 3.0	45.8	43.0	5.3	16.4	0.2	81	..	26.5	56.4	0.000	3.7	11.1
11	30.114	58.9	45.3	13.6	51.5	+ 0.6	48.7	45.7	5.8	13.8	1.8	81	111.1	34.3	56.4	0.000	4.6	11.0
12	30.084	55.0	50.0	5.0	52.2	+ 1.6	50.2	48.3	3.9	5.3	2.6	86	65.9	47.3	56.2	0.007	0.0	11.0
13	30.124	52.2	40.4	11.8	49.0	- 1.3	45.9	42.1	6.9	10.7	2.1	77	68.2	26.0	56.0	0.000	0.0	10.9
14	30.018	57.0	43.9	13.1	51.3	+ 1.2	48.2	44.9	6.4	9.0	2.6	78	65.4	37.1	56.0	0.000	0.0	10.8
15	30.153	61.5	41.4	20.1	53.6	+ 3.7	49.0	44.0	9.6	17.3	2.2	70	103.7	28.3	56.0	0.000	2.3	10.8
16	30.306	61.5	37.0	24.5	48.6	- 1.2	45.7	42.2	6.4	14.5	0.3	79	99.0	25.6	55.9	0.000	7.2	10.7
17	30.356	57.7	39.3	18.4	48.7	- 0.9	45.9	42.6	6.1	11.8	1.2	79	84.6	26.4	55.7	0.000	4.0	10.6
18	30.320	52.6	35.7	16.9	44.5	- 4.8	43.8	43.0	1.5	2.8	0.0	94	78.4	22.6	55.5	0.000	0.5	10.6
19	30.084	57.9	40.3	17.6	48.5	- 0.6	47.2	45.8	2.7	9.3	0.0	90	89.6	32.1	55.3	0.002*	4.0	10.5
20	29.843	60.2	42.6	17.6	50.7	+ 1.9	49.0	47.2	3.5	12.2	0.0	88	94.1	27.2	55.1	0.003*	..	..
21	29.664	62.7	42.0	20.7	48.6	+ 0.0	47.1	45.4	3.2	13.1	0.0	89	90.4	26.7	55.0	0.002*	4.7	10.4
22	29.300	61.5	43.9	17.6	51.2	+ 2.9	49.5	47.8	3.4	12.0	0.3	88	95.2	29.1	54.9	0.402	3.6	10.3
23	28.675	54.6	45.3	9.3	49.2	+ 1.1	48.1	47.0	2.2	11.3	1.0	92	98.6	40.6	54.8	0.690	2.2	10.2
24	28.926	53.9	45.5	8.4	48.7	+ 0.8	44.9	40.1	8.6	19.8	2.7	72	98.9	37.0	54.4	0.018	4.6	10.2
25	28.909	58.7	49.5	9.2	53.5	+ 5.8	51.2	49.0	4.5	8.3	2.2	84	94.3	45.1	54.4	0.483	2.1	10.1
26	29.258	59.4	47.8	11.6	51.9	+ 4.3	49.9	47.9	4.0	11.0	1.4	86	92.1	38.5	54.3	0.002	1.9	10.0
27	29.489	55.5	49.7	5.8	52.6	+ 5.1	52.0	51.4	1.2	2.4	0.3	96	54.6	44.1	54.2	0.386	0.0	10.0
28	29.572	63.0	51.6	11.4	55.6	+ 8.2	53.4	51.5	4.1	11.4	1.2	86	100.7	43.3	54.2	0.026	5.3	9.9
29	29.346	59.0	51.5	7.5	55.1	+ 7.8	53.9	52.9	2.2	4.2	0.3	92	70.2	41.0	54.1	0.001	0.0	9.9
30	29.366	59.7	47.1	12.6	54.1	+ 6.9	52.1	50.1	4.0	12.5	1.2	87	98.8	36.1	54.2	0.074	3.6	9.8
31	29.584	58.9	45.0	13.9	51.5	+ 4.4	50.1	48.7	2.8	8.9	0.6	90	81.8	32.2	54.1	0.143	1.2	9.8
Means	29.792	59.1	45.6	13.5	52.0	+ 2.0	49.6	47.1	5.0	11.4	1.3	83.4	88.8	35.6	55.7	2.315	2.5	10.7
Number of Columns for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day, 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 photographic 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 photographic 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 October 19, 20 and 21 are derived from wet fog.

The mean reading of the Barometer for the month was 29.792in., being 0.064in. higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 68°.8 on October 1; the lowest in the month was 35°.7 on October 18; and the range was 33°.1. The mean of all the highest daily readings in the month was 59°.1, 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 45°.6, being 2°.4 higher than the average for the 65 years, 1841-1905. The mean of the daily ranges was 13°.5, being 0°.8 less than the average for the 65 years, 1841-1905. The mean for the month was 52°.0, being 2°.0 higher than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.							CLOUDS AND WEATHER.			
	POLARIS		SUN & MINORIS.		OSLER'S.			ROBINSON'S.							
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.			Pressure on the Square Foot.		Horizontal Movement 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.	miles.						
Oct. 1	7.2	0.70	5.3	0.52	SSE : Calm : SE	SE : ENE	0.5	0.02	198	b w	c Ci Acu	c bc Acu Ci	b w		
2	0.0	0.00	0.0	0.00	Calm : E	E : Calm	0.1	0.00	167	c w f	c f bc Acu	bc Acu c	c o m		
3	10.6	0.99	10.6	0.99	Calm	N : NNW	0.8	0.02	177	o m f	d d o f	ff c	b m.		
4	5.8	0.54	5.8	0.54	N : NNW	N : NNE	1.9	0.13	268	b m.	b Cu	bc b Ci y	b c		
5	6.4	0.59	5.7	0.53	N : NNE	NNE	5.1	0.61	354	c	c Nbst	c d. c	b c r.		
6	0.0	0.00	0.0	0.00	NNE : NE	NE	4.6	0.45	323	c	c Stcu	c Stcu	c		
7	0.0	0.00	0.0	0.00	NE : NNE	NE : NNE	1.0	0.10	254	c d r	c r d c	c Nbst	c d. d. c		
8	4.9	0.46	4.3	0.40	NNE : NE	NE : NNE	0.9	0.05	241	c	c Stcu	c Stcu b	b c		
9	9.7	0.86	9.7	0.86	NE	NE	1.1	0.07	236	c	bc c Acu	c Stcu b	b c b		
10	6.2	0.55	3.5	0.31	Calm	N : Calm	0.9	0.02	179	b f	b f c m b	b. Cu Acu	b. c f m.		
11	0.1	0.01	0.1	0.01	N : NNE	NNE	2.8	0.17	273	c	c Stcu Cu	c Stcu	c d		
12	0.0	0.00	0.0	0.00	N	N	1.6	0.20	274	c	c d d.	c Stcu	c		
13	1.6	0.14	1.6	0.14	N : NNW : Calm	NW : WSW	0.1	0.00	197	c	c o St	o c b m	b x c f m		
14	0.0	0.00	0.0	0.00	WSW : W	W : NW	1.0	0.04	250	c f	c f m.	c Stcu m	c m.		
15	10.7	0.95	9.9	0.88	W : NW	NNW : SW	1.4	0.08	246	c m	c m. bc Cu	bc c Frcu y	b f		
16	5.6	0.49	5.3	0.46	SW : Calm	WSW	0.2	0.03	219	ff x	ff b Ci	b bc Ci Cu	b m c		
17	10.9	0.95	9.9	0.86	WSW : Calm : W	WSW : S	0.1	0.00	196	c	c Stcu m.	c b Ci m	b f		
18	0.3	0.02	0.0	0.00	Calm	Calm	0.0	0.00	106	b x fe	FeFe b f	b f Fe	FeFe		
19	2.7	0.24	2.7	0.24	Calm	E : Calm	0.9	0.02	188	FeFe	FeFe c b m.	b m.	b f w Fe		
20	6.4	0.56	6.4	0.56	Calm	SSW : Calm	0.1	0.00	164	FeFe	FeFe b c b	b Cu	b x m		
21	11.2	0.97	11.0	0.96	Calm	S	0.1	0.00	159	b FeFe x	FeFe b f	b f b Ci	b w		
22	1.5	0.13	0.2	0.02	S : SSW	SSW : Calm : SSE	3.0	0.14	254	b w	bc Acu Frcu	c Nbst r. rr	rr c		
23	0.4	0.03	0.3	0.02	SSE : SE : SSW	S	6.5	0.59	346	c i r	c i r R c	c Cumb p r R	r R c		
24	0.7	0.06	0.5	0.04	WSW : W	W : SW : SSE	4.3	0.55	373	c	c p c Cu	c b Cu Ci c	c d. c		
25	3.3	0.28	2.1	0.18	SSE : S	S	6.6	0.96	376	c rr	c Nbst p	c p i R h t l	R h l c		
26	0.0	0.00	0.0	0.00	Calm : S	SSW : Calm	1.0	0.01	187	c	c m c	c Ast Frcu	c f d		
27	6.2	0.52	4.5	0.37	Calm : N : NE	NE : S	1.7	0.07	240	c d. m	c d. rr	rr o Ast m	c w		
28	0.0	0.00	0.0	0.00	S : SSW	S : Calm	1.0	0.05	233	c b w	b c	c Ast Acu	c i r. m		
29	3.7	0.31	3.6	0.30	NE : Calm	Calm : SE	0.4	0.01	196	c	c o St m	c m f	p. c b w		
30	8.6	0.69	7.3	0.58	SE : S : SSW	SW : SSW	4.2	0.20	270	c d. d	c d. c Acu	c r c	c r b		
31	2.7	0.21	1.1	0.09	S : SE	SE : ESE : Calm	1.0	0.02	209	b c	c Acu Ci	c b c Ci Cu	rr c		
Means	4.1	0.36	3.6	0.32	..	..	..	0.15	237						

The mean Temperature of Evaporation for the month was 49°.6, being 1°.7 higher than  
 The mean Temperature of the Dew Point for the month was 47°.1, being 1°.5 higher than  
 The mean Degree of Humidity for the month was 83.4, being 1.5 less than  
 The mean Elastic Force of Vapour for the month was 0.325in., being 0.017in. greater than

the average for the 65 years, 1841-1905.

The mean amount of Cloud for the month (a clear sky being represented by 0 and an overcast sky by 10) was 6.6.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.233. The maximum daily amount of Sunshine was 7.9 hours on October 4.

The highest reading of the Solar Radiation Thermometer was 117°.4 on October 1; and the lowest reading of the Terrestrial Radiation Thermometer was 22°.6 on October 18.

The Proportions of Wind referred to the cardinal points were N. 25, E. 15, S. 23, W. 14, calm or nearly calm conditions, 23, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 6.6 lbs. on the square foot on October 25. The mean daily Horizontal Movement of the Air for the month was 237 miles; the greatest daily value was 376 miles on October 25, and the least daily value was 106 miles on October 18.

Rain (0.005in. or over) fell on 11 days in the month, amounting to 2.315in., as measured by gauge No. 6 partly sunk below the ground; being 0.467in. less than the average fall for the 65 years, 1841-1905.



MONTH and DAY 1937.	BARO-METER. Mean of 24 Hourly Values (corrected to 32° and reduced to 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.					Of Evapo-ration.	Of the Dew Point.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
Nov. 1	29.408	52.7	43.9	8.8	49.9	+ 2.9	49.4	48.8	1.1	1.7	0.0	96	55.4	33.9	54.1	0.489	0.0	9.7
2	29.681	48.5	41.2	7.3	45.8	- 1.0	45.8	45.8	0.0	1.3	0.0	100	57.4	30.1	54.1	0.002*	0.0	9.6
3	29.886	52.9	40.2	12.7	48.0	+ 1.4	47.8	47.6	0.4	2.8	0.2	98	63.9	30.0	54.0	0.000	0.0	9.6
4	29.962	56.7	39.5	17.2	47.1	+ 0.7	45.7	44.1	3.0	9.9	0.0	89	89.3	27.0	53.9	0.000	3.0	9.5
5	29.998	52.5	42.4	10.1	46.3	+ 0.2	44.8	43.0	3.3	9.4	0.0	88	78.2	30.5	53.8	0.000	1.5	9.5
6	29.979	49.7	45.9	3.8	48.3	+ 2.5	46.9	45.3	3.0	4.6	1.2	89	52.7	34.5	53.6	0.009	0.0	9.4
7	29.882	52.6	46.0	6.6	49.3	+ 3.9	48.1	46.9	2.4	3.9	1.2	91	56.3	42.0	53.4	0.000	0.0	9.3
8	29.896	52.4	45.4	7.0	49.6	+ 4.6	48.6	47.7	1.9	4.7	0.4	93	62.1	38.1	53.2	0.096	0.0	9.3
9	29.977	50.4	38.0	12.4	46.6	+ 2.0	44.3	41.5	5.1	9.5	0.6	82	78.3	31.2	53.1	0.123	2.8	9.2
10	29.876	45.0	35.0	10.0	39.9	- 4.4	37.8	34.6	5.3	8.4	1.0	81	58.9	28.5	53.0	0.000	2.2	9.2
11	29.950	48.0	38.7	9.3	43.4	- 0.6	41.2	38.1	5.3	7.9	2.8	82	60.9	34.1	52.9	0.000	1.0	9.1
12	30.058	47.7	34.9	12.8	41.3	- 2.4	38.7	34.7	6.6	11.9	2.0	78	69.2	24.4	52.7	0.000	1.9	9.1
13	30.000	40.8	27.1	13.7	34.4	- 9.1	32.0	27.5	6.9	13.4	1.3	76	57.4	17.9	52.1	0.000	1.6	9.0
14	29.917	40.1	29.3	10.8	33.8	- 9.5	31.4	27.1	6.7	12.6	2.7	76	46.4	18.6	52.0	0.000	0.5	9.0
15	29.946	46.7	31.0	15.7	39.0	- 4.1	37.4	35.1	3.9	6.2	1.1	85	57.0	23.1	51.6	0.000	0.0	8.9
16	29.884	42.7	29.2	13.5	37.9	- 4.9	37.1	35.9	2.0	7.2	0.5	92	59.2	25.3	51.2	0.000	0.6	8.8
17	29.521	41.0	36.9	4.1	38.8	- 3.8	37.0	34.3	4.5	8.3	0.4	83	49.9	30.6	50.7	0.046	0.0	8.8
18	29.246	44.5	39.9	4.6	41.7	- 0.7	41.5	41.3	0.4	2.0	0.0	98	45.1	38.9	50.5	0.040	0.0	8.8
19	29.127	48.5	39.2	9.3	44.2	+ 1.9	42.0	39.1	5.1	12.8	0.2	82	60.0	31.7	50.3	0.105	5.1	8.7
20	29.507	40.2	30.9	9.3	37.2	- 5.0	35.7	33.4	3.8	6.0	1.7	86	51.2	22.8	50.1	0.000	0.4	8.7
21	29.694	39.3	23.9	15.4	32.5	- 9.6	32.1	31.4	1.1	5.5	0.4	96	..	13.0	49.9	0.000	0.6	8.6
22	29.691	47.1	34.3	12.8	41.3	- 0.8	40.8	40.1	1.2	5.2	0.0	96	..	27.0	49.8	0.010	0.0	8.6
23	29.767	50.7	43.3	7.4	46.4	+ 4.4	45.9	45.2	1.2	4.8	0.2	96	59.3	33.3	49.6	0.211	0.7	8.5
24	29.925	48.3	37.2	11.1	44.5	+ 2.5	43.0	41.1	3.4	6.7	0.2	88	59.0	31.6	49.3	0.000	0.3	8.5
25	30.159	42.0	29.6	12.4	36.6	- 5.3	35.7	34.1	2.5	5.7	0.0	91	52.5	24.1	49.1	0.003*	2.8	8.4
26	30.115	43.1	28.6	14.5	35.4	- 6.4	34.5	32.9	2.5	7.1	0.0	91	51.0	23.1	49.0	0.000	3.0	8.4
27	30.052	46.6	29.6	17.0	38.4	- 3.3	37.1	35.1	3.3	9.5	0.0	88	55.7	26.5	48.9	0.000	0.2	8.3
28	30.316	40.8	27.6	13.2	34.5	- 7.0	33.0	30.3	4.2	6.4	0.7	84	41.0	22.2	48.6	0.000	2.1	8.3
29	30.216	46.4	34.4	12.0	40.5	- 0.7	37.6	32.9	7.6	14.7	3.4	74	61.5	30.1	48.6	0.008	0.8	8.3
30	29.900	51.9	42.0	9.9	47.8	+ 6.8	47.0	46.1	1.7	5.9	1.2	94	57.5	37.0	48.2	0.116	0.0	8.2
Means	29.851	47.0	36.2	10.8	42.0	- 1.5	40.7	38.7	3.3	7.2	0.8	88.1	58.8	28.7	51.4	Sum 1.258	1.0	8.9
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day, 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 photographic 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 photographic 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 November 2 is derived from wet fog, and that on November 25 from hoar frost.

The mean reading of the Barometer for the month was 29.851 in., being 0.086 in. higher than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 56.7 on November 4; the lowest in the month was 23.9 on November 21; and the range was 32.8. The mean of all the highest daily readings in the month was 47.0, being 2.0 lower than the average for the 65 years, 1841-1905. The mean of all the lowest daily readings in the month was 36.2, being 1.7 lower than the average for the 65 years, 1841-1905. The mean of the daily ranges was 10.8, being 0.3 less than the average for the 65 years, 1841-1905. The mean for the month was 42.0, being 1.5 lower than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.							CLOUDS AND WEATHER.			
	POLARIS		8 UNRS. MINORIS.		OSLER'S.			Robinson's							
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.		Pressure on the Square Foot.		Horizontal Movement 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.						lbs.	lbs.
Nov. 1	4.7	0.37	4.0	0.32	Calm : E : NE	N : SE	0.7	0.03	197	c	c o r r m	r R r R m c	c b		
2	0.0	0.00	0.0	0.00	Calm	WSW : Calm	0.0	0.00	152	b Fe	Fe Fe	Fe fe Fe	fefe		
3	5.9	0.47	5.1	0.41	Calm	SW : Calm	0.0	0.00	157	fefe	Fe f	o f m	b f		
4	5.3	0.42	4.7	0.38	Calm : SE	SE : Calm	0.1	0.00	182	Fe b c	c m.	bc b Ci Frcu m.	b w c f		
5	4.5	0.36	2.5	0.20	Calm : NE	ENE : NE	0.9	0.03	215	c ff	c f m	c Stcu b m	b m f		
6	0.0	0.00	0.0	0.00	NE : ESE	ESE : NE : Calm	0.5	0.02	212	o	o d d. c m.	c m.	d. d.		
7	2.9	0.23	1.2	0.10	Calm	ENE : E : Calm	0.1	0.00	178	c m.	o St m. m	o St m m.	c m.		
8	0.0	0.00	0.0	0.00	Calm : ESE	E : Calm	0.1	0.00	198	c m. m	c Ast m	c Acu Ci m	c d. r m		
9	12.7	1.00	12.7	1.00	Calm : NNE	NNE : N	3.6	0.31	287	c i r d. m	c d. bc Frcu	bc b Frcu	b		
10	8.1	0.63	6.6	0.52	N : NNW	NNW	3.4	0.45	350	b x	b c Stcu	c Stcu bc	bc p.		
11	10.5	0.82	10.1	0.79	NNW	NNW	2.0	0.23	314	bc	bc c Cu Frst	c Stcu Ast	c b		
12	11.4	0.90	9.6	0.75	WSW : NNW	NNW	0.2	0.02	216	b x c	c Acu b m	b c Stcu m	c b x m		
13	11.8	0.91	11.4	0.88	Calm	NNW	1.1	0.03	196	b f m x	b m f	b f b Cicu c b	b m x		
14	11.5	0.89	10.4	0.80	NNW : Calm	NW : SW	1.8	0.03	219	b m x	b m f x	b f b c Ci m.	b lu-ha m f		
15	1.8	0.14	1.5	0.12	WSW	NW : Calm	0.0	0.00	198	b c b x	b Frst m f	b c Frst f	FF		
16	10.2	0.79	8.7	0.67	Calm	ESE	2.0	0.08	213	c	fe Fe b f	b c f bc	b c lu-ha		
17	0.0	0.00	0.0	0.00	ESE	ESE	3.3	0.27	309	c lu-ha c	c Ast	o Nbst d d.	d. d.		
18	0.0	0.00	0.0	0.00	ESE	ESE : E	2.1	0.26	316	d. d. o	o d. m f	o d. m f	o d f		
19	13.0	1.00	13.0	1.00	ESE : WSW	WSW	2.2	0.20	336	o d r	c b c so-ha	bc Cist b	b w		
20	..	..	..	..	WSW : NNW	NNW : SW	0.4	0.05	241	b w	b c f m	c Stcu m	c b f x		
21	3.5	0.26	2.8	0.21	SW : Calm	Calm	0.0	0.00	150	b f x	b f FF	b bc Acu f	c m		
22	2.3	0.17	1.2	0.09	Calm : SE	SE : ESE	0.7	0.02	203	c b x c	c Acu f c	c Stcu.	c r m		
23	2.6	0.19	2.1	0.16	SE : SSE	SE : Calm	0.2	0.00	197	c r r	c Acu	c Stcu Cist bc	c m		
24	13.2	0.98	12.8	0.95	NE	NE	1.4	0.07	242	c m	c Frcu m m.	c Frcu b c b	b		
25	13.5	1.00	13.5	1.00	Calm : WSW	WSW : SW	0.0	0.00	197	b x	FF b f	b Ci f	b f m		
26	0.4	0.03	0.0	0.00	Calm : WSW	Calm	0.0	0.00	164	b m x	b m f	b f	b f F x		
27	9.5	0.69	7.2	0.53	Calm	NE	1.6	0.04	193	FF	FF	c Stcu m.	c m. b c		
28	4.3	0.31	2.1	0.15	Calm	Calm : SSE	0.0	0.00	147	c b x	b m f x	b f x	b x c f		
29	2.9	0.21	2.2	0.16	SSW	SW : SSW	2.0	0.14	273	c	c Acu m	c Ci bc	c b c r		
30	0.3	0.02	0.2	0.01	SSW	SSW	1.4	0.13	291	i r c	c o i r. m	r r. o d m.	dd c		
Means	5.8	0.44	5.0	0.39	..	..	..	0.08	225						
Number of Column for Reference.	19	20	21	22	23	24	25	26	27	28	29	30	31		

The mean Temperature of Evaporation for the month was 40°.7, being 1°.2 lower than  
 The mean Temperature of the Dew Point for the month was 38°.7, being 1°.0 lower than  
 The mean Degree of Humidity for the month was 88.1, being 1.5 greater than  
 The mean Elastic Force of Vapour for the month was 0.236in., being 0.0roin. 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 6.1.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.116. The maximum daily amount of Sunshine was 5.1 hours on November 19.

The highest reading of the Solar Radiation Thermometer was 89°.3 on November 4; and the lowest reading of the Terrestrial Radiation Thermometer was 13°.0 on November 21.

The Proportions of Wind referred to the cardinal points were N. 18, E. 22, S. 14, W. 14, calm or nearly calm conditions, 32, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 3.6 lbs. on the square foot on November 9. The mean daily Horizontal Movement of the Air for the month was 225 miles; the greatest daily value was 350 miles on November 10, and the least daily value was 147 miles on November 28.

Rain (0.005in. or over) fell on 11 days in the month, amounting to 1.258in., as measured by gauge No. 6 partly sunk below the ground; being 0.962in. less than the average fall for the 65 years, 1841-1905.

MONTH and DAY 1937.	BARO-METER. 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 Sunshine.	Sun above Horizon.
		Of the Air.					Of Evaporation. Mean of 24 Hourly Values.	Of the Dew Point. Deducted Mean Daily Value.	Mean.	Greatest.	Least.		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.							Highest in Sun's Rays.	Lowest on the Grass.				
Dec. 1	29.478	53.2	45.2	8.0	50.0	+ 9.1	49.2	48.4	1.6	6.6	0.8	94	62.0	41.0	48.2	0.411	0.2	8.2
2	29.030	48.2	40.9	7.3	44.3	+ 3.4	43.6	42.8	1.5	5.2	0.7	94	63.3	36.0	48.0	0.793	0.1	8.2
3	29.244	45.2	40.2	5.0	43.0	+ 1.9	41.7	39.9	3.1	4.9	1.6	89	46.0	38.1	48.0	0.072	0.0	8.1
4	29.511	40.2	33.0	7.2	37.1	- 4.2	35.7	33.5	3.6	9.6	0.2	87	44.0	31.2	48.0	0.244	0.0	8.1
5	29.143	41.8	31.5	10.3	37.9	- 3.6	36.0	32.9	5.0	9.0	0.4	82	47.9	26.3	47.9	0.112	0.0	8.1
6	29.179	35.6	28.0	7.6	31.4	- 10.1	30.7	29.3	2.1	5.7	1.0	92	37.1	23.1	47.7	0.000	0.0	8.0
7	29.244	36.8	30.8	6.0	32.9	- 8.4	32.4	31.5	1.4	3.6	0.3	95	40.5	26.9	47.7	0.000	0.0	8.0
8	29.360	38.6	34.0	4.6	36.8	- 4.2	35.4	33.1	3.7	5.0	1.0	86	40.3	31.8	47.4	0.247	0.0	8.0
9	29.406	38.2	34.1	4.1	36.0	- 4.6	35.3	34.0	2.0	2.0	0.0	93	39.9	31.7	47.1	0.218	0.0	8.0
10	29.542	41.4	31.1	10.3	34.4	- 6.0	33.8	32.8	1.6	5.6	1.6	94	40.6	28.1	46.9	0.351	0.0	8.0
11	29.124	44.7	36.6	8.1	40.7	+ 0.5	39.3	37.5	3.2	10.5	1.2	87	51.0	30.1	46.8	0.017	0.8	7.9
12	29.361	39.0	31.8	7.2	36.3	- 4.0	33.5	28.3	8.0	12.3	3.6	72	45.2	26.1	46.4	0.005	4.1	7.9
13	28.994	43.0	31.8	11.2	38.7	- 1.8	37.7	36.1	2.6	7.9	0.8	91	45.0	26.9	46.2	0.726	0.0	7.9
14	28.845	37.7	30.8	6.9	34.6	- 6.1	34.1	33.2	1.4	4.0	0.3	95	40.5	26.6	46.1	0.048	2.4	7.9
15	29.219	39.6	31.6	8.0	34.7	- 6.1	33.8	32.2	2.5	7.0	0.0	91	41.9	26.8	46.0	0.005	0.0	7.9
16	29.574	40.3	30.7	9.6	36.4	- 4.3	35.6	34.2	2.2	3.1	1.2	92	42.7	25.0	45.8	0.020	0.0	7.9
17	29.901	39.8	35.4	4.4	37.5	- 2.9	36.0	33.7	3.8	4.2	2.2	86	47.1	32.0	45.6	0.000	0.0	7.8
18	29.945	36.0	27.6	8.4	32.8	- 7.2	31.3	28.7	4.1	8.9	1.7	84	36.5	18.9	45.3	0.000	0.0	7.8
19	29.875	35.6	26.0	9.6	31.3	- 8.2	30.7	29.5	1.8	3.7	0.3	93	39.9	17.0	45.1	0.147	0.0	7.8
20	29.891	35.1	25.0	10.1	30.8	- 8.2	30.1	28.7	2.1	5.9	0.3	91	44.0	22.0	44.9	0.002*	2.7	7.8
21	29.730	43.9	34.1	9.8	38.3	- 0.4	37.0	35.0	3.3	10.5	0.7	88	41.4	31.4	44.9	0.000	0.1	7.8
22	29.841	51.7	43.9	7.8	48.2	+ 9.8	47.7	47.3	0.9	3.9	0.2	96	59.2	40.7	44.8	0.000	0.0	7.8
23	30.045	53.4	38.3	15.1	48.8	+ 10.6	47.9	47.0	1.8	5.0	0.6	93	61.9	29.9	44.8	0.024	1.2	7.8
24	30.217	52.0	39.3	12.7	47.7	+ 9.5	46.8	45.8	1.9	4.5	0.2	93	57.1	31.0	44.9	0.001	0.7	7.8
25	30.418	51.4	41.2	10.2	46.1	+ 7.7	46.0	45.9	0.2	1.6	0.0	99	51.0	36.1	45.0	0.002*	0.0	7.8
26	30.514	43.2	32.1	11.1	39.3	+ 0.7	39.0	38.6	0.7	1.7	0.0	97	44.8	32.6	45.0	0.010	0.0	7.8
27	30.509	38.8	34.6	4.2	37.3	- 1.5	35.7	33.2	4.1	6.6	0.8	85	41.0	33.9	45.1	0.000	0.0	7.9
28	30.357	42.7	34.1	8.6	38.4	- 0.5	37.0	34.9	3.5	7.5	0.7	87	44.0	33.6	45.3	0.006	0.0	7.9
29	30.265	42.6	37.6	5.0	40.1	+ 1.1	38.7	36.8	3.3	6.3	1.2	87	41.7	35.3	45.3	0.040	0.0	7.9
30	30.299	39.5	34.6	4.9	37.0	- 1.9	35.1	31.9	5.1	8.9	1.8	81	46.6	29.2	45.2	0.008	1.3	7.9
31	30.229	42.4	34.2	8.2	38.1	- 0.6	36.8	34.8	3.3	4.6	1.5	88	42.3	28.3	45.2	0.002	0.0	7.9
Means	29.687	42.3	34.2	8.1	38.6	- 1.3	37.5	35.9	2.8	6.0	0.9	89.7	46.0	29.9	46.1	Sum 3.511	0.4	7.9
Number of Column for Reference.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The results apply to the civil day, 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 photographic 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 photographic 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 20 is derived from hoar frost, and that on December 25 from wet fog.

The mean reading of the Barometer for the month was 29.687 in., being 0.105 in. lower than the average for the 65 years, 1841-1905.

TEMPERATURE OF THE AIR.

The highest in the month was 53°.4 on December 23; the lowest in the month was 25°.0 on December 20; and the range was 28°.4. The mean of all the highest daily readings in the month was 42°.3, being 1°.9 lower than the average for the 65 years, 1841-1905. The mean of all the lowest daily readings in the month was 34°.2, being 0°.8 lower than the average for the 65 years, 1841-1905. The mean of the daily ranges was 8°.1, being 1°.1 less than the average for the 65 years, 1841-1905. The mean for the month was 38°.6, being 1°.3 lower than the average for the 65 years, 1841-1905.

MONTH and DAY, 1937.	RECORD OF THE NIGHT SKY.				WIND AS DEDUCED FROM SELF-REGISTERING ANEMOMETERS.							CLOUDS AND WEATHER.			
	POLARIS		δ URSÆ MINORIS.		OSLER'S.				ROBINSON'S.						
	Duration.	Fraction of Total Exposure.	Duration.	Fraction of Total Exposure.	General Direction.		Pressure on the Square Foot.		Horizontal Movement 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.						lbs.	lbs.
Dec. 1	3.0	0.22	0.7	0.05	SSW : SW	S : SSW	2.8	0.04	245	c r	c m p. c Cicu	c r	R c r		
2	0.0	0.00	0.0	0.00	SE : Calm	ESE : NE	2.7	0.05	222	i r	c Nbst i r	i r RR r	r r c i r		
3	0.0	0.00	0.0	0.00	N	N	5.0	0.90	399	i r	c	c Nbst d. r c	c d.		
4	0.5	0.04	0.4	0.03	N : NW : WSW	SW : Calm	1.6	0.10	231	c	c Ast m	o m r s r r	c f m		
5	13.2	0.96	12.9	0.94	Calm : WNW	WNW : WSW	6.2	0.70	374	c r. r r	r r c Nbst	c i r. m.	b x		
6	0.0	0.00	0.0	0.00	WSW : Calm	Calm	0.0	0.00	169	b x	b c f x	c f x	c f x		
7	4.5	0.33	2.8	0.20	Calm	ENE : E	1.2	0.04	209	c f x	o f	o f	b c m		
8	0.0	0.00	0.0	0.00	ENE : NE	NE	1.8	0.13	298	c r. s.	r. c m	c i r. r m	r r		
9	0.0	0.00	0.0	0.00	NE	N	2.5	0.21	278	c d	c r s r r m	i r s c m	r. c m.		
10	3.1	0.23	2.1	0.15	N : NW : WSW	SSW : SW	6.9	0.37	287	c m	c St m	c m b Ci c	r r		
11	0.8	0.06	0.7	0.05	SW : SSW	SW : W	2.8	0.24	315	r c	c o r c m.	c b c Stcu m.	c		
12	7.7	0.56	7.3	0.53	WNW	W : WSW	5.0	0.50	..	c r s	c b Frst m.	b Cu c b m.	b x c		
13	2.1	0.15	1.9	0.13	SSW : S	S : Calm	5.6	0.53	307	c	c i r R	i r r r	r r r s		
14	1.5	0.11	1.2	0.09	WSW : SW	SSW : Calm	0.6	0.03	212	r c	b x m	b c Ci b m	b x FeFe		
15	6.6	0.48	2.8	0.20	Calm : NNW	NW : Calm : N	1.3	0.08	..	FeFe c m	c p m	c r s b m f	b x c f		
16	2.5	0.18	1.4	0.10	Calm : N	N	3.7	0.37	312	c m	c Ast m	c r c d m	d d. m.		
17	8.3	0.60	6.9	0.50	N	NNW	2.1	0.29	297	c m	c Acu m	c Acu m	c		
18	8.7	0.62	5.3	0.38	NW : WSW	W : Calm	0.5	0.04	203	c b x	b c Stcu f x .	c f b c m x	b f x		
19	8.7	0.63	6.7	0.48	Calm	Calm	0.0	0.00	87	b c	r s r s. x f	s. c b x f	f x		
20	3.3	0.24	1.4	0.10	Calm	SSE : SE	1.1	0.05	140	f x	f F f b x	b Cu c x	c x		
21	2.0	0.14	1.3	0.10	SSE : S	S	2.9	0.22	260	c	c Ast	c Ast d.	d. c		
22	0.0	0.00	0.0	0.00	SSW : SW	SSW	2.2	0.15	283	c	c Stcu m	c Nbst m.	d. d. m.		
23	6.7	0.48	6.2	0.44	SW : W	WSW : SSW	1.8	0.13	279	d. d c	c Stcu m	c b Ci m	b m w		
24	1.3	0.09	0.8	0.06	SSW : SW	SW	1.4	0.15	277	c m	c Stcu	c Stcu	c d.		
25	0.0	0.00	0.0	0.00	WSW : Calm	Calm	0.2	0.00	81	c	FeFe	FeFe	FeFe		
26	0.0	0.00	0.0	0.00	Calm	Calm : ENE	0.2	0.00	106	Fe fe	o i d. f	o f m	c i d. m		
27	0.0	0.00	0.0	0.00	Calm : ENE	NE	0.5	0.03	194	c	c Stcu	c Stcu	c		
28	0.4	0.03	0.2	0.01	NE : N : Calm	Calm : NNE	4.8	0.11	213	c	c m. f	c f c d	c		
29	0.3	0.02	0.0	0.00	NNE : NE	NE	3.1	0.45	361	c	c d d. m.	i d. d m.	d d. m.		
30	9.2	0.65	7.9	0.56	NE : NNE	ENE : NE	1.3	0.15	263	c	c i r m	c Stcu b c	b		
31	0.0	0.00	0.0	0.00	NNE : N	N	3.3	0.33	290	b c r.	c d. m	c Nbst d. m	c d.		
Means	3.0	0.22	2.3	0.16	..	..	..	0.21	248						

Number of Column for Reference. } 19 20 21 22 23 24 25 26 27 28 29 30 31

The mean Temperature of Evaporation for the month was 37°.5, being 1°.0 lower than  
 The mean Temperature of the Dew Point for the month was 35°.9, being 0°.5 lower than  
 The mean Degree of Humidity for the month was 89.7, being 2.2 greater than  
 The mean Elastic Force of Vapour for the month was 0.211 in., being 0.005 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 8.5.

The mean proportion of Sunshine for the month (constant sunshine being represented by 1) was 0.055. The maximum daily amount of Sunshine was 4.1 hours on December 12.

The highest reading of the Solar Radiation Thermometer was 63°.3 on December 2; and the lowest reading of the Terrestrial Radiation Thermometer was 17°.0 on December 19.

The Proportions of Wind referred to the cardinal points were N. 27, E. 13, S. 21, W. 17, calm or nearly calm conditions, 22, the whole month being represented by 100.

The Greatest Pressure of the Wind in the month was 6.9 lbs. on the square foot on December 10. The mean daily Horizontal Movement of the Air for the month was 248 miles; the greatest daily value was 399 miles on December 3, and the least daily value was 81 miles on December 25.

Rain (0.005 in. or over) fell on 20 days in the month, amounting to 3.577 in., as measured by gauge No. 6 partly sunk below the ground; being 1.684 in. greater than the average fall for the 65 years, 1841-1905.

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

MAXIMA.				MINIMA.				MAXIMA.				MINIMA.				MAXIMA.				MINIMA.							
U.T., 1937.		Reading.		U.T., 1937.		Reading.		U.T., 1937.		Reading.		U.T., 1937.		Reading.		U.T., 1937.		Reading.		U.T., 1937.		Reading.					
<b>January.</b>				<b>January.</b>				<b>May.</b>				<b>May.</b>				<b>September.</b>				<b>September.</b>							
d.	h.	m.	in.	d.	h.	m.	in.	d.	h.	m.	in.	d.	h.	m.	in.	d.	h.	m.	in.	d.	h.	m.	in.	d.	h.	m.	in.
3.	19.	40	30.163	1.	17.	10	29.757	6.	8.	30	30.143	3.	17.	20	29.639	4.	8.	50	30.098	1.	16.	50	29.744	6.	17.	30	29.860
5.	16.	30	29.961	4.	20.	0	29.712	16.	9.	25	29.914	11.	10.	45	29.498	8.	21.	40	30.129	10.	0.	0	29.862	8.	21.	40	30.129
8.	21.	45	30.434	6.	14.	0	29.494	23.	10.	15	29.989	21.	4.	40	29.287	10.	22.	10	29.983	17.	16.	45	28.995	10.	22.	10	29.983
14.	10.	50	29.994	13.	5.	25	29.848	24.	22.	20	29.942	24.	4.	10	29.861	21.	9.	25	29.857	22.	4.	15	29.734	21.	9.	25	29.857
16.	23.	5	29.702	16.	9.	30	29.432	27.	23.	40	30.185	26.	14.	50	29.808	24.	0.	10	30.031	25.	4.	0	29.897	24.	0.	10	30.031
20.	9.	10	29.640	18.	15.	0	28.768					31.	17.	40	29.859	25.	11.	5	29.975	28.	4.	0	29.897	25.	11.	5	29.975
23.	0.	10	29.802	21.	4.	15	29.237									29.	9.	20	30.048	28.	2.	20	29.766	29.	9.	20	30.048
26.	17.	45	29.417	24.	15.	0	29.044																				
30.	10.	45	29.148	28.	6.	30	28.898																				
31.	11.	30	29.260	30.	18.	10	29.053																				
<b>February.</b>				<b>February.</b>				<b>June.</b>				<b>June.</b>				<b>October.</b>				<b>October.</b>							
2.	11.	0	29.593	1.	1.	30	29.081	2.	11.	0	30.001	4.	3.	40	29.837	4.	21.	5	30.350	1.	15.	50	29.688				
6.	23.	10	29.728	5.	5.	50	28.893	5.	10.	15	29.921	7.	15.	45	29.760	8.	2.	10	29.745	8.	2.	10	29.745				
12.	9.	50	29.770	8.	10.	10	28.890	8.	14.	20	29.880	10.	17.	50	29.661	10.	8.	30	30.306	12.	5.	25	30.063				
15.	10.	25	29.963	10.	10.	10	28.890	10.	19.	40	29.773	10.	22.	45	29.690	13.	9.	5	30.163	14.	6.	45	29.995				
18.	6.	40	29.905	13.	3.	40	29.455	15.	22.	10	30.186	17.	7.	35	30.380	17.	7.	35	30.380	23.	19.	0	28.502				
21.	11.	20	29.689	17.	7.	10	29.422	21.	10.	50	29.936	24.	18.	20	29.106	24.	18.	20	29.106	25.	14.	15	28.850				
23.	20.	5	29.549	19.	16.	40	29.321	26.	9.	30	29.975	27.	8.	0	29.531	27.	8.	0	29.531	27.	15.	5	29.438				
26.	1.	25	29.387	22.	9.	30	29.126					28.	19.	5	29.602	28.	19.	5	29.602	30.	3.	0	29.192				
27.	0.	0	29.075	25.	15.	35	29.161					31.	8.	30	29.644	31.	8.	30	29.644								
28.	1.	20	28.806	26.	16.	0	28.972																				
				27.	16.	25	28.699																				
				28.	11.	15	28.581																				
<b>March.</b>				<b>March.</b>				<b>July.</b>				<b>July.</b>				<b>November.</b>				<b>November.</b>							
3.	11.	30	29.436	4.	15.	50	29.251	2.	6.	50	29.953	3.	20.	0	29.683	5.	22.	50	30.069	1.	16.	0	29.319				
6.	11.	30	29.663	5.	5.	0	29.344	5.	7.	15	30.012	7.	3.	50	29.716	7.	15.	5	29.854	7.	15.	5	29.854				
8.	0.	25	29.541	7.	5.	0	29.344	8.	11.	15	29.994	9.	19.	35	29.709	9.	19.	50	30.016	10.	15.	40	29.818				
13.	20.	25	29.032	11.	18.	35	28.852	8.	11.	15	29.994	9.	19.	35	29.709	13.	0.	0	30.080	14.	16.	0	29.902				
16.	1.	0	29.940	14.	10.	15	28.673	11.	8.	30	29.926	15.	14.	55	29.442	16.	0.	0	29.994	19.	4.	10	29.006				
24.	9.	20	29.848	18.	5.	0	29.361	18.	0.	5	30.093	21.	20.	10	29.627	25.	22.	50	30.215	27.	3.	55	29.973				
30.	9.	0	30.211	26.	3.	25	29.486	22.	22.	5	29.714	23.	18.	25	29.497	28.	10.	0	30.358								
								27.	11.	40	29.917	29.	17.	10	29.802												
<b>April.</b>				<b>April.</b>				<b>August.</b>				<b>August.</b>				<b>December.</b>				<b>December.</b>							
6.	22.	50	29.828	2.	16.	40	29.154	2.	9.	30	30.069	7.	3.	20	29.778	4.	7.	20	29.664	2.	14.	0	28.961				
8.	21.	5	29.811	7.	15.	50	29.635	9.	8.	25	29.994	14.	13.	20	29.565	8.	20.	45	29.421	5.	6.	20	29.071				
12.	21.	40	29.536	10.	17.	20	29.177	16.	0.	50	29.727	17.	2.	20	29.446	10.	9.	5	29.666	9.	6.	30	29.331				
15.	12.	10	29.609	14.	4.	15	29.191	20.	0.	15	30.013	21.	14.	30	29.888	12.	18.	55	29.449	11.	15.	0	29.063				
19.	9.	35	29.722	16.	12.	40	29.167	23.	7.	40	30.014	24.	16.	20	29.932	18.	2.	0	29.963	13.	23.	0	28.711				
21.	22.	15	29.877	20.	17.	20	29.077	26.	22.	40	30.171	26.	20.	0	29.922	20.	10.	0	29.922	19.	13.	30	29.832				
24.	10.	0	30.031	22.	4.	55	29.781					26.	20.	0	30.545	20.	10.	0	29.922	21.	13.	20	29.679				
30.	9.	35	30.283	28.	2.	20	29.879					30.	19.	5	30.317	26.	20.	0	30.545	29.	5.	5	30.230				
																30.	19.	5	30.317								

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 readings to reduce to sea level.

HIGHEST and LOWEST READINGS of the BAROMETER in each MONTH for the YEAR 1937.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Highest .....	30.434	29.963	30.211	30.283	30.185	30.186	30.093	30.171	30.129	30.380	30.358	30.545
Lowest .....	28.768	28.581	28.673	29.077	29.287	29.572	29.442	29.446	28.995	28.502	29.006	28.711
Range .....	1.666	1.382	1.538	1.206	0.898	0.614	0.651	0.725	1.134	1.878	1.352	1.834

The highest reading in the year was 30.545 in. on Dec. 26. The lowest reading in the year was 28.502 in. on Oct. 23. The range of reading in the year was 2.043 in.

MONTHLY RESULTS OF METEOROLOGICAL ELEMENTS for the YEAR 1937.

MONTH, 1937.	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.			
	in.	°	°	°	°	°	°	°	°	°	°	
January .....	29.628	53.5	28.3	25.2	46.7	36.4	10.3	41.9	+3.3	40.4	38.3	87.0
February .....	29.428	57.4	29.3	28.1	48.5	37.8	10.7	43.2	+3.6	41.0	37.9	81.8
March .....	29.479	60.7	23.7	37.0	46.9	33.4	13.5	39.5	-2.4	37.0	32.8	77.0
April .....	29.662	64.8	31.3	33.5	57.5	42.1	15.4	48.8	+1.6	46.0	42.5	79.2
May .....	29.833	81.9	39.1	42.8	65.1	46.7	18.4	55.0	+1.9	51.3	47.7	77.4
June .....	29.880	85.1	42.8	42.3	71.1	50.1	20.9	59.8	+0.4	54.6	50.0	70.3
July .....	29.827	89.5	49.4	40.1	73.7	55.3	18.4	63.1	+0.5	58.2	54.2	72.9
August .....	29.887	91.9	47.4	44.5	77.1	55.9	21.2	64.8	+3.1	59.8	56.0	73.9
September .....	29.756	82.5	37.8	44.7	67.9	48.9	19.1	57.3	+0.1	53.7	50.3	77.7
October .....	29.792	68.8	35.7	33.1	59.1	45.6	13.5	52.0	+2.0	49.6	47.1	83.4
November .....	29.851	56.7	23.9	32.8	47.0	36.2	10.8	42.0	-1.5	40.7	38.7	88.1
December .....	29.687	53.4	25.0	28.4	42.3	34.2	8.1	38.6	-1.3	37.5	35.9	89.7
Means .....	29.726	Highest 91.9	Lowest 23.7	Annual Range 68.2	58.6	43.6	15.0	50.5	+0.9	47.5	44.3	79.9

MONTH, 1937.	Mean Elastic Force of Vapour.	Mean Temper- ature of the Earth 4 feet below the surface of the soil.	Mean Amount of Cloud (0-10).	RAIN.		WIND.											Mean Daily Pressure on the Square Foot.	From Robin son's Anemo- meter.  Mean Daily Horizontal Move- ment of the Air.
				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.								Number of Calm or nearly Calm Hours.				
						Number of Hours of Prevalence of each Wind referred to different Points of Azimuth.												
						N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.					
	in.	°			in.	h	h	h	h	h	h	h	h	h	h	h	lbs.	miles.
January .....	0.232	45.7	7.8	21	3.570	7	72	55	33	179	176	114	12	96	0.47	326		
February .....	0.228	44.8	7.6	22	3.941	28	5	12	37	64	263	152	69	42	0.43	348		
March .....	0.186	43.4	7.3	17	2.904	76	142	78	40	99	85	61	56	107	0.19	279		
April .....	0.273	46.2	8.1	15	2.431	84	88	45	21	53	130	78	77	144	0.17	257		
May .....	0.332	50.1	7.2	13	3.402	42	96	92	22	59	114	82	38	199	0.10	225		
June .....	0.363	54.8	7.0	12	1.869	75	32	36	11	18	163	68	96	221	0.11	228		
July .....	0.423	57.1	7.9	9	0.706	48	34	17	10	48	187	146	85	169	0.20	250		
August .....	0.452	58.9	5.9	6	1.683	67	69	31	12	36	88	44	70	327	0.10	201		
September .....	0.367	58.7	6.0	16	1.263	107	5	6	25	88	223	45	58	163	0.14	240		
October .....	0.325	55.7	6.6	11	2.315	121	119	31	47	110	72	49	21	174	0.15	237		
November .....	0.236	51.4	6.1	11	1.258	72	66	92	65	26	91	36	41	231	0.08	225		
December .....	0.211	46.1	8.5	20	3.511	127	106	28	19	89	122	48	41	164	0.21	248		
Sums .....	..	..	..	173	28.853	854	834	523	342	869	1714	923	664	2037	..	..		
Means .....	0.302	51.1	7.2	..	..	..	..	..	..	..	..	..	..	..	0.20	255		

The greatest recorded pressure of the wind on the square foot in the year was 15.7 lbs. on January 28.

The greatest recorded daily horizontal movement of the air in the year was 559 miles on January 6 and 28.

The least recorded daily horizontal movement of the air in the year was 81 miles on December 25.

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

1937.

Hour. Universal Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly Means.	
0 <sup>h</sup>	in. 29.647	in. 29.454	in. 29.478	in. 29.660	in. 29.845	in. 29.890	in. 29.834	in. 29.893	in. 29.761	in. 29.801	in. 29.852	in. 29.681	in. 29.733	
1	29.644	29.451	29.476	29.654	29.839	29.886	29.831	29.890	29.760	29.798	29.848	29.676	29.729	
2	29.642	29.446	29.471	29.650	29.836	29.883	29.828	29.887	29.755	29.792	29.848	29.677	29.726	
3	29.644	29.439	29.465	29.649	29.833	29.880	29.825	29.884	29.750	29.786	29.843	29.678	29.723	
4	29.639	29.433	29.463	29.648	29.829	29.882	29.825	29.883	29.745	29.784	29.840	29.676	29.721	
5	29.634	29.429	29.463	29.653	29.830	29.883	29.827	29.887	29.746	29.785	29.839	29.673	29.721	
6	29.630	29.426	29.466	29.661	29.834	29.886	29.832	29.891	29.752	29.786	29.843	29.675	29.723	
7	29.634	29.428	29.471	29.669	29.837	29.893	29.835	29.898	29.758	29.794	29.847	29.677	29.728	
8	29.643	29.427	29.477	29.674	29.842	29.893	29.837	29.902	29.764	29.802	29.858	29.687	29.734	
9	29.644	29.430	29.482	29.678	29.842	29.892	29.836	29.904	29.772	29.806	29.864	29.695	29.737	
10	29.643	29.427	29.483	29.681	29.842	29.889	29.833	29.902	29.771	29.809	29.868	29.700	29.737	
11	29.641	29.425	29.484	29.676	29.840	29.886	29.832	29.899	29.767	29.804	29.864	29.698	29.735	
12	29.628	29.417	29.482	29.672	29.836	29.881	29.828	29.894	29.762	29.796	29.854	29.691	29.728	
13	29.617	29.405	29.478	29.666	29.832	29.876	29.824	29.887	29.754	29.791	29.847	29.686	29.722	
14	29.610	29.399	29.473	29.658	29.828	29.871	29.820	29.879	29.748	29.784	29.841	29.683	29.716	
15	29.608	29.397	29.471	29.650	29.822	29.866	29.817	29.872	29.742	29.779	29.839	29.685	29.712	
16	29.609	29.399	29.469	29.646	29.820	29.861	29.814	29.867	29.740	29.778	29.841	29.687	29.711	
17	29.611	29.408	29.475	29.646	29.818	29.859	29.811	29.866	29.741	29.780	29.845	29.688	29.712	
18	29.615	29.422	29.484	29.650	29.819	29.861	29.811	29.867	29.745	29.787	29.851	29.689	29.717	
19	29.619	29.432	29.492	29.659	29.825	29.867	29.815	29.873	29.752	29.791	29.854	29.693	29.723	
20	29.620	29.437	29.497	29.670	29.831	29.874	29.821	29.884	29.761	29.793	29.858	29.696	29.729	
21	29.621	29.442	29.499	29.674	29.838	29.885	29.831	29.890	29.765	29.798	29.861	29.697	29.733	
22	29.621	29.447	29.499	29.674	29.839	29.891	29.836	29.892	29.765	29.798	29.863	29.696	29.735	
23	29.619	29.453	29.500	29.676	29.838	29.891	29.838	29.891	29.763	29.794	29.862	29.699	29.735	
24	29.618	29.455	29.500	29.674	29.835	29.888	29.838	29.888	29.759	29.791	29.860	29.697	29.734	
Mean	0 <sup>h</sup> .-23 <sup>h</sup> .	29.628	29.428	29.479	29.662	29.833	29.880	29.827	29.887	29.756	29.792	29.851	29.687	29.726
	1 <sup>h</sup> .-24 <sup>h</sup> .	29.627	29.428	29.480	29.663	29.833	29.880	29.827	29.887	29.756	29.792	29.851	29.688	29.726
No. of Days Employed	31	28	31	30	31	30	31	31	30	31	30	31	..	

MONTHLY MEAN TEMPERATURE OF THE AIR AT EVERY HOUR OF THE DAY, AS DEDUCED FROM THE PHOTOGRAPHIC RECORDS.

1937.

Hour. Universal Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly Means.	
0 <sup>h</sup>	40.6	41.6	36.9	45.3	50.3	54.4	58.7	59.5	53.2	48.8	40.4	37.8	47.3	
1	40.1	41.3	36.5	44.9	49.6	53.6	57.8	58.6	52.6	48.7	40.1	37.7	46.8	
2	39.9	40.9	36.2	44.4	49.2	52.9	57.3	58.0	52.2	48.6	39.6	37.6	46.4	
3	39.6	40.8	35.8	44.2	48.6	52.2	56.6	57.4	51.6	48.3	39.6	37.6	46.0	
4	39.6	40.5	35.4	44.0	48.1	51.7	56.0	56.9	51.0	47.9	39.3	37.6	45.7	
5	39.8	40.8	35.1	43.9	48.3	52.0	56.3	56.8	50.6	48.2	39.5	37.7	45.7	
6	39.9	41.0	35.2	44.3	49.8	54.3	57.8	57.7	50.7	48.4	39.5	37.8	46.4	
7	40.0	41.2	35.9	45.6	51.6	56.4	60.0	59.7	52.4	48.9	39.6	38.0	47.4	
8	40.3	41.8	37.6	46.9	53.8	58.8	62.3	62.4	55.2	50.2	40.2	38.2	49.0	
9	41.0	43.2	39.9	48.5	55.9	61.3	64.6	65.2	58.4	52.2	41.4	38.5	50.8	
10	42.3	44.5	41.9	50.1	57.9	63.5	66.4	67.7	61.3	54.0	42.8	39.0	52.6	
11	43.6	45.3	43.4	51.8	59.5	65.0	68.2	70.2	63.0	55.7	44.0	39.8	54.1	
12	44.5	46.1	44.5	53.1	60.7	66.2	68.7	72.2	64.3	57.1	45.2	40.1	55.2	
13	45.0	46.7	44.7	54.2	61.3	67.0	69.5	73.7	65.1	57.6	45.9	40.6	55.9	
14	44.9	46.5	44.7	54.8	61.5	67.4	70.0	74.1	65.4	57.8	46.1	40.5	56.1	
15	44.5	46.4	44.2	55.0	61.8	67.3	69.7	74.1	64.7	57.4	45.5	40.2	55.9	
16	44.0	46.0	43.8	54.8	61.5	67.3	69.2	73.2	63.7	56.4	44.7	39.7	55.4	
17	43.5	45.4	42.6	53.8	60.7	66.0	68.1	71.4	62.1	54.7	43.7	39.4	54.3	
18	43.0	44.4	41.2	52.2	59.4	64.4	67.0	69.5	60.0	53.4	43.2	39.1	53.1	
19	42.6	43.6	40.1	50.3	57.2	62.3	65.3	66.8	58.1	52.2	42.6	38.5	51.6	
20	42.4	42.7	39.4	48.9	55.0	60.1	63.2	64.3	56.6	51.4	42.1	38.2	50.4	
21	42.0	42.1	38.6	47.9	53.5	58.3	61.5	62.7	55.5	50.6	41.5	38.0	49.3	
22	41.6	41.6	37.9	47.0	52.4	56.8	60.5	61.4	54.4	50.0	41.0	37.8	48.5	
23	41.3	41.3	37.2	46.3	51.5	55.7	59.6	60.7	53.7	49.4	40.8	37.6	47.9	
24	40.7	41.1	36.9	45.6	50.6	54.6	58.5	59.7	52.8	48.7	40.4	37.4	47.3	
Means	0 <sup>h</sup> .-23 <sup>h</sup> .	41.9	43.2	39.5	48.8	55.0	59.8	63.1	64.8	57.3	52.0	42.0	38.6	50.5
	1 <sup>h</sup> .-24 <sup>h</sup> .	41.9	43.1	39.5	48.8	55.0	59.8	63.1	64.8	57.3	52.0	42.0	38.6	50.5
No. of Days Employed	31	28	31	30	31	30	31	31	30	31	30	31	..	



MONTHLY MEAN TEMPERATURE OF EVAPORATION AT EVERY HOUR OF THE DAY, AS DEDUCED FROM THE PHOTOGRAPHIC RECORDS.

1937.

Hour, Universal Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly Means.	
0 <sup>h</sup>	39.2	39.9	35.4	43.8	48.7	51.8	56.2	57.4	51.5	47.5	39.4	36.0	45.6	
1	38.9	39.7	35.1	43.6	48.2	51.2	55.5	56.9	51.1	47.4	39.3	36.8	45.3	
2	38.6	39.4	34.9	43.3	47.8	50.8	55.1	56.4	50.8	47.3	38.8	36.7	45.0	
3	38.6	39.3	34.5	43.0	47.4	50.3	54.6	56.0	50.4	47.0	38.9	36.6	44.7	
4	38.4	39.1	34.3	42.7	46.9	49.8	54.1	55.5	49.8	46.7	38.6	36.7	44.4	
5	38.6	39.5	34.0	42.7	47.2	50.1	54.5	55.4	49.5	46.9	38.8	36.8	44.5	
6	38.8	39.8	34.0	43.0	48.2	51.6	55.4	56.1	49.5	47.2	38.9	36.8	44.9	
7	39.0	40.0	34.5	43.9	49.5	52.8	56.5	57.5	51.0	47.7	38.9	37.1	45.7	
8	39.3	40.5	35.9	44.9	50.8	54.1	57.6	59.0	52.9	49.0	39.4	37.3	46.7	
9	39.9	41.5	37.5	46.1	51.8	55.6	58.8	60.3	54.8	50.3	40.4	37.6	47.9	
10	40.8	42.5	38.6	47.1	52.8	56.6	59.5	61.2	56.1	51.4	41.4	37.9	48.8	
11	41.8	42.9	39.5	48.0	53.9	57.4	60.3	62.2	56.3	51.9	42.3	38.4	49.6	
12	42.5	43.4	40.1	48.6	54.5	58.0	60.8	63.2	57.2	52.6	43.1	38.7	50.2	
13	42.8	43.6	40.0	49.2	54.8	58.5	61.1	63.4	57.2	52.7	43.5	39.0	50.5	
14	42.7	43.3	40.0	49.6	55.1	58.6	61.4	63.7	57.6	52.7	43.5	38.8	50.6	
15	42.4	43.0	39.8	49.6	55.4	58.8	61.2	63.8	57.7	52.4	43.0	38.6	50.5	
16	42.2	42.7	39.5	49.3	55.3	58.5	61.3	63.7	57.2	52.0	42.4	38.3	50.2	
17	41.9	42.3	38.7	48.7	54.7	57.7	60.8	63.0	56.1	51.3	41.8	38.1	49.6	
18	41.4	41.8	38.2	47.8	54.0	56.9	60.2	62.5	55.2	50.7	41.5	38.0	49.0	
19	41.1	41.2	37.6	46.8	52.8	56.0	59.6	61.5	54.3	50.1	41.1	37.5	48.3	
20	40.8	40.6	37.2	46.1	51.4	55.3	58.9	60.4	53.6	49.5	40.7	37.2	47.6	
21	40.4	40.0	36.7	45.5	50.6	54.5	58.0	59.7	53.1	49.0	40.3	37.0	47.1	
22	40.0	39.6	36.3	45.0	50.0	53.7	57.4	58.9	52.6	48.5	39.9	36.9	46.6	
23	39.5	39.5	35.8	44.6	49.6	52.9	56.8	58.3	52.1	48.1	39.7	36.7	46.1	
24	39.2	39.4	35.4	44.2	48.9	52.1	56.0	57.6	51.2	47.4	39.4	36.5	45.6	
Means	0 <sup>h</sup> .-23 <sup>h</sup> .	40.4	41.0	37.0	46.0	51.3	54.6	58.2	59.8	53.7	49.6	40.7	37.5	47.5
	1 <sup>h</sup> .-24 <sup>h</sup> .	40.4	41.0	37.0	46.0	51.3	54.6	58.1	59.8	53.7	49.6	40.7	37.5	47.5
No. of Days Employed	31	28	31	30	31	30	31	31	30	31	30	31	..	

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

1937.

Hour, Universal Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly Means.	
0 <sup>h</sup>	37.3	37.5	33.0	41.9	47.0	49.4	54.2	55.8	49.9	46.1	38.0	35.4	43.8	
1	37.2	37.5	32.8	42.0	46.7	48.9	53.6	55.5	49.6	46.0	38.1	35.3	43.6	
2	36.8	37.4	32.7	42.0	46.3	48.8	53.3	55.1	49.4	45.9	37.6	35.2	43.4	
3	37.1	37.3	32.3	41.5	46.1	48.4	53.0	54.9	49.2	45.5	37.9	34.9	43.2	
4	36.7	37.2	32.4	41.1	45.5	47.9	52.5	54.4	48.6	45.3	37.6	35.2	42.9	
5	36.9	37.8	32.1	41.2	46.0	48.2	53.0	54.3	48.4	45.5	37.8	35.3	43.0	
6	37.2	38.3	31.9	41.4	46.4	49.0	53.4	54.8	48.3	45.9	38.0	35.1	43.3	
7	37.5	38.5	32.1	41.7	47.3	49.4	53.6	55.8	49.6	46.5	37.9	35.7	43.8	
8	37.9	38.8	33.2	42.5	47.8	49.8	53.8	56.4	50.8	47.8	38.2	35.9	44.4	
9	38.5	39.2	33.7	43.4	47.7	50.6	54.2	56.7	51.6	48.4	39.2	36.2	44.9	
10	38.7	39.9	33.5	43.6	47.9	50.7	54.1	56.5	51.6	48.9	39.5	36.2	45.1	
11	39.4	39.7	33.5	43.7	48.7	50.9	54.3	56.4	50.5	48.2	40.1	36.4	45.1	
12	39.9	40.0	33.4	43.6	48.8	51.1	54.8	56.9	51.2	48.4	40.3	36.8	45.4	
13	39.8	39.7	32.8	43.7	48.8	51.5	54.8	56.0	50.4	48.0	40.5	36.8	45.2	
14	39.8	39.2	32.8	44.0	49.3	51.4	55.0	56.3	51.0	47.8	40.2	36.4	45.3	
15	39.6	38.6	33.0	43.7	49.6	51.9	54.9	56.5	51.9	47.5	39.7	36.4	45.3	
16	39.9	38.3	32.8	43.3	49.7	51.3	55.5	57.1	51.8	47.7	39.3	36.3	45.3	
17	39.8	38.1	32.6	43.0	49.3	50.7	55.4	57.1	50.8	47.9	39.3	36.2	45.0	
18	39.2	38.3	33.4	42.8	49.0	50.5	55.1	57.6	50.9	48.0	39.2	36.3	45.0	
19	39.0	37.9	33.6	42.7	48.7	50.3	55.2	57.7	50.9	48.0	39.0	35.9	44.9	
20	38.6	37.6	33.7	42.8	47.8	51.0	55.7	57.5	50.9	47.5	38.8	35.6	44.8	
21	38.2	37.0	33.7	42.7	47.7	51.2	55.2	57.4	51.0	47.3	38.7	35.4	44.6	
22	37.8	36.7	33.9	42.6	47.5	50.9	54.9	57.0	50.9	46.8	38.5	35.4	44.4	
23	37.0	37.0	33.6	42.5	47.7	50.4	54.5	56.6	50.6	46.7	38.3	35.2	44.2	
24	37.2	37.3	33.0	42.4	47.1	49.8	53.9	56.0	49.6	46.0	38.0	35.0	43.8	
Means	0 <sup>h</sup> .-23 <sup>h</sup> .	38.3	38.2	33.0	42.6	47.8	50.2	54.3	56.3	50.4	47.1	38.8	35.8	44.4
	1 <sup>h</sup> .-24 <sup>h</sup> .	38.3	38.2	33.0	42.7	47.8	50.2	54.3	56.3	50.4	47.1	38.8	35.8	44.4



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

1937.

Hour, Universal Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly Means.	
0 <sup>h</sup>	87	85	86	88	88	83	85	87	88	90	91	91	87	
1	89	86	86	89	90	84	85	89	90	90	93	91	89	
2	88	87	87	91	90	86	86	90	90	90	93	91	89	
3	91	87	87	90	91	87	87	91	91	90	93	91	90	
4	89	87	89	89	91	87	87	91	91	91	93	91	90	
5	89	88	89	90	92	87	88	91	92	90	93	91	90	
6	90	89	88	89	88	82	85	90	91	91	94	91	89	
7	91	90	86	86	85	77	79	87	90	91	93	91	87	
8	91	89	84	84	80	72	74	81	85	91	93	91	85	
9	90	86	78	82	74	68	69	74	78	87	91	91	81	
10	87	84	72	79	69	63	65	67	71	83	88	90	77	
11	85	81	68	74	68	61	61	62	64	76	86	87	73	
12	84	79	65	70	65	58	61	58	63	72	83	87	70	
13	83	76	63	68	64	57	60	54	59	70	81	86	68	
14	82	75	63	67	65	56	59	54	60	70	80	85	68	
15	83	74	65	66	65	58	59	55	63	70	80	86	69	
16	85	75	65	65	66	56	62	57	65	72	81	87	70	
17	87	76	67	67	66	57	64	61	67	78	84	88	72	
18	87	79	74	70	69	61	65	66	72	82	86	90	75	
19	87	80	78	75	73	66	70	73	77	86	87	91	79	
20	86	82	80	79	76	72	76	79	81	87	88	91	81	
21	86	82	82	82	80	77	80	83	85	88	90	91	84	
22	86	83	85	85	83	81	82	85	88	89	90	91	86	
23	84	84	87	87	86	82	83	86	89	90	90	91	87	
24	87	85	86	89	88	84	85	87	89	90	91	91	88	
Means	0 <sup>h</sup> .-23 <sup>h</sup> .	87	83	78	80	78	72	74	75	79	84	88	90	81
	1 <sup>h</sup> .-24 <sup>h</sup> .	87	83	78	80	78	72	74	75	79	84	88	90	81

TOTAL AMOUNT OF SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN EACH MONTH, AS DERIVED FROM THE RECORDS OF THE CAMPBELL-STOKES SELF-REGISTERING INSTRUMENT FOR THE YEAR 1937.

Month, 1937.	Registered duration of Sunshine in the Hour ending:—																Total Registered Duration of Sunshine in each Month.	Corresponding aggregate Period during which the Sun was above the Horizon.	Proportion of Sunshine	Mean Altitude of the Sun at Noon
	5h	6h	7h	8h	9h	10h	11h	Noon.	13h	14h	15h	16h	17h	18h	19h	20h				
January	—	—	—	—	1.5	5.9	7.1	6.2	7.5	5.5	2.5	0.3	—	—	—	—	36.5	261.0	0.140	18
February	—	—	—	1.0	5.7	6.6	5.1	6.3	4.7	5.0	4.6	2.4	0.4	—	—	—	41.8	279.0	0.150	26
March	—	—	1.2	8.7	11.5	12.3	11.6	10.1	8.8	8.5	7.3	7.0	4.6	0.1	—	—	91.7	368.0	0.249	37
April	—	1.9	3.7	4.7	5.5	5.9	8.9	7.7	7.1	7.9	8.9	9.3	6.5	3.8	0.1	—	81.9	415.6	0.197	48
May	0.3	5.7	7.4	9.3	12.4	13.8	12.8	12.9	13.1	12.8	12.1	12.7	13.1	11.9	6.6	0.5	157.4	483.9	0.325	57
June	2.1	9.9	11.6	13.6	12.8	14.6	12.5	13.6	13.3	12.7	14.2	11.9	8.8	6.3	0.9	—	171.5	496.3	0.346	62
July	1.6	6.6	9.6	8.7	9.1	9.5	10.3	8.0	7.3	8.3	8.7	9.9	8.3	7.1	4.3	0.6	117.9	499.8	0.236	60
August	—	3.1	8.8	11.6	12.1	13.5	15.6	18.4	18.7	16.9	14.1	13.8	12.3	9.3	3.6	—	171.8	452.2	0.263	52
September	—	—	3.6	9.3	12.8	18.0	18.0	15.3	15.3	14.7	13.9	11.3	9.0	3.5	—	—	144.7	380.1	0.381	41
October*	—	—	—	2.1	4.4	6.9	10.2	11.3	12.0	11.2	9.1	6.8	0.9	—	—	—	74.9	321.2	0.233	30
November	—	—	—	—	0.6	3.4	4.2	5.1	6.9	5.0	5.1	0.8	—	—	—	—	31.1	267.3	0.116	20
December	—	—	—	—	—	1.0	2.9	2.4	2.9	2.1	2.3	—	—	—	—	—	13.6	245.6	0.055	16
For the Year	4.0	27.2	45.9	69.0	88.4	111.4	119.2	117.3	117.6	110.6	101.3	88.5	67.0	44.5	20.9	2.0	1134.8	4470.0	0.254	..

The hours are reckoned from " Apparent " midnight.

\* The instrument was out of action on October 20.

READINGS OF THERMOMETERS ON THE ORDINARY STAND IN THE CHRISTIE ENCLOSURE IN THE YEAR 1937.

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

Days of the Month.	Dry-Bulb Thermometers, 4 ft. above the Ground.					Wet-Bulb Thermometers, 4 ft. above the Ground.				Days of the Month.	Dry-Bulb Thermometers, 4 ft. above the Ground.					Wet-Bulb Thermometers, 4 ft. above the Ground.					
	Maxim.	Minim.	9h	12h	15h	21h	9h	12h	15h		21h	Maxim.	Minim.	9h	12h	15h	21h	9h	12h	15h	21h
JANUARY.										MARCH.											
d											d										
1	50.5	42.6	49.6	50.5	49.6	43.3	48.8	49.3	49.0	41.7	1	40.0	31.9	33.6	38.2	39.7	37.9	32.1	34.5	36.0	35.8
2	50.5	37.6	42.3	47.3	48.4	50.5	40.1	44.5	45.4	48.8	2	44.0	34.4	36.9	43.7	42.4	37.6	35.0	38.9	38.8	36.9
3	53.0	47.9	48.9	51.4	52.4	50.1	47.8	49.1	49.7	48.6	3	50.1	33.7	41.0	45.6	43.8	36.9	38.9	41.8	41.3	33.8
4	50.2	42.9	48.3	47.6	46.6	43.0	46.4	45.8	45.3	41.4	4	44.7	33.2	39.6	43.7	42.1	36.6	37.4	39.1	38.8	35.0
5	44.5	34.3	37.8	43.1	43.9	40.8	35.8	39.5	39.6	38.4	5	39.2	33.6	38.2	38.3	38.6	34.3	36.1	36.2	35.2	33.9
6	53.5	40.6	50.7	52.9	53.3	51.6	49.5	50.1	49.9	50.2	6	40.6	33.0	34.5	36.2	39.9	36.5	33.5	35.1	38.1	35.0
7	51.7	41.9	43.2	46.7	47.4	42.5	39.8	41.5	41.4	39.6	7	36.8	32.6	33.8	34.5	35.9	34.3	33.4	34.0	34.1	32.8
8	42.9	30.0	31.4	38.2	42.1	33.5	30.6	36.8	38.6	33.0	8	35.7	33.2	34.3	34.9	35.2	33.7	32.3	33.0	32.2	31.7
9	43.6	30.7	35.7	42.8	42.7	36.6	35.5	40.6	39.8	35.3	9	38.4	31.3	33.6	36.9	37.6	34.3	31.8	33.5	32.5	30.9
10	42.9	29.5	32.6	42.6	40.6	33.1	30.7	37.5	36.6	31.3	10	42.8	23.7	35.7	41.3	38.0	35.1	31.8	36.2	35.9	34.6
11	47.0	29.8	39.3	45.0	46.4	42.6	38.9	44.2	45.3	40.9	11	52.1	33.5	40.7	50.6	49.5	42.4	40.3	47.9	47.0	41.8
12	47.0	32.7	41.8	45.7	45.5	46.8	41.2	44.9	44.4	46.0	12	51.7	37.7	45.9	49.4	42.7	40.7	43.3	45.1	41.8	38.6
13	52.0	46.5	49.4	50.9	51.3	47.1	49.0	50.0	49.0	43.8	13	48.2	35.8	44.1	46.8	45.6	36.0	40.3	40.9	40.1	34.4
14	47.2	39.2	40.9	42.3	42.4	39.6	40.2	41.0	41.1	33.6	14	42.8	35.0	39.0	41.7	37.6	38.2	38.5	41.4	36.7	36.6
15	40.4	34.3	34.5	39.5	37.5	36.5	34.1	37.8	36.5	35.8	15	45.3	34.2	38.4	43.3	43.2	36.6	34.5	36.9	35.8	33.2
16	44.6	32.2	41.7	43.0	43.4	32.6	40.9	41.0	38.8	32.1	16	48.1	27.6	40.8	48.1	43.6	47.3	38.4	42.9	42.1	45.9
17	47.0	31.2	40.1	46.7	42.8	44.6	39.0	43.5	40.9	42.8	17	57.0	44.3	49.2	51.2	51.1	46.6	47.3	48.4	46.5	44.8
18	49.4	39.7	45.5	46.9	48.4	40.7	44.9	46.5	46.4	38.0	18	57.0	43.2	49.6	54.9	55.9	43.9	46.9	49.9	48.9	41.7
19	42.7	33.1	37.5	42.0	41.6	37.1	36.5	39.6	39.0	36.5	19	57.5	40.4	49.8	54.1	47.6	42.7	46.8	49.5	46.2	41.9
20	46.0	30.2	32.4	42.6	43.4	45.3	31.7	38.9	40.6	42.9	20	60.7	36.3	47.9	55.9	56.0	44.4	46.2	49.4	47.8	41.9
21	51.1	42.3	44.9	49.7	50.7	49.7	43.9	47.7	48.2	47.3	21	46.1	39.3	40.7	43.4	45.7	41.2	39.0	41.1	42.7	39.4
22	51.7	47.7	50.0	49.8	51.2	48.2	49.0	48.6	49.4	45.8	22	42.2	33.9	36.0	39.6	40.8	35.5	34.7	34.9	33.7	31.7
23	51.5	43.9	45.3	48.7	48.3	51.5	45.0	48.5	47.5	48.0	23	43.4	30.8	36.9	40.7	41.3	36.0	34.5	35.0	36.3	34.8
24	52.6	46.6	48.3	51.6	49.6	46.6	46.8	48.2	48.6	45.9	24	49.7	30.2	37.9	45.7	49.6	44.3	33.7	40.0	41.8	41.8
25	49.6	43.5	44.9	48.9	47.8	44.4	44.1	46.7	46.4	43.3	25	50.7	38.2	42.3	48.6	49.4	39.6	37.9	40.8	41.8	38.3
26	44.7	34.1	35.0	35.2	35.0	34.6	34.8	34.7	34.6	33.8	26	46.2	33.1	37.6	43.0	46.0	33.8	32.7	36.2	38.0	32.2
27	44.2	33.5	36.6	43.3	40.8	39.1	35.9	40.8	38.4	30.5	27	47.0	30.9	39.4	43.3	45.6	37.0	36.3	37.8	39.2	34.8
28	39.1	31.3	34.6	33.0	32.8	31.7	33.9	31.9	31.9	31.2	28	47.8	28.8	38.6	44.2	47.6	37.7	36.2	38.5	39.8	35.2
29	31.7	28.3	30.3	30.2	29.9	29.6	29.4	29.3	28.7	28.8	29	47.4	31.4	37.6	46.2	44.1	39.1	36.1	39.8	39.4	35.1
30	44.7	29.3	31.6	33.4	37.3	43.4	31.0	32.6	36.8	42.3	30	46.1	31.4	41.1	43.4	44.2	39.8	36.1	38.8	39.2	36.8
31	49.0	40.3	44.5	48.8	47.3	45.6	43.1	46.8	45.7	45.1	31	53.9	34.1	43.5	51.0	50.7	37.7	39.5	44.4	44.8	36.5
Means	47.0	37.0	41.0	44.5	44.5	42.0	39.9	42.5	42.4	40.4	Means	46.9	33.9	39.9	44.5	44.2	38.6	37.5	40.1	39.7	36.7
FEBRUARY.										APRIL.											
d											d										
1	52.8	44.0	45.4	50.6	50.2	46.2	42.9	46.8	45.6	43.8	1	53.0	31.3	37.6	50.1	48.3	40.6	37.6	44.6	42.9	40.0
2	51.1	39.2	45.7	50.7	49.4	50.7	44.4	47.9	47.0	49.8	2	52.9	38.5	42.1	46.5	51.2	47.9	41.9	45.7	50.0	47.6
3	54.6	49.0	50.6	53.5	52.8	49.6	49.9	49.9	47.5	46.2	3	64.8	42.0	49.7	57.6	62.8	45.8	48.1	52.2	54.6	43.8
4	53.6	48.0	48.8	51.6	51.4	49.3	47.7	48.9	47.8	47.6	4	57.8	36.4	45.0	54.5	55.4	45.3	44.8	49.7	50.9	43.8
5	49.3	42.2	48.7	48.1	45.8	42.7	48.5	47.6	41.5	39.3	5	59.3	38.3	45.9	55.5	58.4	46.9	44.5	50.7	51.2	45.3
6	48.3	35.2	38.3	45.7	47.7	38.7	36.0	40.4	41.5	35.7	6	62.5	41.3	48.8	57.6	58.7	49.8	48.0	52.1	52.9	48.6
7	41.7	34.9	41.3	40.3	41.0	41.7	39.8	39.8	40.2	41.5	7	58.0	49.3	52.8	53.3	54.5	51.8	51.3	51.7	52.4	50.0
8	53.2	41.3	49.6	52.4	48.3	42.3	49.5	50.7	44.7	39.8	8	61.3	49.3	56.4	58.9	56.2	50.1	51.3	52.8	51.9	48.6
9	44.3	36.3	39.7	42.0	44.0	38.4	37.1	38.3	37.7	35.6	9	63.7	47.2	52.8	61.7	61.7	55.8	50.8	55.8	55.1	52.8
10	45.2	35.3	39.7	44.4	44.6	40.4	37.0	39.2	38.7	37.0	10	62.4	50.0	54.8	55.6	59.6	50.4	54.1	54.1	55.8	48.6
11	42.8	35.9	38.8	41.8	42.3	38.7	36.3	37.2	37.5	35.7	11	59.1	43.8	49.9	55.3	54.7	44.9	46.1	48.8	47.7	42.1
12	42.3	29.3	33.5	39.7	41.9	36.6	31.9	35.9	37.7	35.8	12	57.9	40.0	51.7	56.7	56.8	45.7	47.9	50.8	50.0	43.0
13	44.0	35.0	40.8	42.4	43.9	40.0	40.1	40.8	41.7	39.2	13	56.8	39.1	43.7	50.8	55.2	50.7	42.3	47.5	51.1	48.2
14	54.9	39.7	46.4	50.4	53.2	51.6	45.9	49.5	51.7	50.8	14	56.9	46.0	51.4	55.3	52.4	46.3	49.8	52.5	50.3	45.6
15	57.4	48.0	51.5	54.9	54.7	49.6	50.4	52.4	51.9	48.1	15	50.8	43.8	45.7	47.6	49.9	47.3	44.8	45.9	47.9	46.2
16	51.9	37.0	49.7	47.9	44.6	37.5	47.9	46.1	41.8	35.6	16	57.5	45.6	51.4	53.7	49.6	49.8	46.8	49.2	47.6	47.1
17	48.0	35.5	43.3	46.1	46.4	40.6	39.9	42.2	42.0	37.8	17	50.0	43.3	44.8	47.3	48.7	44.5	43.9	44.5	45.6	42.5
18	49.1	34.0	40.2	43.3	46.0	48.6	37.8	42.0	45.6	47.1	18	50.9	42.4	46.6	48.3	49.6	46.7	43.7	44.8	45.7	44.5
19	53.8	45.6	46.0	46.8	52.2	47.6	44.4	46.4	51.0	42.6	19	63.0	43.1	49.8	53.8	58.1	46.7	46.6	46.9	48.9	43.7
20	47.8	38.9	42.6	46.7	44.6	41.2	38.7	40.6	39.8	37.8	20	57.6	44.3	51.6	52.5	51.3	45.2	50.0	50.8	50.6	43.4
21	46.2	37.2	41.7	45.4	45.5	41.7	38.3	39.9	41.2	40.8	21	56.8	40.3	47.9	52.2	55.0	49.2	42.5	43.8	45.4	44.8
22	43.7	36.1	40.5	41.7	41.7	36.4	39.8	39.3	37.9	34.4	22	61.4	44.1	53.4	56.4	59.0	56.0	52.3	52.8	53.8	52.5
23	44.8	32.8	38.3	42.1	43.8	33.5	35.8	37.6	37.8	32.2	23	62.4	47.4	54.4	57.6	60.8	53.1	47.8	49.8	51.9	50.2
24	45.0	31.6	40.8	43.8	41.7	40.0	38.9	40.9	40.1	39.9	24	60.1	47.0	51.3	53.7	59.6	51				

READINGS OF THERMOMETERS ON THE ORDINARY STAND IN THE CHRISTIE ENCLOSURE—continued.

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

Days of the Month.	Dry-Bulb Thermometers, 4 ft. above the Ground.						Wet-Bulb Thermometers, 4 ft. above the Ground.				Days of the Month.	Dry-Bulb Thermometers, 4 ft. above the Ground.						Wet-Bulb Thermometers, 4 ft. above the Ground.														
	Maximum.	Minimum.	9h	12h	15h	21h	9h	12h	15h	21h		Maximum.	Minimum.	9h	12h	15h	21h	9h	12h	15h	21h											
MAY.										JULY.																						
d	°	°	°	°	°	°	°	°	°	°	d	°	°	°	°	°	°	°	°	°	°	d	°	°	°	°	°	°	°	°	°	°
1	58.4	42.1	47.3	56.2	56.0	47.5	45.4	51.5	51.1	45.7	1	77.6	60.0	67.7	71.7	75.6	65.1	61.9	63.6	65.2	62.1	1	77.3	54.3	59.1	67.7	75.6	59.6	55.7	59.9	64.6	58.1
2	63.6	45.0	47.1	53.5	63.2	46.8	45.9	50.3	56.7	46.2	2	80.1	61.3	68.3	72.0	77.8	63.7	64.2	65.5	67.9	61.5	2	78.8	57.5	58.6	66.8	74.6	66.3	56.4	61.0	64.8	58.4
3	71.5	42.9	56.2	69.7	62.0	54.2	53.2	60.5	57.8	50.8	3	86.6	61.4	77.7	83.8	84.1	71.6	68.4	71.1	67.8	63.5	3	81.0	52.3	64.6	77.8	80.6	64.3	61.6	67.5	69.1	62.4
4	65.6	48.4	50.6	56.8	63.4	55.5	49.4	52.3	55.8	50.0	4	71.6	56.5	61.1	61.8	61.6	56.8	56.9	56.5	55.8	54.0	4	84.7	57.0	72.6	81.5	76.5	65.7	66.1	68.3	65.8	64.3
5	59.9	43.2	52.3	57.5	57.6	50.6	43.6	46.6	46.1	42.1	5	71.5	50.1	63.4	64.7	68.1	58.5	55.6	57.4	58.9	53.8	5	82.2	60.2	70.0	75.4	81.0	67.0	65.0	64.6	68.0	63.0
6	63.3	39.1	53.9	60.6	58.8	53.6	46.0	50.1	51.7	49.7	6	69.9	53.9	59.4	67.4	67.5	58.9	56.9	62.1	61.5	58.7	6	91.9	56.2	75.8	87.5	88.8	68.6	67.6	69.8	70.5	63.1
7	65.5	49.7	55.8	62.7	64.6	53.6	54.3	57.9	57.5	52.1	7	72.0	57.3	64.4	67.0	65.6	61.5	60.2	59.9	58.4	55.5	7	85.8	62.2	76.2	83.5	84.3	68.1	65.8	69.9	70.6	61.7
8	55.8	45.6	48.6	49.9	52.6	46.0	47.6	48.1	48.8	43.7	8	74.7	52.1	62.1	69.6	73.3	61.6	52.2	56.8	59.3	53.9	8	79.7	56.9	66.9	75.3	76.2	62.3	60.0	62.0	62.5	57.0
9	51.4	43.1	45.8	47.4	50.0	50.7	45.0	45.5	49.5	50.4	9	67.3	53.3	63.8	62.2	59.6	59.7	56.8	56.6	56.4	56.5	9	86.6	52.9	71.6	78.5	81.9	69.7	60.1	64.1	64.9	62.0
10	63.2	48.6	54.1	62.0	58.2	50.3	50.1	54.8	51.2	48.9	10	69.0	52.6	58.1	55.8	64.5	59.9	52.1	53.3	53.9	54.3	10	80.2	62.8	70.5	72.9	73.8	65.3	64.2	64.9	65.8	64.6
11	60.9	46.8	50.5	51.6	54.1	47.6	50.1	50.9	53.1	46.8	11	73.2	51.2	64.1	69.6	67.4	59.7	56.8	58.7	58.8	59.5	11	83.0	61.6	66.1	78.7	78.6	67.7	63.7	68.2	67.4	64.2
12	56.2	42.5	53.5	54.9	51.6	49.6	51.7	52.2	50.8	49.5	12	70.0	59.0	65.7	67.6	67.0	65.1	62.5	64.4	65.3	63.6	12	79.8	57.8	72.6	78.4	79.6	65.3	66.6	67.6	68.6	62.3
13	55.7	46.7	48.6	50.6	52.0	49.7	47.5	48.7	49.5	48.5	13	82.0	63.1	67.7	74.9	78.4	67.5	64.1	67.0	67.8	62.2	13	74.5	62.1	65.2	71.4	71.2	63.7	64.6	67.3	66.7	63.2
14	63.2	44.0	54.6	62.5	55.2	53.6	52.0	57.1	52.9	52.2	14	85.6	56.4	72.7	81.8	83.4	66.0	63.6	68.1	70.8	63.7	14	69.4	57.8	63.8	65.7	64.6	58.6	62.8	65.6	63.7	55.0
15	53.7	47.1	49.7	51.6	53.0	50.4	47.0	48.2	49.2	46.7	15	89.5	59.1	77.0	84.3	77.0	60.9	69.8	72.1	69.0	59.9	15	69.1	51.3	59.4	63.2	65.3	59.6	52.0	53.6	54.3	55.3
16	53.7	44.2	47.8	49.6	51.6	46.6	45.0	46.1	47.5	44.6	16	73.9	55.6	63.8	69.5	72.8	62.3	56.0	58.2	59.8	56.3	16	74.2	47.4	62.9	68.6	67.5	59.3	56.4	59.8	60.2	59.0
17	60.0	45.3	52.7	58.3	57.8	47.7	48.9	52.5	51.8	44.8	17	78.0	52.0	67.3	73.4	69.5	59.6	60.0	63.4	63.2	57.8	17	75.8	58.6	64.9	67.9	72.6	66.1	60.5	60.7	63.0	58.7
18	54.0	41.4	50.8	53.7	53.8	49.6	47.0	49.8	50.2	49.1	18	81.7	56.1	70.0	76.5	76.7	66.2	64.8	67.4	67.7	63.8	18	76.1	57.9	65.5	70.2	72.6	63.6	59.9	61.6	63.0	61.1
19	59.0	47.9	49.6	49.7	54.8	49.6	49.0	49.7	53.2	48.9	19	77.5	57.4	72.6	74.9	76.4	64.4	66.7	67.5	66.3	62.5	19	71.9	55.5	62.5	69.3	69.6	62.6	54.0	56.7	58.1	56.2
20	67.0	43.4	56.8	61.3	63.3	54.8	52.2	55.7	57.8	53.8	20	74.4	56.9	65.2	71.5	71.8	62.8	59.2	61.9	61.6	61.4	20	70.2	53.8	59.6	66.4	67.3	61.7	54.9	57.9	56.7	56.2
21	65.0	49.8	53.0	59.3	59.6	50.0	52.2	53.2	52.6	46.6	21	74.6	56.3	68.3	68.4	59.7	59.3	60.4	59.8	58.0	58.0	21	67.8	54.8	60.6	62.3	64.8	59.7	56.1	57.7	59.4	56.7
22	62.2	44.5	57.6	53.6	56.3	55.2	53.4	52.3	54.5	54.0	22	67.2	53.5	61.6	66.4	64.5	59.7	55.2	56.6	55.7	53.8	22	74.5	54.7	62.3	68.1	72.6	61.9	57.6	60.0	60.8	57.8
23	74.9	54.3	63.6	68.1	72.9	60.4	58.8	60.5	62.8	56.4	23	72.7	53.7	58.5	62.8	68.8	61.9	57.8	61.1	63.2	57.6	23	76.4	48.5	65.9	72.5	75.3	59.6	59.5	61.5	62.3	56.8
24	74.9	53.2	65.6	71.6	73.1	59.3	58.4	62.9	63.3	57.0	24	72.5	51.8	63.1	70.2	72.3	60.0	56.2	59.2	59.8	54.8	24	80.2	52.6	68.4	76.9	79.5	62.6	61.6	65.1	66.5	60.6
25	81.6	54.7	70.2	77.7	80.8	65.7	61.6	64.8	65.6	60.9	25	69.1	55.0	61.1	64.6	65.2	62.3	56.4	57.9	58.4	57.6	25	77.9	55.7	65.7	76.9	74.9	63.0	61.8	66.9	61.9	61.0
26	77.1	56.0	67.6	68.6	68.2	57.4	61.0	61.1	62.9	55.7	26	67.0	56.7	59.6	63.0	67.0	62.1	54.6	55.9	58.4	55.1	26	71.9	57.3	62.7	69.8	70.0	61.2	60.8	63.8	62.6	58.7
27	71.6	48.3	60.5	67.6	68.5	57.6	53.1	57.1	59.5	54.1	27	66.3	55.8	59.7	61.7	62.7	59.3	53.6	54.7	55.5	54.8	27	65.1	56.8	60.5	60.5	64.4	60.4	56.6	56.7	58.3	58.6
28	76.9	47.0	65.4	73.7	76.2	58.1	57.3	62.1	62.9	53.6	28	69.5	54.4	60.2	64.2	65.3	56.6	55.4	56.0	55.7	53.7	28	72.3	52.1	59.0	63.7	71.6	56.8	56.4	59.3	63.6	56.2
29	81.9	49.7	69.2	77.9	80.6	64.1	61.6	65.8	65.8	59.3	29	69.5	50.6	61.0	66.0	66.8	56.4	55.6	58.6	58.1	53.6	29	74.4	54.7	61.5	69.6	71.6	58.6	59.5	62.8	61.8	57.9
30	79.3	53.3	71.6	76.9	74.8	64.5	62.1	60.1	66.2	55.1	30	66.6	49.4	58.7	62.3	64.6	59.6	55.2	57.6	59.6	57.4	30	76.8	54.8	63.3	75.3	74.8	59.7	60.1	66.3	64.4	58.9
31	72.9	54.0	62.7	65.9	70.8	59.3	54.4	54.8	58.0	50.9	31	72.6	55.6	58.0	61.6	65.6	58.7	54.8	57.2	59.8	56.4	31	79.9	55.6	62.6	74.5	76.0	62.0	61.5	66.6	66.6	59.9
Means	65.2	47.2	55.9	60.7	61.8	53.5	51.8	54.5	55.4	50.6	Means	74.0	55.4	64.6	68.7	69.7	61.5	58.8	60.8	61.2	58.0	Means	77.1	55.6	65.2	72.2	74.1	62.7	60.3	63.2	63.8	59.7
JUNE.										AUGUST.																						
d	°	°	°	°	°	°	°	°	°	°	d	°	°	°	°	°	°	°	°	°	°	d	°	°	°	°	°	°	°	°	°	°
1	66.8	49.2	58.4	64.8	59.2	55.0	51.0	53.8	50.8	47.2	1	77.3	54.3	59.1	67.7	75.6	59.6	55.7	59.9	64.6	58.1	1	77.3	54.3	59.1	67.7	75.6	59.6	55.7	59.9	64.6	58.1
2	66.2	47.0	54.9	61.5	64.3	52.6	49.0	52.3	53.3	50.8	2	78.8	57.5	58.6	66.8	74.6	66.3	56.4	61.0	64.8	58.4	2	78.8	57.5	58.6	66.8	74.6	66.3	56.4	61.0	64.8	58.4
3	67.3	44.6	58.5	64.6	63.3	56.6	51.8	54.8	54.0	53.0	3	81.0	52.3	64.6	77.8	80.6	64.3	61.6	67.5	69.1	62.4	3	81.0	52.3	64.6	77.8	80.6	64.3	61.6	67.5	69.1	62.4
4	74.2	54.8	66.8	69.2	69.2	59.6	60.4	61.3	62.0	55.6	4	84.7	57.0	72.6	81.5	76.5	65.7	66.1	68.3	65.8	64.3	4	84.7	57.0	72.6	81.5	76.5	65.7	66.1	68.3	65.8	64.3
5	76.9	51.0	61.6	71.1	76.5	59.7	57.4	62.1	65.5	56.3	5	82.2	60.2	70.0	75.4	81.0	67.0	65.0	64.6	68.0	63.0	5	82.2	60.2	70.0	75.4	81.0	67.0	65.0	64.6	68.0	63.0

READINGS OF THERMOMETERS ON THE ORDINARY STAND IN THE CHRISTIE ENCLOSURE—concluded.  
(The readings of the maximum and minimum thermometers apply to the twenty-four hours ending 21<sup>h</sup>.)

Days of the Month.	Dry-Bulb Thermometers, 4 ft. above the Ground.					Wet-Bulb Thermometers, 4 ft. above the Ground.				Days of the Month.	Dry-Bulb Thermometers, 4 ft. above the Ground.					Wet-Bulb Thermometers, 4 ft. above the Ground.					
	Maxi- mum.	Mini- mum.	9h	12h	15h	21h	9h	12h	15h		21h	Maxi- mum.	Mini- mum.	9h	12h	15h	21h	9h	12h	15h	21h
SEPTEMBER.										NOVEMBER.											
d										d											
1	76.7	58.1	66.2	72.6	70.8	65.4	61.8	65.3	64.4	62.8	1	53.7	46.0	52.4	52.5	52.2	46.4	51.9	52.0	51.6	45.9
2	78.2	58.0	67.8	71.4	71.7	62.9	62.6	64.9	65.8	61.5	2	48.5	41.2	45.4	47.2	46.9	48.5	45.4	47.1	46.8	48.3
3	76.6	58.6	63.6	72.2	75.7	60.7	60.6	62.8	64.5	54.4	3	52.9	42.9	48.6	51.6	52.2	42.9	48.4	51.1	51.5	42.7
4	75.7	47.2	62.2	69.7	70.2	57.6	55.8	58.0	58.4	53.6	4	56.7	39.5	49.5	54.5	53.9	42.0	48.8	52.1	49.4	41.7
5	77.6	46.9	62.7	73.7	74.6	60.7	56.9	61.4	61.6	56.9	5	52.5	41.1	48.0	52.2	50.4	42.8	46.8	49.0	46.6	42.2
6	81.8	55.0	60.2	75.0	78.5	63.8	57.0	63.8	65.5	57.9	6	49.7	42.4	48.9	49.0	49.0	48.5	48.5	47.1	46.8	47.6
7	82.5	61.3	67.5	76.4	80.8	64.2	62.5	66.8	69.3	62.1	7	52.6	46.0	48.6	50.6	52.5	50.5	47.5	49.6	50.8	49.5
8	70.0	56.8	58.9	65.9	69.7	58.3	52.8	55.7	55.8	51.2	8	52.4	45.4	48.5	51.5	51.5	51.3	47.7	49.5	49.8	50.5
9	63.3	46.1	59.9	58.0	53.4	50.7	52.7	52.8	52.8	49.0	9	51.8	39.6	48.6	48.4	47.6	39.6	46.8	44.0	42.7	37.8
10	61.2	46.3	55.4	58.8	58.5	50.9	50.9	51.1	50.3	44.9	10	45.0	35.0	37.7	41.9	44.5	41.0	36.0	39.4	41.5	39.0
11	57.5	44.8	51.6	54.4	56.2	52.7	47.4	49.3	50.6	49.5	11	48.0	38.7	42.7	47.0	47.8	44.1	40.9	44.3	44.3	41.6
12	59.7	48.8	54.4	57.5	58.2	50.6	48.9	50.4	50.8	50.1	12	47.7	34.9	39.7	46.5	46.6	42.2	38.4	43.0	42.0	38.7
13	59.7	49.6	54.5	57.8	57.2	53.0	52.6	53.8	53.9	52.0	13	42.4	27.1	33.6	35.8	39.7	35.4	31.8	34.2	34.7	32.2
14	61.8	47.7	52.7	60.6	60.5	51.7	51.2	52.6	52.5	49.8	14	40.1	29.3	31.5	35.2	39.6	33.8	30.2	32.6	34.8	31.3
15	67.7	50.9	59.4	65.8	63.5	54.5	56.2	58.8	60.0	51.4	15	46.7	31.0	36.6	43.4	45.8	41.3	34.9	41.0	43.1	40.3
16	64.6	42.3	57.3	60.5	58.5	49.4	53.7	55.0	55.6	49.0	16	42.7	29.2	35.0	38.3	40.5	37.5	35.0	37.9	40.2	36.2
17	64.7	47.9	60.0	55.8	55.6	52.5	56.8	54.7	54.2	52.2	17	41.0	36.2	39.5	41.0	38.5	39.1	36.9	38.2	37.0	38.7
18	67.8	48.0	56.8	64.9	61.3	51.7	52.5	56.1	55.3	50.8	18	43.7	38.7	41.0	42.2	42.7	43.6	40.7	42.0	42.7	43.6
19	58.3	45.7	52.1	55.8	54.7	52.5	51.4	52.5	52.9	51.0	19	48.5	39.5	43.9	46.6	46.1	40.4	42.6	42.4	41.1	38.1
20	60.0	46.7	52.5	57.7	56.5	49.8	50.3	52.5	51.5	47.6	20	40.4	31.6	39.2	39.8	39.4	32.4	37.7	37.7	36.7	32.1
21	58.9	37.8	50.4	57.8	57.6	51.8	47.3	52.2	52.4	49.9	21	38.9	23.9	29.1	32.9	37.2	38.9	28.8	32.0	36.6	38.7
22	70.4	48.1	61.3	66.7	66.0	50.8	55.3	58.7	57.9	49.9	22	47.1	34.3	39.7	46.9	45.0	41.8	39.6	44.9	43.6	41.6
23	71.2	42.6	54.3	65.6	70.5	51.4	53.5	56.3	59.4	50.0	23	50.7	40.5	46.4	50.0	50.0	45.8	46.0	49.1	48.2	45.3
24	68.5	44.0	58.5	65.8	66.2	60.4	54.5	57.6	58.7	57.8	24	48.3	41.2	44.9	46.5	47.0	41.8	44.3	44.4	43.6	40.0
25	60.6	53.8	54.2	56.4	56.1	55.4	53.2	55.2	55.8	55.1	25	42.0	29.6	32.4	39.2	42.0	36.7	31.9	38.0	39.8	35.9
26	71.9	53.0	61.5	69.5	71.6	60.0	59.5	62.5	62.6	56.5	26	43.1	28.6	35.7	42.8	38.7	33.0	33.8	40.2	38.0	32.8
27	71.9	48.7	59.8	67.3	69.5	62.9	57.6	63.3	65.3	62.1	27	46.6	29.1	36.5	44.8	44.9	40.5	36.5	43.6	42.4	37.6
28	65.2	54.3	60.0	62.9	64.4	56.2	56.8	55.2	55.7	51.7	28	40.8	27.6	30.0	38.6	39.2	33.3	29.7	36.2	36.2	31.9
29	67.9	43.3	58.4	65.4	66.4	50.8	54.2	57.5	59.0	50.3	29	46.4	33.0	39.9	46.1	43.8	41.1	37.6	40.7	39.0	38.8
30	68.5	45.1	57.0	65.8	68.0	52.5	56.8	58.5	58.9	51.5	30	51.9	40.5	48.7	51.6	51.0	48.7	47.8	50.3	49.8	48.2
Means	68.0	49.2	58.4	64.3	64.7	55.5	54.8	57.2	57.7	53.1	Means	47.1	36.1	41.4	45.2	45.5	41.5	40.4	43.1	43.0	40.3
OCTOBER.										DECEMBER.											
d										d											
1	68.8	46.8	60.4	66.2	66.3	53.6	56.6	57.8	57.4	52.0	1	53.2	46.2	51.1	52.8	51.1	47.2	50.5	50.1	49.2	46.7
2	68.7	49.9	56.7	66.4	66.8	57.6	55.3	58.2	59.9	56.6	2	48.2	40.9	44.6	46.3	43.2	45.0	44.0	45.2	42.4	43.8
3	58.2	55.1	55.8	56.4	57.7	56.1	55.2	54.9	55.6	51.8	3	45.2	40.9	41.6	42.9	44.2	42.4	40.2	41.3	43.0	40.9
4	62.3	46.4	53.5	61.5	61.6	51.3	50.0	54.4	51.6	47.7	4	43.1	33.0	37.3	38.5	36.8	36.9	35.3	36.0	35.2	36.7
5	59.4	47.9	55.6	59.4	58.0	53.2	52.8	54.8	54.7	50.6	5	41.8	34.2	38.4	39.9	40.8	34.6	35.9	37.0	37.7	32.6
6	56.8	49.8	55.4	56.0	56.5	54.3	51.7	50.8	50.5	50.7	6	35.6	28.0	29.6	32.4	33.1	33.6	29.2	31.6	32.2	32.6
7	56.1	50.2	51.8	54.6	54.8	50.9	51.3	52.6	51.6	48.6	7	35.3	30.8	31.0	32.4	34.3	34.4	30.8	32.2	33.8	33.4
8	60.4	50.2	54.3	58.6	58.7	51.5	51.5	53.1	52.6	50.0	8	38.6	34.0	37.2	38.4	37.6	34.9	35.2	36.2	36.0	34.4
9	60.8	49.5	54.8	60.5	59.3	50.4	50.5	52.8	51.3	48.6	9	38.2	34.0	35.0	36.5	37.9	35.7	34.7	35.8	36.9	34.8
10	59.1	40.6	47.6	54.0	57.4	45.4	47.2	50.5	49.9	44.4	10	39.0	31.1	32.0	33.0	32.6	39.0	31.9	31.8	32.0	38.0
11	58.9	44.9	51.6	58.6	57.7	51.4	49.1	51.8	51.4	50.5	11	44.7	37.2	43.7	43.7	42.7	38.5	42.5	42.6	40.3	36.5
12	55.0	50.0	51.3	53.6	54.6	51.9	49.8	51.2	51.6	49.7	12	39.0	33.8	35.3	37.8	38.2	33.8	32.6	33.3	33.7	31.8
13	52.2	40.4	49.6	50.6	51.2	45.4	46.1	46.6	46.7	43.4	13	43.0	31.8	39.5	42.6	42.6	35.3	38.6	41.8	41.8	35.3
14	57.0	43.9	48.6	55.9	56.9	54.6	46.6	51.8	51.7	50.2	14	37.7	30.8	32.4	37.4	36.9	32.9	31.9	36.4	35.9	32.9
15	61.5	48.6	55.6	60.6	57.9	48.6	51.5	51.8	50.6	45.8	15	39.6	31.6	35.6	36.1	38.8	32.6	34.9	34.8	36.1	32.0
16	61.5	37.0	48.4	59.3	59.5	48.5	46.7	52.3	52.6	46.2	16	40.3	30.7	36.7	38.8	39.7	37.5	35.8	37.8	38.7	36.2
17	57.7	41.6	53.0	55.4	56.7	42.0	48.6	50.4	50.9	41.7	17	39.8	35.4	36.0	39.1	39.5	37.6	35.0	37.1	37.6	36.2
18	52.6	35.7	43.1	52.6	50.0	47.0	42.9	50.7	48.8	46.9	18	37.6	29.3	30.7	33.8	36.0	29.9	29.9	32.1	32.8	28.8
19	57.9	40.3	46.6	56.1	57.0	50.3	45.9	51.8	53.0	50.0	19	35.6	26.0	32.7	33.3	34.4	31.0	32.2	32.8	33.6	30.8
20	60.2	44.7	48.2	57.2	60.2	45.5	47.7	53.0	54.2	45.0	20	35.1	25.0	29.5	33.4	33.4	33.5	29.5	32.1	32.2	31.7
21	62.7	42.0	45.7	53.4	62.6	46.4	45.4	51.4	56.0	46.1	21	42.8	32.2	37.0	38.0	39.3	42.7	35.3	36.8	38.6	42.2
22	61.5	43.9	55.4	59.5	56.6	49.4	54.1	54.0	53.6	48.9	22	51.7	42.4	48.4	51.0	49.8	50.5	47.9	49.6	48.8	50.0
23	54.6	45.3	52.3	52.4	52.3	46.5	51.5	50.1	47.8	45.7	23	53.4	39.5	52.4	53.0	49.6	39.5	51.4	50.5	47.6	39.5
24	53.9	45.5	48.8	52.5	52.1	47.5	45.4	46.2	43.8	44.6	24	52.0	38.3	47.9	51.9	51.4	51.0	47.5	50.3	49.6	50.0
25	58.7	46.9	54.0	56.3	54.5	54.4	52.0	53.5	52.8	51.8	25	51.4	41.2	46.3	45.7	45.2	41.6	46.3	45.7	45.2	41.6
26	59.4	47.8	51.5	55.9	57.5	50.0	50.7	51.9	52.7	49.5	26	43.2	32.1	41.6	41.6	39.7	34.3	41.5	41.5	39.0	34.1
27	55.5	49.7	51.0	52.2	54.3	54.															

AMOUNT OF RAIN COLLECTED IN EACH MONTH OF THE YEAR 1937.

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.	in.	ft.	in.	
6	3.570	3.941	2.904	2.431	3.402	1.869	0.706	1.683	1.263	2.315	1.258	3.511	28.853	0	5	149	6
8	3.698	3.969	2.962	2.424	3.407	1.892	0.710	1.739	1.266	2.367	1.349	3.639	29.422	1	0	150	1
Number of Rainy Days (0.005 in. or over).	21	22	17	15	13	12	9	6	16	11	11	20	173	..	..		

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 .	1937													Mean for the Year.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		
h	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	
1	13.2	14.6	11.2	10.1	8.9	8.3	10.1	8.0	9.2	9.3	8.7	9.9	10.1	
2	13.5	13.6	10.8	10.1	8.6	8.5	9.9	7.9	9.0	9.3	8.4	10.0	10.0	
3	13.1	13.3	10.6	9.5	8.5	8.5	9.1	7.3	8.8	9.3	8.6	10.1	9.7	
4	13.3	12.9	11.0	10.0	8.5	8.3	9.4	7.4	9.5	9.1	9.0	10.2	9.9	
5	13.5	12.6	10.8	10.4	8.7	7.9	9.3	7.9	9.0	9.2	8.7	10.2	9.9	
6	13.6	12.3	10.2	10.1	8.5	7.8	9.3	7.4	8.9	8.8	8.8	9.9	9.6	
7	12.8	12.0	10.3	10.2	8.9	7.8	9.1	7.3	9.1	9.5	8.8	9.9	9.6	
8	12.3	12.3	10.6	10.2	9.1	8.1	9.5	7.2	8.8	9.5	9.1	9.9	9.7	
9	12.7	13.2	11.1	10.8	9.6	8.8	9.9	8.0	9.7	9.5	8.2	10.4	10.2	
10	13.5	14.0	12.2	10.2	9.4	9.6	10.3	7.8	10.0	9.8	8.9	10.2	10.5	
11	13.6	14.4	12.9	10.9	10.0	9.8	11.1	7.7	10.7	10.4	9.3	10.2	10.9	
12	14.9	15.5	13.1	11.4	10.5	10.2	11.8	8.3	11.4	11.1	9.4	10.8	11.5	
13	14.0	15.5	13.1	11.0	10.3	10.8	11.5	8.3	10.6	10.9	9.9	10.6	11.3	
14	14.0	16.6	13.1	11.2	9.9	11.0	11.5	9.1	11.2	11.1	10.4	10.0	11.6	
15	14.4	16.6	13.7	11.0	9.9	11.1	11.9	9.1	11.5	11.7	10.4	10.5	11.8	
16	13.0	16.0	13.4	11.2	10.7	10.5	11.8	9.5	11.0	11.0	10.3	10.2	11.5	
17	13.1	15.4	13.3	11.5	9.8	11.5	11.6	10.2	11.3	10.4	9.8	10.2	11.5	
18	14.0	15.5	12.4	11.9	9.6	11.4	11.8	10.4	10.5	10.4	10.2	11.0	11.6	
19	13.9	15.7	11.4	11.5	9.6	10.9	10.9	9.9	10.4	9.7	9.9	11.0	11.2	
20	14.1	15.4	10.9	11.4	9.8	10.4	10.6	9.2	10.2	9.7	9.9	10.8	11.0	
21	14.2	15.4	10.9	11.0	9.4	10.0	10.0	9.0	10.1	9.6	9.6	11.0	10.9	
22	13.9	15.0	10.5	10.8	9.0	9.2	9.4	8.2	10.0	9.0	9.3	10.9	10.4	
23	13.9	15.5	10.7	10.5	9.4	8.7	10.3	8.5	10.0	9.1	9.1	10.8	10.5	
24	13.7	15.2	10.5	10.1	8.7	8.8	10.3	8.0	9.4	9.6	9.2	9.7	10.3	
Means ..	13.6	14.5	11.6	10.7	9.4	9.5	10.4	8.4	10.0	9.9	9.4	10.3	10.6	
Greatest Hourly Measures }	30	28	23	23	23	19	21	19	20	23	19	24	..	

\* The measures are derived from the motion of the cups by the formula  $V = 2v + 4$ , where  $v$  is the hourly motion of the cups in miles. See Introduction.

