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THE  
OBSERVATORIES' YEAR BOOK  
1930



Comprising the meteorological and geophysical results obtained from autographic records and eye observations at the observatories at Lerwick, Aberdeen, Eskdalemuir, Cahirciveen (Valentia Observatory), and Richmond (Kew Observatory), and the results of soundings of the upper atmosphere by means of registering balloons.

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## PREFACE.

UP to the end of 1921, the serial statistical publications of the Meteorological Office were grouped together as though they were parts of one comprehensive book. This book, which was entitled "The British Meteorological and Magnetic Year Book," consisted of:—

Part I	..	..	..	..	The Weekly Weather Report.
Part II	..	..	..	..	The Monthly Weather Report.
Part III, Section I	..	..	..	..	Daily Readings at Meteorological stations of the First and Second Orders.
		Section II	..	..	Geophysical Journal, Daily Values of Meteorological and Geophysical Elements.
Part IV, Section I	..	..	..	..	Hourly Values from Autographic Records. Meteorological Section.
		Section II	..	..	Hourly Values from Autographic Records. Geophysical Section.
Part V	..	..	..	..	Réseau Mondial.

The data for the year 1922 and subsequent years are found in the following publications:—

New Publication from 1922.				Corresponding parts of the British Meteorological and Magnetic Year Book until the end of 1921.
The Weekly Weather Report	..	..	..	Part I.
The Monthly Weather Report	..	..	..	Part II.
The Observatories' Year Book	..	..	..	{ Part III, Section II. Part IV, Section I.* Part IV, Section II.
The Réseau Mondial	..	..	..	Part V.

It will be noticed that Part III, Section I, of the old publication is not included in the new issues. This part contained "Daily Readings at Meteorological Stations of the First and Second Orders," and it has been decided that as the Observatories' Year Book contains daily values of the meteorological elements for the principal first order stations and the Daily Weather Report contains daily values for these and about 40 other stations, it is not necessary to revive the issue of this section, which ceased with the data for 1921.

The present volume is the ninth issue of the Observatories' Year Book. It contains geophysical data for Lerwick, Eskdalemuir, Cahirciveen and Richmond, meteorological data for Aberdeen, Eskdalemuir, Cahirciveen and Richmond, and in addition an aerological section giving the results of soundings of the upper atmosphere by means of registering balloons.

The table of mean annual values of magnetic data for observatories of the globe has been contributed by the Astronomer-Royal. It will be found in the Eskdalemuir section.

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\*Part IV, Section I, Hourly Values from Autographic Records, Meteorological Section, was discontinued after the data for 1913 had been published. The hourly values for the years 1914 to 1921 are, however, available in manuscript.



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ERRATA IN PREVIOUS VOLUMES.

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## LIST OF OBSERVATORIES.

	Latitude.	Longitude	G.M.T: of Local Mean Noon.		Height above M.S.L.
			h	m	
Lerwick, Shetland Isles .. .. .	60 8 N.	1 11 W.	12	5	81·7
Aberdeen .. .. .	57 10 N.	2 6 W.	12	8	11·4†
Eskdalemuir, Dumfries-shire .. ..	55 19 N.	3 12 W.	12	13	242·0
Valentia Observatory, Cahirciveen, Co. Kerry.	51 56 N.	10 15 W.	12	41	9·1
Kew Observatory, Richmond, Surrey ..	51 28 N.	0 19 W.	12	1	5·5

*Note.*—The height given is that of the site of the rain-gauge. The heights of other meteorological instruments are shown in the appropriate Tables.

† The site of the rain-gauge was altered on 1st June 1928.

## NORMAL VALUES AND MONTHLY SUMMARIES.

Monthly and annual normals of pressure, dry bulb temperature, and rainfall for each hour of the day and for the period of 45 years, 1871–1915, are published for the observatories, Aberdeen, Cahirciveen, Richmond and Falmouth in *Hourly Values from Autographic Records, 1917* (Part IV of the British Meteorological and Magnetic Year Book, 1917), and in previous volumes of that series. Corresponding normals of wind-speed and sunshine are published there for the same observatories and for the period of 35 years, 1881–1915; while corresponding normals of relative humidity are also published there for the period of 30 years, 1886–1915.

For Eskdalemuir the same publication gives hourly averages for the months and for the year, referred to the period 1911–1915.

Summaries giving additional mean values and frequencies of occurrence of various meteorological phenomena will be found for all the observatories in *The Monthly Weather Report* and its Annual Summary. The latter also contains special summaries of the tabulations of the anemographs.

Monthly normal values of maximum, minimum and mean temperature, rainfall and sunshine for the period 1881–1915 are published in the *Book of Normals, Section I* for Aberdeen, Cahirciveen, Richmond and Falmouth. *Section IV* of the same publication gives information regarding the range of variation of temperature and rainfall at the same observatories, and monthly frequencies of the normal numbers of days of hail, thunder, snow, snow-lying and ground frost. *Section VI* of the *Book of Normals* gives tables and isopleth diagrams showing the normal diurnal and seasonal variation of relative humidity at all the observatories for which data of relative humidity are included in this volume.

## GENERAL INTRODUCTION TO THE METEOROLOGICAL TABLES.

The elements dealt with in the following meteorological tables for the Observatories at Aberdeen, Eskdalemuir, Cahirciveen and Richmond are :—barometric pressure, air temperature, humidity, rainfall, sunshine, wind speed and direction, minimum night temperature on the grass, cloud, visibility and weather, and in some cases temperature in the ground, solar radiation and level of underground water.

The positions of the Observatories and the heights of the sites are given on p. 8.

### NOTES ON THE INSTRUMENTS AND TABULATION OF THE RECORDS.

A detailed description of the barograph, thermograph, and Beckley rain-gauge used for obtaining the records of pressure, temperature, humidity, and rainfall is given in the *Reports* of the Meteorological Office for the years 1867 and 1869; for a description of other instruments in use reference may be made to the *Meteorological Observer's Handbook* and to the article on Meteorological Instruments in the *Dictionary of Applied Physics*, Vol. III. The following notes are supplementary and are given partly for reference and partly as containing information necessary for the interpretation of the tables.

**Barometer.**—The record of barometric pressure is obtained photographically from a mercurial barometer.

A beam of light is passed through the space between the surface of the column of mercury and the top of the tube, and, after passing through a diaphragm which reduces the width of the beam of light to a very narrow sharp line, is focussed upon a sheet of sensitized paper (ordinary "bromide" paper is employed) carried upon a cylinder which is rotated by clockwork and makes one revolution about its vertical axis in rather more than 48 hours.

The barogram is therefore a continuous photograph of this narrow vertical line, and appears as a horizontal ribbon, the depth of which is constantly varying with the rise or fall of the mercury in the tube of the barometer.

The expansion of a zinc rod is utilised to compensate for the effect of temperature upon the height of the barometric column; the arrangement produces mechanically a lengthening of the beam of light at its upper end as it becomes shortened at its lower extremity by the expansion of the mercury in the tube. A time-scale is recorded upon the barogram by means of a shutter actuated by the clock. This shutter cuts off the light for the space of four minutes every two hours, thus producing interruptions which appear as narrow white spaces on the record corresponding with known points of time. Until 1918 these time-breaks occurred at the even hours, 2h, 4h, 6h, etc., but it was found that when the edge of the record was not critically sharp owing to various causes, a systematic error was introduced when measuring the records, whereby the values at the even hours were slightly in excess of those at the odd hours where no time-break existed. From 1918 onwards the clock was so arranged that the time-breaks should occur half an hour before the even hours; by this means both even and odd hour-values are measured at points on the trace which are unaffected by any systematic difference.

Control readings of a standard barometer are taken three times a day by different observers. The control readings are first corrected for index error, temperature and gravity, and then compared with the corresponding readings of the barogram. The differences between the control readings and the corresponding tabulated values

are then found and a correction derived therefrom is applied to all the tabulated values. This correction, known as the "residual correction," is so applied as to run smoothly throughout the whole length of each record—a period of 48 hours—and alterations in the amount of the correction occur, where necessary, in steps not exceeding 0.1 millibar.\*

The scale value of the barograms is found from a comparison of a series of such standard and curve readings. The indications of a curve are converted into numerical values by measuring the ordinates with a tabulating instrument, graduated according to the ascertained scale value.

**Thermometers.**—The air temperature and humidity data at each Observatory are derived from records obtained photographically from two mercurial thermometers. One thermometer is used as a dry bulb and the other as a wet bulb thermometer.

Each thermometer has a large cylindrical bulb four inches long and a very long stem. The latter is bent twice at right angles to enable the bulb to be exposed outside the building in a louvered screen attached to the north wall of the Observatory.† The column of mercury in the vertical portion of the stem inside the building is broken at a convenient point by a small air space which moves up or down the stem with rise or fall of temperature. The record is obtained by passing a reflected beam of light through the air space and photographing its image upon a moving sheet of "bromide" paper in the same manner as described in the case of the barometer. A base line is traced on the paper by a pencil of light passing through a small aperture in the brass frame carrying the recording thermometer. The time-scale is automatically recorded upon the curves, a time-break occurring half an hour before each even hour.

Two large standard thermometers with very open scales graduated in degrees absolute and having bulbs similar to those of the thermograph are mounted in the screen side by side and close to the thermograph bulbs. One of the thermometers is arranged as a dry bulb, the other as a wet bulb. Control readings of these thermometers are made three times a day for comparison with the corresponding readings obtained from the thermograms.

The scale-value of the curves is found by a comparison of the readings of the standard thermometers, corrected for any errors they may have, with the corresponding measurements of the curves. The curves are measured by means of a plate of glass ruled with lines corresponding with the ascertained scale-value of the record, both for temperature and for time. The scale is graduated so as to read degrees vertically and hours horizontally.

Two alternative methods of reading the curves have been adopted.

- (a) At Richmond the scale is set by the base-line and after hourly readings have been obtained for the whole record comparisons are made with the control readings. The residual correction so determined (normally the same for the whole record of 48 hours) is applied to the tabulations.
- (b) At Aberdeen, Eskdalemuir and Cahirciveen, the practice is to adjust the glass scale so that the readings at the control hours on the trace are made to show general agreement with the corresponding eye-readings of the standard thermometers. The temperature equivalent of any part of the curve can then be read off. The base-line photographed on the record serves as a useful check.

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\* At Cahirciveen and Richmond the rule is to apply the same correction for the whole chart.

† At Eskdalemuir the screen stands in the open.

**Rainfall.**—This element is recorded by a Beckley self-registering rain-gauge, in which the rain as it falls is collected in a receiver supported on a float in a vessel of mercury. As the rain passes into the receiver, the float gradually sinks, carrying with it a pen which records its position upon a paper stretched upon a clock-driven cylinder. The displacement of the mercury by the float is arranged so as to give a uniform scale throughout. When five millimetres (two-tenths of an inch) of rain have entered the receiver a siphon comes into action, and, by discharging its contents, causes the float to rise till the pen is brought back to the zero line, from which the record begins again.

The collecting funnel of the Beckley rain-gauge has an area of approximately 100 square inches. Each gauge stands on level ground and its distance from every other object is greater than twice the height of the object. The height of the rim of the Beckley rain-gauge above the surface of the surrounding ground varies from 0.4 m. to 0.6 m. at the different observatories. Details are given at the head of the tables of hourly values. A check gauge with funnel 8 inches in diameter is installed near by.

The records obtained from the Beckley self-registering rain-gauge are, if necessary, subjected to a proportional correction whereby they are brought into agreement with the amount of rainfall as recorded by the check rain-gauge which is read twice daily at 7h. and 18h.

**Sunshine.**—The record of sunshine is obtained from a Campbell-Stokes recorder, in which instrument the sun's rays are focussed through a 4-inch spherical lens of crown glass upon a strip of blue card, which is scorched, or burned right through, according to the intensity of the sun's rays. Three different patterns of card are used at different seasons of the year. The cards are exposed in a metal bowl, and the focussed image of the sun leaves its mark behind it as it travels along the surface of the card with the apparent motion of the sun through the heavens. The intensity of the burn is not measured, but the record is regarded as that of "bright" sunshine whenever the card has been distinctly scorched. When measuring the duration of sunshine which is represented by intermittent burns, an allowance is made for the extension of the trace by the charring of the card.

**Wind - Speed and Direction.**—The hourly values of wind-speed and direction which appear in this volume are derived from the records of Dines tube anemographs. These instruments record the speed of the wind and its direction directly as functions of the time. In the case of Aberdeen, where building operations have seriously affected the exposure of the tube anemograph, data from the Robinson Cup Anemograph, adjusted as explained in the sectional introduction, have been printed for 1930. For volumes previous to that of 1926 the hourly values of wind-speed and direction, July to December, were derived from the records of Robinson Cup Anemographs at the older observatories. At Eskdalemuir the records of tube-anemographs have always been used. Particulars of the exposure of the tube-anemographs at the several observatories will be found in the introductions to the data for each observatory. A description of the tube anemograph will be found in the *Meteorological Observer's Handbook*.

In consequence of these changes the values of wind-speed published for Aberdeen, Cahirciveen and Richmond for 1926 and later years are not directly comparable with those published in earlier years. The matter was briefly discussed in the General Introduction to the *Year Book* for 1926. The following table gives, for the various wind directions, the mean values of wind-speed recorded by the tube anemographs, expressed as percentages of the corresponding values recorded by the cup anemographs :—

Average values of the quantity  $100 \times \frac{\text{Speed by tube anemograph}}{\text{Speed by cup anemograph}}$   
at the three observatories, arranged according to the direction of the wind.

North = 360°, East = 90°, South = 180°, West = 270°.

Wind Direction in degrees from North.	Aberdeen.	Cahir-civeen.	Richmond.	Wind Direction in degrees from North.	Aberdeen.	Cahir-civeen.	Richmond.
10	131	103	99	190	138	137	96
20	132	103	100	200	132	134	99
30	130	104	103	210	124	128	99
40	117	103	103	220	115	115	100
50	115	104	104	230	108	102	100
60	115	105	99	240	110	90	100
70	119	105	99	250	112	88	101
80	113	104	97	260	114	85	101
90	110	102	101	270	128	82	101
100	126	98	104	280	124	81	103
110	121	97	102	290	110	83	101
120	118	98	100	300	99	88	96
130	118	100	104	310	100	92	93
140	125	103	102	320	108	95	96
150	128	107	98	330	111	97	99
160	137	114	92	340	120	98	98
170	133	123	92	350	138	99	103
180	135	134	95	360	135	102	104

**Minimum Night Temperature on the Grass.**—This is the temperature determined by a minimum thermometer exposed freely over the surface of the grass. The stem of the thermometer is enclosed in an outer glass jacket, but the spirit bulb is freely exposed to the air. The thermometer is supported on two small Y-shaped pieces of wood so that it lies horizontally, with its bulb about one or two inches above the ground, which is covered with short grass. When snow has fallen the thermometer is supported so as to lie just above the surface of the fallen snow, but not touching it.

The thermometer is laid out at 18h. each day, having been kept in an upright position, bulb downwards, inside the Stevenson Screen during the daytime, so that any spirit that may have condensed in the upper part of the stem may be able to run down and join the main spirit column.

#### NOTES ON THE TABLES.

**General.**—Interpolated values are printed within brackets, ( ). Maximum and minimum values are printed in heavy type.

**Standard of Time.**—The observations are referred to *Greenwich Mean Time* except as regards sunshine, for which element *local apparent time* is used.

**Units.**—In accordance with the practice introduced in 1911, as a consequence of certain resolutions of the Gassiot Committee of the Royal Society, the values in the tables are expressed throughout in units based upon the C.G.S. System: tables for conversion to other units are given in the *British Meteorological and Magnetic Year Book (Part IV)* for 1913 and are also to be found in the *Computer's Handbook*.

**Daily Mean Values.**—The daily means of pressure, temperature, relative humidity and wind speed are obtained by adding half the sum of the values for the initial and final midnights to the sum of the 23 intermediate hourly values and dividing by 24.

In the preparation of the tables of diurnal inequalities for individual months and for the year, it is assumed that the difference of value between the means for the initial and final midnights, which may be termed, so far as the hourly variations are concerned, the non-cyclic variation, is equally distributed over the whole 24-hour period. Thus, in a table of diurnal inequalities the entry  $d_n$  for the hour  $n$  is given by

$$d_n = x_n - \bar{x} - (n-12) (x_{24} - x_0) / 24,$$

$x_n$  being the value of the element at hour  $n$  and  $\bar{x}$  the mean for 24 hours.

**Annual Values.**—The mean values or totals for the whole year (given either in separate tables or at the end of the corresponding monthly tables), are computed as the means or sums of 365, in leap year 366, daily values.\* The annual values of pressure at sea level are computed from the annual means at station level and the annual means of air temperature; the annual values of vapour pressure are derived from the annual means of air temperature and relative humidity.

**Atmospheric Pressure.**—All pressures recorded in this volume are expressed in *millibars*, one millibar being equal to 1000 dynes per square centimetre. The following are the values of physical constants used in evaluating the data:—

Density of Mercury = 13.5955 grams per cc. at 0°C.

Intensity of Gravity at Sea Level (Lat. 45°) = 980.617 centimetres per second per second.

1 inch = 25.4000 millimetres.

Hence a pressure of 1000 millibars corresponds with a reading of 750.076 millimetres on a mercury barometer at temperature 0°C. in Lat. 45° and is equivalent to 29.5306 inches under standard conditions of temperature (mercury at freezing point, scale at 62° F.) in Lat. 45°.

The true pressure in millibars can only be obtained from the reading of a barometer after the latter has been suitably corrected for (a) index error, (b) temperature, and (c) gravity.

These corrections have been applied to the barometer readings in obtaining the pressure values published in this volume. The corrections for index error (including those for capillarity) are given in the certificates issued by the Kew Observatory or the National Physical Laboratory in respect of the standard barometers at each observatory. The corrections for temperature are equivalent to those published in the *International Meteorological Tables* (Gauthier-Villars, Paris, 1890). The correction for the variation of gravity from its standard value at sea level in latitude 45°, quoted above, is in accordance with the formula adopted in the *International Tables*, viz. :—

$$g_{z,\lambda} / g_{0,45} = (1 - 0.00259 \cos 2\lambda) (1 - 5z/4E)$$

where  $z$  = height of the station above M.S.L.  
 $E$  = earth's radius, both expressed in the same units,  
and  $\lambda$  = latitude of station.

Except at Eskdalemuir, the correction for the variation of gravity with height, contained in the second factor of the above equation, is insignificant.

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\* At Eskdalemuir the annual values for the years 1922 to 1926 were computed as the means or sums of 12 monthly values.

Unless otherwise stated, all pressure values refer to the level of the observatory, as given in the headings of the tables. The reduction to sea level, wherever made, is effected by tables drawn up for each observatory in accordance with the following scheme :—

If  $p$  is pressure at station level, and  $P$  is pressure at sea level, the correction required to reduce  $p$  to sealevel is  $P-p$  where

$$\log_e (P/p) = \bar{g}z (1 - 3 \bar{w}/8p) / K\bar{T}.$$

$z$  = height of station in centimetres.

$e$  = base of Napierian logarithms.

$K$  = gas constant for dry air =  $10^9/348 \cdot 4$  C.G.S. units.\*

$\bar{T}$  = mean absolute temperature of the air column between station level and mean sea level.

$\bar{w}$  = mean value of water vapour pressure in the column.

$\bar{g}$  = mean value of the acceleration of gravity in the air column. Even at Eskdalemuir, the highest station, the effect on the correction of the variation of gravity with height is, in this case, negligible, so that

$$\bar{g} = 980 \cdot 617 (1 - 0 \cdot 00259 \cos 2\lambda).$$

The factor  $(1 - 3 \bar{w}/8p)$  in the above formula is practically unity except at Eskdalemuir. Its value for that observatory is discussed in the Introduction to the Eskdalemuir section.

In the same way, the value of  $\bar{T}$  at each observatory differs inappreciably from the value of air temperature at the observatory, except in the case of Eskdalemuir (*see* Introduction to Eskdalemuir section for details).

Hence at all observatories except Eskdalemuir, no corrections are applied for the effects of water vapour, or of change of air temperature in the column of air between the station and sea level.

The scheme for correcting barometer readings outlined above was introduced for Eskdalemuir at the beginning of 1927. For the other observatories, it has come into effect as from 1st January, 1928. The effects of the introduction of the scheme on the tabulated values are briefly referred to in the several introductions to the individual sections. Only at Eskdalemuir are they at all appreciable.

The tables contain values of pressure at exact hours obtained from the photographic barograms in the manner described on p. 9; also daily, monthly and annual means of hourly values, together with the monthly and annual means of diurnal inequalities. Monthly and annual means of the hourly values after reduction to mean sea level are also given.

There is also a table showing the daily extremes of pressure, *i.e.*, the maximum and minimum values recorded during each day.

**Temperature.**—The scale on which temperatures are recorded is such that the freezing point of water under atmospheric pressure is  $273^\circ\text{A}$  precisely. Other temperatures differ by  $273 \cdot 0$  from readings on the Centigrade scale.

The scale approximates to the absolute scale defined by Lord Kelvin, on which the temperature of the freezing point is  $273 \cdot 1$  to the nearest tenth of a degree.† Accordingly, to convert temperatures published in this volume to the Kelvin scale, a correction  $+ 0 \cdot 1$  is to be added to each reading.

As an alternative to the application of this correction modified values may be used for the constants which enter certain formulæ. For example :—At temperature  $t$  on the scale adopted in the Year Book, the radiation according to Stefan's Law‡ is

$$5 \cdot 709 \times 10^{-5} (t + 0 \cdot 1)^4 \text{erg}/(\text{cm.}^2 \text{ sec.}) ; \text{ or } 5 \cdot 717 \times 10^{-5} t^4 \text{erg}/(\text{cm.}^2 \text{ sec.})$$

\* This value depends on a coefficient of expansion of dry air of  $1/273$  and on the density of dry air at pressure  $1013 \cdot 23$  mb. and temperature  $273^\circ\text{A}$ , *viz.*,  $1293 \cdot 052$  g/m<sup>3</sup>.

† A. L. Day and R. B. Sosman, *Dictionary of Applied Physics*. Macmillan, London, 1922. Vol. I, p. 840.

‡ The constant  $5 \cdot 709$  is the value which has been adopted by the International Research Council for publication in the "*International Critical Tables*."

In using the modified formulæ we are virtually adopting a scale of temperature with the degrees greater than those of the Centigrade scale, in the ratio of 273·1 to 273. This is the practice of the *Computer's Handbook* of the Meteorological Office.

The tables give the values of temperature at exact hours obtained from the photographic thermograms; also daily, monthly and annual means of hourly values, together with the monthly and annual means of diurnal inequalities. There is also a table showing the daily extremes of temperature.

**Humidity.**—When the temperature of the wet bulb is above 273°A, values of relative humidity at exact hours are deduced from the corresponding values of dry and wet bulb temperatures obtained from tabulations of the photographic thermographs, complete saturation being taken as 100. Until the end of the year 1925 the reduction was effected from tables based on Glaisher's hygrometric factors\* but from 1st January, 1926, tables have been employed which proceed from Regnault's formula

$$x = f - Ap(t - t'),$$

where  $x$  = vapour pressure under the conditions of observation.

$f$  = saturation vapour pressure at the temperature ( $t'$ ) of the wet bulb.

$p$  = pressure of the air.

$t$  = temperature of the dry bulb in absolute (Centigrade) degrees.

$t'$  = temperature of the wet bulb in the same units.

$A$  = a constant.

The tables used in this volume for determining the hourly values of relative humidity when the wet bulb is above the freezing point are *Jelineks Psychrometer-Tafeln* (6th edition, Leipzig, 1911). They give values which are in almost exact agreement with those given by *Hygrometric Tables* published by the Meteorological Office in 1924 (M.O. 265) for general use at second and third order stations. The latter tables are not suited to the purposes of this Year Book, because in them temperature is expressed in Fahrenheit degrees, whereas the absolute centigrade scale of temperature is used at the observatories.

No allowance for variation of pressure  $p$  is made and the standard value used in Jelinek's tables, *i.e.*, 755 mm. of mercury (1006·57 mb.), is adhered to. Similarly no allowance is made in the adopted value of the constant "A" for the speed of the air flowing past the wet bulb, though it is well known that "A" is not independent of the ventilation. "A" is regarded as fixed and equal to ·0008. In view of the well-marked diurnal variation of wind-speed, the diurnal variation of humidity, derived in this manner, is subject to slight modification.

When the wet bulb reading does not exceed 273°A, the above method of reduction is not followed, but values of relative humidity are derived from the record of the hair hygograph. To these values are applied appropriate corrections based on a comparison between the readings of the record of that instrument and the corresponding values of humidity computed from dry and wet bulb readings during neighbouring periods when the wet bulb readings exceeded 273°A.

The mean values of vapour pressure are computed by slide rule from a table‡ of saturation vapour pressure over water, and the corresponding mean values of relative humidity and air temperature.

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\* Glaisher's Hygrometric Tables, 7th edition, London, 1885.

‡ The saturation vapour pressures used are those employed in the preparation of *Hygrometric Tables*. They are equivalent to those published by Scheel and Heuse in *Annalen der Physik*, 1910.

The normal hourly values of relative humidity for the period 1886–1915, published for certain Observatories in "Hourly Values from Autographic Records, 1917," were derived from tables based on Glaiser's factors. The application of the new tables to the normal hourly values of dry and wet-bulb temperature gives results for normal relative humidity which are only slightly different from those which have been published. At Kew Observatory in winter the difference is negligible; in July it does not exceed 1 per cent. at any hour, in October it does not exceed 2 per cent. at any hour. The effect is greatest in April, when the published normal values of average relative humidity are reduced by 3 per cent. at noon and at 16h. and by smaller amounts at other hours.

Of greater importance is the effect on the values of absolute minimum humidity. Under the old system, values of relative humidity less than 30 per cent. seldom occurred; under the new system, values less than 20 per cent. may occur not infrequently.

Tables are printed giving the values of relative humidity at exact hours together with daily, monthly and annual means of hourly values. Monthly and annual means of vapour pressure computed from the corresponding mean values of temperature and relative humidity, together with monthly and annual means of diurnal inequalities of relative humidity, are also given.

**Rainfall.**—Tables are given showing for the 60-minute intervals between exact hours\* the amount of precipitation, expressed in millimetres, derived from the record of the Beckley gauge (see p. 11). Totals of amount are given for each day, and for each month; the latter totals referring both to the complete days of the month, and to each of the hours of the day. When zero rainfall is assigned to a particular hour, the entry appears as "...". Corresponding totals of durations of rainfall are also given, the duration being regarded as the number of hours during which rain falls at a rate of not less than 0.1 millimetre per hour. If slight precipitation, due to rain, snow, fog or dew, extends over some hours, and if the amounts collected in some or all of the hours are less than .1 mm., the fact is indicated by a succession of entries, each of which is enclosed within brackets, covering the period over which precipitation is known or believed to have occurred. In such cases entries of (.1) are allocated evenly among the hours concerned in such a way that their sum is equal to the aggregate fall during the period, and the remaining entries are (...), (\*), (≡) or (☉) according as the precipitation took the form of rain, snow, fog or dew. Slight precipitation which takes other forms such as hail, sleet, hoar frost, glazed frost and rime is dealt with similarly. When it is impossible to determine the hourly amounts of precipitation, *e.g.*, during snowfall or on occasions when the record has failed, the normal procedure is to consider each case on its merits, and to assign hourly values derived from estimates made by the observers as soon as possible after the event. Such values are also enclosed in brackets.

Annual totals of hourly amounts and duration and notes on special features of the rainfall of the year are also given.

**Sunshine.**—Tables are given showing for each of the 60-minute intervals between exact hours† according to *local apparent time*, from sunrise to sunset, the duration of bright sunshine recorded by the Campbell-Stokes instrument. The sums and means of hourly amounts are also given. For each day is shown the total duration of bright sunshine, and also the percentage this represents of the "possible" duration for the day. The "possible" for each day is computed as the period of time beginning and

\* For the years 1904 to 1920 it was the practice to tabulate rainfall for the periods of 60 minutes centred at the exact hours; the reversion to the method in use before 1904 occurred on 1st January, 1921.

† Before 1st January, 1921, sunshine was tabulated for the periods of 60 minutes centred at exact hours.

ending at the instants when the centre of the sun is apparently on the horizon, due allowance being made for atmospheric refraction. Even on a clear day the sun, when at an altitude less than  $2\frac{1}{2}^{\circ}$  to  $3^{\circ}$  above the horizon, fails to make a scorch on the card of the Campbell-Stokes recorder.

A distinction is made in the tables between (a) sunshine not possible, and (b) sunshine possible but none recorded. If, in any hour, sunshine is not possible, the symbol “—” is used; if more than 3 minutes of “possible” sunshine falls in the 60-minute interval between exact hours according to local apparent time, and if no sunshine was recorded, the symbol “...” is printed.

The values for the months and for the year of percentage of possible duration of sunshine are obtained by comparing the total recorded sunshine for the period with the total “possible” sunshine for the period.

**Wind.**—Tables are printed giving the hourly values of wind speed and direction, together with the mean speed for each day, each hour, and for the month and year. Values of speed are expressed in metres per second (1 metre per second=2.2369 miles per hour): those of direction are given in degrees from true north. The values of direction\* and speed are averages for periods of sixty minutes, centred at the exact hours of Greenwich Mean Time. They are obtained by estimation from the records with the aid of a transparent scale, with engraved graduations corresponding with the velocity, direction and time scales of the record.

For speeds not exceeding 1.5 m/s the wind directions are regarded as indeterminate and are omitted.

The daily values of the speed and time of occurrence of the maximum gust and the monthly distribution of wind are shown in other tables.

**Minimum Night Temperature on the Grass.**—Values are given for each day of the year together with monthly and annual mean values. The interval to which the reading refers is from 18h the previous day to 7h on the day to which it is entered.

**Diary of Cloud, Visibility and Weather.**—In these tables are given particulars of the cloud forms observed daily at 7h, 13h, and 18h, the total cloud amount observed at 7h, 9h, 13h, 15h, 18h, and 21h, the range of visibility at each of these six hours and the kind of precipitation which may be falling at those hours. There is also a column devoted to remarks on the weather of the day.

*Cloud Form.*—The observations of cloud form are made in accordance with the International classification, and the following abbreviations are used in the tables:—

Cirrus	..	..	..	..	..	..	Ci.
Cirro-Stratus	..	..	..	..	..	..	Ci-St.
Cirro-Cumulus	..	..	..	..	..	..	Ci-Cu.
Alto-Cumulus	..	..	..	..	..	..	A-Cu.
Alto-Stratus	..	..	..	..	..	..	A-St.
Strato-Cumulus	..	..	..	..	..	..	St-Cu.
Nimbus	..	..	..	..	..	..	Nb.
Cumulus	..	..	..	..	..	..	Cu.
Cumulo-Nimbus	..	..	..	..	..	..	Cu-Nb.
Stratus	..	..	..	..	..	..	St.
Stratus-cumuliformis	..	..	..	..	..	..	St-Cuf.
Fracto-(prefix, as in fracto-stratus)	..	..	..	..	..	..	Fr.
-lenticularis (affix, as in stratus-lenticularis)	..	..	..	..	..	..	-lent.
Mammato-cumulus..	..	..	..	..	..	..	M-Cu.

\* Formerly it was the practice to take the direction at the exact hour. The present rule was adopted as from 1st May, 1915 (see also Introduction to *Hourly Values from Autographic Records*, 1913, p. xv.).

All the cloud forms noted by the observer at the time of observation are printed where space permits. When the number of forms is too great to allow of this, the predominating forms selected at the time of observation to give the best representation of the cloud canopy are printed. If high or medium cloud can be seen, one of the selected types is normally a high or medium cloud.

*Cloud Amount.*—The figure given for the amount of cloud denotes the proportion of the sky covered by cloud, the numerical scale running from 0, cloudless, to 10, completely overcast. The figure denotes the total cloudiness irrespective of form. In the case of fog through which it is impossible to discern the sun or stars the cloud amount is entered as 10, but if cloud can be seen through the fog, the form and amount of that cloud are entered in the usual way. If the sun or stars are visible through fog and if there is no evidence of cloud above the fog the amount is entered as 0.

*Visibility.*—Observations of the range of horizontal visibility made every day at 7h, 9h, 13h, 15h, 18h, and 21h, are printed in the diaries of cloud and weather.

As described in detail in the *Meteorological Observer's Handbook* (Ed. 1926), a series of selected objects, A, B, C..., as nearly as possible at the standard distances given in the table which follows, is used for this observation. The objects are selected so as to be readily seen and identified from specified observing points in daylight.

SCHEME FOR OBSERVATIONS OF RANGE OF VISIBILITY AND OF FOG,  
MIST AND HAZE.

Indication Letter of Object.	Standard Distance of Object.	Verbal Description.	BEAUFORT LETTERS.	
			Detailed Scale.	Contracted Scale.
(X)	Metres. —	Dense fog	8 f	} F
A	25		7 f	
B	50	Thick fog	6 f	
C	100		5 f	
D	200	Fog	4 f	} f
E	500	Moderate fog	3 f	
F	1,000	Mist, haze or very poor visibility	m or z	m or z.
G	2,000	Poor visibility	} m <sub>0</sub> or z <sub>0</sub>	m <sub>0</sub> or z <sub>0</sub> .
H	4,000	Moderate visibility		
I	7,000			
J	10,000	Good visibility		
K	20,000	Very good visibility		
L	30,000			
M	50,000	Excellent visibility		

NOTE.—The grouping of the letters by the horizontal lines indicates the limits of the several figures of the International Telegraph Code for visibility, from 0 to 9, which grouping is also adopted in the tables of frequencies published in the *Monthly Weather Report*.

when the air is clear. A variation up to 10 per cent. from the standard distances is considered admissible. Particulars of the objects in use at each observatory, together with a statement of their actual distances and bearings from the point of observation and notes on local peculiarities which affect the observations, will be found in the Introductions to the sections for the individual observatories.

The method of observing consists in determining which is the most distant of the selected objects that can be identified and entering the corresponding letter. In cases of uncertainty when the observer, though recognising the presence of an object, would be unable to identify its nature from the observations he is able to make *at the time*, the letter corresponding with the next nearer object is entered. If object A, the nearest of the selected objects cannot be identified, an entry X is made. At night the letters are used to denote as nearly as possible corresponding degrees of atmospheric obscurity.

Small letters are used to indicate interpolations or extrapolations made in cases where it has not been possible to find suitable objects within 10 per cent. of the standard distances. In such cases the observer may use objects at other than the standard distances to guide his judgment. Particulars of such auxiliary objects will be found in the sectional introductions.

At Cahirciveen, visibility is recorded in both landward and seaward directions. The observations of visibility landwards are printed in the main tables. Particulars of occasions when visibility seawards differed from visibility landwards are set out in the Introduction to the Cahirciveen Section.

*Fog, Mist and Haze.*—The table of standard distances of visibility objects also summarizes the descriptions used in connection with the phenomena of fog, mist and haze, and relates them to the scale of visibility. It also contains the Beaufort letters used for these phenomena in the Remarks column of the diary. In this Year Book as in other publications of the Meteorological Office, statistics of fog, mist and haze are based solely on visibility observations. The term *fog* is restricted to occasions when the visibility is less than 1 kilometre (*i.e.*, object F not visible); the terms *mist* and *haze* to occasions when the visibility is greater than 1 kilometre, but less than 2 kilometres (*i.e.*, object "F" visible, but "G" not visible). The distinction between mist (m) and haze (z) is determined by the depression of the wet bulb. When the visibility is between the limits specified for mist or haze, haze is recorded when the depression of the wet bulb is more than 1°F; if the depression of the wet bulb does not exceed this limit, the term *mist* is used.

In volumes previous to 1926, occasions of haze, mist and fog were indicated by the International symbols for these phenomena, viz., ∞, ≡° and ≡ respectively, but the relation of these terms to the visibility scale was less rigorous. In order to indicate that a change in procedure has occurred in this matter, the three International symbols for haze, mist and fog are no longer used.

*Precipitation.*—Whenever precipitation is falling at one of the six hours of observation there is printed in the Diary of Cloud and Weather under the heading "Precipitation" the International weather symbol which indicates the kind of precipitation, in accordance with the list below.

*Remarks.*—For the purposes of the column headed "Remarks on the Weather of the Day," it is usual to consider the day as divided into three portions, viz., morning, afternoon and night, denoted by *a*, *p*, *n*, respectively, but it should be noted that no arrangements are made for regular eye observation of weather changes in the period 21h 30m to 6h 30m.

The entries in the remarks column consist very largely of international weather symbols and the letters of the Beaufort scale. These symbols and letters are as follows:—

*Beaufort Notation and International Weather Symbols.*

b	blue sky, whether with clear or hazy atmosphere.	r	● rain.
c	cloudy, <i>i.e.</i> , detached opening clouds.	←	ice crystals in the air.
o	overcast, <i>i.e.</i> , the whole sky covered with one impervious cloud.	s	* snow.
g	gloomy.	rs	* sleet.
u	ugly, threatening.	+	drift snow.
v	visibility, unusually clear atmosphere.	⊠	snow lying. (More than half the surrounding country covered with snow.)
z	haze.*	h	▲ hail.
m	mist, light fog.*	△	soft hail.
f	fog.*	t	⊥ thunder.
fe	wet fog, <i>i.e.</i> , fog which deposits water copiously on exposed surfaces.	l	⋈ lightning.
w	dew.	tlr	⊠ thunderstorm.
x	hoar frost.	≡	gale.
	rime.	q	squalls.
	glazed frost.	⊙	solar corona.
e	water deposited copiously on exposed surfaces, without rain falling.	⊕	solar halo.
y	dry air. (Relative humidity less than 60 per cent.)	⊖	lunar corona.
p	passing showers.	⊗	lunar halo.
d	drizzling rain.	☾	rainbow.
		☀	aurora.
		☾	zodiacal light.
		☾	mirage.

The letter *i* preceding a letter or symbol which denotes some form of precipitation indicates that the precipitation is of an "intermittent" or "occasional" character.

The letter *j* preceding a letter or symbol which denotes some form of precipitation indicates that the precipitation is within sight, though not actually falling at the station.

The figure 0 written after and above a symbol indicates slight, whilst the figure 2 indicates strong or heavy; thus ●<sup>0</sup> slight rain, ●<sup>2</sup> heavy rain. The figures 0 and 2 written after and below the letters of the Beaufort notation are also used with a similar significance, thus d<sub>0</sub> stands for slight drizzle.

The letters b, c, o, g and u, are used to describe the general appearance of the sky. The use of the letters g and u is sufficiently clear from the definitions given above. o is used whenever the sky is completely overcast with a uniform layer of thick or heavy cloud; c is used to denote that there is some cloud present, but o is not appropriate; b denotes that there is some blue sky.†

In order to meet difficulties which occur when there are only small quantities of cloud or blue sky present, c is not used unless the sky is more than a quarter covered, and b unless there is more than a quarter of the sky free from cloud. If there is more than a quarter of the sky covered with cloud and more than a quarter of the sky free from cloud b and c are both recorded.

The gale symbol ≡ is normally used in this publication to indicate that the wind as recorded by the anemograph averaged at least 17·2 m/s for one or more "centred" hours. At Richmond (Kew Observatory) the symbol has been used with the word gust in brackets to indicate the occurrence of gusts reaching 17·2 m/s.

\* To indicate varying intensities of haze, mist and fog the notation shown in the last two columns of the table on p. 18 is used.

† The present usage with regard to b, c and o dates from 1st Jan., 1926.

M.O. 340  
(Lerwick)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1930

Comprising the meteorological and geophysical results obtained from autographic records and eye observations at the observatories at Lerwick, Aberdeen, Eskdalemuir, Cahirciveen (Valentia Observatory), and Richmond (Kew Observatory), and the results of soundings of the upper atmosphere by means of registering balloons.

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LERWICK

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1932

## LERWICK OBSERVATORY.

Latitude .. .. .	60° 8' N.
Longitude .. .. .	1° 11' W.
G.M.T. of Local Mean Noon .. .. .	12h. 5m.
Height of Site above Sea-level .. .. .	From 80·5 metres. to 90·0 metres.

## INTRODUCTION.

### GENERAL REMARKS.

In 1919 the establishment of an observatory in the Shetlands was included in the programme of the Meteorological Office. A wireless station, built in 1913 by the Admiralty and transferred after the war to the Post Office, but used by that Department only in case of emergency, offered suitable accommodation in the way of offices and living quarters. It proved possible to make an arrangement under which the Air Ministry has the use of the station as an observatory.

The Observatory was opened on the 7th June, 1921, when the first instalment of the instrumental equipment arrived. Later on in the same year the construction of a magnetograph house and of huts for absolute magnetic and auroral observations was commenced. The magnetograph house is a heavy concrete structure with walls 2 feet 6 inches (76 cm.) thick, of internal dimensions 16 feet by 10 feet (4·9 m. × 3 m.), and after construction several months had to elapse before the thick concrete walls and roof could be thoroughly dried and the recording instruments placed in position. These instruments, which are described below, consist of magnetographs recording magnetic declination and horizontal and vertical force. More recently subsidiary magnetographs recording the same elements have been installed in one of the adjacent non-magnetic huts; the records obtained therefrom are used to cover lacunæ in the standard traces or for special investigations. In addition, in order to obtain a record of the more minute changes in the vertical component of terrestrial magnetic force, a line of twin cable was laid in an approximately horizontal plane round Loch Trebister, the terminals of the cable being connected to a suitable galvanometer on which could be measured the current induced in the cable by changes in the vertical component of terrestrial magnetic force. The arrangement is similar to one in use at Eskdalemuir Observatory, but no records from either have yet been included in official publications.

Other instruments installed at the Observatory included barometers, barographs, hygrograph, psychrometers, nephoscope, rain-gauges (ordinary and self-recording), sunshine recorder and Dines tube anemograph and, later, an electrograph; and in 1928 a Krogness auroral camera. But meteorological observations have been restricted, and the time of the somewhat limited staff available has been devoted chiefly to magnetic work, to some work in atmospheric electricity and latterly to auroral photography.

The site and the work in Atmospheric Electricity and Terrestrial Magnetism will now be described.

## SITE.

The Observatory is situated on a ridge of high ground about a mile and a half (2.4 km.) to the south-west of Lerwick and adjoins the main road between Lerwick and Scalloway. The site slopes upward from west-north-west to east-south-east, the average height above M.S.L. being about 280 feet (85 metres). The ground to the east and south-east rises slightly for about  $\frac{1}{4}$  mile (.4 km.) then slopes sharply down to the sea. In other directions there is a downward slope for about  $\frac{1}{4}$  mile extending to the Loch of Trebister on the south-west, Sandy Loch to north-west, and to the Burn of Sound to north-north-west; beyond these and distant about  $\frac{3}{4}$  mile (1.2 km.) from the Observatory are small hills—Munger Hill to the south is about 320 feet (97 metres) above M.S.L., Shurton Hill to west-north-west rises to 576 feet (176 metres), and Stony Hill to the north to about 400 feet (122 metres). In clear weather it is possible to see the Outer Skerries,  $25\frac{1}{2}$  miles (41 km.) north-east by north, and Sumburgh Head, 20 miles (32 km.) south by west; the horizon in other directions is limited to a few miles.

The average depth of soil in the vicinity is about a foot, and outcrops of sandstone occur in many places. The surrounding country is barren and desolate, the only vegetation being coarse grass, stunted heather, and moss, with occasional patches of bare black peat. The Observatory ground is of a very uneven nature, and, owing to lack of proper drainage, is frequently water-logged; in winter it may be almost submerged for considerable periods. Views of the station are shown and the arrangement of buildings and situation of instruments are set out on a site plan in the 1928 Year Book.

## ATMOSPHERIC ELECTRICITY.

**Notes on the Instruments.**—The records of potential gradient are obtained from a Benndorf electrograph (No. 108, by L. Castagna, Vienna) which since 1926 has been installed in the north-west corner of the Office Block. The site is divergent from the ideal for two reasons:—

- (1) There is distortion of the equipotential surfaces by adjacent houses, wireless plant, etc.,
- (2) It is a comparatively large distance (236 metres) away from the ground where absolute determinations are made.

Consideration of the variations of mean monthly values of the reduction factor shows that these disadvantages are less serious than might be anticipated.

The collector rod passes through a window in the north wall, and is situated 190 cm. from the corner of the building. The collector is 476 cm. above the ground and projects 123 cm. from the window. From January 1 to August 16 the collector was of the type used in earlier years, consisting of a copper spiral about 5 cms. long, painted over with radium sulphate. The collectors used from August 16 to the end of the year are of polonium deposited on a copper rod, about 4 cms. long by 0.5 cm. diameter; these are recoated periodically by arrangement with the Government Chemist, and a fresh collector is brought into use on the first day of each quarter. The collector is screwed into the smaller end of a tapered German silver tube, 76 cm. long, and of triangular cross section, which, in turn, is attached to a "Duralumin" tube, 89 cm. long and 1.3 cm. in diameter. The latter tube passes through a hole, 3.8 cm. diameter, in one end of a wooden box (dimensions 38 × 25 × 10 cm.), where it is supported horizontally between the ends of two metal rods embedded in sulphur. A number of small 2-volt electric bulbs are kept burning inside the box in order to improve the insulation of the supports for the collector rod during wet weather, and a similar bulb is placed inside the case of the electrometer. The rod is connected to the base of the acid pot of the Benndorf electrometer by a fine wire. A detailed description of this instrument is to be found in *Phys. Zeit.* 7 (1906), p. 98, whilst the general principle is described in Mathias' *Traité d'Electricité Atmosphérique et Tellurique*, p. 54, and in Chauveau's *Electricité Atmosphérique*, pp. 61-64.

The record consists of a series of dots made once a minute on a long roll of paper as it is unwound from a drum by clockwork, exact hours being indicated by dots near the edge of the sheet. Timing is taken from electric clock No. 1,031, governed by the Observatory standard, Shelton No. 35. The needle of the electrometer is earthed at least twice daily, and a zero line is obtained by connecting up these earth marks; owing to the constancy of the perpendicular distance between the zero line and the line through the hour marks, further intermediate positions of the zero are easily obtained. The scale value has been about 22 volts per millimetre, which permits a range from +1700 to -1250 volts per metre in the open to be recorded.

Combined tests of the insulation of the system and scale value of the record are made daily, the procedure being to remove the collector and to charge the needle, which is connected to a Wulf electrometer. The rate of leak is obtained for a period of 4 minutes with a positive charge and for the same interval with a negative charge. Considering the climatic difficulties the behaviour of the instrument in the matter of insulation has been very satisfactory. The rate of leak has been in general small, the average during 1930 being such that the instrument would lose half its potential in 53 minutes. It has been found that the scale value remains reasonably steady and may, for all practical purposes, be taken as constant across the full width of the sheet. The factor by which the recorded potential must be multiplied for conversion into potential gradient in the open is obtained from absolute measurements above a levelled piece of ground near the old site of the electrograph (see site plan in the Observatories' Year Book, 1928). An insulated wire, stretched horizontally between two stout wooden posts 121 cm. in height and 9.48 m. apart, carries at its centre a burning fuse exactly 1 metre above the ground. A Wulf electrometer, usually No. 5225 (Günther & Tegetmeyer, Brunswick), is connected to one end of the wire and ten to twenty readings are obtained from the electrometer at minute intervals. The reduction factor is deduced from the mean of these values and the corresponding mean potential at the collector as recorded by the Benndorf electrograph. Smoothed monthly means of the factors so obtained are employed in reduction of the records. The calibration of the Wulf electrometers is checked periodically, using a Gambrell potentiometer and standard cells. With the exception of the change in collector already referred to, there was no change in any essential part of the apparatus or in the observational technique throughout the year 1930.

Monthly scale values and exposure factors, together with data relating to rate of leak, are shown in the following table:—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Mean Value of $-\frac{d}{dt} \log_e V.$ ...	·013	·012	·012	·011	·012	·013	·014	·016	·013	·013	·013	·013	·013
No. of days used in mean	28	23	27	26	29	27	24	25	27	29	26	23	314
Highest $-\frac{d}{dt} \log_e V.$ ...	·022	·025	·017	·015	·017	·018	·029	·028	·016	·019	·021	·017	—
Lowest $-\frac{d}{dt} \log_e V.$ ...	·009	·008	·009	·007	·008	·010	·009	·012	·006	·007	·006	·010	—
Scale Value (v/mm) ...	22.3	21.1	22.7	22.0	21.9	22.0	22.0	22.0	22.4	22.4	22.8	22.7	—
Mean Exposure Factor ...	1.27	1.29	1.25	1.28	1.26	1.31	1.26	1.30	1.32	1.31	1.30	1.33	1.29
Applied Exposure Factor	1.27	1.27	1.27	1.27	1.28	1.29	1.29	1.29	1.31	1.31	1.31	1.31	—
No. of Determinations of Exposure Factor ...	11	11	7	10	11	8	6	10	10	13	5	5	107

In its response to changes of potential gradient the Benndorf instrument is very sluggish, compared, for instance, with the Kelvin water dropper in use at Eskdalemuir Observatory. A series of tests in June 1930 gave 33 seconds as the time to rise to

half value, with the radium collector then in use, the rise being assumed to follow an exponential law; the polonium collectors used later in the year were considerably faster, one of these (No. 3), tested in September, rising to half value in about 4 seconds. Sometimes when there is no wind the rate of rise of potential is very much slower and apparently nearly linear. If the instrument rises through a potential  $V$  and has a capacity  $C^*$  a quantity of electricity  $CV$  has to be given to the air in the neighbourhood of the collector, and in the absence of wind and the presence of fog this may hang about in the form of a heavily charged cloud for a considerable time before being dispersed. Fortunately these conditions are rare at Lerwick except in early summer.

If we assume the leaking and the charging to be exponential, i.e.,—

$$\text{If } \frac{dV}{dt} = -K_L V$$

$$\text{and } \frac{d(V_0 - V)}{dt} = K_C (V_0 - V)$$

where  $K_L$  measures the rate of leak,  
and  $K_C$  „ „ charging,

then the potential finally acquired by the instrument is equal to the real potential multiplied by  $K_C/(K_L + K_C)$ .

In 1930 the highest mean monthly value of  $K_L/K_C$  was about 1/80, so that the electrograph generally recorded a potential gradient not less than 98 per cent. of the true gradient. This variation is included in the exposure factor, but as the changes of  $K$  are small, it appears unlikely that the month-to-month variations in factor are influenced thereby to any appreciable amount. From 1927 to 1929 the factor in summer was higher than in winter, but in 1930 there was no annual variation, the values ranging from 1.25 in March to 1.32 in September. The factors from August to December are slightly higher and more consistent than those for earlier months; this is probably due to the quicker rate of charging of the electrograph with the polonium collector. The vegetation in the vicinity of the site for the absolute observations changes very slightly throughout the year and the grass on the site itself is kept short. A larger contribution to the variations of the factor is probably made by the combination of effects due to peculiarities of the electrograph site and wind direction. In this connection the following table shows the mean values of the exposure factor for 1927 and 1928 summarized according to wind direction:—

	Calm.	N	NE	E	SE	S	SW	W	NW	1927 -28
Mean Factor ... ..	1.35	1.33	1.37	1.27	1.24	1.37	1.36	1.35	1.29	1.33
No. of Observations ... ..	24	19	16	12	21	44	28	21	26	211

Relatively high values of the factor are associated with winds from north-east, south, south-west, and west, for which directions the electrograph collector has a good exposure. The exposure in other directions is obstructed by adjacent buildings, and the depression of the factor depends upon the proximity of these obstructions to the collector. The lower factors, resulting from the higher potential of the collector when shielded from the wind, also follow from R. A. Watson's conclusion that potential gradient is inversely dependent upon wind speed. (Geophysical Memoir No. 38). Wind direction, however, appears to have no appreciable bearing upon the annual variation of factor discussed in the preceding paragraph.

\* The capacity was measured in October, 1930, and found to be approximately 75 cms.

On 28th June, 4th July, and 12th September, 1928, measurements were made of potential gradient above fairly smooth ground near sea level. The determinations on the two earlier dates were taken at the Point of Trebister,  $2\frac{1}{4}$  km. south-south-east of the Observatory, those on the third near the Sands of Sound, 1 km. to the east. In all, ten series of observations were obtained. The mean electrograph exposure factor computed therefrom works out at 1.36, a value in close agreement with the standard determinations.

#### IDENTIFICATION NUMBERS OF INSTRUMENTS USED IN 1930.

Benndorf electrograph (L. Castagna, Vienna)	.. .. .	108
Wulf bifilar electrometer (Günther & Tegetmeyer, Brunswick)	.. .. .	5225
Electrostatic voltmeter (Cambridge Instrument Company)	.. .. .	5716
		11889

**Review of Results**—Days when there was a complete trace have been classified as follows by means of an electric character figure:—

- 0, denotes a day during which, from midnight to midnight, no negative potential was recorded.
- 1, denotes a day with excursions to the negative not amounting in the aggregate to more than three hours.
- 2, denotes a day with negative potential amounting in the aggregate to more than three hours.
- a, denotes that the range of potential gradient in the open did not exceed 1,000 volts in any of 25 hourly periods of the day.
- b, denotes that this range was exceeded in at least one, but in fewer than six, of these periods.
- c, denotes that this range was exceeded in six or more of the hourly periods.

The character figures so assigned are given in Table 4.

In the Observatories' Year Book for 1928, for the first time, this table contained also details of the duration of negative potential for each day for which an estimate could reasonably be made. If the record failed when no precipitation fell it was assumed that the potential gradient remained positive; if, however, precipitation fell when part of the record was lacking no estimate was made except when the part of missing record was small enough and the conditions of precipitation sufficiently continuous to permit the interpolation of the gradient conditions from those obtaining before and after the lacuna.

Over the year 1930 there were 24.2 hours more negative potential gradient than in 1929, and 20 days more on which negative gradients did occur. Against the mean daily duration of 1.63 hours for 1928, that for 1930 as well as for 1929 was 1.55 hours. In each year there is a close parallelism between the month-to-month variations of mean duration of negative potential and the monthly mean electric character figure, and again between either of these quantities and the monthly totals of rainfall.

Curves are read by use of a mean value glass scale graduated in millimetres, the tabulated values being 60 minute means centred at exact hours G.M.T. The ordinates are converted into volts per metre in the open by multiplying by the product of the appropriate scale value and reduction factor. Values are assigned for 3h, 9h, 15h, and 21h, on all days, and for each hour on "a" days.

An indication of the characteristics of indeterminate potentials may be obtained from the tabulations, in which :—

- (1)  $z$  is marked against hours when there occurred large oscillations of small period which are not accurately reproduced in the record. The signs  $+$ ,  $-$ , following the  $z$  indicate on which side of zero the mean value lay; for values marked  $\pm$  the sign of the mean value was uncertain.
- (2) values prefixed by the symbols  $>$ ,  $<$ , indicate that for one or more periods during the hour potential passed beyond the range recorded by the electrograph.

The hourly values for 3h, 9h, 15h, and 21h are given in Table 1; estimated values, enclosed within brackets, are given in cases where the record was in some manner defective; a dash is entered against hours for which no value can be given with any degree of assurance. Two sets of mean values are given :—(a) The means of all positive values; hours when the trace passed off the top of the sheet are included in obtaining these means, the upper limit of registration being taken as the value for the period not recorded. (b) The means for all days on which all four hours were completely recorded or could be estimated.

In all months except May the general (a) mean from the four selected hours exceeds the (b) mean, the difference over the year as a whole amounting to 17 v/m. In six of the ten months in which *oa* days occurred, the means from the *oa* days are greater than the (a) means; over the year as a whole the *oa* day mean is only 6 v/m greater than the (a) mean. The annual mean daily values derived in these three ways for the four years 1927–1930 during which the electrograph has been in the same position are :—

			<i>oa</i>	(a)	(b)
1927	..	..	213 v/m	179 v/m	160 v/m
1928	..	..	166 v/m	156 v/m	134 v/m
1929	..	..	162 v/m	161 v/m	133 v/m
1930	..	..	181 v/m	175 v/m	158 v/m

It is a defect of the Benndorf recorder that even with such a high scale value as 22 v/mm the width of the sheet is frequently exceeded during oscillatory movements. In 1930 there were 97 days on which the electrometer needle went beyond the limits of registration on the positive side and 153 on the negative side; these occasions were mainly when precipitation was falling on the collector. The greatest number of extreme positive excursions were associated with snow or sleet showers and were almost invariably only momentary.

The following are the occasions of potential gradients (positive and negative) exceeding 1000 v/m persistent over periods of at least one hour, a specified hour defining the 60 minute interval centred at the exact hour G.M.T. :—

Positive. January, 3d 18h. March, 12d 6h, 12d 9h–11h, 15d 9h, 21d 1h. April, 9d 21h. July, 29d 7h. August, 27d 10h, 29d 11h. September, 6d 16h–17h, 6d 19h–20h, 6d 24h. October, 24d 18h. November, 10d 16h, 22d 24h.

Negative. January, 1d 22h. March, 4d 8h–10h, 9d 2h–3h, 9d 9h. April, 11d 19h–20h, 24d 6h. May, 27d 16h. June, 20d 23h, 27d 20h, 27d 22h, 28d 4h–6h. August, 27d 19h. October, 5d 5h–10h. November, 7d 15h, 12d 4h, 12d 9h. December, 7d 4h, 7d 7h–8h, 7d 17h, 29d 7h.

Occasions when the potential gradient was negative for prolonged periods with perhaps only a few temporary changes to positive were noted as follow :—

- (I) January, 1d 19h 20m to 2d 1h 35m. Mean gradient,  $< -640$  v/m. Negative throughout apart from two excursions, total duration 10 minutes, to positive; continuous heavy rain till 1d 23h, followed by continuous moderate rain.

- (II) January, 7d 5h 50m to 9h 50m. Mean gradient,  $< -410$  v/m. Negative throughout apart from one excursion, duration 5 minutes, to positive; continuous moderate rain.
- (III) March, 4d 7h 0m to 13h 45m. Mean gradient,  $< -730$  v/m. Potential remained negative throughout; continuous moderate rain till 12h, subsequently moderate to slight drizzle.
- (IV) March, 8d 21h 20m to 9d 5h 25m. Mean gradient,  $< -760$  v/m. Potential was negative throughout during continuous slight or moderate rain.
- (V) April, 24d 1h 35m to 10h 25m. Mean gradient,  $< -690$  v/m. There were several brief excursions to positive giving a total duration of 20 minutes; continuous moderate rain.
- (VI) June, 27d 18h 35m to 23h 35m. Mean gradient,  $< -800$  v/m. Potential was negative throughout during continuous moderate rain.
- (VII) July, 20d 17h 30m to 21d 0h 10m. Mean gradient,  $-230$  v/m. Potential negative except for two excursions, total duration 20 minutes, to positive; drizzle followed by continuous slight rain.
- (VIII) October, 5d 2h 45m to 16h 45m. Mean gradient,  $< -880$  v/m. Apart from one excursion, duration 10 minutes, to positive, potential was negative throughout; continuous slight rain.
- (IX) November, 7d 13h 25m to 19h 5m. Mean gradient,  $< -620$  v/m. Potential was negative throughout during continuous moderate rain.
- (X) November, 12d 2h 40m to 9h 40m. Mean gradient,  $< -650$  v/m. Negative throughout except for one excursion to positive of duration 10 minutes; continuous moderate rain.
- (XI) December, 7d. Potential was continuously negative from 0h 40m to 5h 5m, and from 6h 20m to 11h 15m, the average gradients for these intervals being  $< -740$  v/m, and  $< -730$  v/m respectively. The total duration of negative potential for this day, 15.7 hours, was the highest value recorded during the year. Continuous moderate rain till 9h was followed by continuous slight rain.
- (XII) December, 29d 1h 35m to 9h 40m. Mean gradient,  $< -710$  v/m. Negative throughout apart from one excursion to positive of duration 5 minutes; continuous moderate rain.

Notable spells of high potential were:—

- (I) March, 6d 18h to 7d 2h. Mean gradient, 530 v/m. Mist.
- (II) March, 12d 5h to 16h. Mean gradient,  $> 1140$  v/m. Snow showers; fog.
- (III) April, 9d 10h to 10d 5h. Mean gradient, 550 v/m. Drizzle; fog.
- (IV) June, 13d 13h to 14d 4h. Mean gradient, 550 v/m. Fog.
- (V) June, 17d 15h to 20h. Mean gradient, 650 v/m. Fair to cloudy.
- (VI) June, 30d 18h to July, 1d 7h. Mean gradient, 500 v/m. Mist.
- (VII) July, 3d 4h to 12h. Mean gradient, 610 v/m. Fog.
- (VIII) July, 4d 5h to 15h. Mean gradient, 620 v/m. Fog.
- (IX) August, 26d 14½h to 27d 16½h. Mean gradient, 610 v/m. Fog.
- (X) September, 6d 14h to 7d 6h. Mean gradient, 790 v/m. Fog.
- (XI) October, 15d 9h to 15h. Mean gradient, 670 v/m. Mist; intermittent rain.

There were 72 days on which there occurred apparent changes of potential gradient from the limit of the sheet on the positive side to the limit on the negative side, at least once within an interval of 60 minutes. If these changes were real and not due to charges given to the collector rod by precipitation, they connote a range exceeding 2900 v/m within an hour. Assuming that in Shetland the charge associated with rain may occasionally attain 10 E.S.U. per c.c., it has been found that the gradient recorded may contain a contribution of not less than 50 volts arising from the charge given by the rain. In some of the hours the extreme reversal occurred at least twice within the period.

The diurnal inequalities for *oa* days for the months, seasons, and year, are given in Table 2, together with mean values of the potential gradient and particulars of the non-cyclic change and the number of days used; the inequalities and other entries for the seasons and year are the means of the corresponding entries for the appropriate months. Similar data for the *1a* and *2a* days together are given in Table 3.

The annual mean diurnal variation for *oa* days during 1930 has a well marked minimum at about 3h and a conspicuous maximum at 20h; secondary maxima and minima occur round 8h and 11h respectively. Similar features are characteristic of the variations for 1927 and 1928, but in 1929 the secondary oscillation was much smaller. In the separate mean variations for the seasons the evening maximum occurs at 19h in winter and at 20h in equinoctial and summer months. In summer there is a third maximum at 15h, and a very weak minimum at 17h. The inequalities for all the remaining days of 1930 which contained no hour of range exceeding 1000 v/m, but in which negative potential gradients occurred, i.e., *1a* and *2a* days, are naturally more irregular, but for the year as a whole and in solstitial seasons, they are generally similar to the corresponding variations on *oa* days. In summer the minimum at 17h is more prominent for the *1a* and *2a* days than for the *oa* days. The range of the inequality for *1a* and *2a* days in equinoctial months is about twice that for either of the other inequalities. In this case, as in 1929, the minimum occurs at 9h to 10h instead of at 3h to 4h as in other seasons. This feature of a retarded minimum in the equinoctial months is to a less extent apparent in the *oa* days.

In both classes of days, *oa* and  $\overline{1a + 2a}$ , the seasonal mean daily values derived from the inequalities increase from winter to summer; this is also true of the two sets of daily means (*a*) and (*b*) of Table 1 deduced from the values at the four hours each day. In each case the equinoctial mean values are intermediate between those of the solstitial seasons.

## TERRESTRIAL MAGNETISM.

### Notes on the Instruments.

The standard records of declination and horizontal force are obtained from the Munro magnetographs which were in use at Falmouth until 1912. The instruments had been stored for several years, but were afterwards reconditioned and tested at Kew before being installed at Lerwick in November, 1922.

A new vertical force instrument of the Watson quartz fibre type and supplied by the Cambridge Instrument Company was installed in the standard recording house at the end of November, 1929, and became the standard vertical force instrument from 1st January, 1930. A description of this type of instrument is given in *Terrestrial Magnetism*, Vol. IX (1904), pp. 62-68.

The declination magnet has a unifilar suspension, and the torsion correction is negligible. The scale value is constant for all positions of the light dot on the sheet; throughout the year it was 1 mm. of ordinate to 1.93 minutes of arc. In the horizontal force instrument the magnet is maintained in a position approximately perpendicular to the magnetic meridian by torsion of the bifilar suspension. Copper damping plates are fitted to each instrument and the recording mechanism is similar to that used at Eskdalemuir. The arrangement of the instruments in the magnetograph house is shown in the Observatories' Year Book, 1928.

A complete auxiliary magnetograph is maintained, the constituents being a Krogness H magnetograph, a locally adapted declination instrument and the Munro V instrument formerly used as standard. The auxiliary records arranged to function

at a low sensitivity have proved their usefulness in supplying record during highly disturbed hours.

The chief instrumental difficulties encountered during the year were :—

- (a) A slight irregular drift in the case of the horizontal force instrument ; corrosion of the tungsten wire used for the suspension of the magnet became serious in September and the suspension was replaced on 22nd.
- (b) A temperature effect in the case of the vertical force instrument. This matter is referred to below.
- (c) Irregular changes in declination base line values. These seem to be of two kinds, some appearing as abrupt discontinuities explainable by slight internal friction in the 16-strand silk suspension, others being slow changes like positive and negative bays with a period up to three weeks within which the base line values slowly diverge from and subsequently re-attain their theoretically expected straight run. These latter changes are frequently synchronous with corresponding warm and cold spells (after allowance is made for the temperature lag through the magnetograph house walls) and are probably bound up with a differential distortion of the magnetograph, the case upholding the suspension tube being of wood whereas the base line mirror rests on the slate slab forming the top of the pillar.

Monthly scale values have been assigned to the records by taking overlapping means, except when discontinuities occurred and special measures were required. The determinations in the case of H are made by Broun's method, the deflecting magnet being placed in the "broadside on" position and at a distance of 55.9 cm. from the recording magnets. A larger deflection distance would render the error due to inequality of the distribution coefficients for the H and D magnets less appreciable, but cannot be used owing to the restricted size of the magnetograph house. For standardisation of the vertical force magnetograph, the field is varied by passing known currents ( $\pm 40$ ,  $\pm 80$ ,  $\pm 120$  milliamps) through Helmholtz Gaugain coils fitted to the instrument. The scale value of H was maintained at approximately 6  $\gamma$ /mm. and that of V at about 8  $\gamma$ /mm.

The records of declination, horizontal force and vertical force have been tabulated hour by hour. The values are read off by means of graduated glass scales, a value being the mean reading for 60 minutes centring at the hour.

Base values for the records are obtained from the results of absolute observations, the determinations of declination and horizontal force being taken at least twice weekly, those of dip five or six times in each week. Horizontal force and declination are determined with the unifilar magnetometer on the centre pillar (No. 2) of the absolute hut, the azimuth of the fixed mark being taken as  $8^{\circ} 43' 2''$  east of south. Inclination is measured with the dip circle placed on the East pillar (No. 3), using  $3\frac{1}{2}$  inch needles. In the deflection experiment three distances 25, 30 and 35 cm. are used for obtaining the distribution coefficients, the horizontal force being computed from the deflection at 25 cm. only.

Mean annual values of the P and Q correction have been derived from observations during the period March 1923 to the end of 1930. An accident caused some

change to the magnet in March 1923, and values for earlier months have been discarded.

The values during these years are as follows :—

Year.	P.	Q.	$\log_{10}(1 + P/25^2 + Q/25^4)$ .
1923 (March–December) ...	−2·398	−14·36	$\bar{1}\cdot99831$
1924 ... ..	−1·236	−464·6	$\bar{1}\cdot99862$
1925 ... ..	−1·165	−875·9	$\bar{1}\cdot99821$
1926 ... ..	+1·225	−1711·2	$\bar{1}\cdot99895$
1927 ... ..	+2·229	−2183·8	$\bar{1}\cdot99912$
1928 ... ..	+0·223	−1395·6	$\bar{1}\cdot99860$
1929 ... ..	−0·539	−968·5	$\bar{1}\cdot99855$
1930 ... ..	−1·210	−837·1	$\bar{1}\cdot99823$

The mean value of  $\log_{10}(1 + P/25^2 + Q/25^4)$  employed in the reduction of all observations for 1930 was the mean of the values derived up to the end of 1929, namely,  $\bar{1}\cdot99862$ . If the 1930 value is added, the mean for the total available period becomes  $\bar{1}\cdot99857$ . The adoption of this latter value would lower all the hourly values, monthly means, etc., as given in the tables by  $0\cdot8\gamma$  in the case of H and  $3\gamma$  in the case of V.

As stated in the general remarks the walls of the magnetograph chamber are of concrete, 2 feet 6 inches in thickness. The diurnal variation of temperature within the chamber is, for most days of the year, negligibly small and no corrections for this diurnal variation have been applied to the diurnal inequalities or other data published in this volume. From the magnetograph house temperatures for each day given in the Tables, however, it will be noted that the day-to-day change of temperature is sometimes considerable. The average change day-to-day in degrees absolute over each of the twelve months of 1930 and for the year as a whole was as follows :—

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
0·32	0·34	0·43	0·24	0·29	0·29	0·26	0·28	0·22	0·42	0·50	0·44	0·34

There were 11 occasions on which the change reached or exceeded  $1^\circ\text{A}$ . These rapid fluctuations of temperature obviously add considerably to the problem of satisfactorily determining base line values in the cases of the horizontal and vertical force magnetographs. The temperature coefficient of the former is known with fair accuracy, being taken to be  $6\cdot1\gamma$  per  $1^\circ\text{A}$ .; consideration of the trend of base values indicates that the error introduced by omitting to apply a correction for temperature of the magnetograph is usually less than the error of observation and that it would be desirable to have absolute observations made more frequently than twice weekly. For another reason, namely that magnetic disturbance at Lerwick is so much more frequent and so much more considerable than at more southerly observatories, it would similarly be desirable to have very frequent absolute observations, with a view to the retention only of those made at times when the autographic records indicate a reasonably constant magnetic field. With the existing staff and instruments it has not, however, been possible to contemplate any increase in the observations of horizontal force.

In the case of the new vertical force instrument it had not been possible, before taking it into use in the magnetograph house, to determine exactly what adjustment would be required to compensate for changes of temperature. An analysis of the records of the year, carried out after the end of the year, afforded convincing evidence that the instrument behaved consistently with a temperature coefficient of  $-24\gamma$  per  $1^\circ\text{A}$ . This coefficient was adopted and all base line values for the year were adjusted accordingly. The hourly values of vertical force published in this volume may therefore be regarded as corrected for temperature effects.

As mentioned above, no attempt has been made to correct the diurnal inequalities for the very small and rather uncertain diurnal variation of temperature to which the chamber may be subject.

### AURORA.

From about September to April a watch for aurora is maintained, normally until about 23h G.M.T. each evening, and observations—as a rule at intervals of 15 to 20 minutes—are made of the northern horizon and of general meteorological conditions. The records form what is called the auroral log, a brief summary of which is given in Table 67. When any auroral display is observed, a second observer is called and detailed observations are maintained until the display subsides. These detailed observations have continued to be mainly non-instrumental and have consisted in noting and making descriptions of the phenomena seen during the display, but from October auroral photography was attempted with the Krogness camera whenever the manifestation was sufficiently bright. The descriptive notes are entered in a second log reserved for records of actual auroral displays. Extracts from this latter log may be obtained by anyone requiring the detailed information.

A general auroral table for Scotland (Table 68) is also included. This table has been compiled from the records of all stations at which climatological observations or weather logs are maintained. The observers at these stations, whilst noting occasions of aurora which they may happen to observe, do not in general maintain a special watch.

### Notes on the Tables.

The hourly values of H, D and V, obtained as described above, appear in three of the four monthly tables. The variations in D, being expressed in minutes, may be readily converted to units of force ( $\gamma$ ) of the component perpendicular to the magnetic meridian by multiplying by a factor which for 1930 is approximately 4.25. A rough comparison of the H, D and V registrations with component registrations (geographical N and W, and V) as for instance at Eskdalemuir, can then be easily made. The mean value for the day is computed according to the expression:—

$$x = \left\{ \frac{1}{2} (x_0 + x_{24}) + x_1 + x_2 + \dots + x_{23} \right\} / 24.$$

The letters "Q" and "D," prefixed to dates, denote the five quiet and the five disturbed days as selected at De Bilt.

In the fourth table for each month are given:—

- (a) The values and times of the daily maximum and minimum and the values of the absolute daily range for each of the elements H, D and V.
- (b) The value of  $\Sigma R^2$  for each day.  $\Sigma R^2$  is written for  $R_H^2 + R_D^2 + R_V^2$  where  $R_H$ ,  $R_D$  and  $R_V$  denote the absolute ranges in force for a calendar day of the components along and perpendicular to the magnetic meridian and of the vertical component, the ranges in declination having been for this purpose converted into units of force of the component perpendicular to the magnetic meridian.
- (c) The daily magnetic character figures, assigned according to the international scheme wherein "0," "1," "2," respectively, denote quiet, moderately disturbed, and highly disturbed conditions.
- (d) The daily values of temperature in the magnetic chamber.

Mean diurnal inequalities of H, D and V on "all" days and on international quiet and disturbed days are given, for the months, seasons and year, in Tables 53 to 61.

In calculating diurnal inequalities the non-cyclic change has been eliminated on the assumption that its time rate is linear. The values of the range of the mean diurnal inequalities of the several elements on the three different types of day are brought together in Table 62, and the values of the non-cyclic change are given in Table 64. The "Average Departures," or mean values of the inequality taken irrespectively of sign, throughout the 24 hours, are given in Table 63.

The mean values of the squares of the absolute daily ranges are summarized in Table 65.

In Table 66 appear for the months and year the mean values of N, W, V, D, I, H and Total Force T. The means of N, W, I and T are derived from the corresponding mean values of H, D and V, which are the means of hourly values on "all" days in the month or year.

Finally, in Tables 67 and 68 are given summaries of auroral observations obtained as already described.

### Review of Results.

*Mean and Extreme Values of the Magnetic Elements, 1930.*—The mean values of the magnetic elements for the years 1929 and 1930 are given in Table I. The values of H, D and V have been computed from the hourly values derived from the autographic records of "all" days, standardized by means of the absolute observations; those of N, W, I and T have been deduced from the values of H, D and V.

TABLE I.

Year.	H.	D. (West)	I.	N.	W.	V.	T.
	$\gamma$	$^{\circ}$ ' "	$^{\circ}$ ' "	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1929 ... ..	14556	14 23.6	72 40.3	14099	3619	46651	48870
1930 ... ..	14527	14 11.2	72 41.6	14084	3561	46624	48835

The decrease in westerly declination from 1929 to 1930 ( $12'.4$ ) was less than in the previous year ( $13'.7$ ). The rates for the five years earlier were  $13'.8$  for 1923–24,  $13'.0$  for 1924–25,  $14'.9$  for 1925–26,  $12'.9$  for 1926–27 and  $12'.8$  for 1927–28.

Mean values derived from (a) international quiet days and (b) international disturbed days are as follow:—(a) H,  $14536\gamma$ ; D,  $14^{\circ}11'.6$ ; V,  $46632\gamma$ ; (b) H,  $14513\gamma$ ; D,  $14^{\circ}10'.9$ ; V,  $46614\gamma$ .

The extreme values of H, D and V recorded during 1930 are given in Table II, but the lower limit in the case of H may have been exceeded at times when the light passed beyond the edges of the photographic paper.

TABLE II.

Element.	Maximum.		Minimum.		Absolute Annual Range.
	Value.	Date, 1930.	Value.	Date, 1930.	
		d. h. m.		d. h. m.	
Horizontal Force ...	$15292\gamma$	Dec. 3 ... 15 11	$13791\gamma$	April 6 ... 22 55	$1501\gamma$
Declination ... ..	$16^{\circ} 1'.6$	Nov. 14 ... 20 20	$12^{\circ} 49'.1$	May 31 ... 0 31	$3^{\circ} 12'.5$
Vertical Force ...	$46901\gamma$	April 8 ... 0 26	$46055\gamma$	July 11 ... 2 57	$846\gamma$

The range of  $3^{\circ} 12' \cdot 5$  in declination is equivalent to a range of 818 $\gamma$  in the component of force perpendicular to the magnetic meridian. In the year 1929 larger ranges were recorded in all three elements.

*Magnetic character of the year.*—The following table shows the mean sunspot numbers for recent years, together with the mean absolute daily range of declination, as a rough measure of magnetic activity :—

Year	1923	1924	1925	1926	1927	1928	1929	1930
Mean Sunspot No. ...	5.8	16.7	44.3	63.9	69.0	76.8	64.2	38.9
Mean absolute daily range of D....	14'.9	15'.4	18'.1	25'.0	20'.0	21'.4	24'.3	28'.5

Coincident roughly with the increase in sunspots there was, up to 1926, an increase of magnetic activity, but the years 1927 and 1928 showed some falling away ; the year 1929, despite a fall in the sunspot number, showed some recovery in magnetic activity, and in 1930 this is maintained. Although the next table shows no obvious relationship between the provisional sunspot numbers and magnetic conditions for the individual months of 1930, it appears from the data of a number of years that certain magnetic qualities, in the summer months, are fairly closely correlated with the sunspot numbers ; in the equinoctial months there is a small correlation and in the winter no very definite relationship emerges.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Provisional sunspot number ...	63.7	49.9	35.0	38.5	37.9	28.9	22.0	25.0	32.7	32.7	36.5	28.0
Mean absolute daily range of D ...	22.7	25.9	28.0	40.0	33.8	27.3	23.6	29.4	31.1	32.6	24.7	24.0
Mean $\Sigma R^2 / (100 \gamma^2)$ ...	493	962	1017	2831	2664	1677	1238	1455	1523	1456	816	988

The values of mean absolute daily range for the months and seasons of the year 1930 are given in Table IV, the ranges of declination in angle having, for convenience of comparison, been converted to units of force of the component perpendicular to the magnetic meridian. It will be seen that the ranges of H and V are greater than the corresponding Eskdalemuir values, the ratios of the annual mean ranges of Lerwick H to Eskdalemuir N, Lerwick D to Eskdalemuir W, and Lerwick V to Eskdalemuir V being respectively 1.6, 1.2 and 2.3 in 1930 ; the corresponding 1926 ratios were 1.4, 1.1 and 2.1 ; 1927 gave 1.3, 1.0 and 1.8 ; 1928 gave 1.3, 1.0 and 1.1 and 1929 gave 1.5, 1.1 and 1.6.

The significant change in the three years 1926-28 was thus a diminution in the ratios of the V ranges at the two observatories, whilst 1929 shows some recovery, and in 1930 the ratio exceeds that of 1926.

TABLE III.

Month.	Magnetic Character Figures.			Mean Character Figures.		Mean Value of $\Sigma R^2/100\gamma^2$ .					
	"0" days.	"1" days.	"2" days.	Lerwick.	Inter-national.	"All" days.	Q days.	"0" days.	"1" days.	"2" days.	D days.
1930.											
January ... ..	4	23	4	1.00	0.69	493	21	19	233	2456	2048
February ... ..	3	18	7	1.14	0.89	962	63	50	364	3670	5256
March ... ..	6	18	7	1.03	0.90	1017	36	37	608	2909	2991
April ... ..	2	19	9	1.23	1.04	2831	188	73	1093	7114	8615
May ... ..	2	19	10	1.26	0.93	2664	124	101	830	6661	8106
June ... ..	6	17	7	1.03	0.87	1677	100	105	954	4783	5522
July ... ..	3	25	3	1.00	0.87	1238	94	95	687	6969	5045
August ... ..	2	26	3	1.03	0.88	1455	148	110	866	7241	5069
September ... ..	5	20	5	1.00	0.85	1523	144	104	674	6339	5733
October ... ..	7	19	5	0.94	0.88	1456	46	59	672	6390	6390
November ... ..	9	17	4	0.83	0.61	816	19	37	226	5071	4130
December ... ..	15	14	2	0.58	0.54	988	10	35	395	12281	5600
Year, 1930 ... ..	64	235	66	1.01	0.83	1427	83	69	633	5990	5376
Year, 1929 ... ..	113	214	38	0.80	0.67	1074	62	72	385	6214	4527
Year, 1928 ... ..	126	211	29	0.74	0.63	581	62	71	305	4996	2068
Year, 1927 ... ..	137	206	22	0.68	0.63	586	58	66	409	5491	2427
Year, 1926 ... ..	208	134	23	0.50	0.65	1436	58	93	1014	15614	7226
Year, 1925 ... ..	207	130	28	0.51	0.56						
Year, 1924 ... ..	229	114	23	0.44	0.55						

TABLE IV.—ABSOLUTE DAILY RANGE. MEAN MONTHLY VALUES.

Month.	Mean Absolute Daily Range. 1930.			Mean Daily Range expressed as Percentage of Yearly Mean. 1930.		
	H.	D.	V.	H.	D.	V.
January ... ..	7	7	7	%	%	%
February ... ..	90	96	99	47	79	59
March ... ..	185	*110	170	97	*91	101
April ... ..	164	118	168	86	97	100
May ... ..	311	169	260	163	140	154
June ... ..	319	143	230	167	118	136
July ... ..	254	116	190	133	96	113
August ... ..	203	100	160	106	83	95
September ... ..	213	124	187	111	102	111
October ... ..	192	131	185	100	108	110
November ... ..	165	138	176	86	114	104
December ... ..	107	104	108	56	86	64
Year ... ..	95	102	89	50	84	53
Winter ... ..	119	103	117	62	85	69
Equinox ... ..	208	139	197	109	115	117
Summer ... ..	247	121	192	129	100	114
Year ... ..	191	121	169	—	—	—

\* Mean of 26 days; 12th and 13th omitted.

The frequency distribution of absolute daily ranges recorded in 1930 is shown in Table V. A comparison with the corresponding figures for Eskdalemuir (Table V. on page 176) indicates that ranges in excess of 200 $\gamma$  are again much more frequent at Lerwick than at Eskdalemuir, even in the case of D or W ranges, of which the frequency distributions at the two places usually show less divergence. Apart from this it is notable that the ranges of maximum frequency at Lerwick fall in the intervals 60-69 $\gamma$  for H and D, and 20-29 $\gamma$  for V, that is, at much the same point as at Eskdalemuir.

TABLE V.—FREQUENCY DISTRIBUTION OF ABSOLUTE DAILY RANGE.

Range. $\gamma$	Number of Cases, 1930.			Percentage Distribution.		
	H.	D.	V.	H.	D.	V.
0-9 ...	0	0	2	0.0	0.0	0.5
10-19 ...	9	3	14	2.5	0.8	3.8
20-29 ...	13	9	28	3.6	2.5	7.7
30-39 ...	24	13	20	6.6	3.6	5.5
40-49 ...	23	17	20	6.3	4.7	5.5
50-59 ...	13	27	18	3.6	7.4	4.9
60-69 ...	27	35	11	7.4	9.6	3.0
70-79 ...	23	31	10	6.3	8.5	2.7
80-89 ...	16	20	6	4.4	5.5	1.6
90-99 ...	22	30	13	6.0	8.3	3.6
100-109 ...	11	26	10	3.0	7.1	2.7
110-119 ...	12	18	21	3.3	5.0	5.8
120-129 ...	9	13	15	2.5	3.6	4.1
130-139 ...	6	19	10	1.6	5.2	2.7
140-149 ...	6	14	13	1.6	3.9	3.6
150-159 ...	11	14	6	3.0	3.9	1.6
160-169 ...	6	11	11	1.6	3.0	3.0
170-179 ...	10	7	8	2.7	1.9	2.2
180-189 ...	9	4	6	2.5	1.1	1.6
190-199 ...	6	7	5	1.6	1.9	1.4
200+ ...	109	45	118	29.8	12.4	32.3
Days omitted ...	0	2	0	—	—	—

TABLE VI.—PRINCIPAL MAGNETIC DISTURBANCES RECORDED AT LERWICK, 1930.

Where the beginning of a disturbance has been marked by a "sudden commencement," the serial number is followed by an asterisk (\*), and the time entered in the second column is that of the sudden commencement, estimated to the nearest minute. In other cases, the exact hour nearest the time at which disturbance may be regarded as having begun is entered in the second column. To the tabulated values of maximum and minimum, the following have to be added:—H, 140 0γ; D, 14°; V, 46000γ.

No.	From	To	Horizontal Force.					Declination.					Vertical Force.				
			Max.	Time.	Min.	Time.	Range.	Max.	Time.	Min.	Time.	Range.	Max.	Time.	Min.	Time.	Range.
	d. h. m.	d. h.	γ	d. h. m.	γ	d. h. m.	γ	d. h. m.	γ	d. h. m.	γ	d. h. m.	γ	d. h. m.	γ	d. h. m.	γ
1	Jan. 4 13	Jan. 8 2	849	6 16 4	330	4 19 22	519	71.9	4 19 16	-20.4	4 21 21	92.3	910	5 15 20	549	7 1 49	361
2	Feb. 11 23	Feb. 17 23	871	12 21 51	-36	14 2 23	907	34.5	12 13 35	-17.4	16 18 14	51.9	876	14 17 53	151	12 23 0	725
3	Feb. 25 2	Feb. 26 4	660	25 18 8	442	26 0 24	218	25.7	25 8 32	-25.6	25 18 10	51.3	793	25 18 7	454	26 0 20	339
4	Feb. 28 6	Mar. 3 18	632	2 16 7	454	1 2 41	178	31.1	2 21 21	-18.0	2 17 47	49.1	778	2 15 56	494	1 3 5	284
5	Mar. 11 12	Mar. 19 6	764	18 18 12	128	12 3 52	636	34.9	13 19 22	-40.5	12 5 9	75.4	779	14 15 9	330	12 5 8	449
6	Mar. 21 14	Mar. 24 20	611	22 16 47	374	24 8 32	237	29.3	24 8 43	-11.0	22 3 39	40.3	746	22 17 25	417	22 3 59	329
7	Apr. 6 12	Apr. 14 4	720	7 17 50	-209	6 22 55	929	70.5	8 0 34	-44.6	6 22 57	115.1	901	8 0 26	228	7 23 30	673
8	Apr. 15 10	Apr. 17 8	612	15 17 0	353	16 3 23	259	26.4	15 20 21	-12.8	16 23 6	39.2	740	15 17 30	478	16 1 34	262
9	Apr. 19 5	Apr. 23 22	928	19 18 53	17	22 23 30	911	64.7	22 23 25	-28.3	22 0 21	93.0	806	19 19 12	215	17 0 30	591
10	May 4 2	May 10 6	704	7 16 40	-149	7 1 0	853	37.4	6 4 4	-50.5	7 1 57	87.9	756	5 13 27	229	6 4 20	527
11	May 11 21	May 14 6	636	13 13 59	142	12 2 4	494	31.5	12 22 33	-32.9	12 1 49	64.4	660	13 18 30	285	12 1 41	375
12	May 16 12	May 23 3	929	16 18 45	73	19 1 50	856	46.8	16 18 15	-36.8	16 18 55	83.6	728	17 15 23	291	17 22 58	437
13	May 30 13	June 4 24	782	31 17 50	<-100	31 0 42	>882	54.3	31 18 52	-70.9	31 0 31	125.2	787	31 0 50	291	31 2 10	496
14*	June 5 21 34	June 8 24	626	8 19 14	-63	7 22 48	689	33.6	7 7 10	-17.9	8 1 28	51.5	686	7 14 31	289	7 23 5	397
15*	June 11 21 56	June 14 17	842	12 16 51	398	13 7 42	444	31.9	12 14 35	-3.7	13 0 26	35.6	742	12 17 23	319	12 23 1	423
16	June 15 10	June 21 18	694	18 17 15	190	16 8 25	504	52.1	16 8 39	-11.4	16 10 22	63.5	826	16 12 32	387	17 0 50	439
17	June 27 1	June 30 24	686	29 18 28	325	29 3 29	361	26.2	27 13 53	-11.4	28 3 28	37.6	753	28 15 44	409	28 21 59	344
18*	July 9 14 53	July 14 2	751	13 17 0	-180	11 3 24	931	40.4	11 3 3	-21.2	11 2 55	61.6	841	13 16 47	55	11 2 57	786
19	July 16 6	July 17 24	655	16 18 50	362	17 2 4	293	23.9	16 23 28	-5.4	17 1 54	29.3	714	16 16 33	462	17 2 19	252
20	July 24 16	July 26 20	634	25 14 17 and 26 18 41	52	25 0 45	582	29.0	26 7 13	-20.8	25 1 26	49.8	754	25 17 21	426	24 23 52	328
21	Aug. 5 10	Aug. 13 6	921	6 16 57	65	6 20 58	856	40.7	6 1 48	-51.0	6 20 58	91.7	809	6 14 52	273	7 0 16	536
22	Aug. 14 13	Aug. 15 20	667	14 20 12	356	15 1 9	311	23.7	15 0 54	-30.5	14 20 8	54.2	764	15 15 50	439	15 1 18	325
23	Aug. 21 10	Aug. 25 5	647	23 16 32	264	22 2 57	383	28.7	22 23 46	-16.8	22 2 55	45.5	715	21 19 30	394	22 3 58	321
24	Sep. 1 12	Sep. 2 8	658	1 16 32	362	2 1 5	296	38.2	2 1 13	-1.6	2 5 36	39.8	773	1 16 22	439	2 2 55	334
25	Sep. 3 3	Sep. 4 16	1090	3 15 29	24	4 0 38	1066	36.9	3 15 33	-20.8	3 21 12	57.7	898	3 16 3	377	3 21 1	521
26	Sep. 5 2	Sep. 8 22	660	5 17 25	426	6 11 42	234	25.4	6 12 5	-14.1	5 20 32	39.5	770	5 17 57	516	7 23 38	254
27*	Sep. 18 8 52	Sep. 19 22	780	18 17 44	114	18 23 6	666	44.8	18 13 34	-37.5	18 22 16	82.3	772	18 13 57	364	18 23 53	408
28	Sep. 28 2	Sep. 30 20	630	29 18 20	-33	30 5 15	663	67.5	30 4 41	-30.1	29 18 17	97.6	772	29 13 28	149	30 4 39	623
29	Oct. 2 12	Oct. 4 24	622	3 15 7	423	3 20 52	199	33.2	3 20 49	-27.0	2 22 16	60.2	751	3 15 33	405	3 20 42	346
30*	Oct. 14 4 23	Oct. 15 3	713	14 19 57	375	14 21 37	338	21.3	14 12 36	-15.0	14 21 22	36.3	688	14 19 49	457	14 21 26	231
31*	Oct. 17 3 38	Oct. 21 8	1041	17 15 34	12	17 21 36	1029	50.3	17 17 17	-36.3	17 21 55	86.6	806	17 21 21	143	17 17 18	663
32	Oct. 25 12	Oct. 30 24	822	26 16 2	97	26 0 27	725	32.5	26 23 14	-34.1	30 19 56	66.6	829	26 16 0	314	26 0 54	515
33*	Nov. 13 19 28	Nov. 15 24	1006	14 18 53	341	15 0 35	665	121.6	14 20 20	-18.1	15 2 33	139.7	814	14 18 46	316	14 20 20	498
34	Nov. 23 16	Nov. 27 20	782	24 18 22	184	26 0 50	598	62.5	25 18 7	-27.8	25 22 50	90.3	811	25 16 10	316	26 1 15	495
35*	Dec. 3 1 8	Dec. 5 4	1292	3 15 11	180	4 2 46	1112	108.3	3 17 36	-55.3	3 14 56	163.6	829	3 15 51	195	3 15 8	634
36	Dec. 20 15	Dec. 24 4	817	20 18 46	454	21 9 14	363	24.1	20 18 7	-38.7	20 18 53	62.8	829	20 18 45	546	24 0 4	283

*Diurnal Inequalities.*—The ranges of the mean diurnal inequalities of all days are about the same as those of 1929 in H and D, but much larger in V in equinox and summer.

The quiet day ranges in H and D are about the same as in recent years, but higher in V.

The ranges of the mean disturbed day inequalities for the year and seasons are greater in V than in any recent year and almost as great in H and D as in 1926. The ranges in May are conspicuously large. In the last four months of 1929 the ranges of the disturbed day inequalities are greater in V than in H, whereas in the first eight months, and also in nearly every month of 1928, they were less.

A comparison of the records of Eskdalemuir and Lerwick shows that the declination inequalities at the two places for all, quiet and disturbed days are very similar in general appearance, although minor irregularities on the one set of values are not always reproduced on the other, or, if so, only with diminished amplitude. Differences are more obvious on the horizontal force curves even on quiet days; and the disturbed day inequalities in H in some months bear little resemblance to one another. In the case of vertical force the present year is the fifth year of observations to be published. In some months the quiet day inequalities are very different from those at Eskdalemuir, and it will be seen from the table below that the range of the inequality varies from just over one half of the Eskdalemuir range in March to over twice the Eskdalemuir range in February.

Ratio of the Range of the Inequality at Lerwick to that at Eskdalemuir. (1930).

Type of Day.	Element.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
q	D	...	.88	1.13	.93	.98	1.09	1.17	1.16	1.00	1.05	1.05	.89	1.02
d	D	...	1.09	1.16	1.16	1.37	1.11	1.30	1.15	.98	1.04	.91	1.07	1.70
q	H	...	.87	.83	1.02	1.05	1.17	1.09	1.41	1.09	.96	.83	.77	.95
d	H	...	1.51	4.99	2.88	3.38	2.58	2.15	1.89	1.76	2.20	3.65	3.52	2.50
q	V	...	1.88	2.28	.57	1.14	1.10	.83	1.01	1.83	1.42	1.58	1.28	1.34
d	V	...	2.09	2.10	1.86	1.82	1.76	1.95	1.99	1.98	1.71	1.47	1.96	1.05

On Plates I and II the diurnal behaviour of magnetic force is illustrated graphically, the representation in the latter plate being in the form of vector diagrams.

*Magnetic Disturbances.*—Particulars of the principal magnetic disturbances recorded at Lerwick during the year are given in Table VI. In the Eskdalemuir Section will be found a similar list which deals with the same disturbances as recorded at that Observatory.

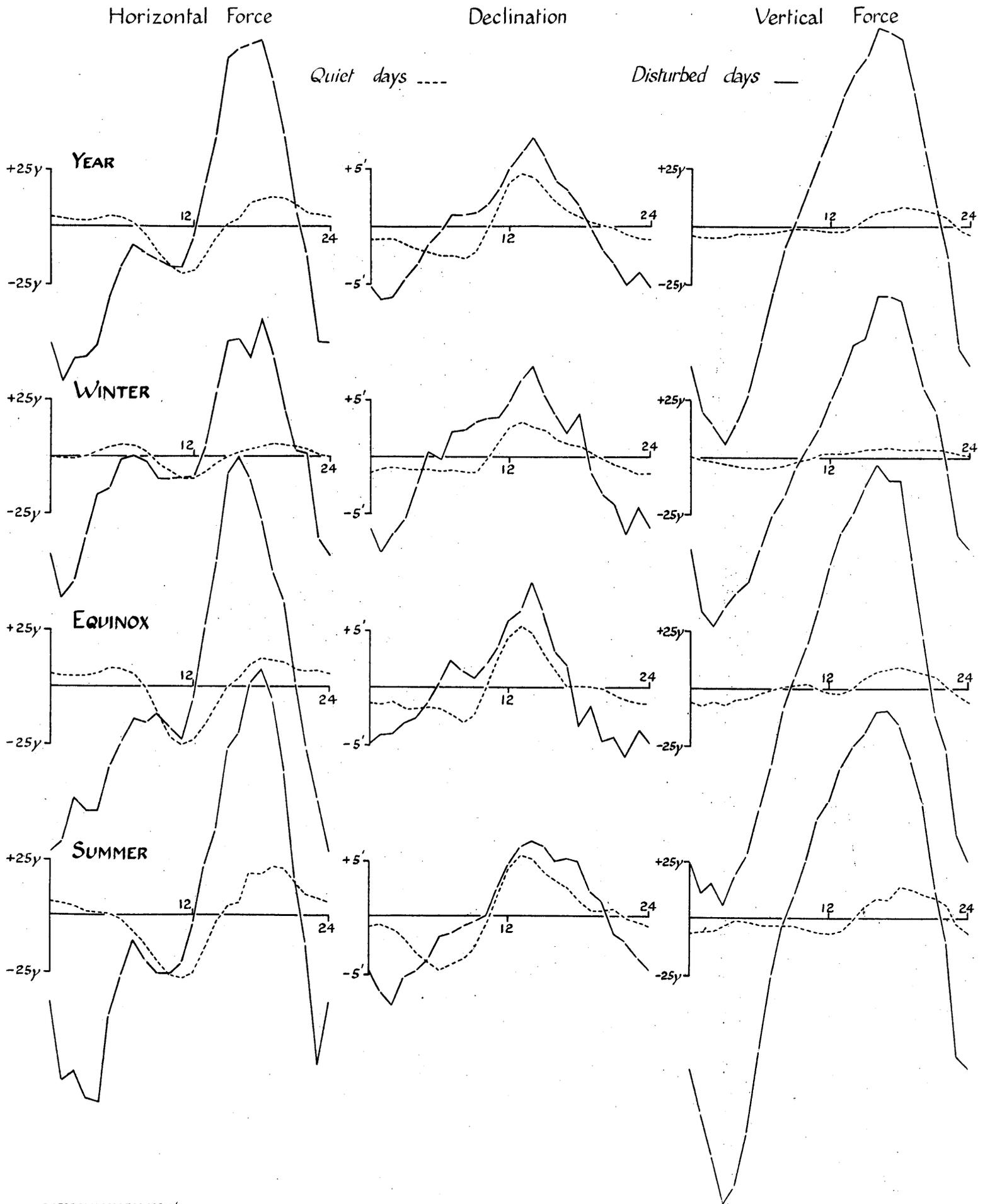
In so far as "sudden commencements" are concerned it has to be remarked that within the limits of accuracy of measurement and registration, these events appear to occur simultaneously at the two Observatories.

#### Remarks on the Autographic Records, 1930.

*January.*—(Average Character Figure 1.00). Disturbance, though frequent, was never of great extent, absolute ranges for the month amounting to only 519 $\gamma$  in H, 361 $\gamma$  in V and 92'.3 in D. There were only four days with the character figure "0."

The chief disturbance of the month was preceded by a small movement of the "sudden commencement" type at 3d 8h 8m and afterwards other small movements were almost continuous. H reached its lowest value for the month (14330 $\gamma$ ) at 4d 19h 22m in a rapid downward swing; the afternoons of each of the three days 4, 5 and 6d were marked by two fairly large upward swings of short duration, the largest rising to 14849 $\gamma$  at 6d 16h 4m. Apart from these movements there were no large

# DIURNAL VARIATION OF THE MAGNETIC ELEMENTS LERWICK 1930



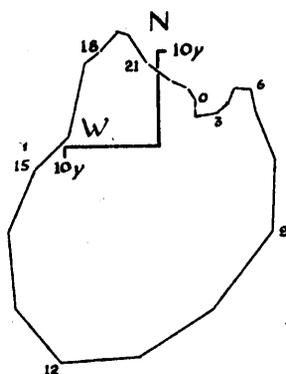
# VECTOR DIAGRAMS ILLUSTRATING DIURNAL VARIATION OF MAGNETIC FORCE

## LERWICK 1930

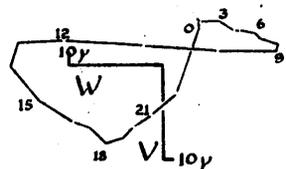
*Quiet days*

*Disturbed days*

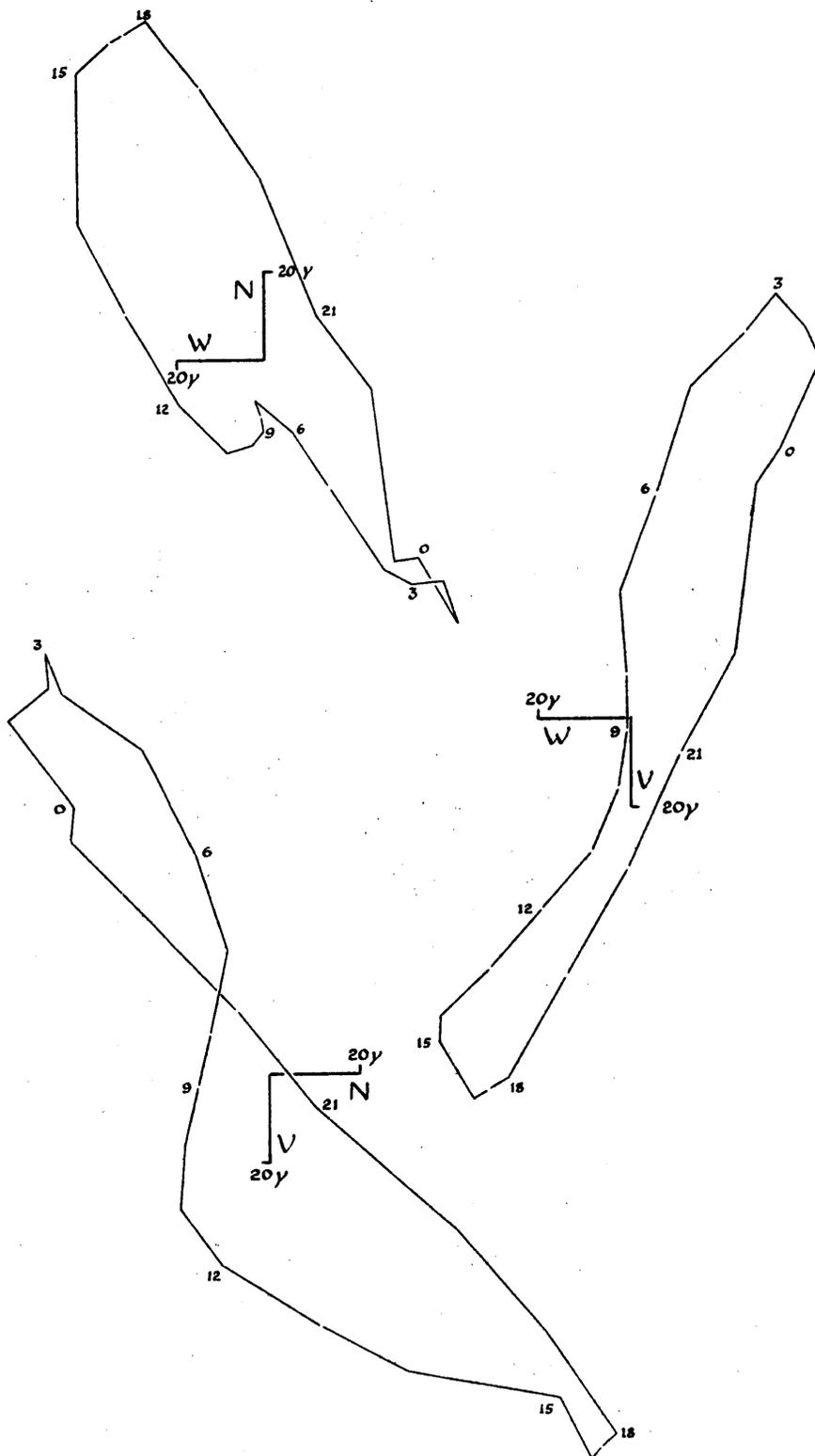
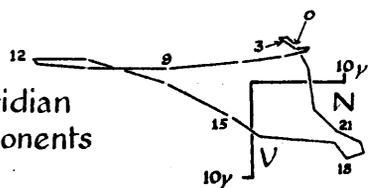
Horizontal  
Components



Prime  
Vertical  
Components



Meridian  
Components



departures of H from the normal value and in this the records are somewhat unusual. The D and V records for the period under discussion were of the usual disturbed day pattern; V, rising to a maximum in the late afternoon, falling quickly in the evening and remaining low throughout the night, while D also rises, slowly but generally fairly steadily, to a maximum in the late afternoon, and falls slightly and becomes much more excited at night. A feature of the D record was a peak at 4d 19h 16m representing an excursion of 69'.

This storm continued with diminishing violence throughout the 7th. Aurora was seen through cloud on the night of 3rd and on the evening of 4th there was a good display—an intense green band attended by occasional rays—which was visible from 18h 45m to 19h 28m. "Flaming" aurora was seen once or twice during the evening. An active display was seen through occasional breaks in the cloud on the evening of 5th.

An unusual disturbance, a single hump in both H and V, occurred on 17d. Between 17h and 18h 56m H rose 220 $\gamma$ , and then returned quite suddenly to its former value. At the same time V rose 170 $\gamma$  but in this case the return was very slow. D rose slowly during the afternoon, but a sharp fall of 16' at 19h 15m brought it back to its former value. Small disturbances persisted throughout the next two days. An aurora showing some activity was seen on the evening of 17d.

A disturbance of the usual type and moderate intensity occurred on 20d–21d following a "sudden commencement" at 20d 15h 10m. The night bay in V gave the low value of 46565 $\gamma$ ; but H variations were small.

An aurora, though merely a glow, was seen on this evening and again on the evening of 23d.

Aurora was observed from one or more places in Scotland on January 3–6, 8, 17, 19–23, 25, 26, 28–30.

*February.*—(Average Character Figure 1·14). This was a month of frequent and at times very violent disturbance, with only three "o" days—6, 9 and 10d.

There were many small movements during the first four days, but nothing noteworthy occurred until the commencement of the storm of 11d to 17d. The afternoon of 12d shows only small movements but at 21h 15m both V and H show sudden upward swings—about 360 $\gamma$  in H and 90 $\gamma$  in V. The high values were maintained for only a few minutes. Just before 22h both H and V began immense falls. That in H was about 1040 $\gamma$ , that in V about 600 $\gamma$ . The minima were reached at about 23h, after which time there was a slow and irregular return to normal values. The main fall was followed, apparently, by declination also, but unfortunately the recorder failed for a time. This storm continued, with slowly diminishing intensity, until 17d, the records being of the usual disturbed day form. A striking feature is a sharp peak in H and V at 14d 17h 53m. The extent of the swing was 250 $\gamma$  in H, 118 $\gamma$  in V, while simultaneously there occurred a bay 35' deep in D. All three were of short duration—about 20 minutes.

Smaller disturbances continued throughout the month, there being few quiet periods. The V records of 18d–19d and 25d–26d are of strongly marked disturbed day type. The former day shows a hump of about 100 $\gamma$  in V, centred at 18h 10m, accompanied by a bay in D about 33' in depth, while on the H record of 25d–26d is a hump 100 $\gamma$  in height, accompanied by one in V of 130 $\gamma$  and a bay in D 33' in depth.

Aurora was seen at Lerwick on every evening from 14d to 22d inclusive. On only four of these days was there more than a glow. Arcs with occasional rays were seen on 15d (21h 5m to 21h 50m) and 20d (20h 1m to 22h 30m) and somewhat more active displays of the same type throughout the evenings of 17d and 22d.

Aurora was observed from one or more places in Scotland on February 1, 3, 5, 12, 14-22.

*March.*—(Average Character Figure 1.03). Disturbances, though fairly frequent, were not large compared with those of February. The first three days all show moderate disturbance. Two bays in D centred at 2d 16h 0m and 2d 17h 45m, each about 33' in depth and each accompanied by humps in the other two records, form the most noteworthy feature. The largest movement in H was a decrease of 132 $\gamma$  between 2d 21h 8m and 2d 21h 35m.

On 11d the storm of February 12 returned after an interval of 27 days. Shortly after 20h H and V began to rise—H 110 $\gamma$ , V 80 $\gamma$ , while D began a slow and irregular fall. The minima of the usual night bays of H and V came rather late—at 12d 3h 52m in H and at 5h 8m in V. They were not especially deep, but the accompanying bay in D is a considerable one, the value remaining about three-quarters of a degree below the normal value for long periods between 3h and 6h. The records of the next two days are of much the usual disturbed day type. The 14d record shows a hump of 230 $\gamma$  in H between 13h 40m and 16h 10m, accompanied by a smaller one in V. This feature appears again centred at 15d 14h 38m and is followed by a second centred at 17h 10m, both accompanied by smaller humps in V and bays about 20' deep in D.

The evenings of 11d and 13d both had aurora of considerable activity. That of 11d was a band with ray structure and attended by a few detached rays. That of 13d was a band at times showing ray structure, at times brilliantly coloured, with a pink or red lower border to the bright green band. A less active display was seen on 15d.

After a somewhat quieter interval disturbed conditions returned on 18d. The afternoon rise of V and H culminated in a sharp peak centred at 18h 10m. This was 230 $\gamma$  in height on the H record, 86 $\gamma$  on the V record. At the same time occurred a bay in D 38' deep. The night bays of H and V, however, were only of moderate dimensions.

Small disturbances continued to be frequent to the end of the month, the V traces especially maintaining the disturbed day form. The H records show a bay, 180 $\gamma$  in depth, centred at 24d 8h 30m.

Aurora was observed from one or more places in Scotland on March 5, 6, 11-13, 15, 17-25, 27, 29. At Lerwick that of 18d showed some activity. It consisted of a fine arc which at times exhibited ray structure.

*April.*—(Average Character Figure 1.23). This was a month of great and frequent disturbances, with only two days—4 and 5—classed as "0." There were, however, no large disturbances until 6d when the storm conditions of March 11-19 returned after an interval of 26d. The first movements were gradual increases in H and V to maxima at about 6d 18h. Thereafter there was a period of fairly slow fall. The usual deep night bay in H was preceded by a sudden rise of 84 $\gamma$  at 21h 28m and the main descent of 584 $\gamma$  began two minutes later. The minimum 13940 $\gamma$  was reached at 22h 39m and was followed by a rapid but oscillatory recovery. The D and V records follow the usual courses and are noteworthy chiefly for the period of large and rapid oscillations between 22h 30m and midnight. Among them are a change in D of 62' in four minutes, and changes in V of 250 $\gamma$  in eight minutes and 220 $\gamma$  in three minutes. A second bay, considerably smaller than the first, followed at 7d 3h.

The records of the following night, 7d-8d, are remarkable. The H record was of normal though vigorous type with a night bay whose minimum, reached at oh 37m, was  $700\gamma$  below the normal for the hour. This was followed by a diminishing series of bays, continuing till 8d 8h. D and V, however, after accompanying the descent of the H trace to about midnight, suddenly developed enormous peaks. The later side of the D peak is a swing of no less than two degrees in nine minutes, while the V peak is about  $640\gamma$  in height. Both gave very excited traces for several hours after.

An interval of comparatively small disturbance followed until the night of 9d-10d, when there were three fairly deep bays of V. On the following night there were extensive movements. These were two deep and steep-sided bays in H centred at 10d 23h 39m and 11d 2h 21m. The minimum of the first, and deeper, was about  $520\gamma$  below the normal for the hour. The V record shows bays corresponding with those in H, but on D there is first a peak with a maximum of  $14^{\circ} 52'$  at 23h 31m, followed by a fall to  $13^{\circ} 38'$  at oh 23m. After a further interval of comparatively small (though continuous) disturbance, there was a renewal of activity on the night of 12d-13d. The single night bay was fairly deep (about  $510\gamma$  below the normal for the hour) and the period when H was lowest was marked by very excited traces on D and V. The movements in D were so rapid that the record is a mere blur some 20' in width, while the V record shows a number of sudden movements, the largest a rise of  $160\gamma$ .

Disturbance of the usual type was evident again from 15d-17d. On 19d a new disturbance broke out. H, after a slow rise to a value of  $14665\gamma$  at 18h 30m, developed a large peak with a maximum of  $14928\gamma$ . A much smaller hump in V, and a bay in D 40' deep accompanied this movement. After 20h the records were quiet—H remarkably so—and it was not until 20d 6h om that the usual night bay arrived. The bay in V came slightly later than that in H and was accompanied by a peak 30' high in D. The next record (20d-21d) is somewhat quieter, the afternoon rise in H less (maximum  $14795\gamma$ ) the night bay quite small. The V bay is however deeper, with a minimum of  $46384\gamma$  against  $46489\gamma$  the previous night. The night of 21d-22d shows two deep bays in H, with minima at 23h 55m and oh 40m, separated by a rise of  $300\gamma$ . The V bay is similarly divided, but D shows a rise from  $14^{\circ} 4'$  at 22h to a maximum of  $14^{\circ} 53'$  at 22h 37m followed by a fall to  $13^{\circ} 32'$  at oh 21m. Thereafter it returned rapidly to normal. The chief peculiarity of the records of 22d-23d was the peak in D,  $1^{\circ}$  in height, which accompanied the deep night bays of H and V.

Thereafter disturbance gradually decreased, and towards the end of the month there were some almost quiet periods. There was a moderate disturbance on the record of 29d-30d, which showed two night bays in all records. The movements were not large except for the first V bay whose minimum was  $250\gamma$  below the normal for the hour.

Aurora was seen from one or more places in Scotland on April 6, 10, 13-22, 25, 30. Some signs of activity were observed at Lerwick on 22d.

*May.*—(Average Character Figure 1.26). This was the most disturbed month of the year, with only 2d and 27d classed as "o."

The first important disturbance (probably a return of that of April 6 since the interval is 27 days) began on the morning of 4d with small bays in all records. All elements rose slowly during the day without any large or sudden movements, but some agitation began to appear at 22h. A sharp upward swing of H of  $257\gamma$  at 5d oh 26m was accompanied by a smaller one in V. This was followed by a series of three deep night bays which appear on all records. The third bay is the deepest in H (minimum  $600\gamma$  below normal) and V (minimum  $400\gamma$  below normal), the second the deepest in D with a minimum  $55'$  below normal. This storm continued until 10d.

A sharp fall in H and V (194 $\gamma$  in H, 109 $\gamma$  in V) at 5d 20h 25m was accompanied by a bay in D 27' deep. The main feature of the rather wild D record on this night was the peak to a maximum of 14° 41' which accompanied the single H bay (some 540 $\gamma$  deep). The H bay the following night was rather deeper. It was accompanied by only a small hump in D, but this was followed immediately by a bay with a minimum of 13° 9'.6. No new features appeared on 7d or 8d and by 10d the records were almost quiet.

Late on 11d disturbance returned after a calm day, all records showing fairly deep night bays with minima about 12d 2h. A large and smooth wave in D of about 24' amplitude occurred between 12d 22h 9m and 23h 5m.

On 16d the slow afternoon rise of H culminated in two very high and sharp peaks with maxima of 14903 $\gamma$  and 14929 $\gamma$  at 18h 10m and 18h 45m, separated by a fall of 350 $\gamma$ . D shows a bay at 18h 45m, 1° in depth, and V a number of rapid movements, the largest about 120 $\gamma$ . All records show three night bays of only moderate depth. The main peculiarity of the records of 17d-18d is the great suddenness of some of the changes. The first of the three night bays in H, for example, shows a fall of 430 $\gamma$  between 20h 52m and 21h 3m. The D record shows a peak 37' in height accompanying this bay. The H record of the night of 18d-19d is an almost straight line broken by a single bay 470 $\gamma$  deep. This was accompanied by the usual V bay and by a small rise (15') in D.

Except for a moderately disturbed record on 25d-26d, the conditions hereafter became steadily quieter until the beginning of the great disturbance of 30d. Since the interval is 27d this is presumably a return of the storm of May 4 onwards. The afternoon rise of H on 30d was not large (maximum 14673 $\gamma$ ). After 21h 30m, however, H fell rapidly to 14160 $\gamma$  at 22h 56m, and, having hesitated about this value for some time, began at 0h 32m a further tremendous fall. It passed the limit of registration, even of the auxiliary magnetograph, 13900 $\gamma$  at about 0h 42m, falling at a rate of 30 $\gamma$  per minute, and did not return until 1h 48m. There was a second bay with a minimum of 14100 $\gamma$  at 4h 24m. The next few hours show considerable periods of smooth and regular oscillations of about four minutes' period and 20 $\gamma$  amplitude. The D record is very wild for this night, its main feature a bay with the exceptionally low minimum of 12° 49'.4 at 0h 31m. The fall of V was comparatively small, with a minimum only circa 330 $\gamma$  below normal, and there were frequent and very large upward swings during the depressed period.

The last night of the month shows three bays in H with minima at 21h 38m, 22h 54m and 1h 45m (June 1). The second was the deepest with a minimum of 13919 $\gamma$ . The declination record, fairly calm to 17h 44m, then became very agitated. The next hour and a half shows many large swings, including one of 62'. The largest change of the night was from 13° 20' at 22h 54m to 14° 35'.4 at 23h 7m. V, as on the previous night, shows a comparatively small night bay (minimum about 230 $\gamma$  below normal) broken by considerable peaks, two of these, at 22h 23m and 1h 47m, being over 300 $\gamma$  in height.

No aurora was noted during the month, except at Wick on May 1.

*June.*—(Average Character Figure 1.03). Though still a month of considerable disturbance, June shows a great decrease of activity compared with April and May. Six days were classed as "0."

The storm of May 30-31 still continued to effect the early records of June. A considerable bay in D, the later side a rise of 44'.4, at 1d 19h 40m was accompanied by swift falls in the other records, in H 235 $\gamma$  in 22 minutes, in V 140 $\gamma$  in six minutes.

The night of 2d-3d shows a long but shallow V bay, with, however, a small peak accompanying the bay in H, 400 $\gamma$  in depth. Three smaller H bays followed. The D record showed a hump some 52' in height centred at 3d 1h 51m.

Following a sudden commencement at 5d 21h 34m, the night of 6d-7d saw some renewal of disturbance, presumably a recurrence of that of May 11 since the interval is 26 days. The main feature was a night bay of moderate depth in both V and H. This had increased by the following night when there was a fall in H of 585 $\gamma$  between 22h 4m and 22h 47m, followed by a recovery almost as rapid. Simultaneously V fell 290 $\gamma$ , but D showed no disturbance until 22h 33m. It rose a little at first, but was generally low until 8d 3h. This period shows a number of fairly large but slow movements.

Thereafter conditions were fairly quiet until 12d, when a new disturbance (probably that of May 16 returning, since the interval is 27 days) broke out. There are three large peaks in H at 12d 13h 32m, 15h 48m and 16h 51m with maxima of 14646 $\gamma$ , 14746 $\gamma$  and 14842 $\gamma$ . The night movements of H were small, but those in V were fairly large and of the usual type. D showed continuous but not large movements.

After a brief quieter period disturbance began again on the 15th. H fell 390 $\gamma$  between 16d 6h 25m and 8h 26m, V, after some smaller movements, about 180 $\gamma$  between 8h 27m and 9h 13m, while in declination there was a hump 47' in height with a maximum at 8h 40m. The records recovered slowly and after 16d 14h developed into ordinary disturbed day records of moderate intensity.

Conditions now became gradually calmer, and the period 22d to 26d was remarkably quiet. On the morning of 27d, however, some small disturbance returned. D fell 18' between 1h 54m and 2h 42m, but was otherwise fairly steady. V shows a good night bay with a minimum 170 $\gamma$  below the normal for the hour, and H a few small movements. Moderate disturbance continued to the end of the month. The night of 28d to 29d provided the largest movements. There was a good bay in V, which included a fall of 213 $\gamma$  in 20 minutes. H had two small night bays, slightly more than 200 $\gamma$  in depth, centred at 22h 0m and 3h 28m.

Aurora was not reported from any place in Scotland during June, but a brilliant arc was reported as having been seen from S.S. *Victor* at midnight on 20th in Lat. 49°59' N., Long. 44°10' W. The zenith of the arc lay to NNW at an altitude of about 8°\*.

*July.*—(Average Character Figure 1.00). Disturbance, though frequent, was much less violent than in the preceding months. Only three days had character figure "0."

The disturbance of the last days of June continued to diminish slowly during the first nine days of July. The records of 2d-3d are the most disturbed in this period. There was a peak at 2d 19h 5m, 74 $\gamma$  high in H, 14 $\gamma$  in V, accompanied by a bay in D 17'·4 deep. The usual night bays in H and V were well marked though not very large. During the period when H and V were lowest D fell about 18' to 14'5', about which value it remained very steady throughout the morning.

At 9d 14h 53m the storm of June 12, returning after an interval of 27d, opened with the best marked "sudden commencement" of the year. The initial movements in H were -18 $\gamma$ , +90 $\gamma$ ; in D -1'·6, +4'·2; in V -7 $\gamma$ , +15 $\gamma$ , -28 $\gamma$ . The later movements during the day were not large, but there are two night bays in H, 260 $\gamma$  and 320 $\gamma$  in depth, with minima at 10d 0h 57m and 10d 3h 7m respectively. The

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\* Marine Observer, Vol. VIII, No. 90, p.126.

accompanying V bays were of about the same depth. With the first of these bays there is a peak in the D record 23' in height, but with the second first a fall to  $13^{\circ}39'4$  at 3h 7m, followed by a peak rising to  $14^{\circ}23'8$  at 3h 20m. There were good night bays on the records of 10d-11d. That in V was about 444 $\gamma$  in depth, that in H about 660 $\gamma$ , with minima at 2h 56m and 3h 23m respectively. There are two bays in declination with minima  $13^{\circ}39'3$  at 2h 33m and  $13^{\circ}37'0$  at 2h 55m, followed by a sharp rise to  $14^{\circ}39'8$ , and declination remained high until 3h 43m when a swift fall began.

The record of 13d is chiefly remarkable for the large afternoon rise in H which reached the highest value for the month (14751 $\gamma$ ) at 17h 0m. There is also a bay in D 39'4 in depth centred at 16h 54m accompanied by a peak in V 116 $\gamma$  high. Apart from one or two smaller outbreaks, records then gradually became quieter, ending in the calm period of 20d-23d.

The night of 24d-25d saw a return of disturbed conditions. There was a night bay, in H 500 $\gamma$  deep, in V 230 $\gamma$  deep. Declination remained steady throughout 24d, but fell 19' just before midnight, and remained low and somewhat agitated during the morning. Afterwards until the end of the month the ranges were not large nor the records of unusual type.

Aurora was not reported from any place in Scotland during July.

*August.*—(Average Character Figure 1.03). Considerable movements were rare, and the month presents little of interest in spite of almost continuous small movement.

The main disturbance, following at an interval of 27 days on that of July 9, began on 5d. Three bays of H occurred on the night of 5d-6d, the third, 246 $\gamma$  in depth, the deepest. These bays are represented on the V trace also, but are accompanied by peaks on the D record. With the first bay in particular there is a peak in D 41'5 in height. The disturbance increased during 6d, the afternoon rise in H culminating in a peak with a maximum of 14921 $\gamma$  at 6d 16h 57m. This was accompanied by a smaller hump in V, the high maximum value of this element (46809 $\gamma$ ) being due to the unusually steep though steady rise during the afternoon. With the H peak there came also a bay in D 31' deep. The night shows a whole series of diminishing H bays. The first and deepest of these (minimum 14062 $\gamma$ ) was accompanied by a very deep bay in D, which, in a single rapid swing, fell 75'3 to a minimum of  $13^{\circ}9'$  (20h 58m). Smaller D bays accompanied the latter bays in H, which, as usual, are shown by the V record also. This was the day of greatest intensity of the storm and was followed by a gradual decrease, although the original form of the curve was fairly well maintained for some days. A swift rise and fall in V, the movements +68 $\gamma$ , -165 $\gamma$ , at 8d 19h 26m, accompanied by changes of D of -29', +39', may be noted because of the suddenness, the changes in V taking only seven minutes and those in D a little longer. A deep double bay in D just after 14d 20h—the initial fall about 44'—accompanying the afternoon peaks of V and H, and a period of mild disturbance on 19d between the somewhat unusual hours of 8h and 14h are the most interesting features of a period which was, however, never wholly calm.

There was a renewal of disturbance on 21d, following the storm of July 24 at an interval of 28 days. The night bay proper came at 22d 2h 57m and gave a minimum value of H of 14264 $\gamma$ . With this came corresponding bays in the other two records, but two earlier bays in H, almost as deep, at 21d 22h 41m and 23h 52m have no corresponding movements in D or V. This disturbance is regarded as continuing until the 25th, but the ranges were not large nor do the records show any very interesting features.

Faint aurora was seen from Lerwick between 22h 45m and 23h 15m on 17d, and from other northern stations on 22d and 30d.

*September.*—(Average Character Figure 1.00). This month included three storms of considerable violence but short duration. Five days received character figure "0."

Instead of the usual slow rise during the afternoon the record of 1d shows a single swing of H of  $+114\gamma$  between 12h 50m and 13h 8m, accompanied by a rise of  $80\gamma$  in V. The night of 1d-2d shows a moderately deep night bay in V and H, accompanied by a hump 33' in height in D.

On 3d a considerable disturbance began. The peak in H which completed the afternoon rise reached, at 15h 29m, a maximum of  $15090\gamma$ . The maximum of V was not exceptionally high, but there are, about this time, many rapid swings of both D and V, the largest 33' and  $130\gamma$  respectively. There were two night bays of V and H, the first also accompanied by a bay in D, whose later side was a very large swing— $56'.4$ . The second H bay was the deeper with a minimum of  $14024\gamma$  at 0h 38m. An aurora was seen on this evening between 20h 45m and 23h 40m. It consisted of numerous detached masses of rays in constant motion but no properly defined arcs or bands were seen.

After a short quiet interval there was some small disturbance from 5d to 8d. On the evening of the first day a number of rapid swings of D, the largest about half a degree, accompanied the usual maxima of V and H.

A "sudden commencement" at 18d 8h 52m ushered in the second considerable storm of the month; it followed that of August 21 at an interval of 28 days. One of its strangest features was a bay in H just before noon. The curve remained for about an hour at the low value of  $14390\gamma$  but rose to a fairly high maximum just before 18h. A very swift up-and-down movement of  $+204\gamma$ ,  $-297\gamma$  at 19h 0m may be noted. D and V were both very excited for about an hour here, and show many large swings. There was a peak in D about  $1^\circ$  in height, accompanied by a rise of  $224\gamma$  in V and a bay in H  $212\gamma$  deep, of very short duration. H shows two night bays, at 23h 6m and 2h 16m, of which the first was slightly the deeper (minimum  $14113\gamma$ ) and was accompanied by a peak in D 81' in height. The second H bay is unusual in being accompanied by a rise in V; and there was at the same time a rise of 20' in D.

On 28d there commenced what was presumably a recurrence of the storm of September 3. The movements were not, however, very large until 29d. The main features of this disturbance were: (1) A period of rapid swings between 29d 18h and 29d 19h. These were greatest in D where the largest amounted to 70'. (2) The very long duration of the night bays of V and H. V, especially, began to fall at 29d 14h, reached its minimum at 30d 4h 40m and did not recover until 8h. The minimum of H ( $14339\gamma$ ) was also very late—at 5h 16m. D was exceptionally high throughout the early hours of the morning, with a maximum of  $15^\circ 6'.2$ .

Active displays of aurora were observed from Lerwick on the evenings of 3d and 21d, the latter an arc attended by occasional rays. Aurora was seen from one or more places in Scotland on September 1, 3, 4, 16-19, 21, 23, 26, 29, 30.

*October.*—(Average Character Figure 0.94). Disturbance, though generally small, was fairly frequent. The first week shows a considerable amount of small movement, with the 3rd the most disturbed. Interesting features were: A bay in declination 25' in depth centred at 1d 17h 55m, accompanied by a hump of  $77\gamma$  in H and a fall of  $50\gamma$  in V; a repetition of this same phenomenon, somewhat augmented, at 2d 22h 16m; and a double oscillation in H of about  $54\gamma$  amplitude between 3d 20h and 3d 21h, closely copied by a movement in D with an amplitude of 21'.

After a period of calm, disturbance broke out again with a "sudden commencement" at 14d 4h 23m. This was most noticeable on D where the movements were  $-2'3$ ,  $+9'5$ . The record of 14d-15d is of the usual disturbed day pattern with a single night bay of moderate depth in all records, centred about 21h 30m. A sharp rise—163 $\gamma$  in H, 85 $\gamma$  in V, 6' in D—preceded the main fall. By 15d 3h all records had returned to normal and a very quiet period followed.

The greatest storm of the month and one of the greatest of the year followed a sudden commencement at 17d 3h 38m. H was very high throughout the first afternoon, with the exceptionally high maximum of 15041 $\gamma$ . This was followed by a single night bay with a minimum of 14012 $\gamma$ , reached at 21h 36m, the main fall preceded by a sharp rise of 147 $\gamma$ . The most striking feature of the V record was a bay 440 $\gamma$  in depth centred at 17h 15m. This was a very rapid movement and occupied altogether only 27 minutes. The bay accompanying the one in H was far less deep than this earlier one. The D record was quiet until 12h 30m when oscillations began. These had a period of about ten minutes at first, but both period and amplitude gradually increased. A number of the swings between 16h 0m and 17h 30m exceeded 1°. The night bay is well represented. Records continued somewhat disturbed until 21d. A bay in H about 100 $\gamma$  in depth, accompanied by a small hump in V is shown at 20d 9h.

The 25th saw a return of fairly vigorous disturbance. The records are of much the usual type, with a night bay, centred at 26d 0h 20m on all three components. The storm increased during the next day. Large and fairly rapid rises of H and V came shortly after noon on 26d, that in H about 150 $\gamma$ , in V 130 $\gamma$ . Both remained high during the afternoon with the maxima about 16h. There were three night bays in H, the first and deepest with a minimum of 14371 $\gamma$  at 23h 28m. V shows a deep bay centred at 0h 8m and a smaller one at 4h 50m, while D shows many rapid movements but no large departures from the mean value.

A brilliant aurora was seen on this evening. Rays, in constant motion, were associated at first with only a glow to the North, but this latter slowly condensed to form a brilliant band with ray structure, red below, bright green above. This phase lasted only from 22h 10m to 22h 17m, after which activity gradually decreased.

Disturbance, of diminishing violence, continued to the end of the month. There were a number of deep bays in D, the largest at 27d 16h 34m, 41' in depth.

Aurora was seen from one or more places in Scotland on October 1, 8, 9 and every night from 16-31.

*November.*—(Average Character Figure 0.83). This was generally a quiet month, apart from two disturbed periods on 14d and 24d-26d.

There was little of interest in the first fortnight. A sudden rise, 74 $\gamma$  in H, 56 $\gamma$  in V, at 4d 21h 32m was the main feature of a period of disturbance which lasted about two hours. This was accompanied by an aurora—a dark red band with ray structure first seen at 21h 33m breaking up into detached masses of rays which persisted with many changes of form until 23h. Slight disturbance returned on 8d and 9d, the largest movement a bay in D 27' deep at 8d 20h 25m.

A well marked "sudden commencement" came at 13d 19h 28m. The movements in H were  $-6\gamma$ ,  $+29\gamma$ ; in V  $-8\gamma$ ,  $+17\gamma$ ; in D  $+3'5$ . There were no large movements on this night, but the next record (14d-15d) is of the usual disturbed day type. A conspicuous feature of the H record is a fall of 236 $\gamma$  in six minutes at 20h 37m. The minimum (14341 $\gamma$ ) of the usual night bay was reached at 15d 0h 35m. The D and

V records show a period of rapid and violent movement during the evening with swings of 53' in three minutes and 419 $\gamma$  in four minutes as the most striking. An aurora of the "flaming" type was first seen at 15d 1h 46m, and continued, allied with active displays of rays and bands, until 5h.

The next disturbance began on the afternoon of 23d and an active aurora was observed during this evening. Early on 24d well-marked bays of V and H occurred. The gradual rise of H during the afternoon of 24d culminated in a peak 240 $\gamma$  in height, the large movement occupying only eighteen minutes. The main night bay, centred at 25d 0h 30m was about 260 $\gamma$  in depth. The V record, of the usual form, shows no sudden or very large movements. Declination was generally low between 24d 16h and 25d 3h. The range during this period was over a degree, but there are no especially interesting movements. An apparently very active aurora on this evening was largely obscured by clouds.

The records of 25d-26d are of much the usual disturbed day type. The most striking feature is the large double wave in V and H between 18h 0m and 18h 35m. The largest swing in H in this period was 376 $\gamma$ ; the largest in V 260 $\gamma$ . The D record shows a peak 81' in height centred at 18h 7m. The aurora of this night was so active that a description of the changes is impossible. Bands with ray structure were observed which had at times very complicated form, and many active masses of detached rays were also seen.

Aurora was seen from one or more places in Scotland on November 1, 3, 4, 14-18, 21-29.

*December.*—(Average Character Figure 0.58). Much the quietest month of the year, with no fewer than 15 days classed as "0."

The largest disturbance of the month opened with a "sudden commencement" at 3d 1h 8m. The movements were:—in H  $-0.5\gamma$ ,  $+12\gamma$ ; in D  $-1'.5$ ,  $+4'.8$ ; in V only a slight quiver of the trace. Records were quiet until 3d 13h 48m, when H began a rapid increase. Four large peaks centred at 15h 11m, 16h 11m, 17h 5m and 17h 45m, the first much the highest with a maximum of 15292 $\gamma$ , are the distinguishing features of the record. During the night there was a number of bays but none very deep. The D record was also very agitated during the afternoon, and the average value high. The first movement was a bay formed by rapid swings of  $-62'$ ,  $+109'$ . The usual disturbed day pattern of the V record was broken by a bay 620 $\gamma$  in depth centred at 15h 8m, and considerable oscillations of 10-20 minutes' period continued until 21h 30m. Moderate disturbance persisted until 4d 16h and there was a small hump in H at 5d 0h 18m accompanied by bays in D and V.

The disturbance of 20d had only one striking feature—a large hump in H between 16h 57m and 19h 49m, the rise about 310 $\gamma$ . This period was somewhat disturbed on the other records also, both showing small humps.

Aurora was seen on 13d, 19d, 20d, 21d and 29d. On 20d a glow, first observed at 18h 15m, broke up suddenly at 18h 4m into a number of patches of rays. Below these a quiet arc formed, and these phenomena persisted with certain changes until midnight. A well defined arc was seen on 21d but very little ray structure. The glow observed on 19d was remarkable only for its dark red colour.

Aurora was observed from one or more places in Scotland on December 2, 3, 4, 9, 12-15, 19, 20 (widely), 21, 23-25, 29.

## 1. Lerwick.

Day.	January. Factor 1·27.				February. Factor 1·27.				March. Factor 1·27.			
	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.
	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.
1	-45	82	88	< -971	166	z±	180	131	354	351	363	331
2	181	125	139	144	131	94	180	134	230	222	222	228
3	-331	57	201	241	105	118	67	105	173	210	202	199
4	88	28	85	161	29	-5	< -332	174	107	< -1152	-9	101
5	-549	-526	158	139	185	252	29	172	112	138	101	164
6	127	88	102	25	67	241	214	137	66	118	202	507
7	57	-263	85	99	0	134	180	107	279	144	167	112
8	z±	102	102	139	56	94	99	147	115	127	-132	-98
9	102	113	< -238	764	80	< -292	118	196	< -1123	< -1115	104	144
10	127	25	125	113	139	70	88	35	66	58	115	121
11	< -484	> 524	150	< 6	56	88	177	204	60	55	84	138
12	99	-444	130	28	137	188	180	142	29	> 1624	861	69
13	125	156	178	> 413	150	163	169	153	86	(-17)	153	95
14	173	144	161	425	174	107	-308	126	86	107	432	573
15	376	153	> 877	439	-	> 732	134	268	124	> 1022	107	170
16	167	130	147	241	83	78	107	153	81	78	104	75
17	141	-195	201	275	51	86	137	150	84	204	101	184
18	303	76	243	379	131	121	147	163	101	138	144	170
19	198	150	147	161	88	94	150	169	135	161	> 979	< -573
20	< -71	555	161	110	161	137	281	367	156	300	228	259
21	57	(113)	167	178	297	222	228	233	115	144	314	213
22	130	125	209	427	252	217	236	241	75	130	245	196
23	402	314	317	158	107	107	172	147	104	112	z±	156
24	178	337	221	161	121	123	(174)	134	95	187	164	300
25	-495	187	269	311	118	115	131	80	213	86	170	-12
26	224	153	195	141	287	206	201	268	86	86	107	156
27	85	125	-8	-20	177	292	332	233	135	104	170	124
28	71	147	224	127	161	206	332	295	138	374	58	360
29	238	125	300	311	-	-	-	-	-199	320	383	170
30	187	113	116	93	-	-	-	-	89	z±	187	392
31	z±	88	113	28	-	-	-	-	187	262	216	320
(a)	167	161	193	215	130	171	171	174	127	254	239	215
(b)	81	49	171	188	135	148	154	171	121	164	180	204
Mean ...	(a) 185. (b) 122.				(a) 161. (b) 152.				(a) 208. (b) 167.			
Day.	April. Factor 1·27.				May. Factor 1·28.				June. Factor 1·29.			
	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.
	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.
1	290	299	382	56	230	260	252	196	65	102	97	199
2	137	167	95	-56	112	249	216	221	77	99	145	187
3	148	z±	81	103	109	140	109	151	11	31	250	256
4	86	128	153	195	70	104	140	137	483	329	182	199
5	73	81	-156	39	84	126	123	129	179	486	162	57
6	42	-28	103	165	67	104	120	115	168	170	185	213
7	109	100	126	153	42	z±	120	123	125	< -199	190	190
8	56	98	145	112	112	112	140	140	105	57	99	11
9	151	290	307	1077	50	59	123	120	153	< -341	91	156
10	458	-	(251)	162	(0)	90	109	z±	119	139	193	71
11	100	70	248	-100	193	190	120	179	37	102	99	224
12	112	126	131	220	106	64	z±	84	145	153	199	230
13	75	162	173	-223	98	140	134	126	131	293	531	415
14	123	153	170	112	129	123	143	151	690	190	173	179
15	120	112	193	181	137	154	182	z±	114	173	236	185
16	123	20	139	139	112	101	129	140	182	145	497	264
17	92	-14	75	145	56	87	171	< -434	182	454	432	466
18	123	131	(106)	-	3	126	112	78	133	-173	207	170
19	-	204	167	170	76	87	104	118	287	457	417	446
20	112	139	179	165	81	112	132	207	361	559	355	156
21	120	123	139	139	59	112	104	84	122	128	185	480
22	53	151	120	142	14	112	118	165	< -156	338	156	321
23	109	117	159	276	160	120	132	123	< -599	315	571	398
24	< -661	< -419	173	259	98	115	165	126	327	346	236	256
25	151	198	226	212	106	196	227	140	> 562	287	187	170
26	100	109	86	92	132	154	154	179	170	151	133	406
27	92	11	112	234	193	95	z±	< -437	116	281	< -264	-628
28	134	131	159	167	101	70	98	64	< -872	< 153	142	176
29	137	123	209	170	115	123	151	162	< 139	207	142	151
30	59	167	165	195	84	188	179	123	-182	400	403	568
31	-	-	-	-	104	87	188	120	-	-	-	-
(a)	124	136	165	195	98	127	145	137	214	242	238	248
(b)	110	121	154	160	100	132	145	140	193	221	255	258
Mean ...	(a) 155. (b) 136.				(a) 126. (b) 129.				(a) 236. (b) 232.			

NOTE.—The Potential Gradient is reckoned as positive if the potential increases upwards. For indeterminate potential gradient the following notation is used: z +, Indeterminate, positive value; z -, Indeterminate, negative value; z ±, Indeterminate in magnitude and sign.

(a) Mean of all positive readings.

(b) Mean from all complete days using both positive and negative readings.

1. Lerwick.

Day.	July. Factor 1.29.				August. Factor 1.29.				September. Factor 1.31.				
	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.	
	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	
1	482	384	282	200	94	85	105	156	117	103	161	138	
2	217	175	223	623	128	142	133	48	-105	149	138	190	
3	338	620	226	468	-287	128	324	327	108	246	190	188	
4	251	705	293	423	170	264	239	366	138	161	193	152	
5	736	381	195	155	253	190	170	239	9	193	z±	132	
6	172	93	118	141	-85	190	142	190	293	369	648	873	
7	(85)	124	113	158	139	256	369	298	469	246	135	261	
8	116	102	93	144	264	307	219	216	135	35	179	147	
9	73	102	127	155	253	219	156	185	114	161	85	108	
10	113	42	144	133	210	284	381	z±	111	105	105	176	
11	121	76	68	90	85	244	190	222	z±	144	117	173	
12	93	149	71	102	114	199	241	222	161	129	185	167	
13	96	116	130	113	114	111	133	128	167	144	147	240	
14	104	121	214	395	119	170	145	-273	103	135	135	167	
15	82	152	121	39	51	131	65	165	132	138	144	176	
16	82	113	135	110	168	80	114	128	132	149	132	147	
17	87	338	116	25	128	142	187	236	67	111	76	117	
18	116	124	324	231	151	114	57	239	88	85	-331	147	
19	z±	87	155	59	202	256	310	153	73	105	129	305	
20	65	158	20	-316	139	318	281	412	-105	26	138	88	
21	152	403	138	76	193	< 20	11	133	62	73	138	144	
22	102	85	138	197	318	264	148	199	82	88	158	144	
23	107	144	186	189	139	452	767	457	129	199	662	627	
24	118	130	(141)	195	423	264	148	307	132	88	261	507	
25	183	223	271	293	159	173	173	312	275	144	53	132	
26	102	166	158	183	182	116	486	596	126	144	149	147	
27	259	259	330	214	381	679	951	400	147	149	132	141	
28	138	186	381	234	236	256	301	142	79	103	126	164	
29	290	z±	141	141	216	z±	z±	111	117	193	138	129	
30	85	93	152	155	165	159	(170)	151	100	135	158	135	
31	93	110	116	172	80	116	190	190	—	—	—	—	
(a)	169	199	172	194	182	211	244	239	136	142	179	212	
(b)	164	203	173	183	153	215	247	229	123	140	163	216	
Mean ...	(a) 183. (b) 181.				(a) 219. (b) 211.				(a) 168. (b) 161.				
Day.	October. Factor 1.31.				November. Factor 1.31.				December. Factor 1.31.				
	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.	
	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	
1	117	126	88	185	69	137	149	197	157	149	77	297	
2	(117)	141	117	117	< -465	170	< -477	-45	181	285	151	137	
3	88	76	126	138	116	131	z±	113	113	39	-15	119	
4	-234	229	501	434	89	72	42	116	134	134	297	241	
5	< -457	< -1319	-478	—	98	89	134	146	149	< 12	163	166	
6	32	114	158	182	72	83	131	131	98	151	149	208	
7	100	114	91	135	116	98	< -1252	104	< -882	< -968	181	-83	
8	97	108	> 325	205	63	80	89	158	-404	< -321	232	181	
9	296	132	132	147	z±	z±	188	z±	45	128	80	98	
10	94	141	138	-322	z±	z±	z±	122	< 6	101	294	122	
11	114	129	161	355	89	80	101	131	119	143	125	146	
12	264	123	135	< 138	-238	< -1264	—	—	92	86	71	86	
13	91	100	141	117	104	119	149	137	-30	< -564	92	163	
14	217	-296	510	428	-176	98	-223	< -489	56	92	119	119	
15	381	460	346	337	92	113	301	191	33	98	151	98	
16	147	346	164	448	> 489	< 140	z±	> 676	86	89	187	z±	
17	-190	132	188	15	274	> 367	< -9	134	z±	53	18	-190	
18	< -155	114	202	217	72	107	< 152	137	62	z±	223	110	
19	173	290	413	223	92	116	107	226	68	59	77	119	
20	220	237	252	334	101	75	107	-42	50	80	107	312	
21	267	281	410	346	-104	89	140	188	122	z±	z±	80	
22	316	275	190	275	122	131	134	< 218	39	68	143	-30	
23	< -858	179	z±	240	z±	128	116	107	-59	59	193	226	
24	z±	217	z±	261	113	119	146	-98	116	157	-353	205	
25	-173	126	202	185	< -51	-122	286	209	101	80	119	149	
26	155	190	144	155	170	110	250	221	83	45	59	62	
27	100	188	149	114	116	12	(164)	(119)	39	30	15	119	
28	217	41	138	135	75	161	158	194	107	65	45	119	
29	79	117	114	176	75	116	238	241	< -992	< -544	157	119	
30	59	97	135	193	< -444	146	283	194	77	122	282	160	
31	> 879	79	9	114	—	—	—	—	92	104	208	413	
(a)	193	169	203	219	124	119	162	184	89	97	143	162	
(b)	116	158	209	202	80	104	149	142	83	104	100	162	
Mean ...	(a) 196. (b) 171.				(a) 147. (b) 119.				(a) 124. (b) 112.				
				Annual Means ...				(a)	146	169	188	199	
								(b)	122	146	175	188	
								(a) 175.		(b) 158.			

The Potential Gradient is reckoned as positive if the potential increases upwards. For indeterminate potential gradient the following notation is used: z+ ,Indeterminate, positive value; z-, Indeterminate, negative value; z±, Indeterminate in magnitude and sign.  
 (a) Mean of all positive readings. (b) Mean from all complete days using both positive and negative readings.

POTENTIAL GRADIENT (reduced to level surface) : DIURNAL INEQUALITIES (in volts per metre).

The departures from the mean of the day are adjusted for non-cyclic change.

\* 0a DAYS ONLY.

2. Lerwick.

1930.

Month and Season.	Hour. G.M.T.																								Non-cyclic change 24-0.	No. of Days used.	Mean Values	
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.				
Jan.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	0	
Feb.	- 19	- 24	- 20	- 10	- 9	- 18	- 35	- 10	- 23	- 36	- 23	+ 4	+ 11	+ 91	+ 21	+ 21	+ 32	+ 21	+ 40	+ 23	+ 17	+ 17	+ 11	- 10	+ 26	9	196	
Mar.	- 3	- 15	- 6	- 11	- 13	- 15	+ 5	+ 9	- 9	- 31	- 28	- 24	- 22	- 21	- 5	+ 17	+ 27	+ 24	+ 24	+ 27	+ 43	+ 21	+ 21	+ 87	6	209		
April	- 26	- 22	- 22	- 30	- 13	- 27	- 8	+ 4	- 2	+ 1	- 12	- 1	- 8	+ 6	+ 22	+ 40	+ 24	+ 12	+ 31	+ 56	+ 19	- 4	- 19	- 22	+ 35	7	148	
May	- 25	- 27	- 35	- 23	- 20	+ 1	+ 16	+ 17	+ 3	- 9	- 11	- 10	+ 2	+ 1	+ 16	+ 19	+ 10	+ 11	+ 8	+ 6	+ 8	+ 7	+ 27	+ 10	- 7	14	146	
June	- 30	- 38	- 31	- 62	- 60	- 58	- 28	- 19	- 19	- 39	- 30	- 21	- 3	+ 43	+ 48	+ 61	+ 78	+ 84	+ 62	+ 25	+ 14	+ 22	+ 29	- 28	+ 38	8	270	
July	+ 1	+ 8	+ 24	+ 23	+ 19	+ 31	+ 19	+ 28	+ 22	- 13	- 2	- 23	- 3	- 14	- 2	- 9	- 23	- 21	- 8	+ 4	- 5	- 15	- 18	- 20	+ 5	12	155	
Aug.	- 1	- 28	- 44	- 47	- 7	+ 12	+ 23	+ 20	+ 9	- 18	- 37	- 36	- 17	+ 5	+ 21	+ 4	- 19	- 14	+ 8	+ 68	+ 38	+ 23	+ 20	+ 15	+ 11	10	233	
Sept.	- 20	- 22	- 23	- 25	- 19	- 18	- 2	- 11	- 3	- 5	- 3	- 4	- 7	- 1	+ 7	+ 9	+ 7	+ 12	+ 25	+ 44	+ 29	+ 19	+ 11	0	+ 6	12	130	
Oct.	- 30	- 47	- 52	- 45	- 45	- 53	- 13	- 7	- 8	- 9	- 19	- 13	+ 33	+ 25	+ 27	+ 66	+ 85	+ 37	+ 19	+ 41	+ 58	+ 3	- 30	- 24	+ 13	3	192	
Nov.	- 17	- 33	- 27	- 19	- 22	- 21	- 7	- 21	- 21	- 9	+ 6	- 1	- 21	- 23	- 37	- 33	- 5	+ 77	+ 85	+ 35	+ 44	+ 21	+ 49	0	- 24	0		
Dec.	- 17	- 33	- 27	- 19	- 22	- 21	- 7	- 21	- 21	- 9	+ 6	- 1	- 21	- 23	- 37	- 33	- 5	+ 77	+ 85	+ 35	+ 44	+ 21	+ 49	0	- 24	4	127	
Year	- 17	- 25	- 24	- 25	- 19	- 17	- 5	+ 1	- 3	- 15	- 16	- 13	- 4	+ 4	+ 10	+ 17	+ 21	+ 25	+ 29	+ 33	+ 25	+ 14	+ 10	- 6	+ 19	85	181	
Winter	- 18	- 29	- 23	- 15	- 15	- 19	- 21	- 15	- 22	- 23	- 9	+ 1	- 5	- 2	- 8	- 6	+ 13	+ 49	+ 63	+ 29	+ 31	+ 19	+ 30	- 5	+ 1	13	161	
Eqnx.	- 20	- 27	- 26	- 28	- 23	- 28	- 9	- 2	- 1	- 5	- 16	- 11	- 1	+ 2	+ 9	+ 27	+ 33	+ 22	+ 25	+ 41	+ 33	+ 15	- 4	- 6	+ 35	28	170	
Sumr.	- 14	- 21	- 21	- 27	- 17	- 3	+ 7	+ 11	+ 4	- 20	- 20	- 23	- 5	+ 9	+ 21	+ 19	+ 11	+ 15	+ 17	+ 26	+ 14	+ 9	+ 15	- 6	+ 12	44	201	

3. Lerwick.

1930.

\* 1a AND 2a DAYS ONLY.

Month and Season.	Hour. G.M.T.																								Non-cyclic change 24-0.	No. of Days used.	Mean Values	
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.				
Jan.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	2	219
Feb.	- 37	- 8	- 11	- 31	- 13	- 45	- 70	- 41	- 23	- 10	+ 3	- 47	- 68	- 21	+ 24	+ 3	+ 45	+ 103	+ 99	+ 87	+ 84	+ 23	+ 1	- 47	- 87	5	121	
Mar.	- 21	- 18	- 52	- 19	- 20	- 17	- 9	- 23	- 23	- 17	- 11	- 7	+ 8	+ 24	+ 23	+ 28	+ 38	+ 46	+ 31	+ 36	+ 9	- 3	- 1	- 2	- 5	5	121	
April	+ 55	+ 38	- 9	- 109	- 48	- 55	- 14	- 11	- 35	- 112	- 121	- 92	- 79	+ 9	+ 67	+ 39	+ 43	+ 56	+ 56	+ 93	+ 73	+ 85	+ 10	+ 61	- 229	2	131	
May	- 41	- 51	- 30	- 27	- 41	- 24	- 26	- 36	- 33	+ 1	+ 1	+ 7	+ 7	- 2	- 24	+ 1	+ 31	+ 35	+ 46	+ 81	+ 107	+ 37	- 1	- 18	+ 31	8	136	
June	+ 8	- 39	- 34	- 29	- 22	- 17	- 4	- 26	- 5	- 2	- 1	- 13	- 1	+ 14	+ 21	+ 19	+ 12	+ 12	+ 4	+ 21	+ 26	+ 28	+ 21	+ 7	- 2	7	105	
July	+ 60	+ 12	- 21	- 24	- 21	- 39	+ 2	+ 27	+ 60	+ 29	- 15	- 47	- 19	- 9	- 18	- 24	- 29	- 21	- 1	+ 35	+ 3	+ 4	- 2	+ 59	+ 149	7	202	
Aug.	+ 11	+ 7	- 17	+ 13	+ 37	- 2	+ 66	+ 39	+ 13	- 10	- 27	+ 14	- 2	- 3	+ 16	- 5	- 8	- 76	- 11	+ 6	- 45	- 8	- 26	+ 16	+ 9	7	169	
Sept.	- 37	- 77	- 58	- 21	- 17	+ 3	- 10	0	- 24	- 11	- 28	- 8	- 18	+ 5	+ 25	+ 46	+ 35	+ 33	+ 39	+ 38	+ 56	+ 40	+ 27	- 39	- 19	9	163	
Oct.	- 20	- 32	- 23	- 23	- 7	- 18	- 44	+ 9	- 16	- 41	- 25	- 16	- 3	+ 10	+ 7	+ 3	+ 14	+ 29	+ 43	+ 55	+ 54	+ 42	+ 5	- 2	- 92	9	154	
Nov.	- 150	- 37	- 4	- 33	- 66	- 60	- 35	- 107	- 186	- 82	- 89	- 57	- 12	+ 73	+ 92	+ 108	+ 148	+ 119	+ 110	+ 94	+ 83	+ 54	+ 69	- 31	+ 50	3	198	
Dec.	+ 5	- 19	- 42	- 50	- 16	- 5	+ 9	- 3	- 5	- 30	+ 15	- 3	+ 31	+ 49	+ 76	+ 32	+ 32	+ 60	+ 55	- 13	+ 9	- 44	- 123	- 18	- 27	5	103	
Year	- 13	- 41	- 3	- 6	+ 49	+ 89	+ 52	+ 33	+ 19	- 47	- 68	+ 29	- 25	+ 27	- 68	- 32	- 11	- 41	- 33	- 27	- 1	+ 51	+ 49	+ 18	- 27	2	140	
Year	- 15	- 22	- 25	- 30	- 15	- 16	- 7	- 11	- 21	- 28	- 31	- 20	- 15	+ 15	+ 20	+ 18	+ 28	+ 30	+ 37	+ 42	+ 38	+ 26	+ 2	0	- 21	66	153	
Winter	- 17	- 21	- 27	- 27	0	+ 5	- 5	- 9	- 8	- 26	- 15	- 7	- 13	+ 20	+ 14	+ 8	+ 26	+ 42	+ 38	+ 21	+ 25	+ 7	- 19	- 12	- 37	14	146	
Eqnx.	- 39	- 21	- 17	- 48	- 41	- 39	- 30	- 36	- 67	- 59	- 59	- 39	- 22	+ 23	+ 35	+ 38	+ 59	+ 60	+ 64	+ 81	+ 79	+ 55	+ 21	+ 3	- 60	22	155	
Sumr.	+ 11	- 24	- 33	- 15	- 6	- 14	+ 13	+ 10	+ 11	+ 1	- 18	- 13	- 10	+ 2	+ 11	+ 9	+ 3	- 13	+ 8	+ 25	+ 10	+ 16	+ 5	+ 11	+ 34	30	160	

\* NOTE.—For explanation of 0a, 1a and 2a Days, see page 51.

## ELECTRICAL CHARACTER OF EACH DAY, AND APPROXIMATE DURATION OF NEGATIVE POTENTIAL GRADIENT.

## 4. Lerwick.

1930.

Day.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		
	Char- acter.													
	Dura- tion of nega- tive pot. grad.													
	hrs.													
1	2c	5·7	1c	1·7	0a	...	1b	1·8	0a	...	1a	0·1	0a	...
2	2b	3·2	1c	0·9	0a	...	2b	3·0	0a	...	1a	0·1	1b	1·5
3	2c	3·9	1b	2·3	0a	...	1c	2·1	0a	...	1a	2·2	1b	0·3
4	2c	3·9	2c	7·9	2b	7·7	0a	...	0a	...	1a	0·1	1b	0·4
5	2b	6·8	1c	1·3	0a	...	1a	1·9	1a	0·1	1a	0·1	0a	...
6	1b	1·9	1c	1·8	0a	...	1a	1·2	1a	0·5	0b	...	1a	0·1
7	2b	4·3	1a	0·3	2a	4·5	0a	...	1c	2·6	1b	2·8	1a	0·6
8	2c	2·9	1a	0·1	2b	8·1	1a	0·3	1b	1·5	1b	1·9	0a	...
9	1b	0·9	1b	1·2	2c	10·2	1a	0·3	1a	0·7	2b	10·0	1a	0·1
10	1b	0·9	1a	0·5	1b	0·4	1b	—	2c	5·5	1b	0·6	1b	1·7
11	2c	4·9	1a	0·1	1b	0·7	2b	3·8	1b	0·2	1b	1·4	0a	...
12	1c	2·9	1b	1·1	1c	1·5	1b	0·5	2b	3·1	0a	...	0a	...
13	1c	1·2	0a	...	1b	1·4	1b	1·7	0a	...	0a	...	1a	1·7
14	1b	2·5	1b	2·2	1b	0·5	1b	2·5	0a	...	0a	...	1a	0·1
15	1c	2·1	1c	—	1b	0·7	1a	0·1	1b	2·6	0a	...	1a	1·0
16	1b	0·8	0a	...	1b	1·2	1b	1·3	1a	0·5	0a	...	1a	0·1
17	1b	1·7	1b	0·5	0a	...	1b	1·4	2b	3·6	0a	...	2b	3·8
18	1a	0·1	0a	...	1a	0·5	—	—	1b	2·9	1b	2·0	1b	0·2
19	1b	0·9	0a	...	1c	1·7	—	—	1a	0·5	0a	...	2c	6·9
20	1c	2·4	0a	...	1c	0·7	0a	...	0a	...	1b	2·3	2a	8·5
21	1a	0·4	0a	...	—	—	1a	0·9	0a	...	1b	0·4	0a	...
22	1b	0·9	0a	...	1b	0·2	1b	1·5	1a	0·5	2b	3·4	0a	...
23	1b	1·0	1a	0·1	1c	1·4	1b	0·4	0a	...	1b	0·4	0a	...
24	1a	0·4	1b	0·1	0b	...	2c	9·5	1a	0·1	1b	1·9	0a	...
25	2b	4·5	1c	1·8	2b	4·6	0a	...	0a	...	1b	1·5	0a	...
26	1b	0·4	1b	1·1	1b	0·5	1a	1·2	0a	...	1a	0·2	1a	0·1
27	2b	5·6	0a	...	1a	1·5	1a	2·0	1b	2·8	2c	7·1	0a	...
28	1b	0·6	0a	...	1b	0·9	0a	...	1b	1·3	2c	8·5	1a	0·6
29	1b	0·1	1b	2·8	0a	...	0a	0·7	1a	0·7	1b	1·4	2c	3·7
30	1c	1·9	1b	0·3	0a	...	0a	...	1a	2·1	0a	...	0a	...
31	1c	2·6	1b	1·2	—	—	0a	...	0a	...	1a	0·4	—	—
Total	41	73·3	20	25·0	28	53·2	23	37·4	20	29·0	25	49·7	20	27·4
No. of days used.	31	31	28	27	30	30	28	27	31	31	30	30	31	31
Mean	1·03	2·4	0·71	0·9	0·93	1·8	0·82	1·4	0·65	0·9	0·83	1·7	0·65	0·9
									0·77	1·1	0·70	0·9	1·13	1·6
											1·2	2·3	1·16	2·7

Annual Values :—Character Frequency  $\begin{matrix} 0 & 1 & 2 \\ 91 & 213 & 58 \end{matrix}$   
Mean character figure 0·91 (362 days)  
Duration of negative pot. grad. : Total 552·5 hrs.  
No. of days 357  
Mean 1·55 hrs.

*Explanatory Note.*—The electrical character of the day is indicated by the figures 0, 1, or 2, according to the character of the trace of the electrograph as regards negative potential gradient. The explanation of these symbols is as follows :—

- 0, denotes a day during which from midnight to midnight no negative potential was recorded.
- 1, denotes a day with excursions to the negative not amounting in the aggregate to more than three hours.
- 2, denotes negative potential extending in the aggregate over 3 hours or more.
- a, denotes that within the 25 periods of 60 minutes for which an estimate of the mean potential gradient has to be made in the process of tabulation there was in no case a range of potential gradient in the open exceeding 1000 volts.
- b, denotes that a range of potential gradient in the open exceeding 1000 volts was reached in at least one but in fewer than six of the 25 hourly periods referred to above.
- c, denotes that a range of 1000 volts or more occurred in at least six of the 25 hourly periods.

Mean values for periods of sixty minutes centred at the hours of Greenwich Mean Time.

5. Lerwick. (H.)

14,000 γ (·14 C.G.S. unit) +

January, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	525	525	531	546	549	549	554	553	547	546	542	541	532	541	534	530	529	537	536	532	529	534	543	545	543	539
2	543	543	545	539	544	547	551	549	549	545	542	541	542	544	537	544	540	543	546	538	535	530	540	542	545	543
3 D	545	543	546	547	551	551	555	552	556	555	531	532	511	519	524	532	545	543	548	544	537	539	532	538	538	541
4 D	538	546	543	536	539	556	549	533	511	505	507	505	512	522	550	545	558	564	546	528	505	568	524	525	488	533
5 D	488	494	471	481	496	521	523	508	514	511	511	497	501	518	548	631	592	577	566	565	516	520	514	500	527	524
6 D	527	525	520	513	490	541	555	548	544	540	539	530	499	515	566	563	634	522	530	554	546	516	494	508	488	533
7 D	488	455	497	528	523	501	531	539	525	523	528	510	530	533	525	521	545	527	518	534	534	542	518	523	497	521
8	497	517	495	519	535	542	537	528	536	526	524	517	527	534	538	537	530	534	539	538	539	547	554	545	534	531
9	534	514	536	545	536	536	539	538	538	537	534	530	529	536	538	539	541	542	542	544	543	541	542	545	549	538
10	549	542	540	543	545	549	548	548	545	534	530	528	530	533	540	538	533	543	546	545	545	545	543	545	545	541
11 Q	545	546	545	545	546	548	549	549	547	545	544	540	534	530	536	539	543	544	543	545	548	548	545	543	545	544
12 Q	545	546	549	547	547	549	552	554	551	545	543	536	533	533	539	541	534	539	548	552	551	553	549	547	545	545
13	545	547	554	553	554	566	569	556	555	552	543	537	535	538	541	545	548	553	549	553	553	551	548	547	553	550
14 Q	553	548	546	546	551	555	560	557	548	537	537	537	535	538	542	545	548	552	557	557	556	553	552	547	546	548
15	546	549	547	548	550	551	553	553	550	544	543	546	547	549	547	545	545	557	546	549	549	542	548	547	545	548
16	545	541	542	541	542	543	550	549	545	543	542	541	542	539	538	544	544	546	549	554	552	553	547	546	546	545
17	546	544	543	546	550	547	548	548	547	543	540	540	542	542	549	552	552	565	549	554	563	566	548	548	535	557
18	535	526	527	530	540	539	539	541	538	532	523	519	521	522	530	534	539	546	555	556	549	548	546	545	548	537
19	548	541	518	525	506	531	540	549	541	533	524	521	519	525	530	544	553	544	544	553	555	549	545	546	549	537
20	549	529	528	531	530	545	544	540	536	527	524	522	527	530	534	554	557	560	567	557	563	557	533	529	540	540
21	519	521	471	528	528	530	532	537	535	524	519	516	515	524	528	538	549	545	538	542	544	544	558	556	537	531
22	537	543	551	534	538	539	554	546	543	531	519	525	528	522	537	543	537	549	544	545	538	546	556	544	548	540
23	548	542	541	541	545	544	548	550	544	534	537	538	539	540	542	542	549	548	544	543	548	546	541	545	543	543
24	543	543	537	535	547	553	548	546	544	540	537	537	536	542	542	545	549	540	548	547	541	549	550	547	547	544
25	547	545	541	538	549	545	542	552	544	545	540	537	535	538	541	546	545	548	549	549	547	548	549	548	545	544
26 Q	545	543	542	544	545	548	549	546	545	540	537	534	535	536	542	545	547	550	553	554	554	552	551	550	549	545
27 Q	549	548	547	549	549	551	553	551	548	543	540	535	537	542	548	550	550	548	549	554	555	558	554	553	552	548
28	552	548	546	549	552	555	557	557	555	547	540	534	533	541	553	553	554	553	551	541	540	547	545	551	552	548
29	552	549	549	556	557	561	555	561	551	546	541	526	516	530	537	542	541	541	545	546	537	544	550	549	541	545
30	541	543	545	552	561	551	552	548	552	543	536	524	512	505	532	541	540	546	545	544	542	541	547	537	536	541
31	536	543	538	541	541	541	549	549	531	531	523	511	517	526	531	533	539	533	546	549	542	548	546	548	548	537
Mean	537	535	533	538	540	545	548	546	542	537	533	529	527	532	539	545	549	546	549	552	544	546	542	542	538	541

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the hours of Greenwich Mean Time.

6. Lerwick. (D.)

14° +

January, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	9.9	13.8	9.7	12.8	14.9	15.9	16.1	16.9	16.1	15.5	16.9	18.0	19.2	21.7	23.2	24.2	20.1	17.8	16.3	14.9	6.8	10.3	14.9	13.8	14.0	15.9
2	14.0	13.6	15.7	15.7	15.5	15.3	15.1	15.3	15.7	15.1	16.3	18.0	18.4	20.3	19.6	18.8	17.2	17.1	17.8	16.3	13.4	12.2	13.8	14.2	15.3	16.0
3 D	15.3	15.7	15.9	15.9	16.1	17.2	16.5	17.6	17.2	19.9	18.0	19.8	23.8	23.6	23.6	19.8	20.1	12.8	21.7	18.2	15.5	15.3	7.2	10.9	14.3	17.4
4 D	14.3	15.9	15.7	18.8	19.2	18.2	17.8	21.3	19.6	17.6	18.8	17.8	23.8	23.4	24.2	22.8	23.4	23.6	20.3	24.8	10.5	2.8	5.7	2.4	17.0	17.0
5 D	2.4	-0.7	6.6	3.3	14.2	16.9	14.2	17.6	24.2	22.5	23.4	18.6	19.9	20.5	22.1	27.7	20.1	24.2	18.6	13.2	5.1	12.2	5.9	3.7	8.9	15.0
6 D	8.8	14.2	14.4	15.8	19.1	13.9	16.4	20.2	19.7	17.5	19.3	20.2	24.5	25.4	25.1	21.2	14.8	17.7	16.2	11.2	-6.4	-6.2	4.4	8.5	16.4	15.0
7 D	16.4	15.4	15.4	10.6	12.3	17.0	19.7	17.1	19.8	18.9	18.1	15.8	17.3	20.0	20.0	17.9	21.4	17.3	3.2	0.7	12.3	10.8	3.6	9.6	6.1	14.4
8	6.1	10.8	14.2	16.2	13.5	15.4	19.8	21.8	19.3	19.7	18.3	19.3	18.9	20.4	18.7	17.7	17.7	18.9	15.2	15.6	15.6	13.1	13.5	14.1	15.0	16.3
9	15.0	19.7	18.3	14.6	16.8	16.6	16.0	15.8	15.6	15.8	17.3	17.9	19.5	19.7	18.9	17.3	16.4	16.6	16.2	15.8	15.6	14.6	14.8	14.2	14.8	16.6
10	14.8	15.0	15.4	15.0	16.0	16.0	16.2	15.8	15.4	14.8	15.8	15.8	17.7	18.1	18.1	17.7	13.9	17.0	17.0	17.3	11.9	14.4	15.6	14.2	15.4	15.8
11 Q	15.4	15.6	15.8	16.4	17.1	16.8	16.0	15.4	14.2	14.1	14.6	16.4	17.5	17.9	18.9	18.5	17.7	17.5	17.5	17.1	15.8	15.6	15.6	15.8	15.8	16.4
12 Q	15.8	16.2	18.3	15.8	15.6	15.6	15.6	15.4	15.2	14.8	16.0	17.3	19.7	19.7	20.6	20.0	19.8	18.3	17.0	16.4	16.0	15.8	16.0	15.8	15.4	16.9
13	15.4	17.5	14.8	15.6	16.4	19.3	16.4	15.8	15.0	15.4	16.0	17.5	18.1	18.3	19.5	19.5	19.8	21.4	20.4	19.7	17.1	16.0	15.6	15.6	14.8	17.3
14 Q	14.8	14.8	13.9	13.5	14.1	14.4	15.0	16.8	15.6	14.8	17.1	17.5	18.3	18.3	18.9	17.7	17.9	17.7	17.7	17.5	16.6	15.8	15.8	15.4	16.0	16.3
15	16.0	15.4	15.6	15.5	15.4	15.2	15.0	14.8	14.6	14.8	16.4	17.3	17.9	18.1	17.9	18.1	18.1	19.5	19.1	18.1	17.9	13.1	14.1	12.9	7.3	16.1
16	7.3	14.2	14.1	14.8	15.4	14.2	15.4	13.9	14.1	15.2	16.6	17.7	19.1	19.3	18.7	18.5	19.5	20.2	18.5	17.0	15.2	13.9	16.0	15.8	16.4	16.2
17	16.4	15.8	15.4	13.9	13.9	15.0	15.0	14.6	14.8	15.2	16.6	18.9	19.7	21.0	23.3	27.4	29.9	31.2	30.8	27.0	17.5	15.4				



Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

9. Lerwick. (H.)

14,000 γ (·14 C.G.S. unit) +

February, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	548	547	520	534	509	552	558	551	527	528	538	531	520	526	524	540	542	545	549	533	544	545	544	551	493	537
2	493	512	540	535	544	543	551	549	541	522	520	525	515	516	528	535	544	539	543	564	554	538	547	542	551	536
3	551	531	525	535	544	549	549	540	543	541	531	515	518	525	534	543	547	540	570	545	550	548	542	544	544	540
4	544	547	547	547	545	542	543	544	535	522	520	527	531	531	529	540	549	552	552	547	547	561	546	545	546	541
5	546	547	540	542	552	554	557	556	552	530	528	529	529	527	532	535	542	544	551	552	550	548	549	548	548	543
6 Q	548	546	547	548	550	552	555	552	545	541	532	523	524	525	527	543	538	539	547	557	550	554	553	553	553	544
7	553	551	549	549	551	554	555	554	549	542	537	531	533	535	537	542	543	548	550	554	561	548	554	554	554	547
8 Q	554	553	553	553	554	555	555	553	550	546	534	520	521	529	535	543	541	543	544	537	537	541	541	538	544	543
9 Q	538	538	540	542	546	552	554	554	551	540	532	524	524	533	540	549	552	552	553	553	555	554	553	551	550	545
10 Q	550	551	550	551	555	557	557	557	556	544	532	525	524	531	533	534	538	542	546	548	547	543	540	547	547	544
11	547	546	531	539	548	551	551	554	549	543	536	534	535	539	545	548	549	551	552	553	552	551	551	553	551	546
12 D	551	545	537	539	544	550	559	559	548	533	541	542	524	537	537	537	555	541	548	553	556	561	567	<31	205	518
13 D	205	286	377	449	488	517	502	526	518	474	480	500	503	523	594	607	539	560	666	548	517	499	530	516	512	503
14 D	512	375	219	320	500	521	523	527	526	516	502	514	516	532	569	553	571	562	603	511	530	505	513	493	396	498
15 D	396	437	462	474	497	490	513	514	522	518	509	497	514	519	564	585	618	561	551	543	537	524	519	533	530	519
16 D	530	476	428	472	458	507	518	509	520	480	487	505	507	528	558	560	548	541	571	553	540	559	531	519	483	516
17	483	442	426	480	505	515	512	521	538	531	524	521	515	521	542	527	545	542	540	535	540	522	533	534	533	517
18	533	532	530	527	511	513	525	529	533	534	528	516	509	528	521	521	527	546	557	541	532	535	538	510	475	527
19	475	524	528	510	511	526	520	531	537	536	526	520	512	513	521	548	543	546	533	534	539	543	531	536	533	528
20	533	536	537	526	531	534	537	541	554	553	527	524	510	517	520	524	544	543	539	549	562	544	528	549	535	535
21	535	531	523	528	532	532	529	535	541	537	523	513	515	522	528	539	541	541	541	547	543	545	549	534	536	534
22 Q	536	534	534	538	542	540	535	538	542	540	533	520	518	524	530	529	536	543	546	549	548	542	545	537	534	537
23	534	532	542	539	540	540	542	545	536	539	538	521	527	534	535	539	548	551	552	549	542	548	552	552	550	541
24	550	558	546	546	547	546	540	551	554	542	522	522	519	521	531	534	539	537	542	539	530	546	549	549	545	540
25	545	544	539	536	538	530	537	542	553	531	507	509	496	514	524	536	535	552	577	532	530	529	509	407	468	527
26	468	523	534	534	539	539	538	532	538	532	518	515	514	522	530	543	548	541	536	548	542	541	540	542	537	533
27	537	538	543	537	515	545	556	548	540	532	526	524	527	531	541	545	540	535	550	544	539	543	550	540	535	539
28	535	538	538	528	524	547	552	546	535	521	522	508	518	537	534	541	533	544	545	545	544	551	559	545	536	537
Mean	515	515	510	520	529	538	540	541	539	530	523	520	518	526	537	544	546	546	555	545	544	542	542	518	515	533

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

10. Lerwick. (D.)

14° +

February, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	15·8	15·6	21·2	11·7	12·5	11·4	15·2	15·6	21·2	20·0	16·2	18·3	19·1	19·3	18·1	15·4	17·5	9·2	7·5	16·0	15·8	14·8	13·5	8·5	12·9	15·3
2	12·9	11·7	11·4	15·6	13·3	15·0	15·6	15·6	15·8	18·9	20·0	20·0	21·0	18·5	19·8	18·7	18·5	19·1	17·5	8·5	1·7	12·3	11·9	9·4	10·8	15·1
3	10·8	14·8	20·4	17·1	15·6	14·8	14·4	17·7	15·6	16·7	17·9	19·2	20·8	20·8	14·6	19·2	17·5	12·1	—0·1	14·2	9·2	11·9	11·5	15·4	17·1	15·2
4	17·0	18·2	16·4	14·7	13·5	15·1	14·7	14·7	15·1	17·2	18·4	19·3	20·5	20·1	19·0	18·8	17·6	17·0	16·4	14·5	16·1	9·1	9·1	11·4	14·1	15·9
5	14·0	16·7	19·8	18·3	14·6	14·0	14·4	14·2	14·6	14·8	16·3	18·7	21·4	23·5	20·4	20·0	17·9	16·2	16·0	15·8	15·4	15·0	14·0	13·6	14·6	16·7
6 Q	14·5	15·1	15·9	14·9	14·7	14·5	13·9	13·7	13·5	13·2	13·9	15·3	17·8	18·4	18·4	18·2	15·9	15·3	12·8	10·6	15·1	15·3	14·9	12·6	14·5	14·9
7	14·4	14·8	15·2	15·0	15·0	14·8	14·2	14·0	13·2	13·2	14·6	17·1	19·4	19·0	19·0	17·9	17·3	16·0	17·1	16·9	6·7	13·1	15·0	14·6	14·4	15·3
8 Q	14·3	15·1	14·7	14·5	14·3	14·3	13·5	13·1	13·0	12·8	14·9	18·0	20·1	21·1	20·4	22·6	20·3	15·9	18·7	17·8	13·9	12·0	11·0	10·6	10·6	15·6
9 Q	10·5	10·7	12·7	14·2	13·0	13·4	13·6	13·6	13·2	13·4	14·6	16·7	19·2	20·4	19·6	18·3	16·5	16·5	16·7	16·3	16·3	15·6	15·4	13·0	11·7	15·2
10 Q	11·6	14·3	14·9	15·5	15·8	15·3	14·3	13·3	13·3	12·9	14·9	17·6	20·7	21·2	20·1	22·0	18·5	17·4	16·4	16·2	16·0	14·1	14·1	14·9	14·7	16·1
11	14·7	14·9	20·9	18·0	13·1	12·0	12·4	12·6	12·9	12·9	14·1	15·5	17·6	18·7	19·1	18·4	18·2	17·6	16·8	16·4	15·7	14·9	14·7	14·3	7·5	15·5
12 D	7·4	4·2	6·1	11·1	11·9	11·5	12·7	13·4	9·0	11·7	11·9	16·9	17·7	24·0	27·3	27·7	29·8	23·8	19·6	18·3	18·1	17·5	12·2	—	—	—
13 D	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9·1	4·6	11·2	11·2	15·3	—
14 D	15·2	0·7	4·9	2·4	12·3	10·1	14·2	16·1	14·2	16·1	16·1	20·0	19·2	25·7	26·7	23·4	20·1	17·4	13·6	12·8	2·6	3·2	10·5	14·7	13·8	

11. Lerwick. (V.)

46,000 γ (.46 C.G.S. unit) +

February, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	664	658	645	620	608	622	637	644	649	661	672	678	686	694	711	720	710	720	718	707	690	686	679	664	626	672
2	626	604	626	627	646	665	668	671	676	678	675	673	681	687	682	686	688	689	697	726	700	683	673	630	630	669
3	630	624	629	654	667	675	670	675	670	671	674	680	684	687	716	702	688	709	701	687	668	628	648	657	645	671
4	645	651	653	656	660	665	666	667	672	675	671	671	671	672	671	670	669	670	672	677	677	665	648	655	654	666
5	654	650	640	642	650	657	658	660	663	671	666	664	666	672	683	677	678	674	671	670	671	671	670	666	663	665
6 Q	663	662	659	659	661	662	663	664	667	668	672	670	667	664	664	670	680	681	679	672	669	665	665	665	662	667
7	662	660	660	660	659	660	660	662	664	666	665	665	663	663	663	664	670	667	664	666	670	666	660	659	659	663
8 Q	659	658	657	656	653	652	653	654	655	656	659	664	661	657	658	661	673	688	686	693	696	688	680	674	665	666
9 Q	665	658	653	651	653	651	651	652	654	660	662	661	658	655	652	652	653	652	649	649	650	650	648	648	646	653
10 Q	646	643	643	643	639	637	638	639	639	641	646	648	649	649	652	653	654	654	650	649	650	655	657	649	647	647
11	647	642	639	603	618	631	637	638	641	646	648	648	647	647	649	649	649	649	647	647	647	648	649	649	645	642
12 D	645	639	638	645	647	646	634	606	618	630	634	637	644	642	659	669	678	707	691	673	666	675	571	317	527	631
13 D	527	612	496	575	625	657	660	660	655	668	663	664	687	714	731	735	695	695	782	745	700	653	673	650	631	666
14 D	631	514	476	513	610	641	657	656	668	670	668	666	676	686	732	762	749	776	727	705	685	643	671	632	555	657
15 D	555	505	573	583	607	618	627	641	667	667	662	673	679	685	700	736	791	753	748	715	685	666	633	661	670	662
16 D	670	585	539	518	516	580	605	632	635	652	650	661	668	665	680	736	704	696	701	689	704	634	625	608	580	638
17	580	567	595	584	591	596	627	622	634	635	646	646	653	655	657	682	707	694	686	695	679	663	653	645	640	643
18	640	641	641	631	617	600	605	625	641	639	644	644	647	653	661	674	671	669	729	697	676	672	657	626	566	648
19	566	585	629	622	573	560	597	617	641	646	652	651	651	650	647	652	686	709	689	682	675	652	646	644	641	640
20	641	636	618	612	625	636	642	644	643	644	643	641	645	644	643	647	653	671	693	711	740	688	666	638	628	652
21	628	639	632	633	638	638	631	624	629	635	638	642	643	643	643	648	654	655	651	647	654	652	638	633	637	641
22 Q	637	642	641	635	624	626	631	631	631	635	637	642	643	643	645	644	639	645	645	646	651	659	657	654	647	641
23	647	626	614	633	635	636	636	634	635	636	637	642	641	645	650	664	670	655	656	668	650	652	653	653	653	645
24	653	641	643	633	635	631	623	615	619	626	639	641	642	643	647	655	657	656	648	656	672	638	635	635	635	641
25	635	635	631	626	593	577	613	621	632	629	644	666	672	680	670	674	677	666	728	670	649	636	576	515	498	635
26	498	485	566	615	623	625	627	624	628	633	634	634	636	636	640	641	659	698	672	648	643	638	645	635	628	627
27	628	610	611	624	613	604	616	624	628	631	631	632	636	638	638	646	655	651	641	646	646	636	622	601	588	629
28	588	615	620	608	605	608	617	611	616	623	622	631	632	636	662	694	687	691	699	680	656	633	611	602	612	636
Mean	626	617	616	620	624	630	637	640	645	650	652	655	658	661	668	677	680	684	686	679	673	657	647	627	624	650

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS:

12. Lerwick.

MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

February, 1930.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House 200 +	
	Horizontal Force.					Declination.					Vertical Force.								
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.	Maximum 14° +		Minimum 14° +		Range.	Maximum 46,000 γ +		Minimum 46,000 γ +		Range.				
	h. m.	γ	h. m.	γ		h. m.	γ	h. m.	γ		h. m.	γ	h. m.	γ					
1	22 48	574	476	23 59	98	2 9	26.6	-6.2	17 33	32.8	17 26	734	590	4 12	144	491	I	76.7	
2	19 16	616	447	0 7	169	11 53	23.7	-9.7	19 19	33.4	19 14	766	557	0 30	209	951	I	76.2	
3	19 58	603	501	11 13	102	13 11	24.8	-13.6	17 30	38.4	17 27	729	613	0 42	116	523	I	75.9	
4	21 1	595	509	9 30	86	12 19	23.0	5.1	20 58	17.9	18 55	678	637	21 49	41	149	I	75.4	
5	6 30	562	517	12 47	45	13 12	26.0	13.1	23 7	12.9	13 59	685	634	2 20	51	77	I	75.3	
6 Q	18 40	565	520	11 21	45	14 49	19.1	5.4	18 37	13.7	16 33	685	657	2 15	28	62	0	75.3	
7	19 55	580	530	11 17	50	12 14	21.5	1.3	19 50	20.2	19 48	677	657	4 20	20	104	I	75.2	
8 Q	6 14	556	517	11 33	39	14 55	24.1	8.9	23.18	15.2	20 0	699	651	5 5	48	79	I	74.9	
9 Q	20 15	558	522	11 19	86	12 51	21.5	9.6	23 38	11.9	0 1	667	640	23 33	27	48	0	75.0	
10 Q	5 25	561	522	11 26	39	14 51	22.6	11.8	0 1	10.8	21 35	661	634	5 20	27	40	0	75.4	
11	23 20	560	516	2 17	44	2 20	26.5	7.5	23 46	19.0	23 5	652	598	2 52	54	109	I	76.3	
12 D	21 51	871	< -4	22 47 to 23 23	> 875	13 35	345	—	—	—	21 36	760	151	23 0	609	—	2	2	76.8
13 D	18 19	776	42	0 28	734	—	—	—	—	—	18 23	845	391	2 0	454	—	2	2	77.5
14 D	17 56	814	-86	2 23	850	13 33	31.3	-16.7	17 58	48.0	17 53	876	364	2 18	512	10248	2	2	77.8
15 D	15 39	723	298	0 21	425	15 16	29.4	-5.3	19 34	34.7	15 39	838	485	0 52	353	3318	2	2	77.7
16 D	18 17	619	319	2 28	300	14 20	25.4	-17.4	18 14	42.8	14 53	752	454	2 32	298	2201	2	2	76.7
17	15 39	556	387	0 53	169	14.42	25.0	-2.5	2 49	27.5	18 24	714	526	0 53	188	789	2	2	76.1
18	18 6	576	467	23 59	109	14 50	25.3	-14.2	18 20	39.5	18 6	767	557	23 49	210	839	I	76.0	
19	17 11	566	424	0 8	142	15 35	23.6	-1.9	19 59	25.5	16 55	713	535	4 37	178	632	I	76.0	
20	20 42	595	502	11 42	93	18 39	25.9	-5.9	23 3	31.8	20 8	762	603	2 43	159	515	I	76.2	
21	22 0	590	509	11 35	81	15 2	21.3	1.8	21 55	19.5	16 30	658	620	22 7	38	148	I	76.6	
22 Q	22 5	559	516	11 46	43	13 18	21.7	4.1	2										

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

13. Lerwick. (H.)

14,000 γ (-14 C.G.S. unit) +

March, 1930.

Table with 25 columns (Hour G.M.T. 0-24) and 25 rows (Day 1-31). Values represent magnetic force in γ. Includes a 'Mean' row at the bottom.

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

14. Lerwick. (D.)

14° +

March, 1930.

Table with 25 columns (Hour G.M.T. 0-24) and 25 rows (Day 1-31). Values represent magnetic declination in degrees. Includes a 'Mean' row at the bottom.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 56-61.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

15. Lerwick. (V.)

46,000 γ (46 C.G.S. unit) +

March, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 D	612	591	603	527	520	559	598	613	622	630	640	650	648	690	681	692	709	723	718	691	625	595	608	552	549	628
2 D	549	579	556	579	602	620	632	634	648	657	671	665	665	672	667	699	740	705	698	674	656	613	600	615	605	643
3	605	548	551	602	632	638	640	639	642	657	653	648	651	661	660	665	667	662	670	659	659	649	606	615	624	637
4	624	611	570	615	634	642	648	651	654	655	656	656	656	659	666	673	678	668	663	661	654	650	644	642	642	647
5 Q	642	643	643	644	646	647	647	648	649	649	647	641	640	642	643	644	650	649	650	651	648	646	642	640	640	645
6	640	640	640	639	640	642	643	644	646	646	643	636	637	635	638	644	645	644	641	640	640	639	637	636	634	641
7 Q	634	632	633	634	635	635	635	636	637	636	632	630	630	631	631	633	634	634	635	635	635	636	635	632	633	634
8 Q	633	632	632	633	633	633	635	633	635	636	634	633	630	630	630	633	635	637	636	637	638	639	639	639	639	635
9 Q	639	639	640	639	639	639	640	642	643	642	642	640	640	641	643	644	646	645	642	641	642	646	647	646	645	642
10 Q	645	645	644	643	640	637	636	636	641	643	643	642	641	642	643	643	644	643	642	645	647	653	659	660	656	644
11	656	653	652	650	648	647	644	644	646	646	644	639	636	633	637	647	645	654	642	638	670	721	715	699	662	655
12 D	662	623	615	573	528	440	480	552	552	573	617	638	690	747	694	669	685	727	733	684	683	606	594	564	561	620
13 D	561	496	447	472	519	527	543	557	609	634	645	649	657	688	697	735	719	726	710	686	621	601	517	500	510	604
14 D	510	516	517	497	579	607	625	610	641	634	650	657	660	676	702	735	714	678	689	685	665	637	642	607	472	630
15	472	430	456	516	552	565	593	613	616	613	637	647	649	680	690	734	730	733	720	672	652	640	640	614	553	621
16	553	548	562	573	603	614	614	593	603	617	634	634	650	665	649	650	679	672	664	641	604	598	591	543	531	614
17	531	548	592	614	604	577	605	626	633	635	639	644	646	650	656	660	669	675	678	667	617	604	601	615	595	626
18	595	539	499	539	566	602	624	632	633	632	632	628	626	632	633	650	661	682	685	631	673	655	613	597	490	617
19	490	433	490	560	605	618	623	633	629	634	633	643	657	665	663	661	644	640	643	642	639	643	618	608	552	614
20	552	564	565	549	573	576	586	606	617	622	625	625	625	629	636	652	670	658	648	638	631	630	614	534	558	609
21	558	586	585	562	563	584	602	616	622	618	618	616	618	619	627	631	636	665	700	705	695	666	656	635	618	626
22	618	610	531	443	432	460	483	526	563	591	610	618	619	619	613	621	640	708	689	666	640	609	587	607	614	588
23	614	614	611	611	606	610	612	615	614	615	618	618	617	615	625	624	617	613	616	625	643	640	621	589	575	616
24	575	579	563	545	545	559	571	592	620	617	623	630	628	642	668	692	671	651	656	638	631	626	625	619	619	616
25	619	606	606	610	607	607	592	597	606	610	610	611	609	609	610	630	640	737	629	617	613	620	616	554	543	609
26	543	537	524	561	558	551	573	592	603	604	610	615	613	615	622	627	627	640	650	643	636	628	621	617	614	602
27	614	606	597	599	608	614	615	618	630	633	630	631	646	643	642	647	649	651	651	650	638	611	615	607	554	626
28	554	520	566	588	606	609	605	612	622	623	625	638	665	658	669	665	651	642	629	625	632	595	559	574	567	614
29	567	491	492	514	564	593	602	612	624	623	626	638	659	641	654	664	668	664	645	640	627	618	600	596	597	610
30	597	606	606	566	565	566	598	611	617	623	631	632	632	634	640	639	639	637	646	643	633	619	618	619	610	618
31	610	611	596	605	620	623	626	628	628	625	623	623	629	639	637	635	633	632	631	637	635	628	622	619	609	625
Mean	589	577	574	577	589	595	605	615	624	628	634	636	641	649	651	659	662	664	663	652	643	631	619	606	589	624

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS:

16. Lerwick.

MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

March, 1930.

Day.	Terrestrial Magnetic Elements.												Character $\Sigma R^2$ Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House $200 \pm$						
	Horizontal Force.						Declination.									Vertical Force.					
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.		Maximum 14° +		Minimum 14° +		Range.					Maximum 46,000 γ +		Minimum 46,000 γ +		Range.	
1 D	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	1061	1	77.0	
2 D	15 34	612	454	2 41	158	12 42	30.2	- 7.1	20 30	37.3	17 16	742	494	3 5	248	1296	2	77.6			
3	16 7	632	457	1 53	175	21 21	31.1	-18.0	17 47	49.1	15 56	778	536	1 53	242	407	1	77.9			
4	21 32	572	466	1 21	106	1 59	30.0	6.9	21 50	23.1	18 4	675	531	1 20	144	119	1	78.0			
5 Q	19 20	559	481	1 18	78	1 20	22.2	6.6	19 17	15.6	15 45	683	564	1 45	119	251	0	77.7			
6	7 1	551	504	13 2	47	14 5	22.1	12.5	8 20	9.6	19 18	654	639	11 52	15	42	0	77.5			
7 Q	19 53	555	510	11 35	45	13 2	21.9	11.5	8 15	10.4	15 31	647	632	11 11	15	43	0	77.4			
8 Q	21 23	552	512	12 24	40	12 4	22.1	10.9	8 41	11.2	8 8	639	627	12 4	12	40	0	77.8			
9 Q	23 40	550	518	12 21	32	12 57	19.6	12.1	8 34	7.5	21 30	641	629	13 —	12	22	0	78.2			
10 Q	20 38	555	523	11 43	32	12 30	18.8	12.5	9 4	6.8	22 8	649	639	1 —	10	19	0	78.0			
11	20 15	557	515	10 50	42	12 49	22.3	10.5	9 16	11.8	23 3	663	636	5 1	27	55	0	78.0			
12 D	20 48	691	515	15 0	176	20 38	25.7	0.8	22 55	24.9	20 41	750	634	12 15	116	571	1	77.4			
13 D	17 48	709	128	3 52	581	12 56	29.8	-40.5	5 9	70.8	17 41	767	830	5 8	487	6283	2	76.9			
14 D	14 31	685	257	21 27	428	19 22	34.9	-17.7	21 44	52.6	14 30	771	434	1 50	337	3515	2	76.1			
15	15 9	738	372	0 43	366	14 52	30.2	-17.7	0 49	47.9	15 9	779	451	23 59	328	2801	2	75.6			
16	14 39	726	388	2 6	338	14 30	30.0	- 8.4	1 38	38.4	17 8	772	414	1 3	358	2730	2	75.2			
17	19 9	627	444	0 54	183	1 41	28.1	- 3.6	20 33	31.7	16 23	686	497	23 21	189	872	1	74			

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

17. Lerwick (H.)

14,000 γ (-14 C.G.S. unit) +

April, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	536	501	544	550	557	542	551	547	531	507	509	508	519	522	552	546	555	567	544	558	557	561	538	546	551	540
2	551	533	536	543	549	548	549	545	536	523	515	515	518	517	536	555	551	561	561	564	561	561	569	545	544	543
3 Q	544	550	537	540	557	555	547	543	541	524	506	499	509	520	545	562	542	551	554	553	552	553	555	555	554	542
4 Q	554	554	553	553	551	550	549	543	530	514	507	503	508	521	531	539	548	564	563	563	558	552	551	554	551	542
5 Q	551	548	549	550	544	554	547	541	535	524	516	514	518	530	541	547	553	550	557	555	556	555	555	553	551	543
6	551	555	548	540	547	548	550	548	542	533	523	514	510	525	559	581	596	607	641	616	566	482	387	123	464	527
7 D	464	516	496	433	500	524	532	536	534	525	511	499	518	536	531	571	628	626	662	580	526	506	460	249	3	510
8 D	3	212	200	265	391	440	495	455	485	522	534	523	564	546	525	546	565	576	595	567	570	547	529	538	540	478
9	540	510	495	513	509	528	532	522	499	491	498	471	502	513	526	542	589	606	562	564	547	532	490	386	367	516
10 D	367	418	448	359	407	509	464	520	492	481	452	455	526	546	554	612	589	603	583	553	549	552	529	455	259	499
11	259	517	428	418	506	479	476	490	465	464	482	508	526	539	540	542	573	591	573	570	563	517	511	523	524	508
12	524	480	473	495	450	481	451	495	499	500	474	489	491	555	561	558	591	607	601	560	555	522	502	449	380	512
13	380	279	439	453	470	502	486	507	506	501	487	500	513	545	559	571	555	595	601	563	553	542	525	495	497	508
14	497	500	364	422	531	530	517	519	512	501	489	489	503	525	543	547	549	542	559	563	557	535	503	491	441	511
15	441	425	476	435	443	501	536	523	507	494	489	487	489	517	555	596	588	594	589	553	541	541	533	512	492	516
16	492	443	441	440	419	516	530	523	510	504	487	500	506	510	521	520	536	543	543	546	549	548	555	570	478	510
17	478	476	470	476	482	467	523	523	506	481	489	499	514	515	523	541	547	552	561	561	567	545	536	547	535	517
18	535	537	539	539	539	540	534	525	519	513	511	503	505	516	525	549	555	541	573	578	547	537	552	546	540	536
19	540	541	543	537	547	551	537	531	533	520	513	501	492	465	494	530	546	569	636	784	571	552	550	541	548	547
20 D	548	543	545	542	544	531	415	500	451	487	486	482	498	508	517	600	661	705	629	585	550	539	519	440	469	533
21	469	516	481	444	450	499	533	505	465	478	475	507	499	514	530	582	542	549	574	582	566	541	526	449	261	507
22 D	261	315	408	431	516	545	541	538	531	478	462	505	517	545	546	543	599	586	589	577	572	551	522	353	397	504
23	397	510	500	493	531	541	522	492	502	505	517	523	507	509	523	573	551	604	581	601	569	529	538	538	521	530
24	521	517	488	523	539	529	506	492	492	471	489	505	517	515	503	527	569	628	601	560	551	545	544	546	540	529
25	540	539	532	536	528	523	541	541	526	509	507	508	501	521	559	517	538	565	567	543	549	546	543	546	545	534
26	545	531	513	513	531	535	522	470	474	516	515	510	515	514	520	520	531	553	564	565	568	550	543	541	540	527
27 Q	540	538	535	531	537	541	543	537	525	494	465	476	497	519	525	543	516	558	558	574	564	542	543	539	524	531
28 Q	524	519	522	522	520	525	535	531	520	515	509	506	508	530	534	542	552	564	596	573	561	554	552	545	545	536
29	545	544	541	546	548	548	547	536	529	521	515	510	506	527	520	568	568	575	577	557	565	564	521	485	514	539
30	514	514	523	520	528	523	531	518	492	488	484	489	506	513	523	535	543	607	601	609	589	573	562	555	559	536
Mean	474	489	489	489	509	523	521	520	510	503	497	500	510	523	534	553	564	581	583	576	558	542	528	491	474	524

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

18. Lerwick. (D.)

14° +

April, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	17.0	18.9	14.6	11.7	11.6	14.3	12.3	9.8	10.0	12.1	13.7	17.7	22.2	24.6	23.0	19.9	18.6	16.1	13.6	14.4	13.3	12.3	16.6	13.1	13.7	15.4
2	13.7	14.8	17.2	13.1	12.2	14.0	13.2	14.2	12.0	11.3	13.9	17.4	22.4	23.3	22.8	21.2	17.7	14.5	16.0	15.7	15.5	6.6	7.2	10.1	13.4	15.0
3 Q	13.4	15.3	15.9	14.9	9.5	8.8	11.1	10.3	8.7	10.2	14.3	17.9	20.6	23.2	23.5	21.0	18.1	14.7	15.8	16.2	16.0	15.8	14.9	14.3	13.7	15.2
4 Q	13.7	13.4	12.8	12.8	12.6	12.4	11.7	9.5	8.2	9.5	12.3	15.0	17.7	20.4	20.3	18.1	17.0	16.8	16.4	17.0	17.8	16.4	16.0	13.7	13.9	14.7
5 Q	13.9	12.5	12.0	10.2	12.4	11.0	10.6	10.0	9.1	10.4	12.9	15.7	18.4	20.2	19.6	18.2	17.5	16.3	16.5	15.7	15.7	15.3	15.0	14.4	14.2	14.3
6	14.2	13.5	12.6	14.7	13.1	12.7	12.4	11.0	9.7	9.3	11.6	15.6	20.5	23.6	25.3	23.9	19.3	23.9	26.3	18.1	14.3	12.0	5.8	1.0	4.3	15.0
7 D	4.3	3.5	10.2	5.4	3.1	2.9	4.4	4.3	5.6	9.8	16.4	20.1	21.4	24.7	24.7	24.1	14.5	23.2	10.8	8.5	11.6	12.7	10.0	0.8	-9.5	11.3
8 D	-9.5	-8.2	-22.7	-6.1	2.4	6.3	9.0	17.1	16.1	10.1	14.4	16.1	10.5	18.6	20.4	20.0	20.2	14.0	12.7	13.4	11.9	19.0	8.4	5.5	4.4	9.4
9	4.4	-2.2	3.2	14.8	8.2	10.5	11.7	11.7	14.0	15.0	14.6	15.9	18.8	24.4	21.3	21.1	9.6	18.4	8.8	12.1	13.4	9.4	2.4	9.8	12.8	12.8
10 D	9.8	13.2	14.4	5.7	4.9	8.4	14.8	13.2	12.8	13.4	15.5	18.4	22.1	20.8	26.0	20.0	18.8	14.4	13.8	13.2	9.6	13.8	14.8	24.4	5.7	14.8
11	5.7	9.3	0.8	15.6	10.0	8.5	12.7	11.0	14.5	13.3	18.3	19.9	22.0	17.8	20.8	19.1	11.8	14.2	13.6	9.6	5.1	-1.4	11.3	11.9	14.4	12.5
12	14.4	19.0	14.0	1.1	6.7	6.1	9.6	16.6	17.6	13.1	15.6	19.1	21.6	20.1	21.2	19.3	14.5	10.0	11.0	18.1	5.4	11.4	12.5	13.7	14.7	13.8
13																										

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

19. Lerwick. (V.)

46,000  $\gamma$  (.46 C.G.S. unit) +

April, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	611	552	540	581	591	592	601	614	620	622	618	619	621	631	652	675	661	675	676	653	644	616	561	582	600	617
2	600	592	577	598	616	623	626	626	627	627	621	620	620	623	622	630	644	649	641	638	640	637	610	604	593	621
3 Q	593	605	606	569	579	587	601	620	628	629	630	630	625	623	628	640	651	649	640	638	637	635	634	632	632	622
4 Q	632	633	635	636	638	640	642	644	643	642	642	640	637	631	635	641	640	640	646	648	650	649	645	643	641	641
5 Q	641	639	637	635	631	620	631	634	635	636	633	625	620	619	623	627	630	632	633	638	639	640	637	637	637	632
6	637	625	614	614	606	618	628	634	636	636	636	634	632	632	636	667	717	730	766	765	699	601	522	448	472	635
7 D	472	567	593	518	527	536	576	602	614	619	623	622	623	628	637	648	699	716	753	654	615	572	477	391	507	596
8 D	507	472	403	407	494	560	587	596	611	647	658	670	769	707	670	656	680	699	705	684	627	548	549	563	562	604
9	562	543	538	556	584	613	627	632	635	638	641	662	667	664	676	667	678	708	677	672	645	630	560	463	436	620
10 D	436	497	531	458	464	514	537	564	607	627	647	668	683	679	661	700	707	692	664	678	639	591	614	556	405	600
11	405	516	514	473	544	568	585	594	611	639	646	632	653	679	657	656	678	682	671	597	566	561	567	587	578	599
12	578	490	459	487	493	546	549	582	597	625	645	650	652	663	667	670	667	667	666	623	610	582	608	525	462	593
13	462	479	431	499	547	576	610	618	637	642	648	651	650	653	673	677	666	684	691	682	677	661	623	562	543	613
14	543	526	493	491	569	617	635	640	639	644	650	652	642	637	645	650	665	665	663	676	662	643	605	540	487	615
15	487	465	512	506	520	515	545	580	607	627	647	659	672	651	654	689	703	706	698	676	636	597	604	563	522	606
16	522	503	513	510	511	548	595	617	626	624	626	620	625	652	667	646	639	643	642	643	642	641	629	561	529	602
17	529	514	513	530	574	560	587	610	626	641	640	638	638	641	647	642	650	658	669	663	663	646	624	629	635	616
18	635	628	614	621	633	638	640	641	640	643	639	644	647	653	656	670	696	697	687	693	669	629	632	610	620	648
19	620	633	639	636	640	641	637	626	637	645	644	643	651	657	640	635	637	637	672	752	697	656	604	589	608	644
20 D	608	620	611	627	629	623	566	511	579	586	612	657	687	644	651	680	748	709	748	720	684	656	637	444	512	633
21	512	522	555	579	571	581	593	623	624	629	651	656	667	658	680	732	678	659	665	668	657	613	556	437	425	613
22 D	425	307	423	483	543	583	606	614	624	637	642	651	664	663	666	651	672	731	693	597	567	624	610	423	452	588
23	452	538	558	565	589	616	628	625	623	628	625	629	639	652	660	674	671	680	675	662	568	551	591	601	609	616
24	609	612	578	595	613	630	626	620	615	625	626	628	629	640	645	651	661	687	667	670	653	649	642	627	623	634
25	623	604	579	612	625	628	627	631	636	636	634	636	639	639	657	701	672	657	661	662	646	639	635	635	627	638
26	627	621	569	551	562	592	610	611	591	600	615	620	622	630	633	640	648	647	656	660	653	636	630	621	619	618
27 Q	619	627	632	629	635	632	632	632	633	638	645	640	640	641	644	652	667	663	668	660	647	645	638	624	607	641
28 Q	607	597	619	621	621	621	628	633	632	637	637	638	635	636	640	644	644	651	653	650	655	648	634	629	628	634
29	628	633	636	637	640	639	635	632	626	622	623	623	622	622	651	668	703	675	668	672	656	657	538	460	552	630
30	552	585	606	622	627	632	634	634	631	627	625	631	632	635	637	637	644	636	698	719	672	650	642	641	637	637
Mean	558	558	558	561	581	596	607	615	623	631	636	640	647	646	650	661	671	674	677	667	644	623	602	561	559	620

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS :

20. Lerwick.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

April, 1930.

Day.	Terrestrial Magnetic Elements.												Character $\Sigma R^2$ Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House $200 +$ °A.			
	Horizontal Force.					Declination.					Vertical Force.							
	Maximum $14,000 \gamma +$		Minimum $14,000 \gamma +$		Range.	Maximum $14^\circ +$		Minimum $14^\circ +$		Range.	Maximum $46,000 \gamma +$					Minimum $46,000 \gamma +$		Range.
1	14 34	607	489	0 47	118	0 35	26.8	4.0	21 16	22.8	17 35	691	531	1 34	160	475	1	78.7
2	21 47	578	506	12 57	72	12 34	24.5	0.9	20 56	23.6	17 11	652	565	1 39	87	219	1	79.0
3 Q	14 44	577	496	11 16	81	13 56	24.3	6.3	4 21	18.0	15 51	654	563	2 59	91	208	1	79.3
4 Q	18 30	569	502	11 9	67	13 28	21.5	7.4	7 50	14.1	19 49	652	629	13 5	23	86	0	79.0
5 Q	4 42	563	511	11 37	52	13 19	20.6	8.6	7 30	12.0	0 1	642	613	4 36	29	61	0	79.3
6	17 49	662	-209	22 55	871	23 20	43.8	-44.6	22 57	88.4	18 17	802	298	23 19	504	11525	2	79.1
7 D	17 50	720	-57	23 59	777	21 59	42.9	-27.4	23 59	70.3	17 50	801	228	23 30	573	10191	2	79.2
8 D	20 33	642	-140	0 37	782	0 34	70.5	-21.7	0 42	92.2	0 26	901	259	1 16	642	11758	2	79.4
9	16 50	638	320	22 50	318	15 47	26.2	-7.6	23 25	33.8	16 38	740	401	23 32	339	2365	1	79.3
10 D	17 30	667	0	23 39	667	23 30	52.6	-7.0	3 0	59.6	15 1	738	337	23 29	401	6676	2	79.5
11	16 27	632	254	0 5	378	11 40	26.1	-22.2	0 21	48.3	16 52	696	358	0 4	338	3001	1	79.7
12	18 47	627	350	23 32	277	18 49	35.1	-4.7	18 49	39.8	15 26	681	415	1 25	266	1773	1	79.7
13	17 32	653	398	0 38	255	1 11	25.6	-3.2	2 50	28.8	17 18	703	410	0 32	293	1675	2	79.8
14	19 31	589	281	2 13	308	13 20	21.9	-3.4	0 4	25.3	19 1	684	423	2 30	261	1755	1	79.8
15	17 0	612	374	2 58	238	20 21	26.4	-5.4	2 47	31.8	17 30	740	438	0 55	302	1679	1	79.9
16	22 44	591	353	3 23	238	12 32	23.3	-12.8	23 6	36.1	13 42	678	478	1 34	200	1201	1	79.8
17	20 18	582	432	4 52	150	13 22	23.4	-4.5	0 51	27.9	18 4	672	478	0 30	194	752	1	80.0
18	17 50	592	493	13 30	99	14 55	24.5	-11.0	22 0	35.5	18 32	720	595	21 10	125	479	1	79.8
19	18 53	928	458	12 29	470	18 40	26.1	-22.7	19 18	48.8	19 12	806	573	22 50	233	3149	2	79.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

21. Lerwick. (H.)

14,000 γ (-14 C.G.S. unit) +

May, 1930.

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day 1-31). Values range from 475 to 559.

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

22. Lerwick. (D.)

14° +

May, 1930

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day 1-31). Values range from -14.2 to 20.1.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 56-61.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

23. Lerwick. (V.)

46,000  $\gamma$  (.46 C.G.S. unit) +

May, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. I	637	630	623	620	602	609	622	631	633	634	630	630	630	629	629	632	634	636	638	643	643	641	640	639	637	631
2 Q	637	634	622	637	639	640	639	639	638	636	633	629	623	619	620	623	624	628	632	633	635	637	636	639	628	640
3 Q	637	639	641	643	645	646	646	646	645	643	640	638	628	622	631	647	651	644	644	643	639	637	636	631	628	640
4	628	620	599	521	500	520	526	570	602	610	616	616	622	638	677	663	658	669	679	687	692	668	600	544	628	614
5 D	628	598	401	346	349	433	516	571	584	609	688	704	657	700	717	698	700	682	695	651	635	543	557	538	524	589
6 D	524	544	531	531	378	400	529	581	590	606	632	640	659	700	666	644	672	672	672	657	641	628	528	440	356	583
7	356	335	311	346	461	550	581	602	621	636	628	623	625	623	626	640	661	654	656	597	588	495	525	448	409	551
8	409	489	529	522	556	541	541	571	605	621	631	629	627	630	640	653	661	660	662	652	643	618	572	531	433	592
9	433	410	484	562	588	569	596	616	610	620	631	631	647	686	688	686	675	651	646	667	615	528	487	456	412	591
10	412	382	457	469	507	568	601	608	609	612	626	617	615	612	616	627	625	634	622	620	618	605	613	614	608	583
11	608	584	585	602	608	608	606	607	607	606	609	607	607	610	611	615	615	615	612	613	611	612	605	579	477	603
12	477	402	376	399	486	554	561	549	559	570	581	592	613	624	636	648	633	625	618	620	628	619	522	444	424	555
13	424	384	514	583	602	573	527	565	593	605	611	610	615	618	630	641	637	638	648	649	585	599	597	604	576	589
14	576	515	500	538	571	578	600	608	608	605	607	608	610	610	616	621	632	644	642	633	627	625	596	549	576	597
15	576	590	592	590	598	606	607	596	601	611	609	601	604	616	634	648	642	642	640	638	619	617	601	537	531	608
16 D	531	554	543	556	534	450	512	546	568	574	585	591	591	596	600	609	676	687	637	621	653	657	570	391	466	575
17 D	466	513	487	459	506	534	568	579	603	603	617	638	637	647	679	706	699	671	665	653	634	500	470	356	503	580
18	503	551	541	520	491	548	580	593	607	612	609	605	609	620	632	622	622	632	635	630	596	588	603	597	585	591
19	585	576	427	495	568	589	603	609	615	615	617	611	607	606	605	618	632	640	629	636	641	630	615	579	566	597
20	566	571	585	589	567	540	536	555	572	600	610	614	608	613	623	626	632	619	621	612	615	610	600	574	548	594
21	548	519	521	481	492	548	570	584	594	599	605	606	604	602	602	602	610	617	627	635	614	610	578	575	577	582
22	577	571	513	512	509	540	547	563	585	600	580	590	593	594	591	591	593	596	588	595	604	598	591	585	575	575
23	575	558	516	547	559	567	571	580	580	581	577	575	574	573	574	569	569	585	582	591	584	577	577	576	576	572
24 Q	576	575	573	568	569	571	570	569	565	560	557	557	556	561	568	570	571	572	585	589	595	593	583	569	551	571
25	551	566	576	580	576	559	561	570	573	570	570	566	570	573	580	596	590	642	642	612	597	593	576	580	555	582
26	555	486	451	526	523	516	546	568	573	580	582	580	580	586	592	593	590	586	583	587	586	586	582	580	580	564
27 Q	580	580	582	584	586	585	578	582	578	571	563	561	565	576	572	567	580	582	585	582	586	587	584	584	582	578
28 Q	582	585	587	591	591	591	590	589	589	587	582	581	586	592	605	622	639	634	638	616	601	596	593	590	593	598
29	593	593	595	597	591	577	577	586	587	590	590	593	594	593	594	598	609	613	631	635	628	611	604	596	569	598
30	569	548	565	575	590	588	586	587	589	585	584	584	583	586	594	600	603	611	634	618	643	630	555	451	555	585
31 D	555	582	396	447	430	396	521	556	595	592	596	597	592	624	619	624	601	592	582	521	511	490	510	480	420	539
Mean	544	538	523	533	541	551	571	586	596	601	606	607	608	616	622	626	631	632	632	624	616	598	578	544	538	588

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS: MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

24. Lerwick.

May, 1930.

Day.	Terrestrial Magnetic Elements.												Character Figure $\frac{\Sigma R^2}{100\gamma^2}$ §	Magnetic Character of Day (0-2).	Temperature in Magnet House $200 +$			
	Horizontal Force.						Declination.			Vertical Force.								
	Maximum $14,000 \gamma +$		Minimum $14,000 \gamma +$		Range.	Maximum $14^\circ +$		Minimum $14^\circ +$	Range.	Maximum $46,000 \gamma +$		Minimum $46,000 \gamma +$				Range.		
	h. m.	$\gamma$	$\gamma$	h. m.		h. m.	$\gamma$	h. m.		h. m.	$\gamma$	h. m.					$\gamma$	
1	18 41	566	492	11 52	74	13 25	21.3	4.3	8 5	17.0	18 58	645	597	3 28	48	129	I	81.6
2 Q	19 23	574	498	11 50	76	13 28	21.1	6.1	2 31	15.0	4 50	642	615	13 30	27	106	O	81.8
3 Q	23 58	562	503	11 29	59	13 47	18.4	6.8	7 28	11.6	15 32	657	618	13 8	39	75	I	82.3
4	19 23	616	401	23 31	215	13 32	27.6	-4.5	4 29	32.1	19 52	700	477	3 39	223	1172	I	82.8
5 D	13 24	695	-54	3 58	749	12 59	27.3	-42.0	2 19	69.3	13 27	756	238	3 33	518	9193	2	82.2
6 D	17 8	645	-48	4 11	693	4 4	37.4	-7.9	23 58	45.3	13 1	714	229	4 20	485	7602	2	81.8
7	16 40	704	-149	1 0	853	23 43	27.5	-50.5	1 57	78.0	16 17	700	238	0 54	462	10669	2	81.3
8	18 9	644	351	0 14	293	13 3	21.6	-13.7	0 24	35.3	17 50	679	400	23 58	279	1853	I	80.6
9	16 10	679	298	0 29	381	14 6	23.9	-8.5	21 38	32.4	14 29	723	375	0 58	348	2857	2	80.2
10	20 39	624	316	0 22	308	2 50	20.0	-4.5	0 29	24.5	16 42	637	358	0 52	279	1835	I	80.3
11	23 59	583	486	23 25	97	23 30	20.5	5.5	23 59	15.0	15 19	620	461	23 55	159	396	I	80.5
12	19 19	604	142	2 4	462	22 33	31.5	-32.9	1 49	64.4	14 36	659	285	1 41	374	4266	2	80.7
13	13 59	636	326	1 4	310	13 50	22.9	-3.4	0 42	26.3	18 30	660	330	0 50	330	2134	I	80.9
14	19 16	595	436	2 6	159	16 10	19.6	3.5	3 35	16.1	16 51	649	482	2 10	167	555	I	81.2
15	18 56	621	491	9 1	130	14 32	20.7	-0.3	22 35	21.0	15 0	651	507	23 28	144	458	I	81.9
16 D	18 45	929	350	22 49	579	18 15	46.8	-36.8	18 55	83.6	16 23	727	324	23 0	403	6238	2	82.0
17 D	20 52	663	217	22 54	446	20 59	41.4	-13.3	1 58	54.7	15 23	728	291	22 58	437	4441	2	82.0
18	17 14	710	283	3 20	427													

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

25. Lerwick. (H.)

14,000 γ (·14 C.G.S. unit) +

June, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 D	400	237	176	372	355	429	475	492	502	482	489	508	520	529	546	565	582	583	624	588	542	552	480	368	377	474
2 D	377	442	437	434	417	463	503	491	460	488	499	495	507	532	523	584	592	625	619	623	589	537	477	298	410	501
3	410	333	413	405	398	473	430	467	492	494	488	499	496	538	573	566	599	608	598	598	510	547	524	419	537	498
4	537	533	527	538	507	504	453	440	481	470	487	499	520	509	528	549	571	585	585	597	583	538	528	420	533	520
5	533	520	519	530	535	532	525	524	521	521	522	534	526	540	528	548	546	561	572	565	563	562	520	541	539	537
6	539	529	533	530	528	538	530	502	495	514	510	507	508	523	536	539	541	554	577	582	559	555	553	563	556	536
7 D	556	518	498	334	483	517	464	441	496	507	508	518	506	532	527	566	604	575	588	593	587	559	513	209	485	507
8	485	468	444	423	503	531	528	503	497	510	510	520	525	535	532	542	554	561	577	603	589	566	562	550	544	527
9	544	536	542	535	494	515	518	516	512	497	496	500	513	542	563	592	596	581	601	561	562	577	553	540	533	541
10	533	477	519	545	542	541	529	528	522	503	508	506	522	533	546	547	568	560	580	581	579	573	555	547	545	539
11 Q	545	546	550	550	549	541	528	522	527	523	524	521	524	536	538	550	546	561	566	575	575	566	563	565	549	546
12 D	549	564	563	552	548	558	551	557	548	531	523	523	507	539	522	601	626	734	637	646	629	577	552	493	485	567
13	485	516	482	500	532	540	541	484	436	472	498	498	498	543	555	578	572	608	609	583	574	547	549	538	515	531
14	515	524	465	513	530	520	521	511	485	485	504	511	535	512	521	531	534	542	543	544	548	549	546	542	540	523
15 Q	540	539	539	538	537	534	532	530	531	521	511	507	503	518	532	536	544	546	555	560	573	572	571	571	564	538
16 D	564	565	563	564	557	545	558	522	360	303	353	406	437	508	502	523	516	516	543	610	600	554	420	427	447	498
17	447	266	400	448	471	480	492	514	499	491	472	473	503	514	529	531	557	559	570	587	594	563	532	526	503	502
18	503	463	480	504	496	508	518	516	514	491	500	500	519	520	562	571	607	653	628	599	555	547	537	494	466	532
19	466	492	486	515	524	511	526	521	512	498	487	488	511	521	553	552	565	575	588	562	555	554	552	543	531	527
20	531	495	489	482	451	502	525	519	508	507	503	482	503	513	508	551	549	572	581	587	570	562	552	540	541	524
21	541	525	541	539	529	529	534	534	524	514	492	505	518	527	551	558	617	583	551	547	552	554	555	549	545	540
22	545	533	522	530	539	533	519	506	511	518	517	515	526	526	525	528	537	543	557	567	571	562	557	552	549	535
23 Q	549	548	541	539	542	547	546	548	539	520	506	500	503	517	531	547	551	558	562	563	560	561	552	548	548	541
24 Q	548	545	546	538	540	543	543	531	519	514	508	507	517	533	549	549	546	559	552	554	558	557	551	545	542	540
25 Q	542	542	533	541	543	537	534	534	537	536	524	518	523	538	547	552	550	562	569	570	574	570	563	565	565	546
26	565	564	561	555	561	562	546	544	543	535	525	527	539	560	561	568	561	585	582	578	570	566	559	558	559	557
27	559	556	531	517	537	548	546	537	525	531	533	511	529	516	545	551	568	575	607	598	588	563	532	526	427	544
28	427	436	502	462	509	516	541	528	494	491	524	531	536	550	571	608	557	598	614	626	596	568	447	534	533	534
29	533	494	496	447	452	511	507	515	521	512	517	513	538	540	563	568	572	616	596	618	582	561	533	521	521	534
30	535	535	532	536	487	468	519	534	519	517	516	523	521	526	544	538	545	587	582	622	589	575	582	574	525	541
Mean	513	495	498	501	507	519	519	514	504	499	501	505	515	529	540	556	566	581	583	586	573	559	536	506	517	529

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

26. Lerwick. (D.)

14° +

June, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'
1 D	-1.5	-11.1	-9.0	-1.1	5.5	10.1	12.4	9.9	8.8	11.5	9.5	13.2	17.1	18.0	19.0	19.0	19.8	20.3	19.8	19.2	19.4	8.4	8.8	9.5	15.5	11.0
2 D	15.5	5.5	-4.9	7.6	4.3	13.4	11.1	7.4	7.2	8.0	9.5	12.2	12.6	17.1	18.8	21.3	17.8	18.4	19.6	13.8	19.0	11.5	7.6	5.7	4.1	11.4
3	4.1	-4.8	21.6	-1.6	9.4	13.5	8.1	9.8	10.0	6.7	7.5	12.1	14.8	15.2	18.1	15.6	15.6	18.1	15.8	17.7	20.1	13.3	13.3	15.4	11.4	12.2
4	11.4	6.6	6.5	8.0	8.6	6.8	9.5	11.3	8.2	9.3	12.6	14.4	15.3	16.3	16.7	15.9	10.7	12.4	14.0	14.4	11.5	14.4	8.8	16.3	5.3	11.5
5	5.3	8.5	11.2	9.8	8.3	6.4	4.0	5.0	7.1	7.1	10.2	11.4	14.3	15.6	15.8	16.0	14.5	14.7	13.9	11.0	12.5	12.7	14.9	10.2	12.7	11.0
6	12.7	15.7	12.4	9.5	6.8	8.0	6.8	6.3	10.3	9.7	10.5	13.0	15.3	16.7	17.5	17.5	17.1	15.9	15.9	11.3	12.4	13.8	13.8	11.1	6.5	12.4
7 D	6.5	10.2	12.4	14.5	12.4	6.4	6.4	26.1	17.8	12.5	10.6	13.7	17.8	20.6	21.0	18.9	17.9	21.4	18.1	14.7	10.6	12.9	14.9	12.0	-1.2	14.4
8	-1.2	-2.2	3.0	13.8	10.7	6.7	5.3	8.4	11.1	9.4	11.7	14.2	16.5	19.2	20.7	20.7	20.2	18.4	18.6	6.1	13.0	14.6	14.6	15.2	14.6	12.4
9	14.6	12.5	10.7	8.6	14.0	14.6	10.5	5.1	9.4	9.4	13.0	14.6	16.5	17.9	20.2	17.1	19.6	17.3	14.0	15.9	15.3	12.5	13.2	11.1	10.3	13.6
10	10.3	14.4	11.1	5.9	6.9	5.3	4.9	6.3	7.0	8.8	11.5	14.8	16.5	17.5	16.9	16.5	16.7	15.0	15.2	15.9	13.6	14.4	13.6	12.6	13.4	12.2
11 Q	13.4	13.0	11.1	10.3	9.6	7.8	6.7	8.2	10.1	10.1	13.4	16.5	18.0	17.9	16.7	15.5	14.8	14.4	13.2	14.2	14.6	14.4	12.3	10.1	12.6	12.7
12 D	12.6	10.3	8.2	7.8	8.6	-0.1	2.2	2.2	0.9	4.2	12.8	18.0	21.5	25.6	27.5	25.2	22.7	19.6	19.4	16.7	8.2	13.8	10.9	14.2	8.6	13.0
13	8.6	3.5	13.3	12.2	10.0	8																				



Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 29. Lerwick. (H.)

14,000  $\gamma$  ( $\cdot 14$  C.G.S. unit) +

July, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	525	526	530	543	535	526	536	527	518	511	509	512	510	531	534	588	575	559	578	577	574	565	562	557	529	542
2	529	524	527	538	535	534	539	533	528	527	520	513	510	533	557	529	539	582	602	629	584	570	548	493	551	543
3	551	543	533	529	538	543	536	527	523	524	519	511	516	535	526	562	587	572	592	611	588	558	544	498	513	544
4	513	500	498	527	526	525	539	521	490	486	491	503	526	528	571	566	568	592	611	601	568	561	545	539	539	538
5	539	529	531	538	527	536	531	534	515	515	516	516	520	503	543	551	576	580	581	600	569	565	557	553	537	543
6	537	532	519	482	492	537	538	532	526	524	511	511	528	544	549	553	558	570	576	572	567	566	556	554	549	539
7	549	548	532	504	524	540	547	541	531	529	521	518	531	535	543	550	555	565	570	586	581	561	552	545	546	549
8 Q	546	546	542	544	544	542	538	537	534	527	523	521	525	534	553	552	545	573	566	555	563	562	558	554	537	545
9	537	526	533	536	546	545	542	534	522	508	495	501	511	522	533	559	580	599	620	622	617	604	607	587	560	554
10 D	560	461	557	395	421	549	534	518	468	453	465	506	527	524	544	564	579	597	640	590	580	568	521	487	495	524
11 D	495	475	477	87	306	480	566	572	557	536	515	493	505	529	552	552	573	586	580	614	574	560	549	548	515	512
12 D	515	508	507	542	524	450	399	483	525	529	509	495	524	524	540	578	569	589	572	609	598	594	547	533	521	532
13 D	521	537	531	527	494	500	483	527	532	513	502	485	510	551	548	627	697	668	603	604	572	545	547	493	480	546
14	480	492	530	545	538	515	506	523	515	511	501	499	493	509	535	553	556	576	574	582	577	557	549	546	543	533
15	543	521	526	535	531	526	528	531	530	521	518	518	516	521	538	545	586	601	568	551	547	540	539	540	542	538
16	542	542	538	541	536	538	526	485	509	494	485	509	525	538	532	518	603	567	572	609	555	528	476	504	472	531
17	472	444	422	491	526	541	531	491	521	517	504	504	518	524	545	573	572	590	595	572	554	550	538	539	543	528
18	543	539	538	539	539	531	502	509	515	524	518	507	503	515	527	555	569	572	562	567	571	558	548	545	543	537
19	543	540	538	534	536	546	537	528	500	484	493	507	519	518	534	535	546	549	545	569	559	552	540	525	538	532
20 Q	538	539	536	538	532	535	532	524	516	516	514	524	531	528	536	536	541	546	545	561	564	559	552	549	550	537
21 Q	550	551	544	546	546	552	545	524	541	545	535	524	530	532	535	543	544	558	560	563	566	560	550	549	550	546
22 Q	550	552	550	543	545	552	541	534	529	522	520	517	524	534	536	540	546	548	548	570	577	561	546	541	549	542
23 Q	538	533	534	534	534	533	527	521	518	517	516	524	504	521	547	534	549	560	555	559	551	554	552	551	549	536
24	549	543	536	530	535	536	531	527	524	523	519	516	523	532	540	546	548	560	568	564	587	571	579	541	354	539
25 D	354	353	537	527	470	480	526	514	488	487	480	483	491	545	600	594	571	593	604	594	571	527	541	526	503	522
26	503	473	510	440	519	551	478	479	490	493	489	493	516	546	541	546	543	551	580	597	557	552	547	538	534	523
27	534	520	489	516	519	533	528	514	493	492	494	492	504	533	551	546	555	559	567	563	551	547	544	557	523	529
28	523	525	509	510	538	534	526	513	503	500	498	494	499	499	520	556	562	553	564	561	567	557	541	546	539	529
29	539	545	532	510	492	535	512	507	511	506	500	475	463	491	528	558	545	551	580	585	565	548	556	540	524	528
30	524	529	531	523	523	530	520	499	496	495	516	511	523	525	529	528	548	587	570	561	569	559	549	545	531	533
31	531	523	509	523	512	521	524	534	525	513	508	509	509	515	518	529	541	559	561	568	564	548	542	543	538	531
Mean	525	517	523	507	516	529	524	521	516	511	507	506	514	526	541	554	565	575	578	583	571	558	548	538	525	535

## MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 30. Lerwick. (D.)

14° +

July, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	13.2	10.3	8.8	9.5	6.8	10.1	8.2	6.3	6.3	6.6	8.2	11.7	15.3	17.3	17.6	15.7	16.1	15.3	14.6	15.7	14.4	11.5	9.7	9.0	8.0	11.5
2	8.0	8.2	7.4	8.4	7.0	9.1	8.0	5.7	6.4	8.0	10.3	13.0	15.5	16.9	18.6	17.6	17.4	17.8	18.0	13.4	14.0	11.9	14.0	13.8	6.3	12.0
3	6.3	6.1	6.8	8.8	9.7	7.6	6.6	7.4	9.3	10.1	10.5	13.2	14.9	16.3	19.4	18.0	16.3	16.1	16.3	10.5	11.1	11.7	11.1	13.0	7.6	11.6
4	7.6	13.0	13.2	8.6	6.1	5.9	5.5	4.3	9.0	11.9	12.2	16.1	14.0	16.7	13.2	14.4	19.6	19.0	10.1	14.6	15.5	15.3	13.6	5.7	12.2	10.3
5	5.6	2.5	7.3	7.5	8.1	3.6	4.6	5.4	5.4	6.2	9.8	12.5	15.4	15.8	16.6	13.9	14.6	13.7	12.1	16.4	10.0	12.1	15.2	12.7	11.9	10.3
6	11.8	7.2	8.8	15.1	13.2	7.4	5.9	5.9	6.4	7.4	7.8	13.0	17.8	18.2	16.3	14.5	13.5	12.3	13.5	12.5	12.3	10.8	11.3	10.7	10.3	11.4
7	10.3	9.5	10.8	9.2	5.4	4.4	2.2	0.0	1.6	5.9	10.1	13.0	16.1	17.2	15.9	14.7	13.8	13.6	13.6	8.6	6.4	10.7	11.8	11.3	10.5	9.8
8 Q	10.5	10.3	13.0	9.1	6.4	7.6	6.4	7.6	8.4	8.9	10.7	12.4	15.1	15.3	15.3	14.5	12.4	13.6	12.4	12.6	13.6	13.6	9.9	8.6	8.2	11.1
9	8.2	10.5	9.7	7.8	7.4	6.2	5.3	6.2	7.4	7.2	8.6	11.3	14.4	15.7	15.9	16.3	19.8	21.7	26.1	25.9	23.4	15.5	11.3	13.0	12.0	13.2
10 D	12.0	6.2	-4.1	7.0	-1.0	2.9	5.8	3.8	12.3	7.5	13.9	13.7	16.0	17.3	18.7	18.1	15.2	15.4	9.6	15.2	14.5	11.2	8.9	7.3	3.8	10.1
11 D	3.8	0.5	0.1	6.6	-0.1	-4.6	-1.1	2.2	5.3	7.8	10.1	11.1	11.9	14.0	16.1	16.9	14.7	13.8	13.8	12.8	10.5	2.4	8.4	11.5	9.5	8.0
12 D	9.5	8.3	2.7	3.5	11.2	13.5	19.1	11.0	10.4	8.5	8.5	13.7	13.5	14.5	15.2	11.8	12.0	15.4	15.2	13.7	10.4	-3.1	4.6	11.2	17.7	10.8
13 D	17.7	12.6	11.5	11.1	12.2	12.8	11.1	10.1	9.5	10.7	11.5	13.8	15.7	8.0	12.8	16.5	11.5	7.0	14.0	15.3	13.2	12.8	10.7	14.8	10.1	12.2

31. Lerwick. (V.)

46,000 γ (·46 C.G.S. unit) +

July, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	593	582	619	632	641	647	653	661	666	668	664	659	660	657	667	671	687	694	686	673	674	664	662	637	633	656
2	633	636	628	637	644	649	652	659	661	663	662	663	661	654	666	675	662	654	675	679	659	666	649	577	605	652
3	605	628	638	647	647	654	665	667	664	660	656	652	647	657	661	667	684	691	687	690	681	658	642	607	577	656
4	577	574	534	566	600	621	638	654	671	677	672	671	685	692	718	731	703	692	700	686	683	680	664	601	592	654
5	592	600	631	650	662	642	654	656	664	669	660	660	664	676	673	686	683	688	698	655	650	675	670	643	626	659
6	626	628	645	618	618	644	669	676	678	681	684	684	677	674	685	693	698	702	692	693	691	686	680	676	677	672
7	677	680	671	619	588	600	628	646	655	657	659	656	657	666	672	670	673	675	676	685	690	681	677	673	676	660
8 Q	676	677	666	666	674	677	677	674	674	675	671	668	670	670	676	683	688	680	693	692	680	676	680	671	659	678
9	659	650	641	656	664	670	677	678	674	671	670	667	670	673	675	673	666	667	666	670	678	690	688	684	648	670
10 D	648	490	549	490	467	578	624	652	652	667	675	691	712	698	689	695	705	724	715	690	689	678	640	619	544	641
11 D	544	548	472	226	274	512	603	653	666	672	673	675	669	664	667	670	665	680	689	716	691	654	631	642	609	608
12 D	609	584	534	593	594	545	529	600	627	641	655	673	665	680	680	700	707	707	678	671	659	684	640	627	595	633
13 D	595	598	633	628	631	593	636	646	657	663	667	665	664	705	707	687	758	748	714	699	662	632	658	602	549	659
14	549	526	586	624	642	651	639	643	661	662	664	660	662	665	668	672	680	679	672	669	662	660	661	659	656	649
15	656	649	636	648	656	646	652	648	654	656	658	663	660	670	671	660	665	713	709	681	669	668	661	657	658	663
16	658	648	656	658	659	652	648	646	621	636	640	640	655	653	670	681	682	705	688	650	636	609	588	613	535	647
17	535	512	487	518	577	616	641	653	656	656	661	664	668	676	685	694	704	697	699	692	684	669	651	657	648	642
18	648	653	654	654	655	655	655	635	637	640	649	652	654	656	659	667	687	688	689	681	666	659	665	665	661	660
19	661	658	657	651	642	644	656	658	666	667	665	657	659	668	671	675	670	684	664	666	677	662	657	638	640	660
20 Q	640	650	650	650	646	644	649	646	645	642	635	633	634	645	652	652	649	651	650	650	660	665	661	658	656	649
21 Q	656	649	636	643	652	653	649	634	623	632	641	643	651	654	655	654	657	658	662	663	666	662	655	648	641	650
22 Q	641	640	643	643	639	635	637	636	632	635	631	630	631	635	640	649	650	644	643	640	650	652	655	649	646	641
23 Q	646	644	644	644	641	638	639	636	636	635	627	622	628	620	625	635	631	637	640	647	641	635	633	628	618	635
24	618	614	626	631	628	630	631	630	624	618	616	612	621	629	633	639	644	651	653	655	645	635	578	589	490	624
25 D	490	548	519	583	551	504	531	562	592	603	612	623	644	650	690	672	662	692	689	668	649	548	531	540	527	599
26	527	497	523	491	502	539	548	567	569	599	621	640	653	649	674	673	659	646	651	646	641	639	629	625	613	602
27	613	580	577	611	614	629	632	631	631	627	622	616	616	619	627	643	639	628	634	642	634	624	617	597	566	620
28	566	571	581	549	570	603	613	614	612	610	604	602	605	607	609	615	627	651	649	647	646	642	628	615	607	611
29	607	615	625	615	566	580	609	619	626	637	640	647	659	653	649	657	676	663	657	646	659	659	621	585	616	632
30	616	633	641	642	641	615	632	645	642	647	658	657	651	653	647	650	647	663	695	679	674	674	651	647	627	650
31	627	582	581	591	617	631	649	656	666	671	673	672	671	668	668	665	665	661	665	670	687	688	673	667	660	653
Mean	613	605	606	602	606	619	633	641	645	650	651	652	656	659	665	669	673	676	676	670	666	656	645	632	615	645

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS :  
 MAGNETIC CHARACTER FIGURES ; TEMPERATURE IN MAGNET HOUSE.

32. Lerwick.

July, 1930.

Day.	Terrestrial Magnetic Elements.												Character Figure $\frac{Z R}{100\gamma^2}$ §	Magnetic Character of Day (0-2).	Temperature in Magnet House 200+			
	Horizontal Force.				Declination.				Vertical Force.									
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.	Maximum 14° +		Minimum 14° +		Range.	Maximum 46,000 γ +					Minimum 46,000 γ +		Range.
1	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	292	I	86·5
2	15 16	601	498	11 57	103	14 25	19·2	3·2	22 25	16·0	17 8	695	576	1 9	119	797	I	86·7
3	19 18	672	448	22 59	224	22 52	23·4	0·5	19 3	22·9	18 57	699	557	22 55	142	708	I	86·9
4	19 12	633	459	23 20	174	14 36	23·4	2·0	19 10	21·4	19 8	702	555	23 19	147	856	I	87·1
5	18 14	633	459	1 55	174	22 19	25·4	0·7	7 14	24·7	15 0	741	521	1 52	220	856	I	87·1
6	19 1	637	484	12 38	153	19 9	20·0	1·5	0 50	18·5	17 56	706	579	0 15	127	444	I	87·5
7	17 50	582	462	3 50	120	13 23	19·9	4·3	6 25	15·6	17 13	705	600	3 3	105	294	I	87·7
8 Q	18 46	594	484	3 13	110	13 39	17·6	-1·0	7 0	18·6	19 30	698	584	3 32	114	318	I	87·8
9	17 44	580	517	11 29	63	12 21	15·7	3·4	22 27	12·3	18 28	701	657	23 59	44	84	I	87·9
10 D	18 12	648	488	10 18	160	18 11	29·0	4·5	5 33	24·5	22 18	699	635	2 13	64	413	I	87·4
11 D	17 42	706	257	3 7	449	0 52	25·3	-20·1	3 5	45·4	17 33	783	381	3 2	402	4099	2	87·1
12 D	19 9	637	-180	3 24	817	3 3	40·4	-21·2	2 55	61·6	19 3	735	55	2 57	680	12103	2	86·8
13 D	20 36	673	308	6 19	365	5 37	27·4	-15·1	20 35	42·5	15 14	722	505	5 16	217	2127	I	86·3
14	17 0	751	428	5 49	323	20 30	23·6	-16·3	16 53	39·9	16 47	841	553	23 52	288	2193	I	86·3
15	19 36	599	418	0 21	181	14 19	17·8	2·4	7 33	15·4	15 46	685	496	0 41	189	683	I	86·3
16	17 12	647	503	12 30	144	1 11	17·6	-3·1	17 7	20·7	17 5	726	628	1 42	98	359	I	87·0
17	18 50	655	433	21 44	222	23 28	23·9	-0·6	20 40	24·5	16 33	714	539	23 59	175	911	I	87·2
18	16 46	613	362	2 4	251	0 29	17·3	-5·4	1 54	22·7	15 59	712	462	2 19	250	1357	I	87·5
19	16 49	584	490	6 4	94	13 35	16·7	6·5	0 20	10·								

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

33. Lerwick. (H.)

14,000 γ (14 C.G.S. unit) +

August, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	538	512	517	533	529	531	534	528	510	512	517	512	514	514	517	530	532	542	546	555	556	558	558	542	548	531
2 Q	548	541	538	535	526	519	538	543	535	522	514	514	512	531	538	541	543	553	553	555	549	547	545	549	546	537
3 Q	546	542	540	539	534	537	543	536	527	513	509	505	507	515	533	541	547	563	568	563	562	556	561	547	541	539
4 Q	541	542	545	546	535	526	531	531	521	514	507	503	506	513	526	536	547	554	556	562	553	548	547	555	542	535
5	542	539	538	545	546	546	539	535	533	523	515	517	526	541	546	538	544	564	591	579	570	560	502	534	539	542
6 D	539	510	464	544	552	416	418	509	512	488	504	512	497	485	557	780	639	694	656	598	493	346	529	534	354	528
7 D	354	507	407	479	518	500	467	483	458	469	470	459	515	532	540	568	531	546	611	608	565	547	453	540	482	508
8 D	482	447	342	436	500	512	494	512	481	481	487	464	495	541	559	564	549	644	602	613	541	520	510	542	511	514
9 D	511	378	421	366	516	468	416	494	457	455	459	489	508	505	531	556	563	547	584	567	560	543	515	491	537	496
10	537	530	518	523	492	503	498	496	487	475	490	502	508	507	556	528	564	597	566	549	554	539	543	540	510	525
11	510	485	492	514	509	526	537	503	504	496	453	480	496	526	558	550	557	547	558	568	557	561	538	538	539	524
12 D	539	538	503	425	401	482	490	500	496	485	479	487	497	504	533	539	582	620	602	608	580	538	493	522	498	518
13	498	427	345	514	544	496	520	532	508	503	497	505	499	530	548	553	547	558	570	570	551	548	533	531	521	518
14	521	530	515	524	529	525	520	496	509	504	492	497	513	527	543	540	549	554	573	592	598	560	540	518	516	532
15	516	421	507	530	555	522	465	478	464	518	514	500	505	531	562	575	612	550	532	539	540	538	536	535	536	523
16	536	535	533	517	524	526	513	518	517	520	514	504	511	526	539	549	588	585	578	568	557	538	537	534	514	536
17 Q	514	530	539	537	542	541	539	537	527	514	498	498	507	510	519	531	539	581	574	573	563	547	534	523	546	535
18	546	536	536	532	539	537	536	531	522	510	509	504	507	520	528	528	540	549	567	556	558	531	513	509	526	531
19	526	537	505	526	538	536	538	542	519	471	425	447	471	548	503	561	551	568	541	550	551	542	539	537	533	524
20	533	529	528	515	525	527	521	521	521	515	511	508	517	522	532	549	536	562	551	558	553	549	531	538	534	531
21	534	534	528	532	535	534	528	525	518	514	515	522	506	508	534	586	539	550	581	612	576	499	502	439	445	529
22	445	500	500	337	403	529	530	487	508	510	506	500	516	534	541	543	541	542	556	563	555	552	544	532	457	512
23	457	538	491	489	531	544	536	511	487	513	513	508	513	535	565	588	560	600	589	566	572	558	534	536	508	536
24	508	486	535	507	510	526	522	521	515	506	494	495	521	514	543	549	573	607	573	542	547	544	543	527	449	528
25	449	510	503	505	502	526	529	520	511	508	507	505	512	517	531	527	538	540	545	554	545	549	544	539	534	523
26	534	530	527	527	533	534	528	521	509	504	504	506	511	525	528	534	540	556	553	552	555	545	547	536	531	531
27	531	532	531	523	518	522	521	525	518	507	504	499	504	522	523	550	559	572	553	547	545	535	533	534	531	529
28 Q	531	528	526	525	528	530	524	517	506	500	497	494	500	508	525	533	548	557	550	555	543	539	527	535	538	526
29	538	534	510	530	526	529	525	518	510	502	503	501	505	512	526	531	526	555	555	562	550	538	530	532	530	527
30	530	526	533	532	502	523	528	522	510	500	503	502	508	521	537	544	545	546	546	547	549	548	550	538	524	529
31	524	494	486	522	483	506	538	531	524	518	515	512	513	524	539	543	547	553	559	565	555	535	543	544	537	528
Mean	515	511	500	507	517	519	515	517	507	502	498	498	507	521	537	555	554	570	569	568	555	537	531	531	515	527

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

34. Lerwick. (D.)

14° +

August, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	9.8	14.2	10.1	5.9	2.0	5.9	3.9	4.1	4.3	5.9	6.6	9.9	14.2	16.3	17.4	17.1	15.7	14.5	13.6	11.8	12.2	12.0	8.4	10.1	8.4	10.2
2 Q	8.4	8.0	7.8	8.8	9.3	11.7	9.3	7.0	6.2	7.0	8.4	13.0	17.4	18.0	18.0	19.4	17.6	15.9	11.5	12.4	11.7	11.5	11.5	11.1	11.3	11.8
3 Q	11.3	10.7	9.9	8.4	8.0	7.8	5.7	5.9	6.4	8.0	9.1	11.5	14.5	16.3	17.2	16.5	15.3	14.7	14.3	11.7	12.2	11.7	10.1	5.9	5.9	10.9
4 Q	5.9	6.4	6.8	6.2	6.8	8.4	8.4	8.8	6.8	8.2	9.7	13.2	15.9	17.2	17.1	15.7	14.5	13.0	11.7	11.1	10.1	10.3	10.7	8.8	8.0	10.5
5	8.0	6.6	6.1	5.9	4.9	3.9	4.9	5.5	5.9	7.6	6.4	10.9	14.9	17.6	18.2	17.6	17.2	15.7	12.0	14.9	9.1	10.9	13.0	8.4	9.5	10.3
6 D	9.6	5.4	17.7	8.7	7.7	18.1	27.0	18.5	13.9	15.8	17.9	14.3	17.0	16.4	20.4	10.4	16.2	22.4	15.6	9.0	6.5	-1.8	6.5	9.6	6.3	13.4
7 D	6.3	3.9	7.0	3.9	3.4	5.5	13.4	19.2	14.7	15.1	13.0	11.5	12.4	13.8	15.7	11.7	13.6	15.7	15.3	3.2	10.3	11.5	8.2	1.8	1.6	10.3
8 D	1.6	-7.6	-3.4	4.1	5.3	11.5	11.3	7.6	12.0	11.1	11.9	11.3	15.3	17.8	16.5	14.4	17.4	9.7	11.9	12.4	18.6	11.7	14.6	4.9	9.9	10.3
9 D	10.0	21.8	13.5	19.7	10.2	13.7	15.8	9.8	13.5	8.5	11.8	11.4	11.0	13.9	11.4	10.6	10.8	9.8	10.6	11.2	10.6	5.6	7.5	12.1	4.2	11.7
10	4.2	6.4	9.6	7.5	10.0	8.9	12.3	10.0	10.0	9.8	10.2	11.6	14.1	14.5	13.1	12.5	14.1	4.6	11.6	14.1	12.3	12.3	9.8	6.0	-3.3	10.2
11	-3.3	0.6	9.4	11.8	12.3	8.9	7.3	8.7	6.0	7.5	8.9	12.3	15.8	15.2	12.5	12.5	10.4	11.4	7.9	6.7	4.6	7.1	9.4	9.6	10.6	9.2
12 D	10.7	12.4	10.5	12.4	15.9	8.4	8.8	7.4																		

35. Lerwick. (V.)

46,000  $\gamma$  (.46 C.G.S. unit) +

August, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	660	646	605	611	631	646	646	652	651	652	653	657	656	661	661	662	667	664	668	669	670	660	653	650	653	653
2 Q	650	651	654	655	652	643	631	640	648	649	652	653	656	660	681	675	668	665	675	668	663	657	655	637	633	655
3 Q	633	629	633	638	643	643	645	648	649	651	647	646	643	642	640	643	645	643	646	655	653	652	633	616	629	642
4 Q	629	634	636	637	643	637	629	630	634	632	640	644	646	642	639	641	644	649	651	650	652	652	648	622	617	640
5	617	630	636	634	632	631	632	631	629	630	628	625	618	618	619	622	626	635	644	668	666	645	569	560	555	626
6 D	555	535	506	535	578	518	434	480	556	597	610	625	652	696	737	755	730	744	767	720	618	434	561	614	441	604
7 D	441	445	465	493	577	595	580	583	619	644	656	700	684	681	706	718	697	661	655	669	661	658	490	469	493	607
8 D	493	454	419	419	477	485	545	589	620	622	631	663	650	648	705	715	668	679	678	675	587	578	544	588	594	591
9 D	594	500	493	461	523	574	561	600	618	665	659	676	689	673	669	665	673	685	661	660	635	606	605	524	581	611
10	581	613	614	615	599	602	609	616	623	632	634	624	630	652	671	690	672	702	672	646	642	638	630	597	547	633
11	547	503	553	575	606	603	614	629	636	635	651	658	637	642	654	666	687	678	671	665	658	624	631	627	622	629
12 D	622	618	602	524	468	493	547	587	606	627	635	635	639	661	667	662	666	671	652	596	618	638	500	529	544	601
13	544	504	409	470	562	573	583	608	627	638	645	639	646	652	645	645	645	654	664	651	623	631	619	579	586	603
14	586	576	602	599	610	623	623	629	631	630	630	630	636	636	629	637	650	656	646	643	623	567	609	600	585	621
15	585	517	484	526	552	558	538	564	601	590	614	618	619	635	662	698	739	682	650	636	629	630	629	627	626	608
16	626	628	626	604	698	698	605	599	599	614	627	628	629	630	642	647	672	721	713	702	667	608	624	608	572	641
17 Q	572	582	599	617	625	636	639	640	638	638	638	635	631	629	633	642	642	646	667	676	659	643	626	592	583	631
18 Q	583	598	615	625	631	636	635	634	632	629	629	629	629	629	632	628	625	626	631	646	653	646	601	556	573	624
19	573	591	605	573	603	613	605	607	616	632	649	629	628	629	653	642	661	658	651	631	636	634	628	627	628	625
20	628	626	607	577	584	594	609	619	620	621	626	627	620	622	628	638	647	652	650	634	645	625	624	632	628	623
21	628	592	567	600	613	619	624	622	621	620	616	610	619	612	611	613	649	634	620	673	664	602	578	555	439	611
22	439	428	484	474	414	511	563	589	606	606	612	618	626	640	641	644	631	620	614	622	632	624	607	563	476	576
23	476	493	538	528	548	570	588	598	606	604	605	610	616	619	637	686	681	657	646	637	611	560	582	590	576	597
24	576	495	532	556	565	578	598	606	609	609	615	616	610	619	618	636	653	671	665	639	624	616	592	596	523	603
25	523	514	546	567	571	592	610	618	616	615	610	606	608	620	627	635	629	623	620	617	631	621	612	609	591	603
26	591	591	595	600	600	601	612	613	612	604	602	603	605	608	617	628	632	637	626	624	621	610	587	560	628	608
27	628	600	608	609	596	560	587	597	605	609	613	613	611	618	631	637	640	652	655	636	629	628	620	612	609	616
28 Q	609	608	607	605	606	615	618	621	620	614	613	610	607	603	600	605	606	613	627	629	628	621	618	606	579	612
29	579	536	547	567	590	605	615	618	617	617	611	610	605	604	604	616	621	616	610	625	617	607	610	612	610	603
30	610	593	592	599	588	574	601	612	618	620	624	624	621	619	618	619	620	620	623	627	627	630	612	575	602	611
31	602	586	523	517	541	548	566	598	607	613	619	624	629	620	621	629	631	643	647	634	634	584	604	628	629	603
Mean	580	565	585	568	585	593	597	609	619	625	629	632	632	636	645	653	655	657	654	649	638	617	603	592	579	617

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS :  
 MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

August, 1930.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + °A.	
	Horizontal Force.						Declination.						Vertical Force.						
	Maximum 14,000 $\gamma$ +			Minimum 14,000 $\gamma$ +			Maximum 14° +			Minimum 14° +			Maximum 46,000 $\gamma$ +		Minimum 46,000 $\gamma$ +				Range.
	h. m.	$\gamma$	Range.	h. m.	$\gamma$	Range.	h. m.	$\gamma$	Range.	h. m.	$\gamma$	Range.	h. m.	$\gamma$	h. m.				$\gamma$
1 Q	22 10	582	488	1 20	94	1 15	19.4	0.1	3 49	19.3	21 20	672	592	1 38	80	235	1	87.1	
2 Q	18 20	570	501	11 58	69	15 4	21.1	5.3	8 37	15.8	14 12	686	630	5 47	56	127	1	86.9	
3 Q	17 39	574	496	12 31	78	13 31	17.8	3.7	23 11	14.1	18 53	659	612	22 45	47	120	0	86.9	
4 Q	18 48	568	497	10 45	71	12 55	17.8	4.5	3 17	18.3	20 41	654	614	23 59	40	100	0	86.7	
5	18 21	610	429	22 18	181	22 9	20.3	2.8	4 59	17.5	19 5	685	533	23 40	152	620	1	87.5	
6 D	16 57	921	65	20 58	856	1 48	40.7	-51.0	20 58	91.7	14 52	809	311	20 57	498	11333	2	87.8	
7 D	18 17	652	155	0 16	497	22 5	23.6	-18.1	0 28	41.7	15 8	730	278	0 16	457	4841	2	87.9	
8 D	19 28	766	161	2 20	605	19 49	30.8	-20.8	19 30	51.6	19 27	755	371	2 9	384	5549	2	88.1	
9 D	17 49	612	315	2 49	297	1 2	29.5	0.4	21 32	29.1	12 20	701	429	2 48	272	1746	1	88.8	
18	17 27	642	465	9 19	177	14 20	17.7	-19.1	23 59	36.8	17 11	755	548	23 59	207	981	1	89.1	
11	20 35	620	438	10 12	182	13 2	17.7	-16.8	20 30	34.5	15 42	698	481	0 45	217	1028	1	89.0	
12 D	16 46	652	342	3 57	310	4 11	25.8	-13.2	18 42	39.0	16 43	696	441	22 11	255	1878	1	88.7	
13	19 34	595	274	2 9	321	1 58	27.9	-2.8	17 35	30.7	17 34	675	367	2 10	308	2173	1	88.8	
14	20 12	667	484	7 21	183	0 28	20.1	-30.5	20 8	50.6	20 0	669	553	20 55	116	927	1	88.6	
15	16 0	642	356	1 9	286	0 54	23.7	-1.2	1 46	24.9	15 50	764	439	1 18	325	2004	1	88.2	
16	16 21	619	498	10 51	121	16 31	21.7	-3.2	23 30	24.9	16 51	736	568	23 59	168	536	1	87.9	
17 Q	19 50	591	492	10 40	99	14 43	17.5	2.0	0 49	15.5	19 3	678	564	0 27	114	272	1	87.5	
18	18 18	585	491	21 53	94	13 35	16.7	-12.3	22										

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 37. Lerwick. (H.)

14,000  $\gamma$  ( $\cdot 14$  C.G.S. unit) +

September, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	537	535	536	529	507	491	453	483	492	495	475	470	485	536	596	595	609	617	565	548	537	535	522	515	503	527
2	503	441	452	468	483	468	497	518	506	493	464	485	507	521	525	542	547	536	533	543	550	552	550	548	547	511
3 D	547	546	544	543	512	494	510	501	491	492	489	499	505	551	604	755	769	602	615	587	554	437	455	436	357	589
4	357	289	444	443	456	478	515	518	507	445	437	454	483	503	511	524	525	538	542	539	540	530	526	521	522	488
5	522	519	504	490	512	529	529	516	510	508	495	490	487	511	540	543	566	627	610	571	550	540	520	532	527	530
6 D	527	507	497	493	534	543	536	505	512	503	466	473	480	537	558	580	573	566	567	553	537	536	528	496	526	525
7	526	506	517	517	530	524	522	514	482	503	492	502	513	520	536	575	557	560	555	551	542	534	501	503	514	524
8	514	494	496	509	517	522	504	517	509	499	490	495	499	516	528	534	571	548	553	542	550	544	534	537	540	522
9	540	539	537	537	534	535	529	516	508	505	477	490	495	519	559	537	547	570	550	527	539	528	524	544	527	528
10	527	501	468	509	513	524	528	515	514	504	505	511	516	524	541	541	537	540	543	536	540	535	539	535	535	523
11	535	535	535	535	532	535	536	536	520	504	497	501	499	511	542	522	522	539	543	534	538	538	545	546	527	528
12	527	525	530	528	523	524	526	521	517	508	503	501	502	511	526	528	527	535	542	543	536	530	522	496	501	522
13	501	526	532	526	524	533	535	533	520	510	501	497	498	505	516	527	528	534	535	536	542	529	528	518	497	522
14 Q	497	493	513	514	524	528	530	528	522	516	507	496	497	504	519	517	525	531	532	536	542	530	522	533	531	520
15 Q	531	529	532	529	537	541	522	538	529	520	507	502	501	507	515	523	534	534	540	538	542	536	535	533	533	527
16 Q	533	532	532	532	532	533	535	531	522	506	498	491	491	498	515	527	542	546	546	541	539	537	537	537	537	526
17	537	537	536	536	534	534	536	533	526	522	502	499	501	495	495	514	522	522	529	535	536	538	537	537	537	525
18 D	538	532	532	534	531	531	531	530	527	516	497	383	440	554	625	554	600	730	660	537	471	473	408	310	332	518
19	332	419	294	422	451	463	468	483	488	492	473	455	493	491	527	541	550	552	543	525	530	500	503	522	515	484
20	515	517	492	510	520	519	517	518	507	494	499	501	502	507	508	515	537	531	535	531	533	527	534	534	532	517
21	532	529	529	529	530	533	533	524	479	461	428	472	499	517	531	510	549	536	550	543	533	521	528	520	517	517
22	517	472	499	524	527	524	522	517	507	505	510	512	508	512	506	507	508	516	519	524	527	529	530	528	531	515
23	531	523	528	535	538	540	539	539	520	510	496	513	517	524	524	532	535	537	545	545	546	548	549	539	506	531
24	506	537	527	547	544	540	536	535	524	484	500	509	505	524	531	537	531	539	547	544	549	541	544	546	537	531
25	537	536	540	540	538	538	535	531	521	510	508	510	517	529	525	530	536	537	548	532	533	542	549	550	538	532
26 Q	538	537	536	538	538	539	536	535	532	519	505	498	499	513	516	527	542	544	545	542	546	543	542	542	544	531
27 Q	544	542	537	538	539	538	538	531	522	515	506	504	505	514	522	522	522	542	545	544	544	541	541	542	542	531
28	539	540	536	526	534	543	544	524	526	525	520	505	490	487	503	522	532	541	550	543	534	512	498	536	534	525
29 D	534	513	501	507	473	498	463	511	482	446	463	500	499	505	535	526	536	532	551	526	530	525	469	466	468	502
30 D	468	290	382	370	229	145	207	344	395	484	465	478	497	501	504	510	518	533	530	540	539	538	534	531	529	440
Mean	513	501	505	512	510	510	510	515	507	500	489	490	498	515	533	541	550	554	552	541	538	528	522	518	513	519

## MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 38. Lerwick. (D.)

14° +

September, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'
1	10.1	11.1	5.1	4.7	9.5	19.2	22.1	10.9	12.0	7.6	9.9	11.3	14.3	10.9	13.2	14.7	13.0	7.0	8.9	9.1	10.7	9.9	8.4	7.2	10.7	10.9
2	10.7	26.2	11.0	4.4	1.1	3.4	9.6	6.3	6.7	8.5	9.6	12.1	14.4	16.2	15.6	14.6	13.7	13.3	10.8	10.2	10.0	9.8	9.2	9.0	9.2	10.7
3 D	9.3	8.9	5.7	6.4	7.0	8.6	7.8	8.2	9.7	12.2	12.8	15.5	16.7	16.7	23.0	19.9	16.5	14.4	11.5	10.5	10.7	0.1	3.0	-6.5	1.0	10.2
4	1.0	5.9	4.9	4.5	3.2	6.6	4.5	2.6	3.7	10.3	12.6	11.3	13.2	14.9	14.0	12.6	9.5	7.8	7.8	7.8	5.9	9.1	7.4	9.5	8.6	8.1
5	8.7	8.9	11.9	11.8	8.7	5.6	5.4	5.4	4.8	6.7	9.2	12.5	14.1	14.6	16.2	10.4	11.6	11.9	7.3	5.6	5.8	0.7	6.0	5.8	7.1	8.7
6 D	7.1	11.7	15.9	13.8	7.0	5.7	7.4	11.5	8.8	10.9	8.0	10.1	18.6	17.8	19.0	9.1	11.7	6.6	2.2	7.8	8.0	8.8	8.2	6.1	7.6	10.1
7	7.6	12.8	9.1	9.3	8.0	7.0	6.8	7.6	10.5	10.1	10.9	11.1	14.2	15.1	11.1	7.2	8.4	9.0	8.4	5.5	5.9	6.1	8.2	3.2	2.8	8.8
8	2.9	3.5	3.5	0.6	1.1	1.1	4.2	4.6	3.8	6.9	10.0	12.7	14.5	15.8	15.4	12.3	12.5	10.0	9.6	7.9	3.1	5.0	9.1	9.1	9.1	7.6
9	9.1	8.3	8.5	8.3	7.9	7.2	7.9	7.7	10.0	10.0	11.0	14.3	15.2	20.2	20.2	13.7	14.8	3.1	3.3	8.5	0.4	4.6	7.5	1.3	9.1	9.3
10	9.1	7.1	10.0	0.6	4.8	6.7	6.2	5.6	6.9	9.1	9.4	11.2	13.9	14.5	14.5	12.0	9.8	10.0	9.8	7.1	6.7	8.5	9.1	10.0	9.8	8.9
11	9.9	9.7	9.3	8.8	8.0	6.3	5.5	5.9	7.6	13.6	15.9	18.0	18.2	18.4	18.4	15.5	12.4	11.1	9.5	7.6	10.1	10.7	10.1	3.2	4.3	10.9
12	4.3	8.4	8.2	7.2	6.3	8.0	6.1	6.6	6.3	9.3	11.3	12.1	14.9	15.3	16.1	14.4	11.3	10.3	8.6	7.8	4.5	4.3	6.1	-0.3	-0.3	8.5
13	-0.3	4.9	6.6	6.3	5.7	3.6	3.2	3.6	4.5	5.7	8.2	10.3														

TERRESTRIAL MAGNETIC FORCE : VERTICAL COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

39. Lerwick. (V.)

46,000  $\gamma$  (.46 C.G.S. unit) +

September, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	629	589	605	615	579	509	495	547	601	631	649	658	665	724	731	742	745	735	720	704	679	649	637	614	590	643
2	590	532	472	469	550	573	590	618	643	647	665	667	653	648	645	641	647	643	641	639	639	640	642	643	640	615
3 D	640	627	619	627	624	600	590	609	617	622	645	641	667	701	746	798	812	749	743	717	674	457	509	526	491	645
4	491	416	490	498	493	573	621	653	653	671	670	679	671	653	648	657	659	661	663	665	655	653	637	640	633	618
5	633	636	625	609	607	623	630	632	641	642	642	638	645	644	646	664	683	695	733	661	631	565	565	597	595	636
6 D	595	605	575	558	589	617	620	627	614	613	613	656	685	677	665	681	668	696	684	667	649	631	610	555	565	631
7	565	596	608	615	618	624	625	627	636	631	633	639	637	637	646	655	654	652	664	652	625	610	579	541	529	623
8	529	543	555	558	588	598	599	595	606	612	612	608	606	605	616	624	626	650	649	650	632	604	605	606	605	605
9	605	608	610	610	612	612	610	615	615	608	618	632	642	657	676	682	649	701	690	645	626	616	583	554	577	628
10	577	558	509	508	559	577	594	611	617	617	620	619	623	630	637	651	650	639	636	636	628	612	615	612	615	606
11	615	616	618	620	622	622	620	617	616	614	614	612	619	622	625	643	651	648	646	653	635	625	619	606	588	624
12	588	602	615	619	620	615	605	612	611	609	612	617	617	617	620	630	638	636	631	635	645	627	545	551	550	612
13	550	590	602	587	559	587	607	612	611	612	609	608	608	604	604	605	609	610	612	612	613	617	615	593	522	601
14 Q	522	525	530	541	562	587	602	611	609	609	611	610	607	609	619	624	624	624	623	621	620	627	619	616	607	600
15 Q	607	600	596	592	599	604	608	594	601	612	624	626	618	618	618	624	628	640	643	639	633	634	630	625	619	617
16 Q	619	624	623	623	622	623	622	625	629	632	629	626	625	627	624	628	633	656	652	646	644	634	628	624	622	630
17	622	621	620	618	614	615	615	619	621	617	619	614	612	620	625	641	659	636	624	618	618	617	618	619	619	622
18 D	619	620	618	617	617	617	617	617	617	617	619	667	644	691	737	704	702	701	693	585	502	570	537	438	416	619
19	416	483	511	554	569	551	570	612	628	635	639	648	657	651	655	684	677	682	674	651	630	579	562	604	621	609
20	621	620	611	604	613	618	621	622	624	623	621	625	624	628	636	631	632	634	638	641	631	625	618	618	619	624
21	619	621	622	621	620	618	615	616	624	631	633	616	622	623	641	668	678	707	673	674	650	625	594	609	617	634
22	617	550	541	597	614	613	616	617	615	614	612	609	609	616	621	622	622	618	614	608	609	611	615	619	618	608
23	618	622	624	624	619	617	618	615	617	612	615	610	607	611	609	608	617	618	626	635	623	617	612	605	583	616
24	583	532	551	548	598	602	607	609	607	616	607	603	601	608	617	619	625	642	630	626	612	608	607	594	582	602
25	582	578	596	605	606	606	606	607	608	606	601	598	597	600	607	606	612	615	618	641	633	621	599	583	590	606
26 Q	590	599	606	607	609	611	612	613	612	611	609	610	611	613	617	617	619	624	625	626	624	624	623	624	620	615
27 Q	620	615	615	614	619	622	622	624	625	625	628	629	625	624	628	640	638	633	631	631	632	628	627	624	624	626
28	624	619	620	604	576	599	606	602	607	611	615	622	633	642	642	639	644	638	652	691	655	605	548	596	642	621
29 D	642	561	501	479	500	501	517	548	585	616	613	631	644	701	715	677	668	665	652	543	576	591	496	468	462	583
30 D	462	309	321	292	240	209	299	424	575	620	628	603	613	618	618	618	618	614	619	616	616	618	620	630	619	520
Mean	586	574	574	574	581	585	593	605	616	621	624	627	630	637	644	651	653	655	653	641	628	611	597	591	586	615

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS :

40. Lerwick.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

September, 1930.

Day.	Terrestrial Magnetic Elements.															Character $\Sigma R^2$ Figure $\frac{\Sigma R^2}{100\gamma^2}$ §	Magnetic Character of Day (0-2).	Temperature in Magnet House 200 +
	Horizontal Force.					Declination.					Vertical Force.							
	Maximum 14,000 $\gamma$ +		Minimum 14,000 $\gamma$ +		Range.	Maximum 14° +		Minimum 14° +		Range.	Maximum 46,000 $\gamma$ +		Minimum 46,000 $\gamma$ +		Range.			
1	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	1562	1	86.9
2	16 32	658	444	7 53	214	5 55	34.8	0.1	16 38	34.7	16 22	773	478	6 7	295	1230	1	86.6
3 D	20 41	562	362	1 5	200	1 13	38.2	-1.6	5 36	39.8	10 23	672	439	2 55	233	10178	2	86.2
4	15 29	1090	260	20 37	830	15 33	36.9	-20.8	21 12	57.7	16 3	898	377	21 1	521	3887	2	85.8
5	19 55	551	24	0 38	527	13 25	15.7	-7.8	0 17	23.5	11 10	691	377	1 1	314	1276	1	85.6
6 D	17 25	660	467	21 38	193	21 35	24.7	-14.1	20 32	38.8	17 57	770	518	21 35	252			
7	15 3	613	426	11 42	187	12 5	25.4	-5.1	17 42	30.5	17 12	725	525	23 24	200	855	1	85.5
8	14 40	585	469	8 23	116	11 53	18.4	0.1	23 33	18.3	17 55	670	516	23 38	154	428	1	85.5
9	16 8	586	485	10 22	101	13 33	17.2	-9.1	20 22	26.3	17 25	658	531	0 1	127	387	1	85.6
10	16 59	597	462	10 18	135	13 11	24.3	-12.2	20 13	36.5	16 56	713	543	22 56	170	708	1	85.6
11	14 23	554	445	1 57	109	12 31	15.6	-3.1	3 12	18.7	15 40	654	481	2 33	173	481	1	85.4
12	18 24	557	490	9 31	67	11 8	19.8	0.7	23 17	19.1	19 0	661	584	23 40	77	170	1	85.3
13	21 39	573	479	23 27	94	15 57	17.6	-5.7	22 33	23.3	19 51	647	512	22 0	135	369	1	85.2
14 Q	19 53	546	485	23 37	61	13 30	14.4	-2.8	0 1	17.2	21 4	621	509	24 0	112	216	1	85.4
15 Q	19 46	548	482	0 50	66	12 43	18.0	-8.0	0 30	26.0	20 40	631	503	0 10	128	331	1	85.2
16 Q	4 43	549	499	10 35	50	6 30	15.5	2.0	3 11	13.5	18 18	646	588	2 40	58	92	0	85.0
17	17 17	561	485	12 24	76	12 54	16.9	0.3	17 3	16.6	16 56	663	620	6 10	43	126	0	85.0
18 D	6 34	545	484	13 41	61	13 30	21.9	3.6	6 30</									

TERRESTRIAL MAGNETIC FORCE : HORIZONTAL COMPONENT.  
 Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

41. Lerwick. (H.)

14,000 γ (·14 C.G.S. unit) +

October, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	527	526	526	529	532	533	526	492	492	491	488	494	504	498	518	513	530	540	549	526	527	529	538	528	514	519
2	514	517	495	517	531	529	522	515	514	506	501	501	497	516	522	525	536	530	525	540	535	540	543	530	530	521
3 D	530	524	515	512	523	510	530	535	527	511	508	456	486	536	555	596	564	547	556	523	503	495	523	512	526	524
4	526	517	516	522	518	496	506	519	509	485	474	485	497	515	537	548	538	537	537	540	547	518	525	528	502	518
5	502	520	524	527	529	526	509	496	489	490	482	494	495	516	517	522	559	548	523	522	518	492	522	524	511	515
6	511	483	512	524	518	525	527	517	517	495	493	495	511	508	519	529	533	527	526	524	526	517	517	515	519	516
7	519	516	513	525	535	523	524	523	517	513	503	502	505	516	516	539	523	519	532	534	509	510	518	505	522	518
8	522	523	513	506	526	495	499	496	490	473	471	477	483	504	526	545	523	517	524	508	518	515	518	519	522	508
9	522	519	498	509	523	526	526	523	507	492	484	484	486	502	505	517	521	520	523	531	530	533	518	531	529	514
10	529	530	529	527	528	528	528	529	525	514	506	499	496	503	508	516	527	530	536	533	519	525	525	531	530	522
11 Q	530	531	529	530	526	534	539	536	524	505	504	507	510	505	516	524	531	531	530	524	526	532	531	532	531	524
12	531	531	531	530	531	531	529	527	522	518	514	506	506	507	517	524	530	533	535	528	535	531	532	532	532	525
13 Q	532	532	532	532	532	533	532	530	528	522	517	513	512	513	516	522	528	530	525	526	527	526	528	527	528	526
14 D	528	525	521	528	530	541	554	558	545	539	527	520	514	503	513	538	533	523	532	542	588	414	400	437	452	517
15	452	499	503	504	508	508	508	508	504	502	498	495	496	498	503	513	522	522	527	528	530	531	530	528	524	511
16 Q	524	527	525	526	527	528	528	527	524	519	514	510	497	498	508	518	523	526	529	531	523	521	521	529	530	521
17 D	530	534	536	538	539	541	517	483	500	512	515	494	491	529	688	860	885	861	546	516	557	376	177	399	443	545
18	443	486	505	493	486	495	505	509	511	514	512	515	496	493	515	521	515	516	517	521	539	540	525	523	507	509
19	507	511	511	505	514	518	521	514	499	493	487	497	501	504	511	516	517	522	525	529	523	519	519	504	460	510
20	460	439	478	506	508	518	518	518	512	448	457	493	505	507	509	515	516	525	514	548	513	521	539	528	500	505
21	500	523	516	513	504	504	519	523	504	511	504	505	508	512	517	520	520	524	537	536	522	526	524	524	523	517
22	523	522	520	520	520	526	527	527	524	516	510	504	504	510	520	525	522	515	516	516	521	524	525	529	527	519
23 Q	527	521	522	521	518	525	529	529	526	521	513	515	517	521	524	528	531	533	526	529	529	535	532	525	525	525
24 Q	525	526	525	526	526	528	530	526	524	520	515	514	517	522	526	530	533	534	532	530	534	531	532	531	534	527
25	534	530	529	531	530	533	536	535	533	526	522	521	532	536	537	530	533	542	558	546	524	532	527	507	425	530
26 D	425	348	454	456	384	509	536	500	485	502	518	524	519	652	691	660	666	572	529	545	491	478	496	430	431	516
27 D	431	469	512	516	472	470	509	517	497	496	504	474	482	501	534	550	563	530	535	528	540	511	431	484	506	504
28	506	474	454	505	524	512	522	505	510	489	480	497	514	510	507	511	526	526	516	522	539	513	505	510	479	507
29	479	493	495	515	507	514	523	506	490	472	481	500	504	509	513	542	529	523	533	537	515	525	487	503	510	507
30	510	488	509	502	491	504	528	509	492	502	505	503	510	516	509	527	534	529	569	522	566	533	509	509	517	516
31	517	519	517	515	516	521	521	518	508	507	507	480	483	498	519	537	529	515	527	527	519	437	516	509	509	511
Mean	507	506	512	517	515	519	523	518	511	503	501	499	503	515	529	544	547	540	532	529	529	511	504	510	506	518

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

42. Lerwick. (D.)

14° +

October, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'
1	6.9	7.3	6.9	6.7	7.5	8.9	10.6	18.1	15.0	13.1	12.9	13.9	15.2	13.1	13.9	12.5	9.8	9.4	-4.8	6.2	8.5	8.1	5.4	5.8	10.8	9.7
2	10.8	8.7	6.9	7.1	6.5	6.7	7.9	8.1	6.4	8.3	9.2	12.1	15.0	14.5	16.4	13.1	9.4	10.0	5.4	5.6	8.3	9.1	-11.6	2.1	7.3	7.9
3 D	7.3	8.7	10.6	13.5	11.6	6.4	7.5	8.1	8.1	7.9	10.2	14.5	16.8	17.5	17.0	15.8	13.7	6.4	-6.8	0.2	-4.1	6.0	5.4	6.5	2.1	8.6
4	2.1	8.3	7.1	6.9	5.4	10.6	10.6	6.0	7.9	8.5	11.9	12.5	12.5	15.6	14.7	8.7	11.6	7.9	6.5	4.0	-3.7	4.6	5.8	0.0	5.6	7.8
5	5.6	9.6	7.3	6.2	6.2	8.3	12.9	15.6	12.3	10.2	9.1	13.5	13.9	15.8	17.5	14.5	7.9	5.0	7.1	6.2	5.6	12.1	4.4	6.4	6.2	9.7
6	6.2	8.7	11.8	4.8	4.4	6.0	8.3	6.0	7.7	8.1	11.8	12.5	15.4	16.8	14.7	13.5	6.9	7.7	8.5	3.5	-8.1	6.2	2.1	2.9	6.2	7.8
7	6.2	5.8	9.8	7.9	6.4	6.4	6.7	6.4	5.0	6.2	7.9	9.6	11.8	14.5	12.1	11.2	10.4	7.7	3.8	-1.6	-1.2	0.4	-5.0	2.3	4.8	6.3
8	4.8	6.7	6.9	14.5	13.9	20.1	21.8	15.4	12.3	11.6	14.8	15.0	14.1	15.6	13.9	14.5	13.9	10.4	2.5	4.8	-0.8	2.7	8.1	7.9	8.1	11.1
9	8.1	8.4	14.6	4.9	5.3	5.3	6.3	8.2	9.3	9.3	11.7	13.0	14.8	16.7	14.4	13.6	11.5	8.2	3.8	8.0	7.8	2.6	-5.5	3.0	7.0	8.4
10	7.0	7.2	7.4	7.4	7.8	6.8	6.8	6.5	5.5	5.5	7.0	8.6	11.5	14.0	13.2	12.2	10.1	4.3	5.9	3.0	1.4	5.5	4.7	8.0	6.5	7.4
11 Q	6.5	6.6	5.7	6.3	6.8	9.0	6.8	7.6	7.8	10.5	11.9	13.0	14.0	14.8	14.4	12.4	11.5	9.7	8.6	6.8	7.6	8.0	7.8	7.8	7.6	9.3
12	7.6	7.7	7.7	7.5	7.7	7.5	7.3	6.6	6.4	6.9	9.8	12.1	13.9	14.7	14.1	12.1	10.0	8.9	8.7	6.4	10.2	5.0	8.1			

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

43. Lerwick. (V.)

46,000  $\gamma$  ( $\cdot 46$  C.G.S. unit) +

October, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	619	618	610	613	610	604	602	607	599	612	620	635	660	658	640	652	651	659	640	628	626	623	607	570	566	622
2	566	568	587	591	601	608	607	615	615	617	622	625	633	637	635	638	644	638	628	626	621	606	597	604	617	616
3 D	604	608	604	579	571	564	591	601	607	611	612	660	649	633	665	706	726	697	672	648	571	492	589	583	529	617
4	529	548	583	590	591	586	575	594	605	618	625	632	655	665	658	670	659	655	644	638	602	614	603	582	575	614
5	575	558	591	606	603	598	602	589	590	593	616	625	640	635	642	653	682	685	660	638	626	522	557	580	552	611
6	552	551	540	564	580	592	584	600	599	607	610	606	606	614	621	620	637	633	624	623	593	584	584	573	582	596
7	582	583	584	585	586	593	597	595	598	597	596	596	596	598	611	620	632	634	626	597	590	578	540	533	549	593
8	549	571	575	554	525	528	522	543	582	597	600	607	627	650	670	674	656	650	640	628	577	584	584	587	584	596
9	584	572	538	518	561	577	580	579	582	588	590	595	595	595	608	601	606	612	613	600	599	589	570	533	567	582
10	567	579	583	586	586	586	585	584	587	588	590	590	587	586	590	592	596	614	609	602	599	592	583	576	572	589
11 Q	572	564	565	569	572	563	566	570	577	582	580	582	583	586	586	595	603	605	603	610	606	592	583	578	578	583
12	578	578	578	579	580	580	581	581	582	581	581	578	577	578	581	584	588	588	588	591	579	569	576	577	578	581
13 Q	578	579	580	580	581	582	584	584	586	585	586	585	586	585	593	599	604	605	613	614	610	606	599	591	584	592
14 D	584	583	582	566	576	561	540	541	555	562	568	574	577	579	579	578	592	609	594	607	618	517	506	553	542	570
15	542	582	574	587	598	596	594	595	595	594	596	596	587	584	583	579	578	575	576	577	576	577	578	578	575	584
16 Q	575	560	560	567	566	569	569	572	575	577	580	580	585	580	578	582	580	575	575	576	581	585	584	578	576	575
17 D	576	572	571	568	567	562	565	565	561	563	579	609	640	659	693	664	585	490	588	669	658	667	542	631	616	599
18	616	570	606	607	601	590	597	598	597	596	599	604	608	597	590	595	599	607	599	604	615	658	636	607	571	603
19	571	581	572	581	571	574	576	582	583	592	594	594	596	596	594	597	598	594	594	594	613	589	581	571	527	586
20	527	435	486	526	560	565	575	574	579	605	623	597	599	596	599	607	648	621	616	572	573	580	568	546	515	578
21	515	517	557	573	572	558	557	568	578	582	582	584	587	586	588	593	599	603	605	581	587	585	578	583	588	577
22	588	590	591	592	590	585	586	586	586	586	585	588	590	591	594	598	607	625	618	618	606	597	593	589	586	595
23 Q	586	592	592	594	594	590	589	590	590	587	586	584	585	587	590	592	595	599	607	600	598	592	590	593	591	592
24 Q	591	593	592	593	593	593	592	592	590	589	591	590	591	591	594	599	601	602	605	605	601	606	603	599	597	596
25	597	595	583	579	591	596	598	597	597	600	599	596	588	591	600	610	614	632	694	676	632	626	623	581	439	605
26 D	439	353	405	432	427	500	540	565	582	587	601	601	627	728	754	742	782	755	716	621	512	512	527	457	366	572
27 D	366	471	549	559	548	507	554	575	589	591	598	629	656	629	634	711	694	673	652	585	582	539	513	490	540	583
28	540	536	521	544	564	575	576	587	596	601	615	598	602	623	637	605	595	625	656	609	589	576	563	543	591	583
29	543	514	524	543	569	565	569	582	593	604	622	648	620	625	622	648	654	603	609	599	594	586	547	518	550	588
30	550	543	530	532	509	530	528	560	574	586	597	601	608	611	626	628	623	647	611	599	546	490	562	569	571	574
31	571	576	577	575	568	564	568	575	587	590	598	616	644	619	611	634	641	632	609	600	605	503	510	539	535	587
Mean	559	556	564	569	571	572	579	582	588	593	598	603	609	613	618	625	628	624	622	612	597	579	574	568	556	592

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS: MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

44. Lerwick.

October, 1930.

Day.	Terrestrial Magnetic Elements.															Character $\Sigma R^4$ Figure $\frac{\Sigma R^4}{100\gamma^4}$	Magnetic Character of Day (0-2)	Temperature in Magnet House $200^\circ +$
	Horizontal Force.					Declination.					Vertical Force.							
	Maximum $14,000 \gamma +$		Minimum $14,000 \gamma +$		Range.	Maximum $14^\circ +$		Minimum $14^\circ +$		Range.	Maximum $46,000 \gamma +$		Minimum $46,000 \gamma +$		Range.			
1	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	h. m.	h. m.	h. m.	h. m.	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	509	I	83.6	
2	18 6	585	475	7 4	110	7 20	21.0	-15.3	17 55	36.3	12 30	675	552	23 8	123	I	83.1	
3 D	22 23	586	471	12 7	115	15 3	17.9	-27.0	22 16	44.9	15 32	653	563	0 3	90	2	82.9	
4	15 7	622	423	20 52	199	20 49	33.2	-22.6	20 5	55.8	15 33	751	405	20 42	346	I	82.7	
5	0 5	584	464	9 47	120	12 50	17.7	-7.7	0 4	25.4	14 49	686	525	0 11	161	I	82.9	
6	16 24	599	475	9 58	124	13 19	21.6	-4.1	16 20	25.7	16 13	721	493	21 11	228	I	82.9	
7	19 36	562	470	0 55	92	12 4	18.7	-16.8	19 52	35.5	16 30	641	530	2 1	111	I	82.6	
8	19 2	552	491	22 53	61	12 53	15.8	-10.8	21 48	26.6	16 40	640	527	21 34	113	I	82.5	
9	19 57	567	463	9 33	104	6 5	24.1	-14.1	19 53	38.2	14 42	679	515	4 12	164	I	82.2	
10	22 33	555	480	10 48	75	1 51	20.3	-11.3	22 26	31.6	17 38	623	501	2 30	122	I	81.5	
11 Q	17 41	558	494	12 4	64	12 37	15.3	-3.4	17 18	18.7	17 15	630	566	0 1	64	I	80.6	
12	5 56	541	500	9 14	41	13 2	15.5	4.1	1 13	11.4	19 14	619	557	1 5	62	0	80.1	
13 Q	19 59	552	501	13 26	51	13 28	16.4	2.7	19 2	13.7	19 2	598	562	20 30	36	0	80.7	
14 D	17 3	535	509	13 30	28	12 55	16.2	4.0	23 50	12.2	18 35	618	578	0 0	40	0	80.9	
15	19 57	713	375	21 37	338	12 36	21.3	-15.0	21 22	36.3	19 49	688	457	21 26	231	2	81.1	
16 Q	19 37	533	419	0 4	114	13 14	11.9	-3.8	0 19	15.7	3 40	601	495	0 15	106	I	81.7	
17 D	21 33	534	494	11 46	40	12 15	11.7	3.4	20 50	8.3	21 13	587	557	1 27	30	0	82.5	
18	15 34	1041	12	21 36	1029	17 17	50.8	-86.8	21 55	86.6	21 21	806	143	17 18	668	2	83.0	
19	23 23	556	420	0 16	136	12 42	16.7	-4.5	0 37	21.2	20 48	665	541	23 38	124	I	83.1	
20	0 32	557	453	9 10	104													

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

45. Lerwick. (H.)

14,000  $\gamma$  (.14 C.G.S. unit) +

November, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	$\gamma$																										
1	509	500	501	516	522	525	523	523	522	508	502	497	498	511	530	531	529	516	507	510	514	518	522	523	523	523	515
2	523	519	522	523	525	528	528	529	523	518	515	513	514	513	527	529	519	518	523	526	531	531	529	525	551	524	524
3	551	509	517	518	519	522	528	529	526	516	513	509	510	515	521	522	526	530	531	527	533	533	533	533	533	532	523
4 D	532	531	529	530	535	546	559	546	519	518	491	489	502	503	513	512	519	519	519	521	522	522	537	516	529	522	
5	529	513	516	521	524	526	524	529	523	517	513	512	510	512	519	522	515	516	520	528	542	523	509	523	524	520	
6	524	524	519	523	529	535	533	529	529	520	516	516	508	510	520	525	527	529	532	532	531	531	531	532	529	525	
7	529	529	529	531	533	533	536	532	530	525	521	515	519	516	525	530	536	542	529	526	525	531	531	531	531	529	
8	533	533	531	528	532	535	536	535	535	529	517	519	525	528	528	529	532	533	532	543	543	540	531	529	525	531	
9	525	528	516	516	525	523	529	529	525	513	501	500	516	523	529	528	530	531	527	531	532	536	527	528	526	524	
10	526	524	525	525	528	531	525	529	531	523	523	518	517	518	523	533	531	532	534	536	534	531	531	543	524	528	
11	524	523	524	526	527	528	529	528	523	518	515	513	515	521	526	528	531	531	533	534	533	530	530	532	534	526	
12 Q	534	530	524	523	523	529	533	531	528	523	522	523	524	525	526	528	529	531	531	528	529	531	530	529	529	529	528
13	529	529	529	530	531	532	531	531	529	526	523	522	523	526	530	532	532	535	535	542	542	536	537	534	531	531	
14 D	531	528	523	529	527	531	537	529	529	525	525	525	528	529	533	538	546	555	696	865	739	529	541	522	449	559	
15	449	416	439	455	477	491	511	508	508	501	493	478	501	505	514	514	511	515	518	519	519	519	517	513	511	497	
16	511	508	509	511	511	513	516	516	519	514	512	513	516	515	517	518	523	523	523	516	519	518	525	511	528	516	
17	528	512	516	516	512	519	525	525	508	506	511	514	516	519	523	525	527	525	526	525	522	526	530	525	523	520	
18	523	522	524	523	529	531	528	525	524	523	520	526	529	531	531	515	526	534	534	535	541	523	526	526	526	527	
19 Q	526	528	525	526	532	533	532	531	529	525	521	519	522	526	529	531	536	537	531	534	534	533	531	528	526	529	
20 Q	526	528	528	532	534	532	535	535	531	524	522	522	524	526	529	530	533	532	530	531	530	528	527	528	527	529	
21 Q	527	525	526	529	530	531	530	529	527	522	519	516	518	523	527	529	531	532	533	532	531	533	534	525	525	527	
22 Q	525	526	526	528	529	531	532	532	529	524	521	519	523	527	531	533	535	538	536	536	536	536	535	535	533	530	
23	533	532	533	534	534	536	538	539	536	533	526	524	521	523	521	521	525	519	520	513	529	506	488	486	499	523	
24 D	499	506	489	497	492	455	510	530	515	500	516	500	483	507	521	526	532	529	586	523	508	491	497	481	406	506	
25 D	406	360	461	460	454	403	513	526	510	477	463	489	525	577	566	580	588	602	490	492	493	439	453	409	459	490	
26 D	459	297	442	505	502	507	511	498	509	509	506	503	507	504	515	513	501	515	523	513	522	515	515	513	514	497	
27	514	496	510	515	524	524	519	512	511	502	492	500	501	512	505	512	514	515	528	506	512	519	519	518	519	512	
28	519	510	509	504	518	524	522	524	513	506	510	495	493	499	504	513	517	519	520	512	513	516	516	512	526	512	
29	526	517	516	513	523	525	526	525	519	504	514	515	513	515	515	511	509	515	523	521	498	498	508	513	517	515	
30	517	518	515	515	522	522	517	527	519	513	515	513	503	509	518	521	522	517	514	513	514	514	520	518	514	516	
Mean	516	504	512	517	520	520	527	527	523	515	512	511	513	519	524	527	527	529	533	535	532	522	522	518	516	521	

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

46. Lerwick. (D.)

14° +

November, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'
1	3.8	4.6	8.3	8.8	8.1	7.9	7.9	8.5	8.3	6.0	8.1	9.2	10.6	10.4	12.3	10.2	10.2	6.3	4.6	7.9	5.0	5.8	6.9	7.1	7.3	7.9
2	7.3	7.4	8.4	8.0	8.0	7.8	7.6	7.0	6.8	6.6	8.4	10.5	11.1	10.5	11.3	11.5	11.8	10.3	8.6	8.0	7.2	7.0	6.8	4.3	-7.1	8.1
3	-7.1	0.5	3.7	4.7	5.7	5.9	6.6	6.2	6.6	6.1	7.8	9.9	10.5	11.3	11.1	10.1	9.1	8.4	8.6	8.8	8.8	8.6	7.2	7.8	7.2	7.3
4 D	7.2	7.4	7.6	8.4	8.4	9.7	8.9	8.4	10.3	14.5	11.1	14.7	14.0	14.5	16.7	10.7	8.6	8.0	7.4	7.0	6.6	3.9	2.4	5.7	1.6	9.1
5	1.6	3.2	6.4	7.4	7.8	7.8	7.4	6.8	6.2	6.1	7.0	8.8	9.5	10.1	10.5	9.7	6.4	5.9	8.8	6.8	1.6	0.5	2.2	5.3	7.6	6.5
6	7.6	8.6	9.3	10.9	8.2	7.0	8.4	9.1	6.8	6.2	7.8	10.7	10.9	11.8	11.5	9.7	8.6	7.2	8.6	8.2	8.0	7.6	7.0	7.0	7.6	8.6
7	7.6	7.6	7.6	7.8	7.6	7.6	7.2	8.2	7.4	8.0	8.9	9.5	11.5	11.5	9.5	9.5	8.8	8.8	8.2	6.1	4.7	7.8	7.4	6.8	6.8	8.1
8	6.8	7.4	6.6	7.4	7.2	7.2	7.0	7.0	7.4	8.9	9.9	11.8	12.4	12.4	14.0	11.5	14.7	15.7	12.0	10.3	-1.9	-3.0	7.4	5.1	7.0	8.2
9	7.0	-1.0	-1.4	0.0	0.4	4.8	5.0	6.0	5.6	6.7	9.6	10.6	12.1	14.1	13.9	12.7	12.3	11.4	7.3	9.4	8.1	0.7	5.6	6.1	6.1	6.9
10	6.1	6.5	6.5	6.7	6.9	6.1	6.7	10.6	5.6	6.9	8.3	10.4	10.4	11.5	11.4	11.5	11.4	10.2	9.2	8.1	6.7	6.5	3.1	0.9	8.0	
11	0.9	4.7	6.4	6.4	6.4	6.8	6.8	6.6	6.6	6.2	6.6	8.2	9.1	9.7	9.7	9.1	8.6	8.2	7.8	8.2	7.4	7.0	7.0	7.6	8.4	7.3
12 Q	8.4	5.5	5.1	3.9	5.3	6.4	6.8	6.6	6.4	6.8	8.2	8.9	9.9	9.5	8.4	8.0	7.6	7.6	8.0	8.0	7.6	7.0	6.8	6.6	6.8	7.2
13	6.8	6.9	7.1	7.3	7.3	7.5	7.3	6.9	6.7																	

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

46,000 γ (·46 C.G.S. unit) +

November, 1930.

47. Lerwick. (V.)

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	535	547	567	575	583	584	588	593	597	605	611	615	623	644	652	644	648	655	653	631	612	604	596	596	595	608
2	595	593	590	592	588	587	585	585	588	590	591	591	593	595	597	630	659	609	595	587	583	583	583	579	544	593
3	544	553	564	573	578	580	578	581	582	586	587	590	589	587	586	584	584	583	583	587	582	582	583	583	582	580
4 D	582	584	582	576	567	557	552	563	573	570	583	599	635	629	619	611	607	601	597	596	597	599	559	557	552	587
5	552	570	578	583	586	585	588	587	589	589	594	595	595	598	600	606	613	617	609	604	579	578	583	580	588	591
6	588	590	592	582	588	589	588	588	590	594	594	594	600	603	603	605	606	605	600	596	597	595	594	592	593	595
7	593	594	597	596	595	595	591	591	592	594	597	597	596	604	608	606	606	604	615	622	620	613	605	602	600	602
8	600	601	602	607	604	604	603	603	602	604	610	608	609	610	616	628	630	632	641	632	660	632	614	609	600	615
9	600	557	554	568	577	566	607	613	613	615	616	614	617	618	621	627	625	630	638	628	624	629	620	614	611	609
10	611	611	611	613	614	612	612	594	597	601	605	608	611	613	613	615	617	617	617	615	616	616	614	594	603	610
11	603	608	612	613	614	613	613	615	617	618	618	619	618	617	618	620	622	622	623	626	627	629	628	623	614	618
12 Q	614	608	614	615	622	624	626	629	631	632	633	632	632	633	633	635	635	635	636	640	638	637	635	634	632	630
13	632	631	629	629	629	629	630	631	631	632	632	630	629	627	626	625	624	622	622	623	622	627	633	628	627	628
14 D	627	622	606	596	604	601	601	607	609	610	614	614	614	613	615	614	614	614	724	678	583	650	672	676	646	624
15	646	598	602	592	599	580	606	625	628	632	639	654	648	636	631	634	631	630	629	632	637	640	643	644	641	626
16	641	638	633	628	624	624	622	624	623	625	628	628	627	628	629	628	627	624	625	633	632	634	629	634	624	628
17	624	616	618	615	612	606	607	605	612	611	612	618	620	618	618	620	619	617	618	615	622	619	610	613	614	615
18	614	613	610	608	604	601	603	604	605	603	609	610	612	615	615	615	628	618	610	610	613	589	589	600	602	608
19 Q	602	602	601	602	599	597	594	594	592	595	594	595	597	598	599	599	596	596	598	596	595	593	593	595	599	597
20 Q	599	594	597	596	595	596	591	592	592	593	593	593	595	596	598	596	594	595	595	592	592	592	591	587	586	594
21 Q	586	591	593	592	591	591	590	588	586	585	585	584	584	587	589	589	589	588	586	585	584	581	577	582	582	587
22 Q	582	582	583	583	582	581	579	579	579	580	582	584	586	586	586	587	587	585	585	585	584	583	583	581	581	583
23	581	582	581	582	582	582	581	578	577	577	581	580	585	585	591	599	602	608	616	644	679	667	609	585	586	597
24 D	586	557	523	498	462	444	491	556	575	583	576	588	620	622	611	623	690	704	682	697	636	594	501	481	508	578
25 D	508	371	417	454	449	416	459	547	575	605	641	632	670	720	680	730	754	755	635	566	579	564	509	477	431	570
26 D	431	359	424	533	552	569	578	585	595	593	598	605	612	614	608	603	626	614	607	610	582	574	579	560	555	570
27	555	551	522	560	568	570	577	582	585	593	600	601	610	608	608	611	620	615	605	602	600	592	589	590	580	589
28	580	572	568	569	563	573	584	585	590	592	595	600	607	607	598	595	594	592	593	600	603	593	587	576	550	588
29	550	569	576	575	565	573	577	581	586	591	592	594	594	595	601	610	618	610	599	603	625	611	593	585	580	591
30	580	585	588	587	584	583	575	575	582	588	589	593	599	607	605	604	604	613	617	617	615	611	603	598	591	596
Mean	585	575	578	583	583	581	586	593	596	600	603	605	611	614	612	616	622	620	618	615	611	607	597	592	587	600

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS:

48. Lerwick.

MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

November, 1930.

Day.	Terrestrial Magnetic Elements.												Character Figure $\Sigma R^2$ 100γ <sup>2</sup>	Magnetic Character of Day (0-2).	Temperature in Magnet House. 200+						
	Horizontal Force.						Declination.									Vertical Force.					
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.		Maximum 14° +		Minimum 14° +		Range.					Maximum 46,000 γ +		Minimum 46,000 γ +		Range.	
1	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	251	I	78.3	
2	13 34	548	484	1 30	64	14 5	16.0	1.7	0 6	14.3	13 27	667	535	0 45	132	367	I	77.7			
3	23 56	571	505	14 59	66	15 26	14.9	-9.2	23 53	24.1	15 52	681	533	23 59	148	175	I	77.8			
4 D	0 1	568	499	0 54	69	13 59	12.0	-10.4	0 21	22.4	11 6	592	531	0 10	61	366	I	77.8			
5	21 39	593	476	10 19	117	11 23	20.5	-5.5	22 12	26.0	12 2	645	541	23 35	104	157	I	77.3			
6	19 35	578	502	16 34	76	13 40	12.8	-3.0	21 20	15.8	16 37	626	552	0 1	74	36	0	77.1			
7	5 15	539	501	12 28	38	11 20	13.0	5.5	16 50	7.5	16 42	609	576	3 22	33	71	0	77.2			
8	17 1	546	506	13 16	40	12 0	14.2	-0.3	19 42	14.5	18 31	632	590	0 30	42	298	I	77.3			
9	20 36	556	513	9 57	43	16 33	16.7	-16.7	20 32	33.4	20 5	688	598	0 33	90	222	I	77.7			
10	21 12	552	488	10 52	64	13 25	14.8	-6.8	21 8	21.6	17 35	649	550	2 5	99	89	0	78.3			
11	22 44	571	511	6 19	60	6 43	13.9	-1.2	23 59	15.1	17 15	620	586	7 9	34	42	0	78.0			
12 Q	19 52	536	512	10 50	24	13 55	10.5	-2.1	0 5	12.6	20 50	631	603	0 4	28	27	0	77.6			
13	0 23	537	519	10 20	18	11 50	10.5	2.8	3 21	7.7	18 55	642	606	0 30	36	35	I	78.0			
14 D	19 34	559	520	11 10	39	12 40	11.9	3.0	21 38	8.9	22 0	637	613	19 36	24	9384	2	78.7			
15	18 53	1006	394	21 24	612	20 20	121.6	-11.2	21 38	132.8	18 46	814	316	20 20	498	644	I	78.7			
16	5 33	528	341	0 35	187	12 38	14.5	-18.1	2 33	32.6	11 45	662	560	4 36	102	72	I	77.7			
17	23 55	539	503	0 1	36	13 20	10.7	-6.5	23 46	17.2	0 15	644	620	6 15	24	72	I	76.3			
18	21 30	541	497	8 25	44	11 41	13.6	-2.8	0 1	16.4	20 20	626	603	5 14	23	134	I	75.1			
19 Q	20 46	562	500	15 47	62	16 46	10.7	-8.2	20 43	18.9	15 53	637	581	21 37	56	18	0	74.4			
20 Q	16 13	541	518	11 25	23	12 22	11.1	3.4	5 17												

TERRESTRIAL MAGNETIC FORCE : HORIZONTAL COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

49. Lerwick. (H.)

14,000 γ (·14 C.G.S. unit) +

December, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	
1	514	517	529	511	526	535	532	529	527	515	506	514	514	515	517	523	520	520	524	526	526	524	524	527	526	526	522
2	526	524	524	527	528	530	530	528	524	518	521	521	520	522	520	520	523	521	523	524	526	521	517	519	526	527	523
3 D	527	531	539	539	544	541	537	538	533	509	504	508	498	510	643	963	886	928	868	650	515	434	428	368	332	581	
4 D	332	263	252	251	336	336	313	379	408	463	478	487	486	516	534	521	507	513	512	511	509	510	511	509	522	441	
5	522	510	503	506	508	509	512	512	513	511	512	514	517	518	518	518	519	516	518	519	515	515	514	513	513	514	
6	513	513	514	516	515	517	517	515	519	519	519	523	525	526	527	526	526	526	525	517	515	520	523	517	519	519	520
7	519	526	507	512	519	528	532	528	523	522	519	515	517	521	520	525	514	522	525	526	522	522	517	519	521	521	
8 Q	521	520	520	521	522	523	523	523	523	521	520	521	526	523	521	521	526	528	528	529	527	527	527	526	522	524	
9	522	522	521	522	526	527	528	530	531	531	527	523	521	517	520	520	521	524	526	523	521	523	523	527	524	524	
10	524	522	524	528	529	530	531	533	530	525	523	523	523	520	521	524	527	531	532	531	530	525	525	525	525	527	
11	525	532	534	529	531	534	534	532	531	529	525	523	523	522	526	529	530	531	531	526	525	526	526	529	526	528	
12	526	528	529	530	533	536	537	538	536	532	530	530	531	536	534	526	528	529	535	540	541	547	531	519	525	533	
13 D	525	513	519	538	528	531	532	533	533	528	530	525	523	511	522	537	525	504	526	540	531	528	540	526	517	526	
14	517	518	521	522	525	530	530	533	528	527	529	524	518	518	527	528	526	524	516	528	519	522	525	535	525	525	
15	525	523	521	524	526	526	527	528	530	526	523	520	517	511	516	528	536	534	534	533	526	525	525	529	526	526	
16 Q	526	522	523	524	526	527	528	529	528	523	523	525	525	527	529	532	533	533	529	526	530	531	529	528	527	527	
17 Q	527	526	527	526	528	531	531	529	528	528	526	526	525	528	532	533	535	536	537	535	533	532	529	528	527	530	
18 Q	527	527	527	529	530	531	532	530	529	532	535	536	536	537	539	537	537	536	535	535	534	532	531	531	531	533	
19	531	530	527	529	530	532	533	533	533	531	532	536	540	536	530	522	528	541	545	540	530	527	531	522	528	532	
20 D	528	529	528	530	530	533	546	538	534	534	535	530	527	530	530	537	537	523	639	631	507	520	519	519	508	538	
21 D	508	502	498	515	517	515	515	495	489	477	495	507	503	519	516	499	512	499	502	512	525	522	529	506	510	507	
22	510	513	511	517	519	500	522	523	521	512	510	511	512	515	510	511	507	521	512	526	512	524	526	525	516	516	
23	516	516	519	523	524	523	530	527	518	524	515	512	510	518	524	522	479	502	511	524	524	511	527	512	515	517	
24	515	522	520	510	519	529	536	525	513	521	521	518	508	501	506	516	518	514	513	514	512	522	525	521	520	518	
25	520	524	518	526	527	530	527	527	527	523	517	514	496	514	526	527	525	524	524	527	515	520	525	523	524	522	
26	524	525	525	527	529	530	528	525	530	526	528	526	520	518	520	521	518	516	534	525	524	521	526	518	515	524	
27	515	525	524	523	527	527	530	531	533	530	516	520	521	524	522	517	520	521	524	517	520	522	538	526	526	524	
28	526	524	524	528	529	536	532	530	528	525	525	525	525	524	524	525	523	524	528	528	527	526	525	523	523	526	
29	523	522	523	525	527	530	530	529	531	526	524	527	526	527	531	534	537	536	526	523	522	517	516	513	510	526	
30	510	519	522	522	525	526	526	526	526	521	518	519	524	522	521	525	525	527	527	524	529	524	521	522	522	523	
31 Q	522	522	520	520	521	524	524	524	523	523	526	527	527	527	530	532	533	533	531	532	533	533	530	527	525	527	
Mean	515	513	513	515	521	521	522	523	522	521	520	520	519	521	528	539	535	537	540	533	523	521	522	517	515	523	

MAGNETIC DECLINATION (WEST).

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

50. Lerwick. (D.)

14° +

December, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	5.8	8.5	0.6	5.8	5.8	2.9	5.8	7.4	7.6	8.4	8.0	9.7	10.5	10.1	8.0	7.6	7.8	8.2	7.4	6.8	6.8	6.2	6.0	4.5	6.0	6.9
2	6.0	6.2	7.4	7.0	6.2	6.2	6.2	6.2	6.6	7.6	8.9	9.1	9.1	8.9	8.4	8.0	6.6	6.6	6.4	6.4	6.2	2.8	5.8	6.2	6.8	6.9
3 D	6.8	7.6	6.8	6.2	7.4	9.1	8.0	7.2	6.6	10.3	15.5	12.4	14.1	16.3	18.8	7.6	14.7	23.0	73.4	42.7	8.7	4.5	12.5	11.1	24.8	12.0
4 D	-24.8	-24.7	-17.7	-21.9	-7.3	14.9	10.5	24.2	21.7	11.8	7.6	9.5	10.3	12.6	16.1	19.7	10.9	9.1	8.0	8.2	7.2	7.2	5.1	4.3	0.4	5.6
5	0.4	3.5	5.3	5.3	5.1	5.3	5.5	5.7	6.0	6.4	6.8	7.0	7.8	8.2	7.2	6.4	6.6	6.4	6.4	6.4	6.6	6.0	5.3	6.2	4.9	6.0
6	4.9	5.7	6.0	5.1	6.0	6.2	6.2	6.0	6.4	6.6	7.0	8.2	8.2	9.1	8.9	7.6	7.8	8.0	4.9	2.8	7.8	6.4	5.7	6.0	5.8	6.6
7	5.8	5.5	1.0	5.3	5.5	6.4	7.2	6.6	7.0	7.8	8.0	7.2	8.7	10.1	9.5	10.7	7.4	8.4	7.6	6.8	6.4	6.2	5.1	5.5	5.8	6.9
8 Q	5.8	5.7	6.2	6.6	6.8	6.6	6.6	6.6	6.6	6.8	7.0	8.0	9.1	10.1	9.5	8.4	8.0	7.6	7.0	6.4	6.4	6.0	5.7	5.7	5.7	7.0
9	5.7	5.7	6.0	6.6	6.8	6.6	7.0	6.6	6.8	7.0	7.4	8.2	9.3	10.5	11.2	10.9	10.1	8.2	5.7	8.2	7.0	5.8	5.1	5.3	4.9	7.4
10	4.9	6.0	6.2	6.6	6.8	7.6	6.6	7.0	7.0	7.4	8.0	9.9	10.7	10.3	10.5	9.7	8.4	8.2	7.6	7.0	6.4	4.7	2.9	5.5	5.3	7.3
11	5.3	6.8	5.8	6.2	6.4	6.2	6.4	6.2	6.2	6.8	7.2	7.0	8.4	8.7	8.7	8.4	8.2	7.8	7.2	7.0	6.6	6.0	5.1	5.5	6.0	6.9
12	6.0	5.8	6.6	6.8	6.6	6.8	6.6	6.6	6.6	6.8	7.4	8.5	9.1	10.1	10.3	12.0	14.3	14.9	11.2							

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT.  
 Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

51. Lerwick. (V.)

46,000 γ (·46 C.G.S. unit) +

December, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	599	570	558	571	569	575	582	587	592	595	603	605	606	606	611	612	611	609	604	600	601	602	602	599	598	595
2	598	597	598	594	594	592	592	592	594	595	596	599	603	605	607	607	606	607	605	604	607	612	612	606	606	601
3 D	606	603	592	596	594	593	594	595	597	605	605	609	626	665	728	499	736	570	569	524	572	656	607	556	429	600
4 D	429	442	427	383	369	353	418	428	434	530	593	642	638	668	681	669	641	628	621	630	632	623	617	614	599	550
5	599	588	607	610	609	607	602	599	598	596	597	599	601	600	603	606	608	610	610	612	618	620	621	623	621	606
6	621	623	624	623	626	626	626	627	624	624	625	625	629	635	638	639	639	638	643	649	647	643	638	641	637	633
7	637	607	613	623	627	625	624	626	624	621	621	625	625	632	636	640	649	641	635	633	631	629	631	628	625	628
8 Q	625	627	628	629	630	630	628	626	623	623	618	619	620	621	626	627	628	628	628	627	627	626	624	623	623	625
9	623	623	624	623	623	622	622	620	618	614	616	616	616	617	619	624	626	631	635	630	631	627	624	615	613	622
10	613	613	613	614	616	619	619	619	619	619	621	621	621	623	627	631	632	631	631	633	632	635	635	631	628	624
11	628	615	614	621	623	624	625	628	627	627	628	627	627	627	627	627	629	629	631	634	634	632	632	625	621	627
12	621	617	617	617	617	616	617	617	619	619	619	615	613	613	616	621	622	630	631	633	640	601	636	622	628	624
13 D	628	620	608	568	597	605	609	612	612	614	617	617	618	622	627	623	641	678	657	652	667	655	648	631	626	626
14	626	618	613	615	615	614	615	614	616	617	617	617	623	627	626	628	633	637	636	629	635	640	636	625	616	624
15	616	615	620	620	619	619	619	619	618	616	619	623	624	630	627	626	623	625	624	624	634	646	640	630	624	624
16 Q	624	624	620	616	615	616	614	614	614	615	616	618	621	621	621	621	618	617	618	620	618	618	619	619	619	618
17 Q	619	620	618	618	616	613	614	616	616	618	619	621	625	625	624	626	624	622	622	624	624	624	629	629	619	621
18 Q	630	630	631	628	628	627	626	626	626	625	626	629	632	634	637	638	636	635	635	634	634	634	635	636	637	631
19	637	634	635	634	633	632	629	627	626	625	625	625	623	627	632	639	639	635	632	630	634	634	627	627	623	631
20 D	623	627	629	629	630	629	620	623	623	622	622	625	627	628	632	635	642	697	765	720	703	666	650	641	628	646
21 D	628	594	618	622	620	619	616	622	628	658	671	665	670	678	669	695	683	714	709	673	646	639	618	597	625	648
22	625	632	629	621	619	621	619	624	629	632	634	634	634	638	645	654	674	672	671	656	645	633	618	584	634	634
23	580	597	613	620	620	623	621	621	624	622	626	626	627	627	629	633	669	645	645	632	628	633	602	589	559	623
24	559	585	601	599	600	611	612	618	621	618	621	622	625	636	646	648	657	671	672	648	638	629	621	620	617	625
25	617	597	598	598	608	612	611	617	617	621	625	627	635	632	626	629	633	634	633	631	641	637	628	613	604	621
26	604	615	620	620	620	621	622	622	616	622	623	624	626	629	630	636	640	648	644	638	636	637	628	621	620	627
27	620	617	623	621	618	615	618	619	620	623	630	630	628	627	632	637	642	641	639	644	645	641	620	618	621	628
28	621	625	626	625	623	616	622	626	627	628	632	632	636	627	628	631	633	632	630	630	630	631	632	633	631	628
29	631	629	628	626	625	625	624	626	625	627	631	633	633	632	630	630	628	631	639	652	653	657	656	659	652	635
30	652	642	638	636	633	632	632	632	632	633	635	637	639	640	642	642	643	642	641	648	644	645	650	650	648	640
31 Q	648	647	646	645	643	641	640	641	643	644	645	647	648	648	648	648	648	648	649	649	651	651	652	653	653	647
Mean	613	609	611	609	609	611	612	613	618	622	624	626	626	630	635	630	640	638	639	634	635	637	629	621	614	623

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS:  
 MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

52. Lerwick.

December, 1930.

Day.	Terrestrial Magnetic Elements.										Character Figure $\frac{E R^2}{100 \gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House $200^\circ +$					
	Horizontal Force.					Declination.								Vertical Force.				
	Maximum $14,000 \gamma +$		Minimum $14,000 \gamma +$		Range.	Maximum $14^\circ +$		Minimum $14^\circ +$		Range.				Maximum $46,000 \gamma +$		Minimum $46,000 \gamma +$		Range.
1	h. m.	γ	γ	h. m.	γ	h. m.	13-4	-1-5	h. m.	14-9	h. m.	γ	h. m.	γ	92	1	77-4	
2	22 45	531	501	9 45	30	1 8	13-4	-1-5	2 5	14-9	14 30	614	548	1 33	66	0	78-1	
3 D	5 22	532	514	21 34	18	11 11	10-1	1-0	20 46	9-1	20 55	615	591	5 30	24	2	78-6	
4 D	15 11	1292	195	21 12	1097	17 36	108-8	-55-3	14 56	168-6	15 51	829	185	15 8	684	20842	2	78-9
5	14 18	554	180	2 46	374	7 23	34-8	-36-2	2 44	71-0	14 26	695	318	4 37	377	3720	2	78-9
6	0 17	568	499	1 36	69	12 26	8-7	-15-0	0 8	23-7	23 17	625	575	0 20	50	173	1	78-3
7	18 31	537	505	19 28	32	13 20	9-9	-4-0	18 26	13-9	19 30	654	620	2 15	34	57	1	79-9
8 Q	0 37	545	501	1 29	44	15 13	12-0	-0-5	1 50	12-5	16 10	650	601	0 47	49	71	0	79-2
9	16 58	530	517	14 35	13	12 31	11-4	4-7	0 42	6-7	4	631	621	0 25	10	11	0	78-7
10	17 46	541	514	14 58	27	14 10	11-8	-3-4	17 40	15-2	17 37	646	609	23 35	37	62	0	78-5
11	16 12	537	514	13 43	23	11 45	11-8	-0-3	21 32	12-1	21 39	638	611	2 50	27	39	0	78-2
12	1 40	535	519	12 50	16	0 40	10-3	3-3	22 34	7-0	18 40	636	609	1 5	27	19	0	77-4
13 D	20 56	573	509	23 15	64	16 58	16-1	-10-9	22 22	27-0	21 10	717	612	12 40	105	281	1	77-3
14	21 53	581	494	16 48	87	15 34	18-5	-18-4	22 29	36-9	17 15	689	556	2 50	133	496	1	77-5
15	6 41	540	506	17 50	34	11 12	11-9	-6-6	22 48	18-5	and 17 52 21 23	644	609	1 35	35	85	1	78-0
16 Q	15 42	541	507	13 15	34	14 0	12-0	1-4	20 54	10-6	21 23	652	611	0 20	41	49	0	78-5
17 Q	17 5	534	519	1 18	15	11 23	9-3	4-9	3 45	4-4	1 20	625	611	3 30	14	8	0	78-0
18 Q	18 3	538	523	23 59	15	13 59	9-0	4-6	5 35	4-4	24 0	632	612	5 10	20	10	0	78-0
19	16 3	541	525	7 43	16	13 42	9-5	4-9	7 13									

DIURNAL INEQUALITIES OF THE TERRESTRIAL MAGNETIC ELEMENTS.—“ ALL ” DAYS.

Departures from mean of the day adjusted for non-cyclic change.

Table for 53. Lerwick. HORIZONTAL FORCE (all days). 1930. Columns: Hour, G.M.T. (1-24), Noon. Rows: Month and Season (Jan-Dec, Year, Winter, Equinox, Summer).

Table for 54. Lerwick. DECLINATION (all days). 1930. Columns: Hour, G.M.T. (1-24), Noon. Rows: Month and Season (Jan-Dec, Year, Winter, Equinox, Summer).

Table for 55. Lerwick. VERTICAL FORCE (all days except Nov. 25, 26, 27, 30; Dec. 14). 1930. Columns: Hour, G.M.T. (1-24), Noon. Rows: Month and Season (Jan-Dec, Year, Winter, Equinox, Summer).

Departures from mean of the day adjusted for non-cyclic change.

Month. and Season.	Hour. G.M.T.		HORIZONTAL FORCE (QUIET DAYS).																						
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
<b>56. Lerwick.</b>																									
<b>1930.</b>																									
Jan.	...	+ 0.1	- 0.3	+ 0.1	+ 1.5	+ 4.1	+ 6.5	+ 5.3	+ 1.7	- 4.1	- 5.9	- 9.7	- 11.3	- 10.3	- 4.7	- 2.1	- 1.7	+ 0.5	+ 3.9	+ 6.3	+ 6.7	+ 6.7	+ 4.1	+ 1.9	+ 1.3
Feb.	...	+ 1.6	+ 2.0	+ 3.7	+ 6.7	+ 8.5	+ 8.5	+ 8.2	+ 6.2	- 0.3	- 9.9	- 20.1	- 20.3	- 14.0	- 9.4	- 2.7	- 1.3	+ 1.5	+ 4.9	+ 6.6	+ 5.2	+ 4.7	+ 4.3	+ 3.1	+ 2.3
Mar.	...	+ 5.7	+ 5.2	+ 5.0	+ 5.9	+ 7.3	+ 7.9	+ 7.2	+ 3.4	- 5.7	- 15.3	- 21.0	- 21.0	- 19.6	- 12.5	- 4.7	- 0.2	+ 1.8	+ 5.7	+ 7.3	+ 9.3	+ 7.8	+ 6.6	+ 6.7	+ 7.1
April	...	+ 4.3	+ 1.6	+ 1.5	+ 3.9	+ 7.0	+ 6.1	+ 0.8	- 8.1	- 24.2	- 37.9	- 39.1	- 30.8	- 14.9	- 3.8	+ 7.5	+ 2.9	+ 18.0	+ 26.1	+ 24.0	+ 18.5	+ 11.4	+ 11.3	+ 9.1	+ 4.8
May	...	+ 6.5	+ 5.2	0.0	+ 1.5	+ 0.9	- 1.6	- 7.2	- 16.2	- 22.1	- 26.5	- 30.2	- 26.2	- 15.3	- 3.9	+ 9.9	+ 6.2	+ 21.6	+ 18.5	+ 22.3	+ 20.7	+ 11.8	+ 7.4	+ 7.3	+ 9.3
June	...	+ 5.9	+ 3.4	+ 2.4	+ 3.0	+ 0.9	- 3.3	- 6.7	- 12.2	- 22.6	- 29.8	- 30.0	- 27.1	- 14.1	- 3.4	+ 3.6	+ 3.8	+ 13.3	+ 16.5	+ 19.7	+ 23.0	+ 19.8	+ 14.2	+ 12.7	+ 7.1
July	...	+ 3.4	+ 0.3	+ 0.1	+ 0.7	+ 1.8	- 4.4	- 13.1	- 13.5	- 15.7	- 19.6	- 19.2	- 18.5	- 11.5	+ 0.1	- 0.4	+ 2.4	+ 15.1	+ 13.3	+ 20.0	+ 22.6	+ 17.5	+ 9.9	+ 7.1	+ 3.0
Aug.	...	+ 5.2	+ 5.9	+ 4.5	+ 0.8	- 1.9	+ 2.3	- 0.2	- 10.1	- 21.0	- 28.9	- 31.3	- 28.0	- 19.3	- 6.7	+ 1.2	+ 9.3	+ 25.8	+ 24.2	+ 25.3	+ 17.4	+ 10.5	+ 5.7	+ 4.4	+ 4.9
Sept.	...	+ 3.3	+ 6.3	+ 6.2	+ 9.6	+ 11.1	+ 7.1	+ 7.2	- 0.4	- 10.9	- 21.9	- 28.6	- 28.6	- 20.3	- 10.5	- 5.0	+ 5.8	+ 10.5	+ 12.3	+ 10.6	+ 12.6	+ 7.1	+ 4.7	+ 6.4	+ 5.4
Oct.	...	+ 3.7	+ 2.9	+ 3.2	+ 1.9	+ 5.7	+ 7.6	+ 5.4	+ 1.0	- 6.9	- 11.8	- 12.6	- 13.9	- 12.9	- 6.7	+ 0.3	+ 4.3	+ 5.9	+ 3.4	+ 2.8	+ 2.6	+ 3.8	+ 3.4	+ 3.4	+ 4.1
Nov.	...	- 1.1	- 2.7	- 0.9	+ 1.0	+ 2.6	+ 3.9	+ 3.0	+ 0.2	- 5.0	- 7.7	- 8.9	- 6.5	- 3.3	- 0.3	+ 1.4	+ 4.0	+ 5.2	+ 3.5	+ 3.4	+ 3.2	+ 3.3	+ 2.5	+ 0.1	- 0.9
Dec.	...	- 3.9	- 4.0	- 3.4	- 2.1	- 0.4	0.0	- 0.7	- 1.6	- 2.5	- 2.0	- 1.0	- 0.4	+ 0.2	+ 2.0	+ 2.7	+ 4.4	+ 4.7	+ 3.4	+ 2.8	+ 2.7	+ 2.2	+ 0.4	- 0.9	- 2.6
Year	...	+ 2.9	+ 2.1	+ 1.9	+ 2.7	+ 4.0	+ 3.4	+ 0.8	- 4.1	- 11.7	- 18.1	- 21.0	- 19.4	- 12.9	- 5.0	+ 0.9	+ 3.3	+ 10.3	+ 11.3	+ 12.6	+ 12.0	+ 8.9	+ 6.2	+ 5.1	+ 3.8
Winter	...	- 0.8	- 1.3	- 0.1	+ 1.8	+ 3.7	+ 4.7	+ 4.1	+ 1.6	- 3.0	- 6.4	- 9.9	- 9.6	- 6.9	- 3.1	- 0.2	+ 1.3	+ 3.0	+ 3.9	+ 4.8	+ 4.5	+ 4.2	+ 2.8	+ 1.1	0.0
Equinox	...	+ 4.3	+ 4.0	+ 4.0	+ 5.3	+ 7.8	+ 7.2	+ 5.1	- 1.0	- 11.9	- 21.7	- 25.3	- 23.6	- 16.9	- 8.4	- 0.6	+ 3.2	+ 9.1	+ 11.9	+ 11.2	+ 10.7	+ 7.5	+ 6.5	+ 6.4	+ 5.3
Summer	...	+ 5.3	+ 3.7	+ 1.7	+ 1.1	+ 0.4	- 1.7	- 6.8	- 13.0	- 20.3	- 26.2	- 27.7	- 24.9	- 15.1	- 3.5	+ 3.6	+ 5.4	+ 18.9	+ 18.1	+ 21.8	+ 20.9	+ 14.9	+ 9.3	+ 7.9	+ 6.1

<b>57. Lerwick.</b>																									
<b>1930.</b>																									
DECLINATION (QUIET DAYS).																									
Jan.	...	- 0.63	- 0.36	- 0.92	- 0.70	- 0.77	- 1.11	- 0.91	- 1.58	- 1.70	- 0.48	+ 0.65	+ 2.09	+ 2.43	+ 2.52	+ 1.82	+ 1.66	+ 1.19	+ 0.85	+ 0.25	- 0.48	- 1.10	- 0.90	- 1.01	- 0.81
Feb.	...	- 2.34	- 1.69	- 1.54	- 2.05	- 1.80	- 1.82	- 1.85	- 2.14	- 2.23	- 0.78	+ 1.43	+ 3.81	+ 5.07	+ 4.56	+ 4.99	+ 2.62	+ 1.29	+ 1.16	+ 0.50	+ 0.75	- 0.40	- 1.33	- 3.00	- 3.21
Mar.	...	- 0.85	- 1.03	- 1.07	- 1.12	- 1.23	- 1.45	- 1.97	- 3.10	- 3.13	- 1.23	+ 1.05	+ 3.86	+ 4.37	+ 3.85	+ 2.35	+ 0.84	+ 0.13	+ 0.11	+ 0.31	+ 0.34	+ 0.31	+ 0.19	- 0.75	- 0.78
April	...	- 0.28	- 0.61	- 1.43	- 2.29	- 3.30	- 3.50	- 4.60	- 5.31	- 4.01	- 0.21	+ 2.74	+ 4.56	+ 6.10	+ 5.57	+ 3.61	+ 2.29	+ 0.26	+ 0.32	+ 0.64	+ 0.73	+ 0.51	- 0.11	- 0.78	- 0.90
May	...	- 0.54	- 1.28	- 2.64	- 4.14	- 5.00	- 5.55	- 5.98	- 5.25	- 3.47	- 0.79	+ 1.87	+ 4.32	+ 5.81	+ 6.31	+ 5.05	+ 4.45	+ 3.49	+ 2.21	+ 0.60	+ 0.02	+ 0.74	+ 0.12	- 0.34	- 0.06
June	...	- 0.11	- 0.85	- 2.00	- 3.02	- 4.60	- 5.78	- 5.82	- 4.92	- 3.37	- 0.39	+ 2.45	+ 4.55	+ 5.53	+ 4.91	+ 3.67	+ 2.88	+ 1.92	+ 1.04	+ 0.98	+ 1.56	+ 1.46	+ 0.59	- 0.41	- 0.27
July	...	- 0.24	- 0.47	- 2.08	- 3.37	- 4.14	- 4.06	- 1.54	- 1.43	- 1.94	- 0.41	+ 0.78	+ 3.44	+ 3.86	+ 3.23	+ 2.22	+ 1.79	+ 2.04	+ 1.56	+ 0.52	+ 0.19	+ 0.94	+ 0.15	- 0.16	- 0.88
Aug.	...	- 2.16	- 1.98	- 1.33	- 2.37	- 2.12	- 3.49	- 3.89	- 4.02	- 3.02	- 1.51	+ 1.49	+ 4.55	+ 5.87	+ 6.01	+ 5.44	+ 3.96	+ 3.11	+ 1.05	+ 0.04	+ 0.03	- 0.45	- 1.58	- 1.32	- 2.31
Sept.	...	- 3.42	- 1.86	- 2.88	- 2.47	- 1.76	- 1.22	- 1.37	- 2.00	- 0.99	+ 1.27	+ 3.27	+ 5.25	+ 6.41	+ 5.43	+ 3.11	+ 1.48	- 0.95	- 0.20	- 0.04	- 0.61	- 1.40	- 1.42	- 1.68	- 1.95
Oct.	...	- 1.30	- 1.47	- 1.59	- 1.11	- 0.54	- 1.24	- 1.27	- 1.72	- 1.32	+ 0.16	+ 2.75	+ 3.95	+ 4.20	+ 4.09	+ 2.98	+ 1.69	+ 1.16	+ 0.22	- 0.39	- 0.88	- 1.83	- 2.76	- 2.07	- 1.71
Nov.	...	- 0.67	- 0.93	- 1.35	- 1.07	- 1.07	- 1.07	- 1.23	- 1.21	- 1.12	+ 0.06	+ 1.45	+ 2.77	+ 2.79	+ 2.08	+ 1.42	+ 1.21	+ 1.07	+ 0.69	+ 0.45	- 0.25	- 0.69	- 1.25	- 1.19	- 0.89
Dec.	...	- 0.90	- 0.80	- 0.71	- 0.77	- 0.93	- 1.19	- 0.95	- 0.77	- 0.50	+ 0.26	+ 1.20	+ 1.56	+ 1.84	+ 1.68	+ 1.42	+ 0.95	+ 0.83	+ 0.75	+ 0.09	- 0.33	- 0.67	- 0.70	- 0.66	- 0.70
Year	...	- 1.12	- 1.11	- 1.63	- 2.04	- 2.27	- 2.62	- 2.61	- 2.79	- 2.23	- 0.34	+ 1.76	+ 3.73	+ 4.52	+ 4.19	+ 3.17	+ 2.15	+ 1.29	+ 0.81	+ 0.33	+ 0.09	- 0.21	- 0.75	- 1.11	- 1.21
Winter	...	- 1.13	- 0.95	- 1.13	- 1.15	- 1.14	- 1.30	- 1.23	- 1.43	- 1.39	- 0.23	+ 1.18	+ 2.56	+ 3.03	+ 2.71	+ 2.41	+ 1.61	+ 1.09	+ 0.86	+ 0.32	- 0.08	- 0.71	- 1.05	- 1.47	- 1.40
Equinox	...	- 1.46	- 1.24	- 1.74	- 1.75	- 1.71	- 1.85	- 2.30	- 3.03	- 2.36	0.00	+ 2.45	+ 4.41	+ 5.27	+ 4.73	+ 3.01	+ 1.57	+ 0.15	+ 0.11	+ 0.13	+ 0.11	- 0.60	- 1.03	- 1.32	- 1.33
Summer	...	- 0.76	- 1.15	- 2.01	- 3.23	- 3.97	- 4.72	- 4.29	- 3.91	- 2.95	- 0.77	+ 1.65	+ 4.21	+ 5.27	+ 5.11	+ 4.09	+ 3.27	+ 2.64	+ 1.47	+ 0.53	+ 0.45	+ 0.67	- 0.18	- 0.53	- 0.88

<b>58. Lerwick.</b>																									
<b>1930.</b>																									
VERTICAL FORCE (QUIET DAYS).																									
Jan.	...	+ 1.0	- 2.9	- 3.8	- 3.9	- 5.2	- 6.8	- 6.1	- 3.6	- 1.5	- 0.8	+ 1.3	+ 2.8	+ 2.4	+ 3.5	+ 4.4	+ 3.9	+ 2.8	+ 1.3	+ 1.1	+ 1.2	+ 0.9	+ 2.2	+ 2.7	+ 2.8
Feb.	...	- 3.2	- 5.0	- 6.9	- 9.6	- 9.5	- 7.8	- 6.9	- 5.4	- 2.5	+ 1.0	+ 3.0	+ 1.3	- 0.8	- 0.4	+ 1.3	+ 5.0	+ 8.9	+ 6.8	+ 6.7	+ 8.0	+ 8.7	+ 6.4	+ 2.8	- 1.9
Mar.	...	+ 0.1	+ 0.2	+ 0.2	+ 0.2	- 0.5	- 0.3	- 0.1	+ 1.4	+ 1.4	- 0.6	- 3.1	- 4.3	- 3.3	- 2.4	- 1.2	+ 1.2	+ 0.7	+ 0.1	+ 0.7	+ 0.8	+ 2.6	+ 3.0	+ 1.7	+ 1.1
April	...	- 8.9	- 3.9	- 12.1	- 9.7	- 10.7	- 4.9	+ 0.5	+ 1.9	+ 3.5	+ 3.9	+ 1.1	- 2.7	- 4.5	- 0.9	+ 5.3	+ 10.5	+ 11.1	+ 11.3	+ 9.9	+ 8.3	+ 5.7	- 0.5	- 5.3	- 9.9
May	...	- 3.3	- 4.7	- 1.0	+ 0.6	+ 1.4	- 0.5	+ 0.1	- 1.7	- 5.1	- 9.3	- 11.0	- 12.3	- 9.8	- 4.5	+ 2.3	+ 9.7	+ 8.9	+ 13.9	+ 9.8	+ 8.6	+ 7.6	+ 4.1	- 0.1	- 3.7
June	...	+ 0.9	+ 0.5	+ 0.2	+ 0.9	- 1.3	- 3.8	- 5.3	- 3.1	- 2.8	- 3.6	- 5.1	- 8.5	- 9.0	- 5.9	+ 1.3	+ 8.4	+ 7.4	+ 8.3	+ 6.5	+ 3.6	+ 3.7	+ 4.3	+ 0.4	+ 2.0
July	...	- 2.2	- 5.8	- 3.8	- 2.0	- 2.8	- 1.6	- 6.0	- 8.8	- 7.0	- 9.2	- 11.0	- 7.2	- 5.0	+ 0.4	+ 5.8	+ 6.4	+ 5.4	+ 9.8	+ 10.6	+ 11.8	+ 10.8	+ 10.0	+ 4.2	- 2.4
Aug.	...	- 20.8	- 15.2	- 10.3	- 5.9	- 4.5	- 6.3	- 2.2	0.0	0.0	+ 1.4	+ 1.5	+ 0.5	- 0.3	+ 3.9	+ 6.6	+ 6.8	+ 9.2	+ 19.6	+ 22.3	+ 17.9	+ 12.7	+ 3.7	- 17.4	- 23.4
Sept.	...	- 13.0	- 12.7	- 12.3	- 6.6	- 0.6	+ 2.3	+ 1.3	+ 1.8	+ 3.4	+ 4.9	+ 3.7	- 0.4	- 0.6	+ 1.5	+ 5.7	+ 6.2	+ 12.2	+ 10.5	+ 7.5	+ 4.2	+ 2.0	- 3.1	- 7.1	- 11.2
Oct.	...	- 7.8	- 7.7	- 5.2	- 4.7	- 6.8	- 6.3	- 5.0	- 3.1	- 3.0	- 2.5	- 3.2	- 1.5	- 2.0	+ 0.3	+ 5.2	+ 8.3	+ 8.6	+ 11.9	+ 12.0	+ 10.1	+ 6.8	+ 2.3	- 2.0	- 4.7
Nov.	...	- 3.8	- 1.5	- 1.4	- 1.1	- 1.0	- 2.6	- 2.1	- 2.4	- 1.3	- 0.8	- 0.5	+ 0.9	+ 2.1</											

DIURNAL INEQUALITIES OF THE TERRESTRIAL MAGNETIC ELEMENTS—SELECTED DISTURBED DAYS.

Departures from mean of the day adjusted for non-cyclic change.

Table for 59. Lerwick. HORIZONTAL FORCE (DISTURBED DAYS). 1930. Columns: Hour (I-24), G.M.T. (1-24), and values for each hour. Rows: Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec, Year, Winter, Eqnx, Sumr.

Table for 60. Lerwick. DECLINATION (DISTURBED DAYS). 1930. Columns: Hour (I-24), G.M.T. (1-24), and values for each hour. Rows: Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec, Year, Winter, Eqnx, Sumr.

Table for 61. Lerwick. VERTICAL FORCE (DISTURBED DAYS). 1930. Columns: Hour (I-24), G.M.T. (1-24), and values for each hour. Rows: Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec, Year, Winter, Eqnx, Sumr.

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS, YEAR AND SEASONS OF 1930.										AVERAGE DEPARTURE OF THE INDIVIDUAL VALUES FROM MEAN OF THE DAY.								
NOTE.—The ranges are those shown in Tables 53 to 61 in the preparation of which the non-cyclic change has been eliminated.																		
62. Lerwick. 1930.										63. Lerwick. 1930.								
Month and Season.	" All " Days.			Quiet Days.			Disturbed Days.			H.	D.	V.	H.	D.	V.	H.	D.	V.
	H.	D.	V.	H.	D.	V.	H.	D.	V.									
January ...	γ	'	γ	γ	'	γ	γ	'	γ	γ	'	γ	γ	'	γ	γ	'	γ
February ...	23.9	7.88	47.6	18.0	4.22	10.7	68.2	17.60	149.2	5.4	2.15	13.3	4.2	1.12	2.9	13.5	4.32	42.2
March ...	45.6	9.07	71.1	28.8	8.28	18.5	192.3	23.97	194.2	11.2	2.41	19.0	6.5	2.18	5.0	39.2	5.34	44.7
April ...	49.9	10.51	90.4	30.4	7.50	7.3	162.1	17.39	205.6	14.2	2.57	24.7	8.3	1.48	1.3	35.4	4.53	58.4
May ...	108.9	11.80	118.9	65.2	11.41	23.4	287.2	19.26	237.4	25.5	3.12	33.7	13.2	2.28	6.1	53.0	4.35	63.5
June ...	124.8	11.36	113.2	52.5	12.24	26.2	332.5	18.65	274.1	31.7	3.53	32.3	12.4	2.92	5.6	68.3	5.20	76.4
July ...	88.4	9.93	96.5	53.1	11.35	17.4	245.0	18.02	208.7	25.5	2.93	26.7	12.4	2.63	4.0	56.3	4.47	62.7
August ...	76.5	9.34	72.4	42.2	8.00	22.8	182.9	16.35	207.9	21.1	2.79	19.8	9.7	1.73	6.3	38.1	4.00	53.2
September ...	72.0	9.27	92.9	57.1	10.03	45.7	189.3	10.02	221.9	20.0	2.64	25.4	12.3	2.63	8.8	43.9	2.49	60.6
October ...	64.7	10.13	82.0	41.3	9.83	25.2	193.8	17.53	223.6	15.9	2.67	24.3	10.5	2.19	5.6	53.7	4.17	66.8
November ...	47.4	11.04	73.6	21.5	6.96	19.8	232.5	17.96	163.4	11.2	2.37	20.4	5.4	1.77	5.5	41.4	3.54	44.4
December ...	31.1	6.90	46.1	14.1	4.14	7.3	148.9	13.46	164.8	6.2	1.59	12.5	3.1	1.17	1.8	24.0	3.39	43.4
Year ...	27.0	6.71	30.3	8.7	3.03	6.7	147.6	23.94	109.7	5.9	1.59	9.7	2.1	0.88	1.9	34.9	5.08	33.6
Winter ...	54.7	8.11	74.2	33.6	7.31	13.0	147.0	14.24	180.3	15.4	2.34	21.4	7.7	1.92	3.8	39.4	3.53	53.0
Equinox ...	27.3	7.56	45.5	14.7	4.50	8.8	121.0	16.23	143.0	6.9	1.88	13.4	3.5	1.31	2.6	25.3	4.11	40.3
Summer ...	58.0	10.17	88.7	37.2	8.30	15.9	171.6	15.20	191.3	16.1	2.59	25.5	9.1	1.82	4.0	43.5	3.65	57.9
Year ...	82.4	9.53	90.6	49.5	9.99	19.8	189.6	14.36	215.4	24.3	2.90	26.0	11.6	2.45	5.8	49.6	3.75	62.3

NON-CYCLIC CHANGE (24h.—oh.).

MEAN VALUES OF THE SQUARES OF THE ABSOLUTE DAILY RANGES.\*\* (Unit, 100γ².)

64. Lerwick. 1930.										65. Lerwick. 1930.					
Month.	" All " Days.			Quiet Days.			Disturbed Days.			R <sub>H</sub> <sup>2</sup>	R <sub>D</sub> <sup>2</sup>	R <sub>V</sub> <sup>2</sup>	R <sub>H</sub> <sup>2</sup> + R <sub>D</sub> <sup>2</sup>	R <sub>H</sub> <sup>2</sup> + R <sub>D</sub> <sup>2</sup> + R <sub>V</sub> <sup>2</sup>	Mean Character Figure.
	H.	D.	V.	H.	D.	V.	H.	D.	V.						
January ...	γ	'	γ	γ	'	γ	γ	'	γ	170	143	180	312	493	1.00
February ...	+0.7	+0.20	-0.5	0.0	+0.32	-2.8	-9.6	-1.84	-7.0	*469	*144	*350	*613	*962	1.14
March ...	-0.4	-0.47	-1.9	-0.8	-0.22	-0.6	-13.6	-4.34	-13.0	427	177	413	604	1017	1.03
April ...	0.0	+0.21	+0.1	-1.0	-0.36	+4.0	-20.8	+2.42	-39.4	1511	377	943	1888	2831	1.23
May ...	+0.8	-0.16	+0.9	+2.8	+0.56	+10.6	+5.6	-4.22	-2.0	1585	321	759	1905	2664	1.26
June ...	-5.1	-0.45	-7.0	+8.6	+0.46	-4.2	+18.4	+1.00	-87.0	984	184	510	1167	1677	1.03
July ...	+4.2	+0.49	+5.8	+8.8	+0.22	+1.6	-48.2	-2.90	-74.4	683	126	429	809	1238	1.00
August ...	+0.4	-0.10	+2.2	+1.0	+0.56	-7.8	+13.8	+1.24	-12.4	754	216	485	970	1455	1.03
September ...	0.0	0.00	-1.0	+6.6	+1.30	-10.4	-8.6	-2.56	-10.4	761	243	519	1004	1523	1.00
October ...	-0.3	-0.13	-0.3	+8.4	+2.74	+26.8	-80.4	0.00	-81.0	685	250	521	935	1456	0.94
November ...	-0.6	-0.10	-2.7	+2.0	+0.44	+4.8	-17.2	+0.04	+4.8	315	225	276	540	816	0.83
December ...	+0.2	+0.07	+1.9	+0.4	-0.18	-2.6	-14.0	-1.08	-8.4	491	264	234	754	988	0.58
Year 1930 ...	+0.4	0.00	+1.7	+1.8	-0.26	+3.2	-6.2	-0.62	-1.4	736	222	468	959	1427	1.01

\* Mean of 26 days: 12th, and 13th omitted.

\*\*R<sub>D</sub> in this Table is used to signify the range in declination converted into units of force of the component perpendicular to the magnetic meridian. See also p. 32.

MEAN MONTHLY AND ANNUAL VALUES OF TERRESTRIAL MAGNETIC ELEMENTS.

(All days except those noted in monthly tables).

66. Lerwick. 1930.									
Month.	North Component.	West Component.	Vertical Component.	Total Force.	Declination. (West.)		Inclination (North.)		Horizontal Force.
	γ	γ	γ	γ	°	'	°	'	γ
January ...	14092	3584	46699	48910	14	16.2	72	42.3	14541
February ...	14086	3576	46650	48862	14	14.7	72	41.8	14533
March ...	14088	3573	46624	48837	14	13.8	72	41.2	14534
April ...	14078	3569	46620	48830	14	13.6	72	41.8	14524
May ...	14082	3565	46588	48800	14	12.4	72	41.0	14526
June ...	14085	3565	46621	48833	14	12.3	72	41.5	14529
July ...	14093	3561	46645	48857	14	10.8	72	41.5	14535
August ...	14084	3557	46617	48828	14	10.4	72	41.5	14527
September ...	14078	3551	46615	48823	14	9.3	72	42.0	14519
October ...	14078	3544	46592	48801	14	7.8	72	41.6	14518
November ...	14083	3542	46600	48810	14	7.1	72	41.6	14521
December ...	14085	3540	46623	48833	14	6.5	72	41.9	14523
Year 1930 ...	14084	3561	46624	48835	14	11.2	72	41.6	14527

Date.	Month.	Date.	Month.	Date.	Month.	Date.	Month.
	<b>January.</b>		<b>March.</b>		<b>April (contd.)</b>		<b>October (contd.)</b>
3	☒ Aurora visible through cloud, 20.30-20.47.	1	.. Cloudy to overcast.	24	.. Cloudy to overcast.	23	☒ Glow, 20.50-21.05.
4	☒ Aurora, 18.45-20.45.	4	.. Cloudy.	25	☒ Glow seen through breaks in cloud, 21.00-22.00.	24	.. Variable sky.
5	☒ Aurora, 17.30-19.35.	5	.. Cloudy to fine.			25	☒ Glow, 19.00-22.00 and onwards.
6	.. ☒ Cloudy to overcast, rain.	9	.. Fair to fine. Moonlight.	26	.. ☒ Cloudy to overcast.	26	☒ Aurora, 18.58-23.45, eclipsed by cloud and rain.
8	.. Fair to cloudy, showers. Moonlight.	10	.. ☒ Cloudy. Moonlight.	27	.. ☒ Cloudy.	27	☒ Cloudy to overcast, rain. Glow, 17.00-19.00.
9	.. ☒ Cloudy, hail showers. Moonlight.	11	☒ Aurora, 20.35-21.10, through breaks in cloud.	29	.. ☒ Cloudy.	28	☒ Glow, 17.00-24.00 and onwards.
10	.. ☒ Cloudy, showers. Moonlight.	12	.. ☒ Cloudy. Moonlight.			29	☒ Cloudy to overcast. Glow visible, 19.00.
11	.. ☒ Cloudy, hail and sleet showers. Moonlight.	13	☒ Aurora, 20.05-22.10.			30	☒ Cloudy with snow, becoming fine. Glow, 20.00-24.00 and onwards.
12	.. Fair to cloudy. Moonlight.	14	.. Fair, becoming overcast with snow. Moonlight.			31	☒ Aurora, 20.15-24.00.
13	.. ☒ Cloudy, showers. Moonlight.	15	☒ Aurora, 19.45-20.25 and 21.30-21.50.		<b>September.</b>		
14	.. Fair to cloudy, showers. Moonlight.	16	.. ☒ Cloudy.	1	☒ Cloudy, showers. Glow through breaks in cloud, 21.00-21.15.		<b>November.</b>
15	.. ☒ Cloudy, showers. Moonlight.	17	.. ☒ Cloudy.	2	.. Fair or cloudy. Moonlight.	1	.. Fine. Moonlight.
17	☒ Aurora, 19.00-19.35.	18	☒ Aurora, 19.40-23.00 and onwards.	3	☒ Aurora, 20.45-23.40.	2	.. ☒ Cloudy to overcast. Moonlight.
18	.. ☒ Cloudy to overcast.	19	☒ Snow until 21.30: glow, 21.45-22.45 above cloud.	8	.. ☒ Cloudy, showers. Moonlight.	3	.. ☒ Cloudy. Moonlight.
19	.. ☒ Cloudy.	21	☒ Aurora, 21.15-23.00 and onwards.	9	.. ☒ Cloudy, occasional rain. Moonlight.	4	☒ Aurora, 21.33-23.00.
20	☒ Glow, 18.30-24.00 and onwards.	22	☒ Aurora, 20.45-21.08, eclipsed by clouds.	10	.. ☒ Cloudy, occasional rain. Moonlight.	5	.. Fair. Moonlight.
22	.. ☒ Cloudy to overcast.	23	☒ Aurora, 21.15-22.35, eclipsed by cloud.	11	.. ☒ Cloudy. Moonlight.	8	.. Fair, showers. Moonlight.
23	☒ Aurora, 21.10-21.20.	24	.. ☒ Cloudy.	12	.. ☒ Cloudy. Moonlight.	9	.. Fair to overcast. Moonlight.
25	.. ☒ Overcast, becoming fine later.	25	.. ☒ Overcast to cloudy, occasional rain or drizzle.	13	.. Fair. Moonlight.	11	.. Fair. Moonlight.
26	.. Fine.	26	.. Fine to overcast.	14	.. ☒ Cloudy. Moonlight.	15	☒ Aurora, 00.46-05.00 and 20.30-24.00.
27	.. ☒ Cloudy, drizzle, becoming fair.	27	.. Fair to cloudy.	15	.. Fine. Moonlight.	16	☒ Cloudy, snow showers. Glow seen 20.00-23.00.
28	.. ☒ Cloudy.	28	.. ☒ Overcast to cloudy.	17	.. ☒ Cloudy.	17	☒ Faint continuous glows.
29	.. Fair.	29	☒ Aurora, 20.24-22.00.	19	☒ Faint glow seen during only clearance of sky, 20.50-21.20.	18	☒ Glow seen through break in cloud, 20.00.
	<b>February.</b>	30	.. Fair to fine.	21	☒ Aurora, 20.00-23.03.	21	☒ Glow, 18.00-18.45 and 21.25-22.00, through cloud.
1	.. Fair to cloudy.	31	.. ☒ Cloudy to fair.	22	.. ☒ Cloudy.	22	.. Fair to cloudy.
2	.. ☒ Cloudy.			24	☒ Aurora, 21.30-23.03.	24	☒ Aurora, 18.00-18.30, through cloud.
3	.. ☒ Cloudy to overcast, snow and sleet showers.		<b>April.</b>	26	☒ Cloudy, becoming fair. Glow, 21.20-22.00.	25	☒ Aurora, 16.40-01.00.
4	.. ☒ Cloudy.	4	.. ☒ Cloudy.	27	.. ☒ Cloudy to overcast.	26	☒ Glow through breaks in cloud, 23.30-24.00.
5	.. Fair to cloudy, hail and sleet showers. Moonlight.	6	.. ☒ Cloudy.	30	☒ Glow seen through breaks in clouds, 19.55-22.00.	28	.. ☒ Cloudy. Moonlight.
6	.. Fair to cloudy, hail and snow showers. Moonlight.	7	.. ☒ Cloudy to overcast. Moonlight.			29	.. ☒ Cloudy to overcast. Moonlight.
8	.. Fair to cloudy. Moonlight.	10	.. ☒ Cloudy to overcast. Moonlight.		<b>October.</b>		<b>December.</b>
9	.. ☒ Cloudy to overcast. Moonlight.	12	.. Mainly fair. Moonlight.	1	☒ Weak continuous glow through breaks in cloud.	2	.. Fine to cloudy. Moonlight.
10	.. Fair, becoming cloudy with intermittent rain. Moonlight.	13	.. ☒ Overcast to cloudy. Moonlight.	2	.. ☒ Cloudy.	5	.. ☒ Cloudy. Moonlight.
11	.. ☒ Cloudy. Moonlight.	14	☒ Glow visible through breaks in clouds after 21.00.	6	.. ☒ Cloudy. Moonlight.	6	.. ☒ Cloudy. Moonlight.
12	.. ☒ Cloudy. Moonlight.	15	☒ Cloudy. Glow seen once through break in cloud at 22.30.	7	.. Fine. Moonlight.	8	.. ☒ Cloudy. Moonlight.
13	.. ☒ Cloudy to overcast. Moonlight.	16	☒ Cloudy. Glow visible through breaks in cloud, 21.15-22.30.	8	☒ Glow visible, 19.45-22.00.	9	.. ☒ Overcast, becoming fair. Moonlight.
14	☒ Glow, 19.30-19.45. Moonlight.	17	☒ Cloudy. Glow visible through breaks in cloud, 21.30-22.00.	9	☒ Aurora, 19.45-23.00.	10	.. Fine.
15	☒ Bright aurora through breaks in cloud.	18	☒ Cloudy to fine. Weak glow seen after 22.30.	11	.. Fair, Moonlight.	11	.. Fair.
16	☒ Aurora, 19.05-22.00 and onwards through breaks in cloud.	19	.. ☒ Cloudy.	12	.. Fair to cloudy, showers. Moonlight.	13	☒ Glow, 19.00 onwards.
17	☒ Aurora, 18.55-22.35 and onwards.	20	☒ Cloudy to overcast. Glow seen once through break in cloud, 21.15-21.30.	16	☒ Aurora, 20.15-21.40.	14	.. Fair—cloudy.
18	☒ Glow, 21.20 and 21.45.	21	.. ☒ Cloudy to overcast. Glow seen through breaks in clouds at 19.18 and 23.00.	18	☒ Aurora, 19.50-01.25.	19	☒ Glow through breaks in cloud, 21.50-23.15.
19	☒ Glow visible through breaks in cloud, 19.00-22.00.	22	☒ Cloudy. Aurora seen through breaks in cloud, 21.20-22.00.	19	☒ Glow visible through breaks in clouds at 19.18 and 23.00.	20	☒ Aurora, 17.15-01.45.
20	☒ Aurora, 20.01-22.30.	23	.. ☒ Cloudy to overcast, rain.	20	☒ Glow visible through breaks in clouds at 19.18 and 23.00.	21	☒ Aurora, 18.00-24.00.
21	☒ Glow seen through breaks in cloud, 22.20-23.15.			21	☒ Glow visible through breaks in clouds 19.00 and 20.00.	24	.. Variable sky.
22	☒ Aurora, 21.40-22.37.			22	☒ Glow, 21.10-21.40.	28	.. Fair.
25	.. ☒ Cloudy to overcast, sleet showers.					29	☒ Glow, 22.05-22.20.
26	.. Fair to fine.					30	.. Fair to cloudy.
27	.. ☒ Cloudy to overcast.					31	.. ☒ Cloudy.
28	.. ☒ Cloudy to overcast.						

In the interests of brevity there have been omitted from the table above all dates on which the sky throughout the evening remained completely overcast and on which, therefore, no opportunity arose of determining whether or not aurora occurred. The nights on which aurora was actually seen are indicated by the symbol ☒. The nights on which aurora was not seen, despite at least an occasional interval of more or less clear sky, are indicated by the symbol ..; in the latter case also, remarks on the weather are added to assist the reader in judging how far the fact of no observation of aurora may be taken as indicating that there was not actual aurora. A full description is available of the auroral phenomena observed.





M.O. 340  
(Aberdeen)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1930

Comprising the meteorological and geophysical results obtained from autographic records and eye observations at the observatories at Lerwick, Aberdeen, Eskdalemuir, Cahirciveen (Valentia Observatory), and Richmond (Kew Observatory), and the results of soundings of the upper atmosphere by means of registering balloons.

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ABERDEEN

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METEOROLOGICAL COMMITTEE



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1932

## ABERDEEN OBSERVATORY.

Latitude	..	..	..	..	..	57° 10' N.
Longitude	..	..	..	..	..	2° 6' W.
G.M.T. of Local Mean Noon	..	..	..	..	..	12h. 8m.

### *Heights in metres above Sea-Level.*

Barometer	..	..	..	..	..	26·0*
Rain-gauge	..	..	..	..	..	11·4*
Robinson Cup Anemograph	..	..	..	..	..	36*
Dines Tube Anemograph	..	..	..	..	..	21

### *Heights in metres above ground.*

Thermometer Bulbs, North Wall Screen	..	..	..	..	..	12·5
Sunshine Recorder	..	..	..	..	..	20·7
Robinson Cup Anemograph	..	..	..	..	..	23
Dines Tube Anemograph	..	..	..	..	..	13
Beckley Rain-gauge Rim	..	..	..	..	..	0·6

## INTRODUCTION.

### SITE

The Observatory, which was established in 1868, is housed in the top floor of the Cromwell Tower of King's College in Old Aberdeen. The College lies on a plain gradually rising from the sea from which it is distant about 1 mile (1·6 km.). There are no serious irregularities of surface in the vicinity excepting the two river valleys of the Don and the Dee. To the north at a distance of about 1 km. the Don flows eastwards to the sea; the Dee flows into the sea at a distance of about 3 km. to the south-east of the College. Between the College and the sea is a golf course covered for the most part with grass. Westwards is the High Street of the Old Town and beyond this there is another street. Further west grass pasture extends for about one kilometre. Southward are some open spaces beyond which the modern town is reached. The enclosure in which the Stevenson screen, the Beckley and check rain-gauges and the grass minimum thermometer are exposed, had its position changed in 1928 on account of the extension of the College buildings. Its position was, in previous years, about 50 metres to the north-east of the Observatory, but from the 1st June, 1928 and onwards, the site has been a new one, also to the north-east of the Observatory, but at a distance of approximately 180 metres. The height of this "station" above M.S.L. is 11·4 metres. The "North-wall" screen in which the recording thermometers are exposed is erected on the wall outside the north window of the uppermost storey of the Observatory. The nature of the soil and sub-soil is loam and sand.

Plans showing the position of the Observatory relative to the City of Aberdeen and the general arrangement of the College Buildings, and also photographs, are given in the volume for 1928. The enclosure shown is that on the new site. A view of the old site will be found in the Introduction to the Observatories' Year Book, 1923.

*Change of value adopted for height of Station above Mean Sea Level.*—There have been one or two changes lately in the values adopted for the height of the Station above Mean Sea Level. Prior to 1st January, 1925, the value for the station level was 14·0 m., and that for the height of the barometer cistern was 26·8 m. As from

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\* These values differ slightly from those given in former years. See note above.

1st January, 1925, however, following a careful redetermination of these heights, the values were altered to 13.4 m. for the station level, and 26.0 for the height of the barometer cistern. The change of site of the rain-gauge enclosure, referred to above, has further altered the value for the station level to 11.4 m. as from 1st June, 1928, but the height of the barometer cistern remains as before, viz. 26.0 m.

### METEOROLOGY.

The elements dealt with in the following tables are:—Atmospheric pressure, air temperature, humidity, rainfall, sunshine, wind speed and direction, earth temperature and minimum temperature on the grass, together with a diary of cloud and weather.

The instruments from which values of the above elements have been obtained and the methods of tabulating the records are described in the General Introduction to this volume. The following additional information refers especially to Aberdeen.

*Pressure and Temperature.*—The photo-barograph, standard Fortin barometer and thermograph are housed in the Observatory room. The pressure scale value of the photo-barogram is 1 mb. = 1.18 mm. on the paper, when the paper is at normal atmospheric humidity. In similar circumstances the time scale is 1 hour = 9.3 mm. The records of the photo-barograph are standardized by means of control readings taken from the standard barometer. Up to the end of 1928 this instrument was Fortin Standard Barometer M.O. 273, but from the 1st January, 1929, it has been replaced by Fortin Standard Barometer M.O. 1149. The N.P.L. certificate of this latter barometer shows a standard temperature varying from 286° A at 1,050 mb. to 287° A at 910 mb.; corresponding corrections have been applied to the control readings.

The recording thermometers are placed in the North-wall screen already referred to. The scale value of the wet bulb thermograph record is 1° absolute = 3.20 millimetres on the paper; for the dry bulb thermograph the scale value varies slightly with the temperature, but is approximately 1° absolute = 3.4 millimetres. The time scale is 1 hour = 9.23 millimetres. Reading of the photothermograms is done by means of glass measuring scales, the records being standardized by control readings from Standard Thermometers M.O. 1698 (dry bulb) and M.O. 1697 (wet bulb). These thermometers have corrections, varying at different parts of the scale, of between -0.1° A and +0.2° A; these corrections have been applied to the control readings. The heights of the barometer cisterns and of the bulbs of the thermometers are given at the top of the appropriate tables.

It may be here emphasized that the bulbs of the thermometers in the North-wall screen are at the considerable height of 12.5 metres above the ground, and that readings from these thermometers are exclusively used for this publication (except as noted below under *Humidity*) and for the corresponding summaries printed in the *Monthly Weather Report*.\*

*Rainfall.*—The recording instrument in use is Beckley rain-gauge No. 2 with an area of 101.1 square inches (653 cm<sup>2</sup>). The procedure adopted in tabulating the records is similar to that described in the General Introduction and calls for no comment. Control was by check gauge M.O. 266 during the year 1930.

*Humidity.*—On those occasions when the temperature of the wet bulb has been 273° A or under, the relative humidity has been obtained from the records of a hair hygograph. This instrument is accommodated inside the new large Stevenson screen at the new site. The hygograph is now 13.2 metres below the level of the thermograph bulbs in the North-wall screen, and in using its records an appropriate adjustment is made.

\* The temperatures for Aberdeen published in the *Daily Weather Report*, and summaries from them given in the *Weekly Weather Report* are from different thermometers, viz., those in the Stevenson Screen with their bulbs only 1.3 metres above the ground.

*Sunshine.*—The sunshine recorder (Campbell-Stokes type) is exposed on the small circular tower on the Observatory roof on which the Robinson cup anemograph is erected. It is rigidly held by lead flaps soldered to the lead roof. The actual diameter of the sunshine sphere is 4.02 inches, and the focal length 2.97 inches, these figures being slightly in excess of the standard values (diameter 4.00  $\pm$  .05 inches, focal length 2.95  $\pm$  .01 inches). The exposure is excellent; the only obstruction is a flagpole to the east, of angular diameter about 1°, which may obstruct 0.1 hr. record about 7h between April and September. This loss has been allowed for, whenever practicable, in tabulating the records. In computing the percentage duration of sunshine the actual possible values for each day of the year 1930 have been employed, a procedure similar to that adopted from 1926 onwards.

*Wind Speed and Direction.*—As stated in the General Introduction, the values for 1929 were tabulated from the records obtained by the Dines tube anemograph, but for the present year a different procedure has had to be adopted. Up to June 30th the values are tabulated from the records of the Dines tube anemograph as formerly, but from 1st July to 31st December, the values are from the records of the Robinson cup anemograph. These latter values have been corrected for the effect of exposure in accordance with the factors given in the Table on page 12 of the General Introduction.

The procedure from 1st July has been necessitated by the serious deterioration of the exposure at the Dines tube anemograph site, due to the initiation and completion of a rather extensive housing scheme in the area immediately to the north of the anemograph, and embracing the sector 300° to 70°. The Dines tube anemograph is one of the "standard mounting" type, and is situated in a field about  $\frac{1}{2}$  km. east of the Observatory, while the cup anemograph is mounted upon the roof of the Observatory building.

In a few instances where the records of the Dines tube instrument prior to 1st July have been defective, the required values have been obtained from the records of the cup instrument, a suitable adjustment of such values having been made in accordance with the data given in the above-mentioned table. Values thus obtained are entered in italics, but from 1st July onwards the cup anemograph values are printed in ordinary type.

The use of recorded values from both anemographs calls for some remark upon the tables showing "Highest instantaneous wind speed recorded each day by the Dines tube anemograph" (Table 151) and "Distribution of wind speed: extreme velocities as recorded by the Dines tube anemograph" (Table 152). In the case of Table 151 the value of the maximum velocity in a gust is shown for every day of the year from the records of the Dines tube anemograph, but, from the 1st July onwards, these values are defective, since they indicate merely the values recorded at the faulty site, and may differ from the true values by an amount depending upon the wind direction. In Table 152 the distribution of wind speed for each month from January to June is from the records of the Dines tube instrument while from July to December it is from the records of the cup instrument, and the same remarks apply to the highest hourly wind. But the entries of the highest gust are from the Dines tube records throughout, and from July to December inclusive these values are defective for the reasons already stated.

*Temperature in the Ground.*—This is recorded by a thermometer (unnumbered), which is kept at a depth of 124 cm. (four feet). At Aberdeen the thermometer is carried in a slot near the end of a long bar of wood, about three inches (7.5 cm.) square in section. This bar fits closely into a wooden sleeve, sunk vertically into the earth, so that the bulb of the thermometer is at the required depth. The thermometer itself is enclosed in a glass tube, and its bulb is embedded in paraffin wax so as to render the thermometer insensible to sudden changes of temperature. This allows of its being

drawn to the surface and read before the temperature of the bulb has time to change appreciably. As underground temperature changes very slowly, the loss of sensitiveness, resulting from the coating of wax, does not lead to inaccuracies in the determination of the temperature of the earth. The thermometer is read at 9h each morning. The thermometer has a correction of  $-0.2^{\circ}$  A; this correction is applied to all readings.

*Minimum Temperature on the Grass.*—The grass minimum thermometer is exposed in the enclosure on two wooden pegs about 4 cm. above grass. It is set at 18h and read at 7h, the reading being entered to the day of observation. There is no correction to grass minimum thermometer M.O. 17866.

*Cloud.*—In connection with the observations of cloud-forms it might be well to indicate the practice adopted at Aberdeen in dealing with the types Nimbus and Strato-cumulus, in view of the fact that there exists among meteorologists some divergence of opinion upon these types, and also because suggestions have been made for a prospective modification in the definitions of the International Classification.

In the case of Nimbus it is the custom at Aberdeen to enter "Nb" on all occasions when the cloud layer from which rain is falling is obviously dense and has developed from A-St, even when no Fr-Nb is visible below it. This is done because it is not always certain to the observer whether the cloud-layer is actually uniform low A-St developed as far as rain, or whether a slight mist-film exists below the ragged Fr-Nb, obscuring the latter from view, and thus giving it the appearance of a uniform featureless sheet. (The International Commission for the Study of Clouds, in the new International Atlas of 1930, have now decided to restrict the definition of Nimbus to the ragged clouds of the "Scud" type which are found generally under a low Alto-stratus cloud from which rain is falling or threatening to fall.)

At Aberdeen on a few occasions during this year there are entries of Nb-St (Nimbostratus) cloud. These signify that the cloud had the appearance of low stratus, or was actually lifted fog, and that drizzle or rain was falling from or through it. A suggestion is put forward in the new International Atlas that the term Nb-St should in future be applied to the low Alto-stratus sheet from which rain is falling, and which previously was classed as ordinary Nb. The entry "St" is reserved for the type of cloud found generally in dry anticyclonic weather.

The entry St-Cu includes only the cloud-forms as defined under that heading in the International Classification, though some of the entries might equally well have been termed A-Cu. It does not, however, include the bases of closed-up cumulus clouds, nor groups of cumulus arranged in lines.

*Visibility.*—In the subjoined table there is given a list of the objects used for the determination of the degree of visibility, together with their distances and bearings from the observation-point, which may be taken as the roof of the Observatory tower, the N.E. corner thereof being used for the nearer objects.

The range of visibility from the Observatory is somewhat limited by the high ground surrounding the city. From S.E. through S. to N. the distance of the visible horizon is between 2 and 4 miles (4 to 7 km.), but in the N.W. a higher hill, at a distance of 5 miles (8.5 km.), rises above the nearer ridges. To the N.N.E. however there is a clear view of the coast-line as far as Cruden Scaurs, where the coast consists of cliffs over 100 feet high, and is nearly 19 miles (30 km.) distant. From N.N.E. to S.E. there is only the sea-line as horizon, which from the height of the Observatory tower is about 10 miles (16 km.) distant.

Definite objects exist at standard distances from A to H, but from I to M there are no definite objects, though there are adequate identification marks for K and L. Owing, however, to these marks being on the sea-coast, and to the generally clearer visibility to the seaward side of the Observatory, it has been deemed advisable to employ small letter entries for all visibility distances that are not definitely landward estimates. The distances I and J are based upon estimates between other available distances. During darkness the estimates depend upon personal judgment, and upon the degree of obscuration, and alteration in the colour, of the surrounding lights of the town.

## VISIBILITY OBJECTS AT ABERDEEN.

OBJECT.	DESCRIPTION.	DISTANCE.	BEARING.
A	Steam-pipe on Boiler house .. .. .	26 yards.	N.E.
B	Top of finial at East end of University Library roof ..	55 "	E.S.E.
C	Gate in North wall of Athletics ground .. ..	110 "	E.N.E.
D	East wall of Athletics ground, and trees along it ..	218 "	E.
E	{ (i.) Ventilator tops on Sunnybank School .. ..	550 "	S.W.
	{ (ii.) Pressure-tube Anemograph pole .. ..	ca.550 "	E.
F	Top of Kiln, Seaton Brickworks .. .. .	1,100 "	N.E.
G	{ (i.) Turret of Salvation Army Citadel .. ..	1 $\frac{1}{2}$ miles.	S.S.E.
	{ (ii.) Coastguard watch-tower .. .. .	1 $\frac{1}{2}$ "	N.E.
H	{ (i.) Girdleness lighthouse-top .. .. .	2 $\frac{3}{5}$ "	S.E.
	{ (ii.) Springhill House .. .. .	2 $\frac{1}{2}$ "	W.
I (i)	No object. Estimate between Strabathie Hill (3 $\frac{1}{2}$ miles) and Brimmond Hill (5 $\frac{1}{4}$ miles).	{ (3 $\frac{1}{2}$ " )	N.N.E.
		{ (5 $\frac{1}{4}$ " )	N.W.
J (j)	No object. Estimate between Brimmond Hill (5 $\frac{1}{4}$ miles) and Sea horizon (10 miles).	{ (5 $\frac{1}{4}$ " )	N.W.
		{ (10 " )	E.
K (k)	Sand-patch, mouth of Ythan River .. .. .	12 $\frac{1}{2}$ "	N.N.E.
L (l)	Cruden Scaurs .. .. .	18 $\frac{3}{8}$ "	N.N.E.
M (m)	Cannot see so far. Used when "L" object shows clear detail and colour-differences.		

## IDENTIFICATION NUMBERS OF INSTRUMENTS USED IN 1930.

The following were the instruments actually in use during the year 1930:—

Standard Fortin Barometer .. ..	M.O. 1149
"    Dry Bulb Thermometer .. ..	M.O. 1698
"    Wet " " " .. ..	M.O. 1697
Recording Beckley Raingauge .. ..	2
Control Raingauge .. .. .	M.O. 266
Glass for " " " " .. ..	M.O. 1507* and 1657
Hair Hygrograph .. .. .	M.O. 154/27
Campbell-Stokes Sunshine Recorder ..	M.O. 32
Robinson Cup Anemograph .. ..	M.O. 50
Dines Tube " " " " .. ..	M.O. 1011
Earth Thermometer .. .. .	—
Grass Minimum Thermometer .. ..	M.O. 17866

\* Replaced by M.O. 1657 on 20th March 1930.

## Review of Meteorological Results

*Pressure.*—Over the year as a whole pressure was about 2.5mb. below its normal value. In January there was a defect of 13 mb., this was followed by an excess of 13mb. in February; thereafter the pressure fluctuations followed the normal course fairly well, but each month had a defect, varying between 1 mb. and 8 mb. except December, when the normal value was recorded. The range of pressure was not so high as in 1929, the highest monthly value being 60 mb. in November, while the extreme range during the year was 77 mb.

The mean diurnal inequalities for the months, seasons and year have been analysed harmonically, with the results set out in the accompanying Table. The unit employed for the months is, as before, .01 mb., that for the seasons and the year is .001 mb., and the phase-angles are reduced to Local Mean Time. The average values of the various coefficients for the period 1871-1926, computed by Dr. A. Crichton Mitchell\*, are given for comparison.

The inequality is supposed to be given by the expression—

$$c_1 \sin(15t^\circ + \alpha_1) + c_2 \sin(30t^\circ + \alpha_2) + \dots$$

$t$  being the time in hours since midnight.

HARMONIC COMPONENTS OF THE DIURNAL INEQUALITY OF ATMOSPHERIC PRESSURE—  
ABERDEEN, LONGITUDE 2° 6' W.

Values of  $c_n, \alpha_n$ , in the series  $\sum c_n \sin(15nt^\circ + \alpha_n)$ ,  $t$  being Local Mean Time reckoned in hours from midnight.

Month and Season.	$c_1$		$\alpha_1$		$c_2$		$\alpha_2$		$c_3$		$\alpha_3$		$c_4$		$\alpha_4$	
	1871-1926		1871-1926		1871-1926		1871-1926		1871-1926		1871-1926		1871-1926		1871-1926	
	1930	1926	1930	1926	1930	1926	1930	1926	1930	1926	1930	1926	1930	1926	1930	1926
January ... ..	.95	.094	234	171	.19	.227	145	151	.15	.130	11	355	.02	.054	232	221
February ... ..	.11	.156	221	176	.33	.270	144	149	.10	.104	345	355	.01	.026	146	96
March ... ..	.39	.164	146	158	.27	.295	147	151	.05	.052	332	336	.04	.031	30	35
April ... ..	.17	.153	137	155	.21	.284	152	151	.03	.019	114	188	.03	.044	4	359
May ... ..	.12	.098	344	135	.24	.237	148	143	.04	.059	165	163	.02	.022	320	329
June ... ..	.10	.057	88	104	.22	.219	134	141	.07	.065	160	155	.02	.008	325	331
July ... ..	.09	.089	119	137	.20	.208	142	144	.06	.068	148	159	.02	.013	232	345
August ... ..	.22	.112	171	162	.22	.232	163	145	.03	.041	109	167	.04	.029	329	336
September ... ..	.31	.119	172	146	.21	.287	147	148	.04	.027	356	342	.03	.053	354	339
October ... ..	.56	.155	246	183	.22	.274	151	149	.06	.075	12	349	.03	.027	347	20
November ... ..	.54	.132	289	197	.21	.229	124	152	.13	.103	354	354	.02	.014	254	172
December ... ..	.22	.164	212	169	.17	.211	161	146	.14	.122	356	356	.03	.051	165	204
Arithmetic Mean ...	.31	—	—	—	.22	—	—	—	.07	—	—	—	.03	—	—	—
Year ... ..	.190	.116	219	163	.221	.247	146	149	.040	.030	10	0	.012	.009	330	340
Winter ... ..	.402	—	246	—	.219	—	143	—	.125	—	357	—	.016	—	201	—
Equinox ... ..	.246	—	188	—	.228	—	145	—	.032	—	5	—	.032	—	4	—
Summer ... ..	.055	—	129	—	.218	—	147	—	.046	—	149	—	.020	—	313	—

Note.—*Winter* comprises the four months January, February, November, December; *Equinox* the months March, April, September, October; and *Summer* May to August.

The outstanding feature in the amplitudes of the 24-hour term is the very high value of .95 mb. in January. This exceeds even the unusual value of .78 mb. in the preceding month of December 1929; in both of these months pressure was about 13 mb. below its normal value. In February, with a very high excess of pressure,  $c_1$ , has the low value of .11 mb., and, generally speaking, there is a tendency throughout the year for the monthly values of  $c_1$  to vary inversely as the monthly mean pressure. The phase-angles,  $\alpha_1$ , for the seasons, show a progressive seasonal change, the maximum occurring later in summer than in winter.

The 12-hour term exhibits a smaller range in the monthly values of  $c_2$  than was the case last year, while the mean value for the year is less than it was last year, and also less than the average values for the period 1871-1926. The usual summer and winter minima are shown, the latter particularly well, and the spring maximum is earlier than usual, while the autumnal maximum is suppressed. The phase-angles,  $\alpha_2$ , are more uniform from month to month than they were last year, and differ less from the average values for 1871-1926.

The 8-hour and 6-hour terms exhibit the usual features, but the amplitude,  $c_3$ , of the former term shows winter values higher than the average, while the amplitude,

\* Diurnal Variation of Pressure and Temperature at Aberdeen, 1871-1926, by A. Crichton Mitchell, D.Sc., Q.J.R. Met. Soc., 1929, p. 197.

$c_4$ , of the latter term shows winter values below the average. In fact for the year 1930, the seasonal variations of  $c_4$  are indicated only slightly.

*Temperature.*—There was a slight excess of  $0.2^\circ$  A over the normal in the temperature of the year 1930 as a whole, due mainly to a continuous excess from June to October inclusive. June showed the most marked departure from the normal, having an excess of  $1.7^\circ$  A. February was below by  $1.4^\circ$  A, and November below by  $1.2^\circ$  A. Both February and March were actually, as well as relatively, colder than January, which latter month, and also December, had excesses of nearly  $1^\circ$  A.

*Rainfall.*—1930 was still another year having excess precipitation. The total excess since 1922 is now 611 mm., 1930 having added 91 mm. The amounts recorded in the individual months showed in most cases large departures from the normal values. The chief deficits were May 34 mm., March 27 mm., July 24 mm., and February 23 mm. The principal excesses were August 81 mm., September 59 mm., April 30 mm., and December 19 mm. The total fall for August—151 mm.—is more than twice the average value for that month. The year was sharply divided into a very dry earlier half and a very wet later half; the total deficit had reached 84 mm. by the end of July, but by the end of December this had become an excess of 91 mm.

*Relative Humidity.*—There was a fairly good relationship between the relative humidity and the incidence of sunshine during 1930, the sunny months usually showing lower relative humidity values than did the cloudy ones. The most marked case was June which with 11 per cent. excess sunshine had a relative humidity 4 per cent. below the normal. March also showed similar features on a lesser scale. Both these months were also dry months, but the wet months of October and November had relative humidity values lower than normal, and also excess of sunshine. On the other hand the very dull months of September and April, both of which were also rainy months, had very high values of relative humidity.

*Sunshine.*—This showed remarkable variations from normal during the year. January, February, and March had excesses of between 3 and 8 per cent.; April a deficit of 14 per cent.; May was nearly normal; June, with the large excess of 11 per cent. closely approached the record for that month at Aberdeen; July and August were normal; September lost 13 per cent.; October and November, despite excess rainfall, had excesses of 7 and 10 per cent.; while December was normal. The year closed with a net excess of 1 per cent. over the average value.

*Wind.*—The average velocity for the year was 4.6 m/s, somewhat higher than in 1929, but there is less difference in the monthly values. This year the windiest month was January with 5.4 m/s, the most quiet month, June with 3.9 m/s. Gales were more frequent than in 1929, having been recorded in February, November, and December.

*Aurora.*—There were 23 occasions upon which Aurora was observed, 13 in the earlier half of the year and 10 in the later half. March, April, and November were the months of highest frequency. Dates of occurrence will be found in the General Auroral Table.

*General.*—1930 was a year of strong contrast between its earlier and later portions, as has been noted under the heading of *Rainfall*. January was warm, bright and dry; February and March were cold, bright and dry; April and May were normal in temperature and dull, while April was wet and May was dry; June and July were warm, bright and dry on the whole; August and September were warm, dull on the whole, and very wet; October, November and December were bright but wet, while October and December were warm and November cold.

Readings in millibars at exact hours, Greenwich Mean Time.

69. Aberdeen : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 26.0 metres.

January, 1930.

Table for Aberdeen in January 1930. Columns: Hour G.M.T., Station Level (1-31), Mean (Station level), Mean (Sea level). Rows: 1-31 hours. Values in millibars.

70. Aberdeen : H<sub>b</sub> = 26.0 metres.

February, 1930.

Table for Aberdeen in February 1930. Columns: Hour G.M.T., Station Level (1-28), Mean (Station level), Mean (Sea level). Rows: 1-28 hours. Values in millibars.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

71. Aberdeen : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 26.0 metres.

March, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	mb.	mb.																								
1	032.5	032.4	032.3	032.5	032.6	032.7	033.0	033.1	033.2	032.9	033.2	033.0	032.8	032.2	031.9	031.3	031.3	031.5	031.7	031.8	031.7	031.9	031.5	031.4	032.3	032.8
2	030.9	030.3	030.1	029.8	029.6	029.5	029.4	029.4	029.2	029.3	028.7	028.3	028.1	027.1	026.8	026.6	026.5	026.4	026.3	026.5	026.3	026.2	025.5	025.0	028.1	
3	024.4	024.1	023.9	023.5	023.2	023.0	022.8	022.6	022.7	022.5	022.7	022.5	022.4	021.8	021.5	021.2	020.9	020.6	020.7	020.4	020.5	020.3	020.1	019.8	022.1	
4	019.5	019.1	018.9	018.5	018.4	018.6	018.7	019.1	019.7	020.1	020.4	020.5	020.4	020.9	020.7	020.7	021.2	022.0	022.4	023.2	023.4	024.0	024.3	024.8	020.7	
5	025.0	025.2	025.1	025.2	025.4	025.9	026.3	026.5	026.9	027.4	027.5	027.6	027.3	026.9	026.7	026.4	026.3	026.5	026.5	026.5	026.5	026.4	025.9	025.4	026.3	
6	025.3	024.5	023.6	023.0	022.4	022.0	021.7	021.8	021.5	020.3	020.0	019.1	018.1	016.7	015.7	014.9	013.7	013.1	012.9	013.0	012.8	012.2	011.6	011.1	018.3	
7	010.8	010.5	010.5	009.7	009.8	009.7	009.3	009.5	009.6	009.5	009.3	008.7	008.2	007.7	007.9	007.9	007.8	007.9	007.7	007.7	007.5	007.7	007.2	007.2	008.8	
8	006.6	006.2	005.7	005.3	005.2	005.2	005.0	004.6	004.5	004.3	004.0	003.4	003.0	002.6	001.8	001.2	000.7	000.9	000.9	000.6	000.7	000.8	000.9	000.9	002.8	
9	005.8	004.7	003.2	002.9	002.9	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	002.8	
10	008.0	008.0	007.7	007.8	007.8	007.8	007.8	007.8	007.8	007.8	007.8	007.7	007.4	007.2	006.9	006.3	005.6	005.1	004.9	004.8	004.8	004.8	004.8	004.8	007.0	
11	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	009.5	
12	009.4	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	
13	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
14	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
15	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
16	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
17	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
18	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
19	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
20	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
21	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
22	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
23	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
24	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
25	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
26	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
27	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
28	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
29	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
30	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
31	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	009.4	
Mean (Station level)	1005.08	1004.82	1004.50	1004.24	1004.11	1004.14	1004.16	1004.24	1004.25	1004.38	1004.33	1004.28	1004.25	1004.08	1003.96	1003.96	1004.07	1004.27	1004.41	1004.51	1004.45	1004.47	1004.32	1004.10	1004.33	
Mean (Sea level)	1008.33	1008.07	1007.75	1007.49	1007.36	1007.39	1007.41	1007.48	1007.49	1007.61	1007.54	1007.49	1007.45	1007.29	1007.17	1007.17	1007.29	1007.50	1007.64	1007.74	1007.69	1007.71	1007.56	1007.35	1007.56	

72. Aberdeen : H<sub>b</sub> = 26.0 metres.

April, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.
1	998.5	998.5	998.3	998.3	998.7	998.8	999.4	999.5	999.7	999.6	998.7	998.2	997.8	997.0	996.9	996.4	995.6	995.4	995.6	995.8	995.9	996.0	996.4	996.6	997.6
2	996.5	996.6	996.5	996.0	996.1	995.3	996.2	995.0	995.3	995.3	995.5	995.3	995.9	995.8	996.3	997.2	997.7	998.3	998.8	999.8	000.6	001.2	001.6	002.1	997.2
3	002.3	002.4	003.0	003.5	004.1	004.4	005.0	005.4	005.8	006.1	006.5	006.5	006.9	007.4	007.1	007.9	008.4	008.7	008.9	009.3	009.7	009.8	009.9	010.0	006.5
4	010.2	010.4	010.3	010.3	010.3	010.4	010.6	010.8	010.6	010.6	010.6	010.1	010.4	010.2	010.7	010.3	010.5	010.8	011.0	011.0	010.8	010.6	010.6	010.4	010.5
5	010.2	009.7	009.3	009.3	009.2	009.2	009.2	009.6	009.9	010.0	010.1	010.1	010.1	010.0	009.9	009.9	010.0	010.2	010.5	010.4	010.4	010.4	010.4	010.2	009.9
6	009.9	009.7	009.6	009.4	009.6	009.7	010.0	010.4	010.9	011.0	011.4	011.8	012.2	012.7	013.1	013.6	014.1	014.7	015.3	015.7	016.1	016.9	017.2	017.7	012.5
7	017.9	017.9	018.0	018.5	019.2	019.7	020.0	020.2	020.4	020.4	020.6	020.7	020.6	020.6	020.6	020.8	021.0	021.2	021.1	021.3	021.2	021.1	020.8	020.8	020.1
8	020.1	019.6	019.1	018.3	018.0	017.6	017.4	016.9	016.1	015.2	014.8	013.8	013.4	012.5	011.8	011.2	011.2	010.6	009.7	009.8	009.5	009.7	009.5	009.1	014.2
9	008.9	008.6	008.3	008.1	008.3	008.2	008.4	008.3	008.3	008.5	008.6	008.4	008.4	008.1	008.0	008.1	008.0	007.9	008.3	008.3	008.2	008			

Readings in millibars at exact hours, Greenwich Mean Time.

73. Aberdeen : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 26.0 metres.

May, 1930.

Table for Aberdeen pressure readings in May 1930. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level/Sea level). Rows show hourly pressure readings in millibars.

74. Aberdeen : H<sub>b</sub> = 26.0 metres.

June, 1930.

Table for Aberdeen pressure readings in June 1930. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level/Sea level). Rows show hourly pressure readings in millibars.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

75. Aberdeen : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 26.0 metres.

July, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-31 days). Includes 'Station Level' indicator and 'Mean (Station level)' and 'Mean (Sea level)' rows at the bottom.

76. Aberdeen : H<sub>b</sub> = 26.0 metres.

August, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-31 days). Includes 'Station Level' indicator and 'Mean (Station level)' and 'Mean (Sea level)' rows at the bottom.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

77. Aberdeen : H<sub>b</sub> (Height of barometer cistern above M.S.L.) = 26.0 metres.

September, 1930.

Table for Aberdeen in September 1930. Columns include Hour G.M.T., Station Level (1-30), and Mean (Station level). Rows show hourly pressure readings in millibars.

78. Aberdeen : H<sub>b</sub> = 26.0 metres.

October, 1930.

Table for Aberdeen in October 1930. Columns include Hour G.M.T., Station Level (1-30), and Mean (Station level). Rows show hourly pressure readings in millibars.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

79. Aberdeen : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 26.0 metres.

November, 1930.

Hour. G.M.T.	Station Level												Sea level												
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.
1	010.2	009.4	008.8	008.5	007.8	007.2	006.7	006.5	005.7	004.9	004.1	003.1	002.0	001.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	002.2
2	989.1	988.0	986.2	983.9	982.5	980.8	979.1	977.8	976.3	975.2	973.9	972.8	971.7	971.3	971.1	971.3	971.5	971.9	972.1	972.5	973.3	974.4	975.8	977.0	976.9
3	977.9	978.8	979.6	980.1	980.4	981.0	982.0	983.1	983.9	984.2	985.0	985.6	985.9	986.3	986.5	986.9	987.2	988.0	988.3	989.3	989.7	990.8	991.7	992.2	984.9
4	993.3	993.9	994.8	995.4	996.1	996.7	997.3	997.9	998.6	999.2	999.7	1000.3	1000.2	1000.5	1001.2	1001.5	1002.3	1002.5	1002.8	1003.3	1003.4	1003.5	1003.6	1003.7	999.4
5	003.5	003.2	003.2	002.8	002.8	002.7	002.6	002.7	003.0	003.0	003.2	003.1	003.0	003.0	003.3	003.5	003.8	004.3	004.4	004.8	004.9	005.0	005.1	005.1	003.6
6	005.1	005.2	005.3	005.1	005.0	005.1	005.3	005.4	005.7	005.6	005.2	005.1	004.9	004.8	004.7	004.5	004.0	003.3	003.1	002.3	001.7	000.9	000.1	000.3	004.2
7	000.9	001.9	002.7	003.4	004.1	004.7	005.1	005.4	005.2	004.5	004.0	002.8	001.4	000.3	998.6	996.6	994.6	992.6	991.3	990.3	989.1	988.5	989.5	990.5	998.9
8	993.0	995.3	997.4	999.5	1001.8	1004.0	1005.5	1007.2	1008.6	1009.7	1010.4	1010.8	1010.5	1010.2	1009.1	1008.0	1007.1	1005.9	1005.7	1005.4	1005.9	1005.7	1006.1	1005.8	1005.0
9	005.5	004.7	003.5	002.5	000.3	000.7	000.7	001.9	003.5	004.6	005.5	006.3	007.4	007.5	008.0	008.3	009.0	009.5	009.7	010.0	010.3	010.6	011.0	011.4	006.2
10	011.5	011.6	011.6	011.2	011.1	011.4	011.4	011.7	012.7	013.1	013.1	013.2	012.9	012.4	012.3	012.4	012.4	012.8	013.1	013.2	013.1	013.5	014.0	014.1	012.4
11	015.3	015.6	016.1	017.1	017.8	018.8	019.9	021.0	022.1	023.3	024.0	024.7	025.7	026.0	026.9	027.6	028.5	029.0	029.8	029.9	030.5	030.9	030.9	030.8	023.9
12	030.8	029.9	029.3	028.5	027.6	026.5	025.9	025.5	024.1	022.9	022.5	021.1	020.3	019.7	018.8	018.4	018.3	017.2	016.7	016.2	015.9	014.9	015.4	015.4	022.1
13	015.3	014.8	014.6	014.6	014.2	014.3	014.0	014.2	014.0	014.3	014.6	014.6	014.7	015.7	015.6	016.5	016.8	016.9	016.6	015.6	015.2	014.9	014.1	013.1	015.0
14	012.5	011.9	011.2	010.0	009.1	008.2	007.8	007.6	006.9	006.4	005.2	005.1	004.6	003.3	002.6	001.8	001.5	001.1	001.2	001.0	000.8	000.9	000.9	000.6	005.1
15	000.9	001.1	001.4	001.4	002.5	002.3	002.9	003.2	004.1	004.5	005.2	005.1	005.2	005.2	005.5	006.0	006.3	007.3	008.4	009.3	010.3	011.3	011.8	012.7	005.3
16	012.9	013.4	013.6	014.3	014.7	015.2	015.9	016.5	017.5	018.0	018.6	019.0	019.3	019.6	020.1	020.6	020.9	021.0	021.1	021.2	021.4	022.0	022.2	022.2	018.2
17	022.2	022.1	022.5	022.0	022.5	022.9	023.3	023.8	023.9	024.2	024.5	024.8	024.9	024.9	025.2	025.5	025.8	025.9	025.9	025.8	025.9	025.8	025.2	025.1	024.8
18	024.4	023.6	023.3	022.3	021.7	020.6	019.4	019.1	018.5	017.6	017.0	015.9	014.7	013.6	012.3	011.3	010.1	008.9	007.5	006.1	005.3	004.3	003.1	002.2	014.8
19	001.1	000.6	000.6	000.4	000.3	000.4	000.4	000.4	001.6	002.5	003.1	003.5	004.3	004.8	005.5	006.3	007.2	007.3	007.6	007.3	007.2	007.3	007.6	007.6	003.5
20	006.1	005.5	004.7	003.5	002.5	001.3	000.3	999.2	998.1	997.2	995.1	993.5	991.9	990.1	988.1	985.6	984.4	982.5	980.9	979.5	978.6	977.3	976.6	976.2	992.3
21	975.6	975.8	976.4	976.8	977.3	977.8	978.7	979.5	979.1	979.8	980.3	980.5	979.9	979.5	979.3	979.3	979.0	978.9	978.4	978.1	977.6	977.2	976.4	976.0	978.2
22	975.5	975.4	974.8	974.2	973.6	973.3	973.5	974.7	975.6	976.2	976.6	976.9	976.9	977.2	977.4	977.9	978.5	980.3	981.5	982.8	984.3	985.6	986.8	987.9	978.1
23	989.4	990.7	992.2	994.1	995.4	996.9	998.6	1000.5	1002.6	1004.1	1005.8	1006.7	1007.4	1007.4	1008.6	1009.1	1009.7	1009.9	010.2	010.2	010.2	010.1	009.3	008.8	003.2
24	007.8	006.6	005.8	004.4	003.2	001.8	000.2	998.8	997.3	995.3	993.0	990.4	987.0	984.6	981.7	978.1	975.9	974.6	974.5	974.5	974.3	974.2	974.4	974.4	989.6
25	975.3	976.0	976.9	977.5	978.1	978.5	979.6	980.7	981.3	981.4	981.6	981.7	981.9	981.1	980.9	980.5	979.4	979.0	977.9	977.0	976.0	975.0	974.3	973.7	978.6
26	973.4	973.1	972.7	972.8	972.7	973.0	973.3	974.0	974.5	975.2	975.6	975.9	976.4	976.9	977.4	978.4	979.2	980.0	980.7	981.4	982.1	982.7	983.6	984.5	976.8
27	985.2	986.2	987.2	987.9	988.8	989.7	990.7	991.7	992.6	993.7	994.6	995.3	995.8	997.1	998.3	999.2	1000.1	1000.9	1001.8	1002.6	1003.2	1003.8	1004.2	1004.6	995.2
28	004.9	005.1	005.4	005.4	005.6	006.0	006.4	006.9	007.4	007.5	007.8	007.7	007.8	007.7	008.2	008.6	009.2	009.6	009.9	009.9	010.4	010.7	011.1	011.2	007.8
29	011.3	011.8	012.0	012.2	012.5	013.2	013.7	014.1	014.3	014.7	014.8	015.0	015.4	015.0	014.6	014.8	015.4	015.7	016.0	016.4	016.2	016.1	015.8	015.7	014.3
30	015.7	015.9	016.1	016.4	016.6	017.2	016.9	017.4	018.4	018.4	018.5	018.3	018.6	018.0	018.2	018.3	018.2	018.0	017.6	017.8	017.4	017.3	017.2	017.2	017.5
Mean (Station level)	1001.52	1001.57	1001.63	1001.57	1001.59	1001.71	1001.88	1002.28	1002.57	1002.71	1002.78	1002.64	1002.42	1002.16	1002.00	1001.91	1001.82	1001.73	1001.70	1001.65	1001.58	1001.56	1001.62	1001.65	1001.92
Mean (Sea level)	1004.74	1004.79	1004.85	1004.80	1004.81	1004.93	1005.10	1005.50	1005.79	1005.92	1005.97	1005.84	1005.62	1005.36	1005.20	1005.11	1005.03	1004.94	1004.91	1004.86	1004.79	1004.77	1004.83	1004.87	1005.13

80. Aberdeen : H<sub>b</sub> = 26.0 metres.

December, 1930.

Hour. G.M.T.	Station Level												Sea level												
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	016.7	016.2	016.3	016.3	015.8	015.6	016.0	016.7	016.7	016.9	017.5	017.7	017.7	018.3	018.4	018.5	018.7	019.1	019.4	019.7	020.1	020.1	020.4	020.7	017.8
2	020.9	020.9	021.0	021.0	021.4	021.9	022.2	023.1	023.2	023.8	023.9	024.5	024.2	024.3	024.5	024.9	025.7	026.2	026.4	026.6	026.8	026.6	026.3	026.4	023.9
3	026.7	026.9	026.5	026.2	026.3	026.3	026.5	026.8	026.6	026.6	026.0	025.2	025.1	024.9	024.5	024.0	024.9	025.1	025.1	025.2	025.0	025.2	024.8	024.7	025.7
4	024.6	024.5	023.7	023.7	023.7	023.5	023.0	022.9	022.7	022.3	022.1	021.2	020.4	019.7	019.4	018.9	018.8	018.7	018.2	017.9	018.0	017.6	017.1	016.9	021.0
5	016.5	016.1	015.4	015.6	015.5	015.5	015.6	015.8	015.5	015.3	015.5	015.3	015.1	014.7	014.4	014.6	014.6	014.8	015.0	015.4	015.5	015.4	015.3	015.3	015.4
6	015.0	014.7	014.1	013.5	013.0	012.1	011.7	011.6	011.1	010.7	010.1	009.3	008.5	007.9	007.1	007.0	006.2	005.5	005.4	005.2	004.5	004.3	004.0	004.1	009.3
7	003.8	003.4	003.1	002.5	002.4	002.6	003.1	003.4	003.5	003.6	003.5	003.2	002.8	002.7	002.0	001.8	001.6	001.0	000.8	000.3	999.9	999.5	999.1	998.8	002.1
8	998.3	997.8	997.3	996.8	995.8	995.7	995.5	995.4	995.1	994.9	994.8	994.0	993.2	992.2	991.9	991.5	991.1	990.9	990.9	990.9	991.1	991.5	991.8	992.1	993.9
9	992.5	992.9	993.3	993.7	994.3	994.8	995.4	996.4	997.3	998.5	999.0	999.1	999.5	1000.1	1000.8	1001.4	1001.7	1002.6	1002.9	1003.2	1003.5	1004.0	1004.2	1004.7	998.7
10	004.9	005.5	006.0	006.1	006.5	006.9	007.1	007.5	007.8	008.2	008.2	008.1	007.6	007.6	007.4	007.6	007.7	007.7	007.1	006.0	005.2	004.4	003.1	001.4	006.5
1																									

PRESSURE AT STATION LEVEL AND AT SEA LEVEL.  
ANNUAL MEANS FROM HOURLY VALUES.

97

From readings in millibars at exact hours, Greenwich Mean Time.

81. Aberdeen:  $H_b = 26.0$  metres.

1930.

Hour. M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Station level.	mb. 006.03	mb. 005.89	mb. 005.76	mb. 005.66	mb. 005.67	mb. 005.76	mb. 005.91	mb. 006.10	mb. 006.26	mb. 006.36	mb. 006.38	mb. 006.31	mb. 006.23	mb. 006.12	mb. 006.07	mb. 006.03	mb. 006.04	mb. 006.11	mb. 006.16	mb. 006.22	mb. 006.23	mb. 006.20	mb. 006.12	mb. 006.04	mb. 006.07
Sea level.	009.22	009.09	008.96	008.87	008.88	008.96	009.11	009.29	009.45	009.55	009.54	009.48	009.40	009.29	009.24	009.21	009.22	009.29	009.35	009.41	009.42	009.39	009.32	009.24	009.26

PRESSURE AT STATION LEVEL; MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

82. Aberdeen:  $H_b = 26.0$  metres.

1930.

Month	Mean.	Hour. 1.	GMT. 2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	994.83	-0.75	-0.84	-0.98	-1.11	-1.03	-0.79	-0.51	-0.19	+0.43	+0.75	+0.83	+0.81	+0.78	+0.72	+0.69	+0.81	+0.68	+0.57	+0.39	+0.24	-0.03	-0.32	-0.53	-0.58
Feb.	1020.11	+0.01	-0.13	-0.27	-0.43	-0.41	-0.38	-0.23	+0.04	+0.27	+0.41	+0.48	+0.33	+0.09	-0.12	-0.19	-0.26	-0.18	+0.02	+0.09	+0.15	+0.23	+0.23	+0.18	+0.09
Mar.	1004.33	+0.24	+0.03	-0.25	-0.46	-0.54	-0.47	-0.40	-0.28	-0.21	-0.04	-0.05	-0.05	-0.04	-0.16	-0.23	-0.19	-0.03	+0.22	+0.40	+0.54	+0.53	+0.60	+0.49	+0.32
April	1008.28	+0.13	-0.03	-0.20	-0.31	-0.28	-0.24	-0.07	-0.05	+0.02	+0.05	-0.01	-0.07	-0.04	-0.11	-0.15	-0.17	-0.10	0.00	+0.10	+0.29	+0.31	+0.36	+0.33	+0.25
May	1010.62	+0.01	-0.08	-0.17	-0.19	-0.11	+0.01	+0.14	+0.21	+0.31	+0.31	+0.25	+0.11	+0.07	-0.05	-0.21	-0.30	-0.35	-0.31	-0.19	-0.01	+0.14	+0.15	+0.16	+0.11
June	1010.32	+0.18	+0.01	-0.14	-0.18	-0.19	-0.13	+0.01	+0.03	+0.06	+0.07	+0.06	+0.05	-0.02	-0.05	-0.12	-0.27	-0.25	-0.28	-0.12	+0.06	+0.28	+0.34	+0.32	+0.29
July	1005.56	+0.15	-0.07	-0.21	-0.21	-0.17	-0.15	-0.04	+0.02	+0.05	+0.09	+0.05	0.00	-0.02	-0.09	-0.09	-0.15	-0.16	-0.15	-0.09	+0.06	+0.32	+0.35	+0.29	+0.22
Aug.	1004.82	-0.01	-0.17	-0.32	-0.43	-0.42	-0.30	-0.17	+0.02	+0.09	+0.01	+0.02	+0.01	0.00	-0.07	-0.03	-0.05	+0.01	+0.11	+0.22	+0.35	+0.42	+0.35	+0.27	+0.10
Sept.	1009.97	+0.04	-0.13	-0.30	-0.46	-0.54	-0.49	-0.34	-0.17	-0.06	+0.02	+0.05	+0.09	+0.06	-0.01	0.00	+0.01	+0.06	+0.17	+0.39	+0.42	+0.37	+0.36	+0.30	+0.15
Oct.	999.79	-0.43	-0.57	-0.71	-0.69	-0.61	-0.48	-0.15	+0.19	+0.45	+0.57	+0.63	+0.60	+0.52	+0.45	+0.35	+0.18	+0.15	+0.24	+0.17	+0.03	-0.04	-0.13	-0.31	-0.42
Nov.	1001.92	-0.30	-0.26	-0.21	-0.27	-0.27	-0.16	+0.01	+0.40	+0.68	+0.81	+0.85	+0.72	+0.49	+0.22	+0.05	-0.05	-0.15	-0.25	-0.29	-0.34	-0.43	-0.46	-0.41	-0.38
Dec.	1003.86	-0.12	-0.17	-0.27	-0.38	-0.39	-0.37	-0.29	0.00	+0.10	+0.33	+0.36	+0.23	+0.02	-0.10	-0.06	+0.09	+0.14	+0.30	+0.25	+0.21	+0.14	+0.08	-0.05	-0.04
Year	1006.07	-0.07	-0.20	-0.34	-0.43	-0.41	-0.33	-0.17	+0.02	+0.18	+0.28	+0.29	+0.24	+0.16	+0.05	0.00	-0.03	-0.02	+0.05	+0.11	+0.17	+0.19	+0.16	+0.09	+0.01

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY.

Maximum and Minimum for the interval 0h. to 24h., Greenwich Mean Time.

83. Aberdeen:  $H_b = 26.0$  metres.

1930.

Month	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
Day.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	mb. 007.7	974.4	mb. 991.0	982.5	mb. 033.3	031.2	mb. 999.8	995.3	mb. 020.6	019.0	mb. 017.6	011.7	mb. 004.8	001.0	mb. 011.5	006.2	mb. 023.5	021.4	mb. 029.5	026.5	mb. 010.4	990.5	mb. 020.7	015.5
2	999.9	970.5	997.4	990.9	031.4	025.0	002.1	994.7	019.6	018.1	014.6	011.6	006.8	002.2	006.2	991.8	025.8	021.9	030.7	028.6	990.5	971.0	027.0	020.7
3	990.9	985.4	997.1	991.2	025.0	019.8	010.0	002.0	019.8	018.6	018.1	014.3	007.7	005.4	993.8	990.3	026.8	024.4	028.8	015.0	992.2	977.0	027.2	024.7
4	991.1	977.1	000.8	991.1	024.8	018.4	011.1	010.0	018.7	013.6	020.8	017.4	009.4	007.7	993.5	991.4	024.4	013.0	015.1	985.9	003.7	992.2	024.7	016.9
5	979.2	971.3	010.4	000.8	027.6	024.8	010.5	008.9	013.6	010.3	020.5	015.5	009.5	005.4	992.8	990.3	013.0	006.5	988.7	983.6	005.2	002.6	016.9	014.3
6	002.1	979.2	026.6	010.4	025.4	011.1	017.7	009.3	014.6	011.3	015.5	011.0	010.4	004.1	997.6	992.6	008.2	005.2	987.3	985.8	005.7	000.0	015.3	003.9
7	997.8	992.3	035.9	026.6	011.1	007.2	021.4	017.7	014.2	010.6	021.8	014.4	016.7	010.4	006.5	997.6	006.2	003.7	996.5	987.2	005.5	988.3	004.1	998.8
8	994.5	990.0	039.7	035.8	007.2	996.9	020.8	009.1	010.8	001.7	021.8	012.7	016.6	011.5	011.0	006.4	006.6	004.2	991.8	975.3	011.1	990.5	998.8	990.8
9	993.0	986.7	040.1	037.6	998.2	987.4	009.1	007.8	001.7	999.4	012.7	998.3	021.1	012.6	012.0	010.5	009.4	006.3	002.0	989.7	011.4	000.1	004.7	992.1
10	988.1	983.1	038.0	036.0	998.2	994.8	010.6	007.6	999.7	994.4	999.8	995.2	021.0	015.1	011.1	000.2	011.4	008.4	003.9	999.5	014.2	010.9	008.3	001.4
11	970.7	983.1	036.0	030.9	000.0	994.7	010.3	995.0	000.4	993.6	009.7	995.9	015.1	011.8	000.2	998.9	016.6	011.4	999.7	988.3	031.1	014.1	001.4	988.0
12	974.9	967.4	030.9	025.7	996.0	992.4	995.0	992.3	006.4	000.4	017.7	009.5	012.2	009.8	001.6	997.2	016.9	013.0	998.2	987.1	030.9	014.8	995.2	982.4
13	995.5	974.9	025.7	014.9	995.0	992.4	992.5	987.6	006.0	999.9	023.3	017.7	010.1	004.2	001.6	986.1	013.0	007.3	002.2	998.0	017.2	013.1	983.8	974.8
14	998.0	995.2	014.9	999.7	995.5	991.9	010.2	990.5	010.8	000.6	027.1	023.2	004.2	002.0	994.9	984.9	014.2	006.9	001.9	995.8	013.1	998.2	998.5	983.8
15	011.9	997.6	018.4	000.2	995.8	994.4	016.4	010.1	010.9	005.3	027.6	025.8	002.3	999.5	008.5	994.9	017.0	014.2	001.1	994.0	012.7	000.6	004.4	998.5
16	020.9	011.9	027.4	018.4	994.5	990.7	016.4	011.6	015.0	008.3	026.3	022.7	999.5	992.9	012.8	008.5	015.9	010.9	002.2	993.3	022.4	012.7	011.8	999.1
17	015.8	007.5	034.2	027.2	995.8	990.3	017.1	008.8	015.3	995.3	022.7	014.8	992.9	986.6	012.5	009.3	011.0	001.5	006.0	987.0	026.2	022.0	018.2	011.8
18	008.9	999.9	034.9	031.8	993.7	988.2	018.0	012.5	003.1	994.0	014.8	008.9	993.3	986.7	009.8	997.5	001.5	986.9	002.6	983.5	025.1	002.2	019.0	014.4
19	999.9	993.9	031.9	024.3	996.2	993.5	013.6	010.7	009.1	003.1	008.9	005.8	000.3	993.3	003.8	993.0	995.5	980.7	003.8	991.7	007.7	999.2	023.5	019.0
20	011.2	999.9	024.9	023.1	994.9	979.7	013.6	008.8	019.3	009.1	006.6	004.6	003.3	999.9	008.3	003.3	983.6	979.2	994.7	989.2	006.6	976.2	026.0	021.0
21	011.7	003.9	026.5	024.3	995.4	989.3	009.3	006.6	022.7	019.3	011.2	003.8	004.0	001.7	004.7	986.7	007.0	983.6	996.3	992.4	980.5	975.6	028.4	023.5
22	006.0	001.1	030.0	026.3	012.5	995.1	006.6	998.5	024.6	022.3	004.4	000.7	010.0	003.9	008.1	986.7	008.9	007.0	002.3	996.0	987.9	973.1	029.3	019.2
23	002.6	999.4	032.4	029.3	017.9	011.7	999.6	995.3	024.5	022.4	001.9	998.6	010.5	009.2	007.8	005.3	007.4	998.3	996.5	992.0	010.6	987.9	019.2	002.4
24	001.3	987.5	032.4	022.3	023.0	017.3	002.8	994.6	022.5	018.4	998.6	993.6	012.5	009.7	014.5	005.3	998.8	993.2	992.0	984.8	008.8			

Readings in degrees absolute at exact hours, Greenwich Mean Time.

84. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulb above the ground) = 12.5 metres. January, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	°A																									
1	76.0	75.5	75.8	75.8	75.9	76.0	76.1	76.0	76.0	75.9	76.0	76.1	76.5	76.8	76.9	76.9	76.9	77.9	78.9	80.1	80.4	81.5	81.6	80.7	77.2	
2	80.1	79.5	79.0	78.6	79.1	80.3	80.3	80.4	80.4	80.5	80.5	80.8	80.4	80.1	80.0	79.4	78.9	78.9	79.0	78.4	78.7	79.1	78.9	79.6	79.6	79.6
3	79.9	81.6	83.0	83.2	81.9	81.3	80.6	80.1	79.5	78.3	78.7	78.8	78.9	78.4	77.8	76.8	76.2	76.1	76.1	75.8	75.5	75.6	75.8	75.6	75.6	78.6
4	75.9	75.8	76.2	75.1	75.4	76.1	75.5	74.5	74.5	74.6	75.1	75.9	75.8	75.8	75.5	75.6	77.0	78.1	78.3	78.7	79.1	79.8	80.0	80.2	80.2	76.5
5	80.3	80.4	80.1	79.2	78.8	79.2	79.2	79.0	78.7	78.5	78.7	78.8	79.1	78.9	78.6	78.7	78.7	78.7	78.4	78.4	77.8	77.3	76.9	76.9	76.9	78.8
6	76.9	77.2	77.5	78.1	77.9	77.9	77.8	77.5	77.4	77.4	77.9	78.1	78.4	78.1	78.0	77.7	77.4	78.1	78.6	78.8	78.8	79.0	79.3	79.7	78.0	
7	79.4	79.3	80.2	81.1	82.1	83.3	83.7	83.8	84.2	84.4	84.4	84.4	84.3	84.5	84.6	83.2	82.8	82.4	80.4	80.0	80.9	80.6	80.3	80.1	82.3	
8	79.9	80.2	80.1	80.0	79.5	75.6	76.0	75.9	76.1	76.2	77.0	76.8	76.9	77.1	76.8	76.2	76.7	76.5	76.5	76.7	76.8	76.6	76.9	76.7	77.3	
9	76.9	76.7	76.8	76.2	76.0	76.0	75.8	76.0	76.6	77.3	77.1	77.6	78.4	78.1	77.2	76.5	76.3	76.4	76.2	76.6	76.4	75.9	76.0	75.8	76.6	
10	75.5	75.6	75.7	75.5	75.4	75.8	75.3	75.0	75.0	74.7	74.6	74.9	75.4	75.5	75.7	76.2	77.4	78.0	78.4	78.2	78.0	77.9	78.2	79.0	76.2	
11	78.5	77.7	76.5	75.6	75.1	75.0	75.1	75.0	74.8	74.8	75.0	75.2	75.0	74.8	74.8	74.3	74.1	73.6	73.5	73.1	72.9	73.1	73.5	73.6	74.9	
12	73.5	73.9	74.3	74.8	74.5	74.9	75.1	76.6	76.6	76.4	76.2	76.1	76.6	76.5	76.3	76.0	75.8	75.6	75.5	75.2	74.9	74.9	75.3	75.9	75.4	
13	75.2	75.8	76.3	77.1	77.0	76.1	76.2	76.9	76.8	76.8	77.5	78.2	78.1	78.5	77.8	77.1	76.7	76.7	76.7	76.4	76.2	75.6	75.3	74.9	76.7	
14	75.2	75.2	75.1	74.8	74.8	74.9	75.5	76.5	76.2	75.9	76.3	76.6	76.7	76.8	77.2	76.0	75.8	75.2	75.1	74.6	74.6	74.3	74.3	74.4	75.5	
15	73.4	73.8	73.8	73.9	73.4	73.0	73.3	73.7	73.3	74.4	74.9	76.8	77.5	77.4	77.2	77.0	75.4	75.0	75.0	74.5	74.5	74.0	73.6	72.7	74.7	
16	73.6	73.9	74.0	74.3	72.6	73.2	73.0	72.9	73.0	72.4	74.4	75.9	76.4	76.6	77.3	77.6	77.5	78.1	78.0	78.2	78.5	79.2	79.5	79.0	75.7	
17	79.2	79.3	79.3	79.3	79.3	79.3	79.2	78.9	78.9	79.1	79.1	79.4	79.7	79.8	80.0	80.2	80.4	80.7	80.8	80.7	80.9	80.8	80.5	80.8	79.8	
18	80.8	80.7	81.1	81.6	81.5	81.6	81.8	81.6	81.2	81.5	81.2	81.4	81.8	81.9	81.5	81.2	81.1	81.0	80.8	80.7	80.6	80.5	80.9	80.8	81.2	
19	81.0	81.5	81.6	82.2	82.1	81.7	81.6	81.4	81.8	82.0	83.2	83.8	83.6	82.9	82.5	82.0	81.4	81.0	80.5	80.4	79.9	79.4	78.7	78.5	81.5	
20	78.3	77.7	77.4	77.3	77.2	77.0	77.0	77.0	77.1	77.7	78.5	79.1	79.4	79.0	78.5	77.8	76.9	76.7	75.7	75.9	75.8	75.4	75.3	74.9	77.3	
21	73.7	74.8	73.7	73.9	74.0	73.5	74.3	74.6	75.3	75.2	75.9	77.0	77.5	77.8	78.2	78.6	78.7	78.9	79.1	79.0	79.0	79.1	79.2	79.2	76.6	
22	79.0	79.0	79.1	78.7	78.8	78.6	78.7	78.8	79.0	79.0	79.0	79.0	79.2	79.1	79.0	79.0	78.9	78.9	79.0	79.1	79.2	79.3	79.2	79.2	79.0	
23	79.7	79.6	79.0	79.0	78.5	78.5	78.5	78.6	79.0	78.4	78.7	79.1	79.3	80.1	79.9	79.8	79.0	78.3	77.6	77.1	76.7	76.7	76.5	76.9	78.6	
24	77.3	78.5	78.6	78.6	78.9	79.4	79.8	79.9	80.0	80.1	80.4	80.5	81.0	80.8	80.6	80.7	80.6	80.5	80.4	80.3	80.4	79.7	78.9	78.8	79.7	
25	78.0	77.8	77.8	77.2	77.8	77.5	77.4	77.3	76.9	76.4	76.8	77.6	78.4	78.6	78.1	77.4	77.1	76.9	76.5	75.8	75.5	74.8	75.0	74.5	77.1	
26	73.9	73.3	73.0	73.2	72.9	72.9	72.3	72.4	71.7	73.0	73.8	75.1	75.7	75.8	75.6	74.4	74.1	73.6	73.2	73.0	73.1	73.6	73.0	72.8	78.6	
27	73.1	72.9	73.2	73.3	73.6	73.9	73.4	73.6	74.0	74.4	74.3	74.1	74.2	74.4	74.4	74.2	74.1	74.2	74.2	74.4	74.4	74.0	73.7	73.4	73.9	
28	73.6	73.5	73.8	73.0	72.8	72.8	72.3	71.8	72.1	72.1	73.4	74.8	75.5	75.8	75.6	75.4	75.3	75.5	75.5	74.7	75.4	75.0	75.2	75.4	74.2	
29	75.1	75.1	75.2	75.3	75.4	75.8	75.8	75.6	75.7	75.7	76.1	75.7	76.6	76.5	76.2	76.1	75.1	74.4	74.2	74.4	74.9	77.7	77.8	78.0	75.7	
30	77.5	77.5	77.6	77.6	77.5	77.2	76.8	76.4	76.4	76.7	76.9	77.7	77.9	77.6	77.3	77.2	76.8	75.5	75.1	75.4	75.4	75.1	74.6	74.5	76.7	
31	74.6	74.8	76.1	76.0	76.8	77.2	77.1	77.4	77.3	77.2	77.5	78.1	78.2	78.4	78.1	78.5	78.4	78.3	77.8	78.8	77.5	78.4	78.4	78.5	77.4	
Mean ...	76.9	77.0	77.1	77.1	77.0	77.0	76.9	76.9	76.9	77.0	77.4	77.9	78.1	78.1	77.9	77.7	77.5	77.4	77.3	77.2	77.2	77.2	77.1	77.1	77.3	

85. Aberdeen : North Wall Screen on Tower :  $h_t$  = 12.5 metres.

February, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	78.5	78.5	78.6	78.5	78.6	78.3	78.0	78.0	77.2	76.8	76.8	76.5	76.5	76.9	76.8	76.9	76.2	76.4	76.2	76.0	75.5	74.7	75.3	75.0	77.0
2	75.1	75.9	75.7	76.3	76.5	76.1	76.8	76.6	76.4	76.3	76.5	76.4	76.3	76.9	76.3	77.0	76.1	75.8	76.0	76.2	76.5	75.4	76.3	76.0	76.2
3	75.8	75.7	75.8	75.4	76.3	76.3	76.9	77.0	77.2	77.4	76.7	76.8	76.8	76.8	76.1	76.5	76.8	76.3	76.6	76.6	75.8	77.1	77.1	77.2	76.5
4	76.4	76.3	75.8	75.2	74.3	74.2	73.9	74.2	75.4	75.3	76.9	76.9	77.3	77.4	77.9	77.5	76.8	76.3	76.1	77.8	77.5	77.7	77.3	77.3	76.3
5	76.9	76.4	75.7	75.5	74.1	74.2	74.8	75.1	75.4	75.5	76.1	77.0	77.8	77.9	76.2	76.2	75.2	74.6	74.9	74.7	75.0	74.5	76.0	75.9	75.8
6	76.0	75.6	75.1	75.5	74.9	74.4	75.1	75.9	76.1	76.3	76.4	76.5	77.2	77.3	77.1	76.9	76.0	75.5	75.8	75.7	75.8	75.6	75.7	75.7	75.9
7	75.8	75.8	75.7	75.7	75.7	75.4	75.1	75.3	75.8	76.3	77.7	77.9	77.9	77.9	77.0	76.1	75.9	74.4	74.6	74.4	74.1	73.9	74.0	74.7	75.7
8	74.2	74.2	74.2	74.3	74.2	74.5	74.5	74.5	75.0	75.1	75.4	75.8	76.1	76.3	76.3	76.0	75.5	75.2	74.9	74.6	74.5	74.6	74.1	73.8	74.9
9	73.2	72.8	72.3	71.6	71.3	71.2	71.6	71.0	72.0	73.3	74.1	75.0	75.6	75.7	75.5	75.0	74.1	73.7	73.4	74.2	74.5	74.9	75.0	75.0	73.6
10	75.1	74.5	73.7	73.9	73.6	73.2	73.5	72.5	73.0	74.3	75.7	77.3	78.7	78.7	78.7	78.0	77.0	77.1	75.7	75.2	74.5	75.9	76.5	75.5	75.5
11	75.7	75.2	75.1	74.3	74.2	73.9	74.0	74.9	74.6	75.3	76.6	78.0	78.8	79.1	79.1	79.1	78.1	77.2	7						

Readings in degrees absolute at exact hours, Greenwich Mean Time.

86. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulb above ground) = 12.5 metres. March, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	75.7	75.6	75.5	75.1	74.5	74.8	74.1	74.3	74.6	75.4	77.2	79.3	80.2	80.9	79.0	78.5	76.4	75.4	74.8	74.1	73.2	73.0	73.2	71.9	75.8
2	71.3	71.9	71.6	71.7	72.2	73.0	72.5	72.7	73.6	74.4	74.6	75.0	75.2	75.7	76.0	75.9	76.0	75.9	75.9	75.8	75.9	76.2	76.4	76.6	74.3
3	76.8	76.9	77.0	77.0	77.0	77.1	77.2	77.1	77.2	77.7	77.6	77.4	77.8	77.7	77.6	77.4	77.3	76.9	76.9	77.0	76.9	76.8	76.8	76.8	77.2
4	76.8	76.1	75.2	75.1	75.0	75.6	75.1	75.6	76.7	78.1	80.1	81.8	81.6	82.4	82.7	82.0	81.3	80.1	79.6	78.9	78.2	77.8	77.6	76.9	78.3
5	76.8	76.2	76.0	75.5	74.5	74.3	75.1	74.8	75.5	77.5	78.8	79.3	79.7	80.1	79.3	79.0	79.0	78.7	78.1	78.3	78.1	78.2	78.4	78.4	77.5
6	78.5	78.4	78.4	78.2	78.4	78.5	78.6	78.7	78.7	79.0	79.1	79.5	80.2	80.7	80.2	79.8	79.8	79.3	79.0	79.0	79.1	79.5	79.3	78.9	79.1
7	78.6	78.8	79.0	78.8	78.0	78.1	78.4	78.2	78.2	80.5	81.6	82.9	83.5	83.6	83.1	83.0	82.6	81.8	81.1	80.9	80.1	80.1	80.5	80.1	80.5
8	80.2	79.7	79.1	79.3	79.2	79.5	79.8	80.4	80.9	81.9	83.0	83.1	83.3	82.8	82.7	82.5	82.6	81.6	81.2	80.9	80.7	80.4	79.9	79.5	81.0
9	79.9	79.9	79.8	80.1	80.0	80.1	80.5	81.4	82.7	83.3	84.0	83.0	80.4	80.2	79.3	78.4	78.3	77.4	76.8	75.7	75.1	75.1	74.9	75.0	79.3
10	74.7	74.8	74.4	74.3	73.9	73.6	73.5	74.2	75.1	76.0	76.6	77.3	77.5	77.9	77.9	77.5	76.9	77.0	77.0	76.4	76.6	76.2	74.9	74.6	75.8
11	74.3	74.7	74.5	76.7	76.5	76.6	76.9	76.9	77.6	77.9	78.3	78.5	78.6	78.5	78.3	78.1	77.8	77.5	77.4	77.4	75.9	75.2	75.0	74.5	76.8
12	74.0	73.6	73.7	73.1	73.3	73.2	74.4	74.4	74.4	75.5	75.3	74.7	73.3	72.9	74.5	74.2	73.6	73.1	72.5	72.2	71.9	71.6	71.7	72.4	73.5
13	72.2	71.9	72.2	72.8	72.9	72.7	72.4	73.1	74.5	75.2	76.0	75.7	76.0	76.6	76.9	76.2	75.8	75.0	73.7	73.6	73.0	73.6	73.7	73.2	74.1
14	73.9	73.0	72.9	72.9	73.1	72.9	72.2	72.9	74.9	75.4	75.3	76.0	76.1	76.3	76.0	75.9	75.4	74.7	73.7	73.2	73.0	72.7	72.7	72.0	74.1
15	71.7	71.6	71.1	70.8	71.2	71.0	71.6	72.7	73.6	74.3	75.0	75.5	76.0	76.3	76.1	76.1	75.6	74.9	74.4	74.4	74.2	72.6	71.4	70.9	73.5
16	71.2	71.0	71.3	72.2	72.6	72.6	73.2	74.0	73.6	73.6	74.9	76.8	77.0	76.9	76.6	76.7	76.6	76.5	76.9	76.1	76.1	76.1	75.9	76.4	74.7
17	76.7	76.1	76.2	75.5	75.7	75.6	75.6	76.1	75.7	75.9	76.3	76.9	76.6	77.0	76.8	75.7	75.5	75.3	75.5	75.2	74.1	74.0	73.7	72.9	75.7
18	72.7	72.7	72.8	73.0	73.0	73.0	72.6	73.4	73.7	74.3	75.4	75.5	75.9	73.8	74.2	74.1	74.4	73.9	72.3	72.2	71.8	70.9	70.4	70.3	73.2
19	70.1	70.0	69.7	69.4	69.6	69.4	68.9	69.5	70.0	71.0	71.3	71.8	72.0	72.1	72.4	72.5	72.1	71.4	70.7	70.2	70.4	69.8	69.8	70.1	70.6
20	69.4	70.1	70.6	71.0	71.5	72.9	73.4	73.5	74.1	75.1	76.3	75.0	73.5	74.4	74.7	74.5	74.2	73.6	73.3	73.0	72.7	72.3	72.4	72.0	73.0
21	71.6	71.7	70.8	71.6	71.8	70.7	71.3	72.4	73.3	74.2	74.3	73.3	72.9	72.6	72.5	72.8	72.9	73.4	73.6	73.3	73.3	72.6	72.0	71.8	72.5
22	72.3	72.8	73.0	73.2	72.7	72.5	71.4	72.2	74.2	75.2	76.2	77.1	77.5	78.0	78.2	77.4	77.2	76.7	75.9	75.6	74.3	74.1	73.7	73.6	74.8
23	73.2	72.8	72.4	72.1	72.0	71.9	72.0	72.7	73.8	75.7	76.7	77.0	76.8	77.6	77.4	77.8	77.0	76.8	76.5	75.9	75.7	75.0	74.5	74.6	74.9
24	74.2	74.1	73.7	73.6	73.2	73.0	72.4	74.5	76.1	77.7	78.1	78.4	79.2	79.8	78.8	78.6	78.0	77.4	76.9	76.8	76.8	77.2	77.1	77.1	76.3
25	77.2	77.0	76.9	77.3	77.6	78.1	78.1	78.6	79.4	80.6	82.2	83.8	84.2	84.6	84.2	83.9	83.4	82.3	81.4	80.7	80.4	80.0	79.7	79.5	80.4
26	79.0	78.7	78.3	78.6	78.5	78.4	78.2	79.1	80.0	81.1	81.0	81.4	81.6	81.7	81.5	81.9	81.9	81.7	80.8	80.4	79.4	78.9	79.0	79.1	80.0
27	79.2	79.4	80.1	79.9	80.0	80.4	80.4	81.2	83.3	84.9	85.6	85.7	86.3	84.0	81.8	81.4	80.6	80.5	80.3	79.7	78.4	79.3	81.1	81.6	81.4
28	81.1	80.8	79.8	79.7	79.8	79.9	80.6	80.4	80.2	80.1	80.5	80.5	81.4	82.4	81.9	81.6	81.0	80.8	81.1	81.1	80.4	80.2	79.9	80.5	80.7
29	80.1	80.0	79.7	79.4	79.6	79.4	79.5	80.2	80.7	81.5	81.8	81.9	82.6	83.0	84.0	83.2	82.2	80.5	79.6	79.2	78.5	78.0	77.5	78.0	80.7
30	77.0	76.4	76.5	76.1	75.7	76.3	76.3	77.6	79.0	80.1	81.2	82.3	81.9	81.0	80.6	80.7	80.7	80.5	80.2	80.1	80.2	80.2	80.1	80.2	79.1
31	80.2	79.8	79.8	79.7	79.7	79.6	79.7	80.0	80.2	80.3	80.7	81.1	81.5	81.4	81.4	81.5	80.8	80.5	80.4	80.3	80.3	80.1	79.8	79.7	80.4
Mean ...	75.5	75.4	75.2	75.3	75.2	75.3	75.4	75.9	76.6	77.5	78.2	78.6	78.7	78.8	78.6	78.4	78.0	77.5	77.0	76.7	76.3	76.1	75.9	75.8	76.7

87. Aberdeen : North Wall Screen on Tower :  $h_t$  = 12.5 metres.

April, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	79.8	79.8	79.7	79.7	79.7	79.5	79.7	79.9	80.0	80.0	80.5	80.5	80.2	80.9	80.3	80.3	80.3	80.5	80.8	81.0	81.1	80.9	80.8	80.9	80.3
2	80.8	80.6	80.3	80.3	80.1	80.1	80.0	79.9	79.8	79.8	79.9	80.0	79.8	80.4	81.6	81.2	80.2	80.3	80.1	80.0	79.8	79.7	79.6	79.4	80.2
3	79.1	79.1	78.9	78.9	78.6	79.2	79.0	78.5	78.6	78.5	78.6	78.8	78.5	78.5	78.4	78.2	78.0	77.9	78.0	77.5	77.5	77.3	77.5	77.5	78.4
4	77.4	77.4	77.6	77.8	77.6	77.9	77.9	78.1	78.2	78.7	79.0	78.6	78.1	77.5	76.9	77.4	77.7	77.4	77.0	76.6	76.7	75.2	75.3	76.2	77.5
5	75.0	74.5	74.2	74.1	74.0	74.1	74.7	75.5	76.6	77.9	78.4	78.5	78.6	78.7	78.5	78.6	78.6	78.2	78.1	78.0	77.9	77.8	77.7	77.2	78.9
6	77.0	77.0	76.8	76.8	76.8	77.0	77.7	78.1	78.2	78.9	78.9	79.1	79.6	79.2	79.5	79.7	79.6	79.5	79.3	79.1	79.0	79.0	78.9	78.8	78.4
7	78.8	78.6	78.4	78.3	78.3	78.3	78.4	78.9	80.0	81.0	81.9	81.6	81.2	81.0	80.9	81.3	81.0	80.1	79.7	79.4	79.4	79.4	79.2	79.1	79.7
8	79.0	78.9	78.9	78.8	78.6	78.6	79.0	79.1	79.4	80.8	80.4	80.9	80.5	80.8	79.9	79.9	79.8	79.9	79.8	80.1	79.9	79.8	79.7	79.7	79.7
9	79.6	79.7	79.7	79.8	80.1	80.2	80.2	81.0	82.1	83.2	82.8	83.2	83.8	84.0	84.0	83.4	83.4	82.6	81.6	81.7	81.6	81.4	81.3	80.6	81.7
10	80.2	79.9	79.9	79.2	79.8	80.1	80.4	80.5	82.2	83.0	83.5	84.4	82.7	81.4	81.8	81.9	82.1	82.1	81.7	81.4	81.4	81.4	80.2	80.0	81.3
11	79.2	79.5	79.5	79.4	79.6	79.4	80.1	81.4	82.5	83.1	83.4	84.3	85.3	85.4	84.7	83.8	83.1	82.2	80.9	80.6	80.0	79.3	7		

Readings in degrees absolute at exact hours, Greenwich Mean Time.

88. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulb above ground) = 12.5 metres. May, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	79.1	77.3	77.3	77.2	76.1	78.6	81.4	83.5	84.3	85.4	85.6	84.9	85.3	85.1	84.4	84.6	81.7	81.2	79.6	79.4	79.8	79.0	80.0	79.6	81.2
2	79.0	79.0	78.6	77.1	77.4	78.6	81.4	81.8	83.8	82.3	83.0	83.1	82.6	82.6	82.2	81.6	81.4	80.7	80.4	79.8	79.4	78.9	78.8	78.7	80.5
3	78.4	78.5	78.4	78.2	78.1	78.3	78.4	78.6	78.5	78.5	78.6	79.1	79.4	79.6	79.5	79.7	79.6	79.8	79.9	79.9	80.2	80.2	80.2	80.0	80.0
4	79.8	79.9	79.7	79.6	79.5	79.7	80.0	80.2	79.3	79.3	79.9	80.6	80.8	80.7	79.6	79.6	79.6	79.6	79.6	79.6	79.4	78.7	78.5	78.5	79.7
5	78.4	78.4	78.5	78.5	78.7	78.8	79.4	79.6	79.6	79.9	80.1	80.2	80.6	80.7	80.7	80.0	79.9	79.9	79.3	78.9	78.3	77.7	77.0	76.5	79.2
6	77.5	77.8	78.0	78.0	77.9	78.4	79.8	80.4	80.8	80.9	81.3	81.6	82.0	81.4	81.5	81.2	81.1	81.0	80.9	80.6	80.3	80.2	80.1	79.9	80.0
7	79.7	79.6	79.4	79.1	79.4	79.5	80.1	81.2	81.2	78.0	79.8	79.6	77.6	79.3	79.1	77.2	77.4	78.1	77.4	75.4	76.1	75.5	74.8	74.7	78.4
8	75.1	74.9	75.0	74.9	74.9	75.4	76.8	77.3	78.4	78.7	78.7	78.6	79.4	79.8	77.5	79.2	80.0	80.5	79.4	78.6	77.4	76.8	76.4	76.0	77.5
9	75.8	76.1	76.4	76.2	76.4	76.9	77.5	77.9	77.6	77.8	77.9	78.8	79.3	79.8	78.5	78.8	78.7	79.4	78.5	77.8	77.6	76.3	76.3	76.0	77.6
10	75.2	74.6	75.2	76.0	76.0	77.5	77.9	79.1	80.3	81.4	82.2	82.7	82.9	82.9	82.3	81.9	81.1	80.5	80.0	79.9	79.7	79.2	79.6	79.5	79.4
11	79.2	78.9	78.7	78.5	78.3	78.5	79.2	79.8	79.6	80.2	79.9	80.5	80.7	80.6	80.5	80.3	80.2	80.1	79.7	79.5	79.4	79.1	79.1	78.7	79.6
12	78.5	78.2	78.3	78.0	77.8	78.1	78.6	78.9	79.3	80.0	80.8	80.2	80.2	80.1	80.6	80.5	81.0	80.6	80.3	79.7	79.0	78.5	78.1	77.5	79.3
13	77.2	77.0	77.4	77.6	78.6	78.9	79.2	79.7	79.7	79.6	79.7	79.8	80.0	80.0	80.1	80.0	79.9	79.8	79.6	79.7	79.8	79.7	79.8	79.8	79.2
14	79.9	80.0	79.5	79.2	80.7	81.2	80.4	79.7	80.4	80.4	81.5	81.5	81.0	80.4	82.4	83.8	84.8	84.8	84.3	83.8	82.8	80.7	80.4	80.2	81.3
15	79.2	79.1	78.5	78.1	78.1	78.2	78.4	79.2	80.0	82.0	84.4	84.2	83.9	83.5	83.0	83.1	82.9	83.1	84.0	82.0	83.7	82.7	82.3	81.7	81.4
16	80.5	80.1	80.7	80.3	80.7	82.3	84.0	84.9	86.1	86.7	87.5	88.1	86.8	86.3	88.1	88.7	88.8	88.3	86.9	85.4	84.2	83.9	82.9	82.2	84.8
17	81.5	81.6	80.7	80.1	81.1	82.2	82.9	84.2	84.9	84.2	82.5	83.1	83.8	83.7	83.0	82.9	82.6	82.4	82.4	82.1	82.0	82.1	82.0	82.3	82.5
18	82.4	81.7	81.4	80.4	80.5	81.1	81.6	81.6	83.2	82.9	84.2	84.3	85.0	85.1	85.7	85.1	84.3	84.2	84.1	82.7	82.2	81.8	81.4	81.2	82.9
19	81.0	80.6	80.3	79.8	81.7	82.4	83.3	83.5	83.9	84.9	85.7	86.4	86.4	86.8	86.1	87.8	86.8	86.5	86.2	85.5	84.8	84.3	84.2	83.8	84.1
20	83.8	83.6	83.2	83.0	82.7	82.7	83.0	83.3	82.5	82.2	82.0	82.2	81.8	81.5	81.8	82.5	83.5	84.0	83.1	82.2	82.6	82.4	81.5	81.5	82.7
21	81.5	81.4	81.0	80.7	80.9	81.5	82.6	83.1	83.3	83.8	83.2	83.4	84.2	84.4	84.2	83.8	83.9	83.6	83.2	82.9	82.7	82.5	82.4	82.3	82.8
22	82.1	81.5	80.5	79.6	80.0	82.2	83.4	83.1	82.5	83.1	83.1	83.6	83.3	83.2	83.1	82.7	83.1	83.3	82.9	82.4	81.9	81.9	81.5	81.1	82.3
23	81.1	81.3	80.2	79.6	79.8	79.6	80.4	81.1	82.4	83.8	84.9	85.8	84.5	86.4	86.4	85.4	84.4	83.0	82.7	82.4	82.5	82.5	82.1	81.8	82.7
24	81.5	81.6	81.6	81.7	81.3	81.9	82.5	82.9	83.0	84.4	85.7	84.9	85.0	84.3	84.7	84.0	83.1	82.2	82.0	81.8	82.2	81.8	81.8	82.4	83.0
25	82.5	82.3	82.1	81.8	81.4	80.9	81.1	81.7	82.0	83.1	84.3	84.4	86.1	84.1	84.1	82.8	82.8	83.2	82.1	82.0	81.7	81.1	81.1	80.9	82.5
26	81.2	81.1	81.1	81.2	81.5	81.7	82.4	82.8	83.8	84.8	84.9	86.0	85.2	84.7	83.0	83.4	84.9	84.3	83.2	82.4	82.4	82.4	82.4	82.2	83.0
27	82.3	82.0	81.9	81.5	81.5	82.2	84.8	86.4	87.9	88.4	88.9	91.0	91.4	92.8	91.8	90.5	88.9	87.8	87.1	86.5	86.1	85.2	84.7	84.0	86.5
28	83.2	81.9	81.4	80.9	81.6	82.9	84.0	84.9	84.6	85.2	86.0	85.5	85.0	85.7	85.8	85.6	85.5	85.6	84.3	83.7	83.1	82.2	80.9	81.3	83.8
29	80.4	79.8	79.1	78.9	80.8	82.7	83.6	84.1	84.9	84.8	85.8	85.9	86.0	85.4	85.6	85.0	85.2	84.5	84.2	83.4	82.4	82.0	81.6	81.4	83.2
30	80.9	79.7	79.0	78.7	80.0	82.9	83.8	84.1	84.6	84.7	85.2	85.4	84.8	84.1	84.4	84.5	84.3	83.4	83.0	82.6	82.4	82.4	82.4	82.4	82.9
31	82.3	82.1	81.7	81.9	82.2	82.6	83.3	83.9	83.8	84.1	84.4	84.0	83.3	84.6	84.3	83.9	83.6	83.4	82.9	82.7	82.1	82.1	81.9	81.7	83.0
Mean ...	80.0	79.7	79.5	79.2	79.5	80.2	81.2	81.7	82.1	82.4	82.9	83.2	83.2	83.1	83.1	82.9	82.7	82.6	82.0	81.5	81.2	80.8	80.5	80.3	81.5

89. Aberdeen : North Wall Screen on Tower :  $h_t$  = 12.5 metres.

June, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	81.8	81.6	82.0	82.2	82.1	82.4	82.8	82.9	82.7	82.9	83.1	83.3	83.1	83.2	82.7	82.8	82.7	82.7	82.5	82.4	82.4	82.2	82.1	82.0	82.5
2	81.9	81.4	81.6	81.4	81.3	81.2	81.5	81.7	82.2	82.7	82.9	83.1	83.9	84.1	83.9	83.5	83.7	83.1	82.9	82.4	81.9	80.5	79.7	79.1	82.2
3	78.5	78.8	79.1	78.9	78.4	79.8	82.3	83.8	84.4	84.2	84.2	85.2	84.9	84.8	86.4	86.4	83.9	83.4	83.3	82.2	82.5	82.6	82.5	82.6	82.5
4	82.7	83.0	82.5	82.7	83.6	83.8	84.4	83.8	84.7	86.3	88.2	90.8	92.2	90.9	89.2	88.5	84.9	85.3	85.4	86.9	84.9	82.5	84.5	83.1	85.7
5	84.2	83.9	84.1	83.6	83.4	85.4	87.4	89.5	91.0	90.3	92.8	94.0	96.0	96.0	96.0	96.4	96.8	92.3	89.0	88.1	86.8	87.3	87.0	86.8	89.4
6	86.7	88.7	88.1	88.1	89.3	89.8	91.3	92.8	91.1	90.7	88.9	88.0	88.4	88.2	87.7	88.1	86.8	86.2	86.1	85.2	84.4	83.4	82.6	82.4	87.7
7	82.2	81.7	81.7	81.7	82.4	83.3	84.0	84.9	85.0	85.6	85.8	86.0	86.6	86.6	87.4	87.6	87.5	87.1	86.5	85.5	83.8	82.3	81.4	80.4	84.5
8	79.8	79.8	79.5	80.3	80.8	81.2	82.7	84.7	86.4	87.4	86.8	87.8	89.2	89.1	89.3	89.1	87.4	86.7	86.6	89.5	88.2	87.0	86.5	86.2	85.5
9	86.0	85.5	85.2	85.1	85.4	85.5	85.2	86.5	86.8	86.5	86.8	86.4	86.2	86.1	86.1	86.4	86.4	86.3	86.3	86.0	86.0	84.0	83.6	82.9	85.8
10	82.3	82.1	82.0	81.6	82.3	83.2	83.6	84.6	85.7	85.6	87.3	87.8	88.6	88.8	88.9	88.5	88.2	87.8	87.1	86.0	85.2	83.9	82.9	82.5	85.3
11	82.0	81.6	81.4	81.5	82.5	83.5	84.7	85.8	87.2	88.0	88.7	89.2	90.1	90.2	90.6	90.0	89.7	89.4	88.8	87.7	86.1	85.2	84.		

Readings in degrees absolute at exact hours, Greenwich Mean Time.

90. Aberdeen : North Wall Screen on Tower :  $h_1$  (height of thermometer bulb above ground) = 12.5 metres. July, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	87.3	86.5	86.5	86.4	86.3	86.5	85.8	86.5	86.3	86.5	88.3	89.1	89.2	89.4	89.8	88.9	88.1	87.6	87.2	86.2	85.5	86.0	85.9	85.3	87.2
2	85.1	85.3	84.6	85.1	85.8	84.9	87.5	88.6	88.1	92.6	94.1	94.6	94.1	94.6	94.8	93.6	93.5	92.7	91.3	90.2	89.8	87.5	86.4	86.5	89.6
3	85.9	85.6	85.7	85.8	85.8	86.2	85.1	86.2	87.1	89.0	90.8	90.4	90.9	91.9	93.9	92.0	92.0	90.9	90.9	90.2	89.7	87.0	88.7	87.4	88.8
4	86.7	86.9	86.6	86.4	87.4	89.0	91.8	91.4	92.2	92.3	92.1	91.8	91.5	90.9	91.9	91.9	91.9	92.5	91.1	90.2	89.5	88.7	88.0	86.8	90.0
5	86.4	86.0	85.5	86.3	86.8	87.7	88.8	88.7	89.0	90.2	90.9	91.5	91.6	91.8	94.5	93.4	93.3	92.1	91.9	91.1	90.4	89.7	89.2	88.5	89.8
6	88.0	87.4	88.0	87.9	88.4	88.7	89.0	87.4	87.8	86.9	86.2	87.1	88.3	89.0	86.4	86.4	87.0	86.1	86.1	86.5	86.9	85.6	85.0	84.4	87.2
7	83.4	83.4	83.2	82.4	84.6	84.9	85.9	86.3	87.6	88.0	88.1	88.9	89.0	89.1	89.7	89.6	89.1	88.7	88.5	87.2	86.7	86.7	86.2	85.9	86.8
8	83.8	82.7	82.5	80.4	83.2	84.6	86.5	87.7	88.4	88.4	88.7	89.9	88.9	89.2	89.4	87.9	88.4	88.3	87.6	88.0	87.6	87.8	86.7	87.1	87.0
9	85.8	85.3	85.9	85.7	86.2	86.2	86.5	87.1	87.9	88.1	88.5	88.9	88.9	88.8	89.0	89.6	88.6	88.2	87.7	86.6	86.0	85.4	85.0	84.8	87.2
10	84.5	84.4	84.2	84.2	84.1	84.6	85.5	86.1	87.0	87.7	86.2	86.8	88.1	89.0	88.6	88.7	88.1	87.3	87.9	85.9	84.5	83.9	84.2	84.1	86.1
11	83.6	82.9	83.1	83.2	83.4	83.2	83.8	84.7	85.1	86.1	86.7	87.2	87.8	87.6	87.7	87.5	87.6	86.3	86.0	85.6	85.3	84.9	84.6	84.4	85.3
12	84.2	84.2	84.0	83.8	84.1	84.2	84.4	84.7	85.1	85.3	86.0	86.0	86.4	87.1	87.3	87.6	87.7	87.3	87.5	86.3	84.7	83.3	81.9	81.6	85.3
13	80.5	80.4	80.2	80.4	81.1	82.3	85.5	85.6	85.5	85.7	87.2	88.5	88.5	88.3	88.4	87.2	86.3	86.2	86.0	85.6	85.6	85.6	85.4	85.4	85.0
14	85.2	85.1	85.2	85.2	85.3	85.3	85.6	85.9	86.5	87.2	87.2	87.5	87.3	87.7	86.8	87.0	86.8	86.5	86.2	85.6	85.7	85.7	85.1	84.7	86.1
15	85.0	85.1	85.1	84.3	84.6	84.2	85.8	87.1	87.3	88.7	86.9	86.7	87.4	87.4	87.6	87.4	87.2	87.1	87.0	86.3	85.9	85.3	84.0	83.8	86.1
16	83.9	84.4	84.8	85.3	86.1	86.4	86.5	86.6	86.8	87.1	87.6	87.5	88.0	88.0	87.8	87.0	86.7	86.7	86.6	86.7	86.5	86.5	86.5	86.5	86.5
17	86.5	86.5	86.5	86.4	86.5	86.5	86.8	86.4	86.2	86.5	86.8	87.1	87.2	88.2	88.3	87.1	87.1	87.1	86.4	86.1	86.3	86.2	86.0	85.8	86.7
18	86.1	86.0	85.9	86.0	85.9	86.1	86.3	86.5	87.4	87.7	87.8	88.0	88.4	88.3	87.4	87.3	87.3	87.1	86.9	86.3	86.0	85.9	85.7	85.5	86.7
19	85.0	84.8	84.5	84.5	85.0	85.8	86.3	87.4	88.6	89.0	89.6	90.0	90.5	89.6	88.9	87.8	86.6	86.6	86.4	86.2	86.1	85.7	85.8	85.6	86.9
20	85.5	85.9	85.9	85.7	85.1	85.1	85.2	85.7	86.2	86.0	86.0	86.1	86.1	86.5	87.1	87.1	87.7	86.3	85.2	84.9	84.5	84.1	83.7	83.7	85.7
21	83.5	83.2	83.1	82.7	82.8	82.8	83.0	84.2	84.4	84.8	84.2	84.4	85.1	85.4	85.2	84.6	84.3	84.4	84.1	83.7	83.3	83.0	82.7	82.6	83.8
22	82.7	82.5	82.5	82.3	82.1	82.0	82.6	82.9	83.1	83.4	83.7	83.8	84.0	84.1	84.4	84.4	84.6	84.4	84.2	84.1	83.9	83.7	83.5	83.6	83.4
23	83.6	83.5	83.5	83.3	83.5	83.8	84.1	84.5	84.7	85.1	85.4	85.4	85.4	85.6	85.1	84.3	84.4	84.4	84.2	84.3	84.3	84.2	84.1	84.1	84.4
24	84.0	83.8	83.9	83.9	83.8	83.6	83.2	83.8	84.4	84.9	85.1	85.6	86.3	86.4	86.4	86.8	85.7	87.1	86.0	85.2	84.7	84.4	84.2	83.6	84.9
25	81.9	81.0	80.3	80.2	81.6	82.4	85.1	86.6	86.6	86.2	86.2	86.6	86.9	87.9	88.3	88.4	88.4	87.7	86.9	86.4	86.0	85.8	85.8	85.8	85.3
26	85.1	84.9	84.8	84.5	85.1	85.3	86.0	85.8	86.9	88.2	88.5	87.5	87.6	87.9	87.7	87.4	88.0	88.8	88.8	87.6	87.2	86.3	87.0	86.8	86.8
27	86.7	86.0	85.9	85.2	86.4	86.4	87.4	89.4	91.1	91.7	92.0	92.4	92.1	93.6	94.0	91.8	92.4	90.4	90.4	89.2	88.0	86.9	85.9	85.8	89.2
28	86.1	85.8	86.4	86.3	86.4	86.7	88.1	88.9	89.6	90.8	91.0	92.4	91.0	89.8	90.0	90.0	89.9	88.9	88.0	87.2	86.9	86.9	85.5	84.8	88.3
29	83.5	82.8	84.3	83.3	83.6	85.0	85.5	85.7	87.4	88.4	88.3	88.6	88.6	88.8	88.9	88.8	87.6	87.7	87.8	87.5	87.2	86.9	87.0	86.6	86.6
30	86.3	86.2	85.5	84.9	84.7	84.7	84.6	85.4	86.1	86.1	86.8	87.2	87.8	88.0	88.1	88.1	87.1	87.1	86.5	85.6	84.8	84.2	84.2	83.8	86.1
31	83.3	83.2	83.3	83.1	83.3	83.4	84.4	85.0	84.7	85.4	86.3	86.6	87.0	87.2	86.6	86.7	86.5	86.7	86.8	86.4	85.7	85.0	84.1	83.7	85.2
Mean ...	84.8	84.6	84.6	84.4	84.8	85.1	85.9	86.4	86.9	87.5	87.8	88.1	88.4	88.6	88.7	88.3	88.1	87.7	87.4	86.8	86.3	85.8	85.4	85.1	86.6

91. Aberdeen : North Wall Screen on Tower :  $h_1$  = 12.5 metres.

August, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	83.7	83.6	83.6	83.4	84.3	84.6	84.6	85.3	85.5	85.7	86.4	86.4	85.7	86.1	86.4	86.4	86.6	86.4	85.9	86.1	85.9	85.2	85.0	85.0	85.3
2	85.1	85.3	85.4	85.6	85.8	85.9	86.0	85.9	85.8	85.6	85.9	85.9	86.0	86.0	86.2	86.5	86.4	86.5	86.6	86.5	86.5	86.2	86.2	86.2	86.0
3	86.2	86.2	86.1	86.2	86.1	85.8	86.2	87.1	87.7	88.4	89.4	89.2	89.7	89.1	89.1	88.5	88.5	87.9	86.7	86.1	85.8	86.5	86.1	86.1	87.4
4	85.5	85.5	85.7	85.8	85.8	86.0	87.0	87.4	87.7	88.4	89.4	89.6	87.6	87.4	87.9	87.6	87.7	87.2	87.0	86.8	86.7	86.7	86.7	86.4	86.9
5	86.4	86.1	85.9	85.7	85.3	85.2	85.0	85.2	85.4	85.7	86.2	86.9	87.9	87.8	88.2	87.5	87.1	86.9	86.5	86.2	85.9	85.8	85.9	85.4	86.3
6	85.2	85.3	85.1	84.7	84.8	85.0	86.1	87.2	88.1	88.3	89.0	90.0	90.0	90.2	90.2	89.6	89.6	89.6	89.2	88.5	87.5	87.3	86.8	86.4	87.6
7	86.0	85.5	85.2	85.1	84.6	85.2	85.9	88.1	88.8	88.9	89.5	90.7	91.9	91.6	91.7	90.1	88.8	88.2	87.7	88.0	86.9	85.7	84.9	84.5	87.7
8	83.9	83.5	83.1	82.3	82.2	83.7	86.4	88.2	88.5	89.2	89.1	90.8	91.4	90.4	90.0	89.8	88.0	88.2	88.1	87.6	87.6	87.4	87.4	87.3	87.2
9	87.1	86.4	85.7	84.6	84.8	85.5	86.4	87.1	87.5	88.4	89.6	91.9	91.9	89.9	89.7	91.4	88.8	88.8	88.9	88.9	88.0	86.7	85.8	85.0	88.0
10	85.4	86.2	86.0	86.0	86.0	86.6	87.0	87.9	89.0	89.6	89.5	88.8	89.3	88.6	88.9	89.1	88.5	88.9	88.8	87.8	87.5	87.8	86.9	86.1	87.7
11	86.0	86.0	86.5	85.8	85.4	86.4	87.9	88.9	89.1	89.3	90.0	90.0	92.2	92.0	91.4	90.0	89.5	88.2	88.4	88.1	87.1	87.1</			

Readings in degrees absolute at exact hours, Greenwich Mean Time.

92. Aberdeen : North Wall Screen on Tower : h, (height of thermometer bulb above ground) = 12.5 metres. September, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	83.3	82.8	82.6	82.9	82.4	82.4	83.1	85.0	85.5	86.8	87.6	87.9	88.3	87.8	87.9	87.2	87.1	86.7	86.3	85.8	85.6	85.9	85.4	85.5	85.4
2	85.5	85.3	85.6	85.4	84.6	84.9	85.3	85.9	86.4	87.2	87.1	87.9	88.4	88.7	88.8	88.6	86.9	86.4	86.1	85.9	85.8	85.5	85.1	84.9	86.4
3	84.9	84.8	84.6	84.4	84.1	83.9	84.6	85.7	85.9	86.0	86.5	87.2	87.5	87.4	87.3	87.1	86.9	86.3	86.0	85.9	85.8	85.8	85.6	85.5	85.8
4	85.5	85.6	85.5	85.5	84.6	85.7	85.9	86.1	86.1	86.1	86.3	86.6	87.0	87.1	86.8	86.7	86.6	86.4	86.1	86.0	86.0	86.1	86.1	86.0	86.1
5	86.1	86.1	86.1	86.2	86.2	86.3	86.2	86.1	86.4	86.6	86.7	86.9	87.7	87.9	88.4	87.6	87.3	87.2	87.4	87.1	86.9	86.4	86.1	85.9	86.7
6	84.7	84.1	83.6	83.4	83.1	82.8	84.4	86.5	88.3	89.6	90.5	90.6	89.5	89.5	88.8	88.5	89.0	87.2	86.8	86.3	86.5	86.6	86.5	86.4	86.8
7	86.3	86.3	86.3	86.2	85.9	85.8	85.8	86.1	86.4	87.0	87.6	88.3	87.5	88.1	87.8	88.1	87.6	87.5	86.3	85.1	85.3	85.4	85.6	85.5	86.6
8	85.6	85.1	84.9	84.8	84.7	84.6	84.9	85.4	86.9	87.4	87.2	87.9	88.9	89.0	87.7	87.8	87.1	86.7	86.1	85.9	85.8	85.6	85.1	84.8	86.3
9	83.9	83.5	83.0	82.8	83.3	82.6	83.8	85.0	86.0	86.5	87.0	87.0	86.8	86.9	87.0	86.8	86.8	86.6	86.5	86.3	86.2	85.9	86.1	85.4	85.5
10	86.0	85.7	85.5	86.0	86.1	85.9	86.2	86.1	86.5	86.6	86.6	86.4	86.5	86.7	86.8	86.6	86.6	86.6	86.6	86.8	87.0	86.7	86.7	86.7	86.4
11	86.8	86.8	86.7	86.6	86.4	86.4	86.6	86.8	86.6	86.8	86.7	86.5	86.4	86.7	87.0	86.9	86.6	86.5	86.2	86.1	86.2	86.1	86.1	86.0	86.5
12	85.8	85.8	85.7	85.6	85.7	85.7	86.0	86.3	86.8	86.9	86.6	87.0	87.0	86.6	86.7	86.5	86.4	86.1	86.0	85.9	85.8	85.4	85.2	85.1	86.1
13	85.3	85.5	85.4	85.2	85.6	85.6	85.8	85.7	86.1	86.1	85.4	85.8	85.5	85.9	85.8	85.5	85.4	85.1	84.0	83.8	83.9	84.2	83.6	83.3	85.2
14	83.6	83.5	83.5	83.4	83.3	83.4	83.6	83.7	83.7	84.2	84.9	85.4	85.8	86.0	86.5	86.5	85.6	85.3	84.4	82.8	82.9	82.1	82.0	81.9	84.1
15	81.2	82.1	82.6	82.9	83.1	82.7	82.4	84.1	84.6	85.5	86.0	86.0	85.4	85.9	86.4	85.4	85.5	84.9	83.2	82.9	81.6	81.1	80.8	80.5	83.6
16	79.8	80.0	80.1	79.2	79.1	79.5	79.9	82.2	83.8	84.9	85.7	86.3	86.1	85.8	85.4	85.4	85.0	84.8	83.8	82.2	81.3	81.4	81.5	81.4	82.7
17	81.7	81.9	81.4	81.0	80.9	80.7	81.0	82.4	83.8	85.1	85.9	85.6	85.6	85.8	85.7	85.1	85.0	84.8	84.5	84.6	84.4	84.4	84.4	84.2	83.7
18	83.8	83.6	83.6	83.6	83.4	83.5	83.6	83.5	83.7	83.9	84.5	85.2	85.7	85.7	84.2	83.7	83.8	83.8	83.1	83.1	83.4	83.3	83.0	82.9	83.8
19	82.9	82.9	83.1	83.0	82.9	82.4	82.9	83.6	84.1	84.9	85.2	85.5	85.6	85.7	85.6	85.4	85.1	85.1	84.8	84.7	85.1	85.1	85.1	85.1	85.5
20	85.6	85.1	84.9	85.0	85.1	85.2	85.0	85.5	85.3	85.6	85.5	85.4	85.7	85.6	85.7	85.6	85.4	85.1	85.0	85.0	85.1	85.1	85.1	85.1	85.3
21	85.4	85.5	85.4	85.4	85.4	85.3	85.3	85.3	85.3	85.6	85.4	85.4	86.0	86.5	87.0	87.1	86.6	85.8	85.1	85.1	85.0	85.0	85.0	84.4	85.6
22	83.8	82.9	82.4	82.0	82.0	82.4	83.4	84.7	85.9	85.9	86.2	86.8	87.3	87.4	87.5	86.5	86.1	85.7	85.6	85.5	85.6	85.8	85.8	85.8	85.1
23	85.7	85.7	85.6	85.6	85.7	86.0	86.6	86.8	88.6	89.8	91.0	91.3	92.4	91.9	89.6	90.8	89.2	89.0	89.4	89.1	88.8	88.8	88.0	88.0	88.4
24	87.2	86.8	87.0	86.8	86.8	86.2	86.1	87.1	87.3	87.7	88.1	88.6	88.4	88.8	88.8	88.0	87.3	87.0	86.7	86.0	85.8	85.8	85.4	85.4	87.2
25	85.3	85.4	85.2	86.3	85.8	85.2	85.2	85.2	85.5	85.2	85.2	85.0	83.9	83.9	83.5	83.1	82.8	82.0	82.1	81.7	81.5	81.5	81.2	81.3	84.0
26	81.3	81.6	82.1	82.2	82.4	82.4	82.5	83.0	82.9	83.6	84.0	84.1	84.0	83.9	84.1	84.0	83.8	83.1	82.3	82.5	82.0	81.7	81.8	82.0	82.8
27	82.5	82.3	82.3	82.2	82.2	82.1	82.1	82.3	82.6	83.2	83.7	83.7	83.6	83.5	83.4	83.2	82.8	82.5	82.2	81.1	80.6	80.4	80.1	80.3	82.8
28	80.4	80.1	80.0	80.3	80.7	80.9	81.2	82.0	83.0	83.9	84.3	84.7	84.7	84.6	84.1	84.0	83.9	83.5	83.0	82.7	82.9	82.6	82.1	81.6	82.5
29	81.9	81.4	81.6	81.7	81.0	81.6	81.8	82.0	84.0	84.3	83.5	84.8	84.8	84.9	84.8	84.4	84.4	84.0	83.3	83.0	82.9	82.7	82.5	82.6	82.5
30	82.5	82.4	82.3	82.2	81.9	81.8	82.1	82.5	83.5	83.4	84.0	84.4	84.5	84.8	84.7	84.3	83.9	83.1	82.6	82.4	82.1	82.2	82.1	82.0	83.0
Mean ...	84.1	84.0	84.0	83.9	83.8	83.8	84.1	84.8	85.4	85.9	86.2	86.5	86.6	86.6	86.5	86.2	85.9	85.5	85.1	84.7	84.6	84.5	84.3	84.2	85.0

93. Aberdeen : North Wall Screen on Tower : h, = 12.5 metres.

October, 1930.

1	81.8	81.8	81.5	81.5	81.4	81.3	81.4	81.5	82.1	82.2	82.6	82.6	82.4	82.2	82.3	81.7	81.2	81.0	80.7	80.5	80.4	80.4	80.2	80.2	81.6
2	80.1	80.0	79.9	79.8	79.8	79.8	79.8	80.5	80.6	80.8	80.8	82.2	82.4	82.5	82.6	82.3	81.9	81.8	81.0	80.8	80.7	80.7	80.6	80.2	81.2
3	81.6	81.4	81.4	81.1	81.0	81.0	81.1	81.4	81.8	82.4	83.1	83.5	83.8	84.0	84.6	84.3	84.1	84.0	83.9	83.7	83.6	83.5	83.3	83.2	82.7
4	83.2	83.1	83.1	82.9	82.8	82.6	83.0	83.2	83.6	84.6	85.6	86.9	87.7	87.6	87.3	86.2	85.4	84.9	84.9	85.0	85.0	84.9	84.9	84.8	84.7
5	84.8	84.7	84.6	84.1	83.7	83.0	82.8	83.0	84.2	84.9	85.1	85.7	85.7	85.1	84.9	84.1	83.5	82.7	81.7	81.1	81.0	80.9	80.6	80.6	83.5
6	80.4	80.0	80.3	79.9	82.0	79.6	79.8	80.7	82.3	83.3	84.0	84.1	83.7	84.4	84.2	83.5	83.0	82.5	81.9	81.9	81.3	81.6	81.7	81.8	82.0
7	82.0	82.0	82.1	82.4	82.1	82.0	82.2	82.4	83.3	84.5	84.9	84.6	85.4	83.8	84.5	83.6	83.4	81.7	80.4	80.0	79.9	80.1	82.7	82.7	82.6
8	82.5	83.3	83.2	81.2	81.1	81.1	81.1	81.0	80.6	80.5	80.6	80.6	80.6	80.7	80.7	80.6	80.8	80.4	80.4	80.0	79.0	79.0	79.3	79.6	80.8
9	78.5	77.4	77.7	77.5	77.1	76.9	77.0	77.6	79.0	79.7	80.5	81.2	81.8	80.6	81.8	81.8	81.5	81.1	80.4	80.0	79.6	79.5	79.1	78.4	79.4
10	78.4	78.5	78.7	79.1	79.1	78.8	79.0	79.3	80.7	82.2	82.6	84.1	84.2	83.4	83.9	84.0	83.5	83.3	83.2	83.4	83.4	83.5	83.4	82.8	81.7
11	82.5	82.1	81.9	82.0	81.3	80.7	80.5	81.5	83.1	83.8	84.0	84.7	84.6	84.4	85.1	84.6	84.1	83.8	83.8	83.0	83.0	83.4	81.8	81.7	83.0
12	81.5	81.0	80.8	80.7	80.2	80.2	80.5	80.7	81.1	82.0	82.8	84.0	83.4	82.6	83.6	82.3	81.1	80.4	80.2	80.0	80.3	79.2	78.6	81.3	
13	78.3	78.3	78.7	78.7	78.8	79.0	79.8	80.3	80.9	81.8	82.7	83.6	84.6	85.4	85.4	85.3	85.1	85.0	85.0						

Readings in degrees absolute at exact hours, Greenwich Mean Time.

94. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulb above ground) = 12.5 metres. November, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean		
Day.	°A																										
1	72.2	72.2	71.9	72.3	71.9	71.7	71.7	71.4	71.9	72.5	73.3	74.3	74.6	75.2	75.8	76.2	76.5	76.7	76.8	76.8	76.5	76.4	76.5	75.5	74.2		
2	75.4	76.1	75.4	73.9	74.3	73.9	73.5	74.1	78.7	80.0	80.6	80.8	80.9	80.8	81.0	80.9	80.0	79.8	79.7	79.6	80.2	80.6	80.2	79.9	78.3		
3	79.8	79.9	79.6	79.3	79.1	79.3	79.6	79.6	80.0	80.2	79.5	79.5	79.4	78.1	78.0	77.6	76.3	76.2	76.1	75.8	75.7	75.9	75.3	75.3	75.3	78.2	
4	74.8	74.6	74.9	75.0	74.8	74.6	74.1	74.1	74.9	75.2	76.1	75.6	77.0	77.6	77.5	77.3	77.0	76.3	75.6	75.3	75.3	74.5	74.5	73.8	73.3	75.4	
5	73.1	72.4	72.5	72.1	72.0	71.2	70.8	70.6	71.4	72.5	74.7	77.0	78.0	78.3	78.0	77.1	75.7	73.8	73.6	73.5	72.9	72.5	72.6	72.2	72.2	73.7	
6	71.7	71.2	71.5	72.6	72.1	71.6	71.4	71.5	72.6	74.7	76.4	77.4	78.6	79.1	78.5	77.6	77.1	76.5	76.0	75.4	75.3	76.5	76.3	76.3	76.3	74.8	
7	77.6	77.0	76.8	76.3	75.8	75.0	75.1	75.0	75.9	77.0	78.0	78.0	78.1	78.2	78.7	80.1	80.2	80.3	80.4	80.4	80.7	81.0	81.2	80.6	80.6	78.1	
8	81.6	81.1	80.0	79.8	79.2	79.3	78.1	77.7	78.3	79.5	80.7	81.2	81.5	81.1	80.8	80.9	81.2	82.0	82.0	82.8	82.6	82.6	82.2	82.2	82.2	80.7	
9	81.8	82.0	82.4	82.9	83.8	84.9	85.8	85.4	85.1	84.8	84.5	84.2	83.8	83.8	83.1	82.4	81.6	81.5	80.5	80.3	80.2	80.2	80.2	80.4	79.7	82.8	
10	79.6	79.6	79.4	78.4	77.8	78.5	78.7	78.3	79.1	79.2	80.2	81.0	80.5	80.3	80.0	78.2	77.7	76.8	77.5	77.4	77.1	77.6	77.6	77.6	76.8	78.7	
11	77.1	77.5	77.1	77.1	76.9	77.0	76.8	76.8	77.1	77.4	78.4	78.8	79.0	79.0	78.6	77.6	78.0	77.5	77.7	77.4	77.6	76.7	77.1	77.3	77.3	77.6	
12	76.5	77.0	77.6	77.1	77.9	78.0	77.6	78.4	78.7	79.4	81.2	81.9	83.0	81.5	83.8	84.5	84.8	84.8	85.1	85.3	85.2	85.5	85.4	84.8	81.3	84.8	
13	84.5	84.4	84.8	85.2	84.6	83.7	84.2	83.5	84.8	87.0	88.1	88.6	88.9	87.9	87.3	86.7	82.4	82.0	82.0	82.4	83.7	82.8	82.7	82.1	82.1	84.8	
14	82.0	81.5	81.8	83.8	83.9	83.5	84.1	84.5	85.0	85.2	85.4	85.9	85.8	85.8	85.7	85.9	85.8	85.2	84.3	83.8	84.7	85.1	85.1	79.9	84.1	84.1	
15	77.5	76.5	76.0	75.9	76.1	76.4	76.6	76.5	76.7	76.7	77.8	78.5	78.6	78.7	78.0	77.4	76.5	75.1	74.9	74.3	74.5	74.3	74.5	74.2	74.2	76.4	
16	74.4	74.2	73.9	73.8	73.3	73.2	73.3	73.2	72.8	73.3	73.8	73.7	74.2	73.6	73.0	72.9	72.7	73.1	72.7	72.4	71.9	71.5	71.7	71.4	73.1	73.1	
17	71.6	71.2	71.6	71.4	71.7	71.2	71.1	71.4	72.1	71.7	72.3	72.8	73.0	72.8	72.3	71.7	70.9	71.3	70.6	70.4	69.9	69.8	68.4	68.5	71.8	71.8	
18	67.8	67.3	67.2	67.4	67.3	67.2	67.9	70.4	71.0	72.5	74.1	74.5	74.9	75.1	75.2	75.0	74.8	77.4	77.6	78.0	78.4	77.4	77.4	77.8	72.9	72.9	
19	77.7	77.9	78.0	78.3	78.5	78.8	78.9	79.0	79.1	79.2	79.8	79.6	79.8	79.8	79.7	79.4	79.3	79.5	79.4	79.4	79.5	79.4	79.4	79.4	79.4	79.1	79.1
20	79.1	79.2	79.1	79.2	79.1	79.5	79.4	79.9	79.9	80.0	80.1	80.1	80.3	80.1	79.9	80.1	80.3	80.9	81.3	81.2	81.0	80.7	80.5	80.1	80.1	80.0	
21	79.4	79.1	78.9	78.6	79.6	79.6	79.7	79.6	80.0	80.4	80.4	80.2	80.1	79.7	79.6	79.4	79.4	79.3	78.9	78.8	78.4	79.0	78.8	78.8	79.4	79.4	
22	78.8	78.8	78.9	79.0	79.3	78.3	77.1	76.0	74.9	74.9	74.8	74.2	74.1	74.0	73.8	74.0	74.5	75.8	75.7	75.4	75.0	75.4	75.6	76.2	76.1	76.1	
23	76.4	76.8	76.9	77.0	77.1	77.4	77.4	77.5	77.8	78.5	78.7	79.0	79.0	78.9	78.5	77.0	75.6	75.7	75.4	74.5	74.5	75.2	75.1	74.5	76.9	76.9	
24	74.3	74.7	75.2	75.4	75.6	78.5	78.8	79.1	79.6	80.0	80.0	80.0	79.7	79.8	80.3	80.5	81.1	81.6	81.9	82.1	81.6	81.9	81.7	81.3	79.2	79.2	
25	81.0	80.6	80.2	79.9	79.8	79.6	79.0	78.5	79.1	80.0	80.0	80.5	80.5	80.4	80.0	79.4	80.2	81.0	81.0	81.1	80.6	80.1	80.3	80.2	80.1	80.1	
26	80.2	80.2	79.1	78.7	78.9	78.5	77.9	78.0	78.5	78.7	79.3	79.2	79.5	79.6	79.3	79.2	79.0	78.9	78.6	78.9	78.8	78.8	78.1	78.3	79.0	79.0	
27	78.4	78.7	78.5	78.6	78.6	78.5	78.5	79.5	79.4	79.1	79.8	80.0	81.0	81.0	80.6	79.6	78.9	78.2	77.4	77.0	76.4	76.0	75.3	75.8	78.6	78.6	
28	76.3	75.7	75.2	75.0	75.2	74.7	74.0	73.8	73.5	74.0	74.8	75.8	76.6	76.5	76.6	76.4	75.7	75.9	75.5	74.9	75.4	75.6	75.6	75.5	75.3	75.3	
29	75.3	75.2	75.5	75.3	74.8	75.1	75.3	75.5	75.5	75.7	76.6	76.9	77.5	77.4	76.8	75.6	75.8	75.4	74.7	75.2	75.0	73.9	73.6	73.7	75.5	75.5	
30	73.7	73.7	73.6	73.8	73.2	74.1	75.1	75.8	76.0	76.4	78.1	77.6	77.5	77.6	77.4	76.6	76.3	75.4	76.4	78.1	78.2	78.0	78.3	78.3	76.1	76.1	
Mean ...	77.0	76.9	76.8	76.8	76.7	76.8	76.7	76.8	77.3	77.8	78.6	78.9	79.2	79.1	78.9	78.6	78.2	78.1	78.0	78.0	77.9	77.8	77.5	77.3	77.7	77.7	

95. Aberdeen : North Wall Screen on Tower :  $h_t$  = 12.5 metres.

December, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	78.3	78.4	78.9	78.7	79.1	79.3	79.4	79.4	79.7	79.7	80.9	80.9	81.1	80.1	80.2	79.9	79.5	78.7	78.5	78.1	78.3	78.6	78.1	77.8	79.2
2	78.6	79.1	79.0	78.9	79.4	79.6	79.6	79.8	79.8	80.2	80.4	80.8	81.0	80.7	80.8	80.7	80.8	80.0	79.8	79.9	79.6	79.7	78.6	78.1	79.8
3	78.6	78.5	78.8	78.6	78.9	78.9	78.3	77.8	77.2	77.9	78.9	79.7	80.1	80.0	79.6	79.4	80.1	80.0	80.1	80.3	81.3	81.4	80.6	80.6	79.3
4	79.9	78.2	77.4	77.0	76.6	76.0	77.1	76.9	76.6	77.2	79.0	79.8	81.0	81.0	80.3	79.9	79.0	77.0	77.8	77.2	75.8	75.2	76.2	75.6	77.9
5	74.9	75.1	74.5	74.1	75.1	74.0	74.0	74.7	75.6	76.0	76.3	77.4	77.9	78.8	78.5	78.2	78.0	77.8	77.7	78.8	78.4	78.5	78.2	78.1	76.6
6	77.9	77.6	77.5	77.3	77.1	76.9	76.8	76.2	76.5	77.0	78.5	79.2	79.3	79.2	79.4	79.5	80.0	80.1	80.0	80.0	79.8	79.6	79.5	79.5	78.5
7	79.4	79.3	79.0	78.6	78.5	78.2	77.9	77.5	77.2	77.2	76.9	77.2	77.1	77.4	77.0	77.2	77.1	77.1	77.0	77.0	77.0	77.0	77.0	77.0	77.6
8	77.0	77.0	76.8	76.2	75.9	75.0	74.4	73.8	73.8	74.7	75.6	76.2	77.0	78.8	77.7	77.2	76.8	76.5	76.1	76.0	76.1	76.5	76.6	76.6	76.2
9	76.0	76.3	76.0	75.6	75.4	74.8	74.8	75.1	75.4	75.5	76.2	76.8	76.3	76.4	76.0	75.4	75.4	74.8	74.6	74.3	74.1	73.7	73.5	72.4	75.3
10	72.4	72.0	71.5	71.4	70.9	70.7	70.5	70.2	70.0	70.5	71.4	72.3	72.8	73.4	73.2	72.5	73.5	73.6	73.5	74.1	74.7	76.8	77.1	77.3	72.7
11	77.4	77.8	77.8	77.8	78.3	78.5	78.6	78.8	79.5	79.8	80.0	79.9	80.0	79.5	79.4	79.2	78.8	78.9	79.						

TEMPERATURE: ANNUAL MEANS OF HOURLY VALUES.  
From readings in degrees absolute at exact hours, Greenwich Mean Time.

96. Aberdeen: North Wall Screen on Tower:  $h_t = 12.5$  metres.

1930.

Hour. (G.M.T.)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
°A	80.02	79.91	79.79	<b>79.87</b>	79.73	79.92	80.25	80.65	81.11	81.58	82.09	82.45	<b>82.67</b>	82.66	82.56	82.30	81.98	81.69	81.35	81.04	80.78	80.57	80.38	80.19	81.06

TEMPERATURE: MONTHLY MEANS AND DIURNAL INEQUALITIES.  
The departures from the mean of the day are adjusted for non-cyclic change.

97. Aberdeen: North Wall Screen on Tower:  $h_t = 12.5$  metres.

1930.

Month	Mean	Hour. (G.M.T.)																							
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	277.30	-0.32	-0.23	-0.14	-0.19	-0.30	-0.33	<b>-0.86</b>	-0.35	-0.34	-0.29	+0.09	+0.55	<b>+0.84</b>	+0.83	+0.63	+0.36	+0.15	+0.09	-0.06	-0.09	-0.16	-0.09	-0.16	-0.71
Feb.	<b>275.19</b>	-0.67	-0.85	-1.02	-1.18	-1.27	<b>-1.86</b>	-1.35	-1.24	-0.82	-0.23	+0.69	+1.22	+1.71	<b>+1.92</b>	+1.73	+1.55	+1.03	+0.61	+0.32	+0.18	-0.07	-0.30	-0.19	-0.43
Mar.	276.75	-1.20	-1.33	<b>-1.47</b>	-1.43	<b>-1.47</b>	-1.41	-1.34	-0.83	-0.11	+0.79	+1.49	+1.88	+1.96	<b>+2.01</b>	+1.84	+1.60	+1.22	+0.73	+0.27	-0.08	-0.49	-0.73	-0.88	-1.05
April	279.39	-0.98	-1.06	-1.19	<b>-1.28</b>	-1.25	-1.11	-0.73	-0.18	+0.42	+0.90	+1.15	<b>+1.47</b>	+1.40	+1.28	+1.26	+1.10	+0.83	+0.58	+0.11	-0.19	-0.36	-0.61	-0.73	-0.81
May	281.48	-1.42	-1.70	-1.93	<b>-2.20</b>	-1.96	-1.20	-0.31	+0.24	+0.63	+0.95	+1.42	<b>+1.70</b>	+1.69	+1.66	+1.62	+1.43	+1.24	+1.06	+0.54	-0.06	-0.36	-0.75	-1.02	-1.21
June	286.17	-2.31	-2.52	-2.78	<b>-2.90</b>	-2.40	-1.35	-0.42	+0.46	+1.12	+1.38	+2.17	+2.29	<b>+2.71</b>	+2.47	+2.17	+2.03	+1.55	+1.16	+0.69	+0.13	-0.68	-1.19	-1.64	-2.06
July	286.57	-1.81	-2.05	-2.05	<b>-2.20</b>	-1.79	-1.49	-0.70	-0.18	+0.36	+0.97	+1.28	+1.56	+1.81	+2.06	<b>+2.15</b>	+1.72	+1.51	+1.21	+0.85	+0.23	-0.22	-0.71	-1.09	-1.39
Aug.	<b>286.86</b>	-1.23	-1.33	-1.50	-1.65	<b>-1.68</b>	-1.37	-0.68	-0.05	+0.47	+1.07	+1.18	+1.53	<b>+1.79</b>	+1.61	+1.69	+1.38	+1.04	+0.82	+0.38	-0.11	-0.53	-0.70	-0.95	-1.07
Sept.	285.05	-0.93	-1.05	-1.12	-1.14	-1.21	<b>-1.26</b>	-0.95	-0.28	+0.32	+0.80	+1.10	+1.42	+1.50	<b>+1.58</b>	+1.42	+1.20	+0.85	+0.44	+0.02	-0.29	-0.43	-0.55	-0.71	-0.83
Oct.	281.96	-0.80	-0.82	-0.88	-1.10	-1.23	<b>-1.24</b>	-1.22	-0.94	-0.27	+0.49	+1.17	+1.48	<b>+1.69</b>	+1.64	+1.63	+1.16	+0.74	+0.32	+0.02	-0.18	-0.26	-0.32	-0.41	-0.57
Nov.	277.73	-0.67	-0.78	-0.89	-0.91	-0.94	-0.93	<b>-0.98</b>	-0.88	-0.41	+0.11	+0.86	+1.15	<b>+1.44</b>	+1.32	+1.18	+0.83	+0.45	+0.33	+0.22	+0.17	+0.11	+0.03	-0.28	-0.51
Dec.	277.79	-0.11	-0.06	-0.34	-0.46	-0.49	-0.62	-0.65	<b>-0.76</b>	<b>-0.76</b>	-0.70	-0.19	+0.42	+0.80	<b>+0.95</b>	+0.80	+0.62	+0.52	+0.30	+0.22	+0.21	+0.24	+0.19	+0.05	-0.15
Year	281.06	-1.04	-1.15	-1.28	-1.39	-1.33	-1.14	-0.81	-0.42	+0.05	+0.52	+1.03	+1.39	<b>+1.61</b>	+1.61	+1.51	+1.25	+0.93	+0.64	+0.30	-0.01	-0.27	-0.48	-0.67	-0.86

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.  
Maximum and Minimum for the interval 0h. to 24h., Greenwich Mean Time.

98. Aberdeen: North Wall Screen on Tower:  $h_t = 12.5$  metres.

1930.

Month	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
	Day.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.								
1	81.7	75.5	78.7	74.3	81.0	71.9	81.1	79.2	86.0	76.1	83.4	81.6	90.1	85.3	86.8	83.3	88.5	82.3	82.7	80.1	76.9	71.0	81.4	77.8
2	80.9	78.3	77.1	74.7	76.6	71.2	81.6	79.7	83.9	76.8	84.2	79.1	95.4	84.4	86.7	85.0	89.2	84.5	82.6	79.4	81.1	73.4	81.1	77.4
3	83.3	75.4	77.5	75.1	77.8	76.6	79.4	77.2	80.4	78.0	86.5	78.8	94.0	84.9	89.8	85.5	87.7	83.8	84.7	80.9	80.4	75.0	81.5	77.1
4	80.2	74.1	78.1	73.7	82.7	74.7	79.6	74.8	80.9	78.2	92.7	82.4	92.7	86.3	88.2	85.4	87.2	85.4	88.3	82.4	77.8	73.3	81.1	74.8
5	80.5	76.8	78.0	74.4	80.1	74.0	78.9	<b>78.9</b>	81.1	76.3	<b>97.7</b>	82.8	94.5	85.3	88.3	84.9	88.4	85.8	85.8	80.6	78.4	70.5	79.2	73.7
6	79.7	76.1	77.6	74.3	80.7	78.2	79.8	76.8	82.1	76.5	93.6	82.3	89.1	84.4	90.6	84.4	90.7	82.4	84.6	79.4	79.5	70.8	80.1	76.0
7	<b>84.7</b>	79.3	78.1	73.8	83.6	77.9	82.1	78.2	81.6	<b>74.4</b>	88.0	80.4	90.1	82.4	92.1	84.3	88.4	85.1	85.4	79.7	81.3	74.9	79.5	76.9
8	80.3	75.4	76.5	73.8	83.3	79.0	81.0	78.5	80.6	<b>74.4</b>	89.7	78.4	90.0	81.8	92.0	82.1	89.3	84.3	83.4	78.6	82.9	77.7	78.9	73.5
9	78.5	75.4	75.8	70.9	84.6	74.7	84.4	79.6	80.9	75.7	87.0	82.6	89.8	84.8	92.1	84.4	87.1	82.4	82.0	76.7	85.9	79.6	76.9	72.4
10	79.0	74.2	79.0	72.3	78.2	73.4	84.5	79.1	83.6	<b>74.4</b>	89.6	81.5	89.4	83.7	90.3	85.0	87.1	85.4	84.3	78.3	81.2	76.6	77.4	<b>69.8</b>
11	79.1	72.9	79.7	73.2	79.0	74.1	<b>85.6</b>	78.9	80.8	78.0	91.0	81.2	88.2	82.8	92.5	85.0	87.1	86.0	85.1	80.4	79.2	76.4	80.1	77.0
12	76.7	73.3	79.5	72.1	75.8	71.5	82.9	75.9	81.0	77.5	89.4	81.8	88.0	81.6	87.9	85.2	87.2	85.0	83.7	78.6	85.6	76.4	79.7	75.3
13	78.6	74.9	76.6	70.1	77.2	71.8	83.2	74.8	80.1	76.9	89.1	82.1	89.0	<b>80.1</b>	89.7	84.0	86.2	83.2	85.9	78.2	<b>89.0</b>	82.0	80.7	75.2
14	77.1	73.9	78.6	72.4	76.8	71.8	82.0	76.4	85.1	78.7	89.5	84.0	87.7	84.7	89.4	83.9	86.6	81.8	<b>88.5</b>	84.8	86.1	79.0	77.9	73.4
15	77.6	72.5	76.2	73.0	76.4	70.6	81.7	76.9	85.0	77.9	90.0	82.0	88.8	83.8	89.1	83.9	86.5	80.4	88.1	85.9	79.0	74.0	78.1	74.0
16	79.6	72.2	75.7	71.5	77.1	70.9	82.7	77.6	88.9	79.6	91.3	80.7	88.6	83.7	90.3	83.4	86.5	<b>79.0</b>	88.2	85.0	74.4	71.2	79.6	78.0
17	81.0	78.8	77.6	71.1	77.2	72.8	81.4	76.6	85.3	79.7	88.7	82.4	88.6	85.6	89.1	84.5	86.3	80.6	86.2	81.9	73.1	68.1	79.0	77.2
18	82.2	80.4	76.9	<b>68.6</b>	76.1	70.3	80.2	76.0	85.7	80.3	90.6	85.1	89.0	85.5	88.2	85.9	85.8	82.9	86.4	82.0	78.6	<b>66.7</b>	<b>86.1</b>	77.3
19	83.8	78.5	76.7	72.0	72.6	<b>68.9</b>	80.2	75.8	87.9	79.6	95.3	86.4	90.7	84.4	86.6	82.4	86.0	82.3	85.3	80.6	79.9	77.6	85.9	79.4
20	79.4	74.5	76.7	72.9	76.9	69.3	79.5	76.4	84.3	81.4	92.8	85.0	88.2	83.6	87.7	82.6	85.9	84.8	84.7	80.2	81.4	78.5	82.3	76.3
21	79.4	72.6	77.2	69.2	74.4	70.6	80.5	75.8	85.1	80.5	92.3	82.8	85.7	82.5	87.0	85.1	87.4	84.3	83.7	80.0	80.6	78.4	80.7	75.8
22	79.4	78.5	76.7	71.4	78.4	70.9	85.2	76.6	84.1	79.4	91.2	85.6	84.7	81.8	91.1	84.6	87.8	81.8	84.9	79.0	79.4	73.7	79.3	76.3
23	80.2	76.4	77.7	75.5	78.3	71.7	83.0	77.4	86.5	79.5	90.4	84.0	85.6	83.3	89.2	84.7	<b>92.7</b>	85.5	84.1	77.3	79.1	74.1	79.6	76.6
24	81.0	76.7	77.4	74.8	79.2	72.7	80.8	79.6	85.8	81.2	87.4	82.5	88.1	83.2	89.2	82.6	86.5	82.6	82.6	76.0	82.2	73.9	79.4	74.8
25	78.8	74.5	77.4	74.8	84.6	76.8	80.2	79.4	86.3	80.8	89.4	82.0	88.7	<b>80.1</b>	88.9	80.5	86.4	81.1	81.9	75.4	81.2	78.4	79.9	75.4
26	76.1	<b>71.4</b>	76.0	72.4	82.1	78.1	81.0	79.4	86.1	80.9	89.2	81.0	89.0	84.4	94.6	86.0	84.3	81.1	81.3	76.7	80.3	77.8	79.6	75.9
27	74.5	72.8	79.1	73.4	<b>86.6</b>	78.6	81.5	78.9	<b>93.0</b>	81.4	87.5	82.5	94.2	85.1	<b>95.2</b>	86.8	83.8	79.9	81.4	74.4	81.1	75.1	81.2	78.7
28	75.9	<b>71.4</b>	<b>81.9</b>	72.4	82.9	79.6	8																	

Percentages at exact hours, Greenwich Mean Time.

99. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulbs above the ground) = 12.5 metres. January, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	68	75	72	79	80	87	88	88	87	86	87	87	85	87	87	87	92	90	94	98	93	83	69	65	83.9	6.9	
2	66	71	81	89	100	83	80	80	73	64	65	62	67	64	61	68	72	72	70	82	85	81	91	90	75.2	7.3	
3	91	89	80	79	72	71	76	73	90	78	67	69	63	71	71	72	70	79	76	72	74	74	72	74	74	75.5	6.9
4	74	75	65	73	72	74	79	87	83	76	77	74	79	80	84	82	82	77	80	86	93	91	94	93	80.0	6.3	
5	93	93	91	90	88	84	82	79	76	71	73	73	71	77	79	80	86	91	89	89	84	80	82	82	82.9	7.7	
6	77	74	76	74	76	75	74	74	73	71	69	68	68	66	64	71	79	80	80	79	81	87	88	84	75.3	6.6	
7	88	91	90	93	92	88	85	84	83	78	77	76	78	76	75	83	87	93	94	99	86	86	90	86	85.7	10.0	
8	86	83	86	85	78	87	89	87	85	81	70	61	62	69	65	72	76	73	78	77	77	83	77	78	77.5	6.4	
9	78	78	77	81	81	79	79	76	83	82	80	74	59	54	66	75	75	76	81	83	82	80	79	79	76.5	6.1	
10	80	84	84	85	84	75	79	77	77	77	82	82	77	80	79	76	77	75	74	80	84	87	89	90	80.4	6.2	
11	82	78	78	75	78	77	77	82	80	78	75	75	75	75	70	75	74	80	79	81	82	79	78	77	77.8	5.5	
12	77	74	74	74	87	86	84	78	75	78	80	81	75	75	78	79	79	79	82	82	86	84	77	73	79.1	5.7	
13	79	74	71	65	66	73	73	69	72	73	66	58	63	52	62	72	78	80	78	80	80	85	85	87	86	72.2	5.8
14	82	82	84	85	84	84	80	69	73	76	73	70	72	70	76	79	75	82	80	82	82	80	83	80	78.6	5.8	
15	86	88	85	84	84	84	76	76	79	74	78	67	66	68	71	67	77	75	77	80	83	87	86	87	78.4	5.4	
16	85	83	81	78	84	82	86	81	85	90	78	79	80	92	89	76	78	74	83	84	86	90	90	88	83.4	6.2	
17	87	86	87	84	84	87	86	88	90	90	93	93	90	91	93	91	90	90	90	91	90	92	94	94	89.5	8.9	
18	94	96	94	92	94	96	91	89	91	88	89	91	89	87	88	89	88	88	88	85	89	91	86	89	90.2	9.8	
19	88	88	88	84	86	89	89	92	89	93	91	89	90	88	83	84	84	82	83	80	79	76	74	74	85.4	9.5	
20	74	78	80	82	77	77	73	78	79	74	70	66	59	56	59	61	69	69	74	68	69	72	74	75	71.4	5.9	
21	87	77	80	84	87	90	89	91	89	87	86	84	84	82	83	82	82	81	81	79	81	83	82	82	83.7	6.6	
22	84	84	84	88	88	89	90	90	90	91	94	96	94	96	97	97	97	99	97	97	97	98	97	97	92.6	8.7	
23	93	90	90	87	89	88	86	85	81	85	85	86	87	81	81	74	75	74	76	80	80	87	92	83.9	7.6		
24	90	89	88	89	88	91	91	93	94	93	93	93	89	90	91	90	90	93	94	94	93	88	88	84	90.8	8.9	
25	89	90	90	97	94	94	90	90	90	93	88	87	77	75	78	80	82	82	82	84	84	85	82	83	86.1	7.1	
26	85	89	88	84	81	81	85	88	88	80	75	74	73	72	72	83	81	83	86	86	85	84	87	87	82.3	5.3	
27	86	87	84	84	83	85	87	88	91	91	94	96	96	94	94	96	94	91	89	87	87	85	83	84	89.4	5.8	
28	83	82	81	83	83	81	80	83	82	82	82	67	69	66	77	82	84	84	84	82	84	82	80	82	79.9	5.3	
29	89	91	91	91	93	89	89	91	91	89	88	87	83	85	83	78	84	87	89	87	89	81	84	84	87.2	6.5	
30	82	79	84	84	86	84	85	88	88	85	84	81	81	79	84	80	83	91	89	88	89	89	91	91	85.1	6.8	
31	89	91	87	85	82	80	80	80	82	80	79	75	72	75	75	79	83	83	82	79	84	80	82	77	81.2	6.8	
Mean ...	83.6	83.5	82.9	83.5	83.9	83.6	83.1	83.0	83.4	81.4	79.7	78.1	76.8	76.4	78.1	79.5	81.4	82.5	83.3	84.0	84.5	84.0	83.9	83.5	82.0	6.9†	
Vapour Pressure*	mb. 6.8	mb. 6.7	mb. 6.7	mb. 6.8	mb. 6.6	mb. 6.7	mb. 6.7	mb. 6.8	mb. 6.7	mb. 6.8	mb. 6.8	mb. 6.8	mb. 6.9	mb. 6.9	mb. 7.0	mb. 6.9	mb. 6.9	mb. 6.8	mb. 6.8	mb. 6.8							

100. Aberdeen : North Wall Screen on Tower :  $h_t$  = 12.5 metres.

February, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure.*	
1	% 74	% 71	% 70	% 70	% 71	% 78	% 75	% 76	% 84	% 87	% 83	% 82	% 82	% 77	% 78	% 75	% 81	% 73	% 73	% 76	% 82	% 80	% 84	% 85	% 85	78.0	6.3
2	87	82	84	85	83	83	75	82	83	85	87	87	88	80	85	77	87	88	85	81	82	90	85	88	83.9	6.4	
3	89	89	88	93	88	90	85	84	80	80	83	83	82	78	87	83	80	85	87	88	91	92	90	92	86.0	6.8	
4	95	95	94	98	96	96	96	96	96	94	93	93	93	92	87	89	93	95	93	84	81	82	82	79	91.6	7.1	
5	80	85	85	89	93	93	91	93	89	85	83	83	79	78	88	83	87	91	90	89	93	76	64	85.9	6.4		
6	64	75	80	79	84	89	80	61	61	61	63	69	57	54	58	61	64	61	60	60	62	65	62	60	66.8	5.0	
7	62	59	60	60	58	59	64	63	62	63	53	52	52	56	73	79	79	87	89	89	90	89	89	85	69.1	5.1	
8	87	89	89	85	85	82	80	80	80	80	80	79	76	73	73	76	74	75	73	75	75	71	73	76	78.8	5.5	
9	78	81	82	81	82	81	78	80	76	72	67	65	63	62	64	67	73	78	79	78	77	75	74	76	74.5	4.8	
10	74	74	77	74	74	75	71	77	75	72	65	63	60	60	63	68	70	71	75	77	75	76	73	79	71.5	5.2	
11	77	82	80	85	83	85	87	84	85	84	82	76	73	72	76	78	80	80	80	79	83	85	76	77	80.4	6.1	
12	77	84	81	84	82	78	79	76	76	70	66	64	66	61	62	65	72	72	77	81	84	85	86	87	75.4	5.3	
13	84	86	87	80	86	88	88	89	88	82	70	70	64	63	68	66	75	71	75	81	81	82	80	83	78.7	4.9	
14	86	86	88	89	90	88	90	90	90	79	69	71	70	62	65	66	65	69	71	68	80	85	78	82	78.2	5.8	
15	84	70	78	80	82	92	91	74	69	65	65	75	81	76	71	75	91	91	79	80	80	81	79	83	78.6	5.4	
16	89	84	85	85	86	87	88	88	86	82	76	73	73	77	80	78	81	84	85	88	87	87	87	87	83.0	5.3	
17	87	84	80	81	80	86	83	86	80	82	77	72	68	62	68												

Percentages at exact hours, Greenwich Mean Time.

101. Aberdeen : North Wall Screen on Tower : h<sub>1</sub> (height of thermometer bulbs above the ground) = 12.5 metres. March, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	87	87	87	87	91	85	90	89	89	85	85	79	58	83	96	91	93	94	98	98	96	98	98	98	98	88.8	6.6
2	90	98	98	98	98	98	98	98	98	98	100	98	98	86	95	94	93	93	93	94	94	93	92	90	96.1	6.4	
3	90	87	85	84	84	82	82	77	80	79	81	82	78	81	81	82	85	85	85	87	88	90	93	93	84.1	6.9	
4	93	91	93	89	89	87	87	89	90	85	76	66	69	65	60	65	67	73	74	77	81	82	81	84	79.9	7.1	
5	83	87	85	87	91	91	89	88	89	87	87	84	86	84	90	93	91	90	94	94	92	89	89	89	88.6	7.5	
6	86	89	91	95	94	94	96	97	99	99	99	94	93	88	89	90	88	93	94	93	93	93	94	94	93.0	8.8	
7	94	94	98	98	90	90	89	86	93	73	70	64	59	61	62	64	66	72	71	71	74	73	70	73	90	76.6	7.9
8	73	77	83	83	84	81	83	80	81	76	74	75	72	76	79	80	75	79	79	82	79	80	86	93	79.2	8.5	
9	93	93	93	93	94	96	93	91	82	73	60	62	72	68	71	75	72	77	77	82	84	84	82	75	81.3	7.8	
10	77	68	67	70	71	73	74	70	64	57	55	51	43	46	50	52	59	55	58	62	69	75	75	78	68.2	4.7	
11	83	80	82	70	70	69	67	62	59	58	60	61	60	61	69	60	67	68	68	71	82	87	87	89	69.8	5.6	
12	87	88	88	84	79	74	73	83	85	72	61	73	85	87	65	55	63	65	70	71	71	70	68	67	74.8	4.7	
13	70	76	72	73	76	78	78	73	69	68	68	70	73	70	59	59	69	66	72	74	83	84	84	85	72.5	4.8	
14	71	76	69	64	59	57	59	58	50	49	60	57	56	59	57	58	59	68	76	77	78	78	80	81	64.9	4.3	
15	83	82	81	82	80	79	79	70	65	57	54	51	50	46	47	42	48	52	58	60	59	75	79	79	65.0	4.1	
16	79	80	82	82	82	82	91	91	90	90	95	85	82	87	90	90	92	85	88	90	90	90	92	82	86.8	6.0	
17	75	83	83	89	82	82	84	79	84	86	82	77	78	77	77	84	85	87	87	82	80	89	90	92	83.1	6.2	
18	91	90	90	90	91	91	90	90	90	82	75	75	73	89	85	81	76	79	84	78	73	72	83	82	83.5	5.2	
19	91	91	86	85	86	85	87	85	83	77	70	68	64	60	58	56	60	61	63	65	67	68	68	66	73.3	3.7	
20	69	68	67	74	74	77	76	79	86	80	72	64	88	69	64	64	62	68	68	67	71	69	69	68	71.3	4.4	
21	68	67	70	67	67	72	69	65	59	63	70	93	96	95	94	93	85	80	77	73	68	71	72	70	75.1	4.4	
22	71	73	83	88	92	94	90	90	81	65	57	50	54	51	63	68	63	67	71	69	76	69	68	67	71.7	5.0	
23	69	72	72	73	76	77	81	80	76	65	57	69	60	62	74	77	74	78	80	79	75	78	82	82	74.7	5.2	
24	85	85	87	89	89	89	87	74	76	62	60	66	60	62	61	65	71	77	78	78	80	77	80	79	75.8	5.9	
25	77	78	75	76	79	80	83	82	83	79	72	54	56	55	56	61	62	66	63	64	64	67	72	70	69.9	7.3	
26	72	70	68	67	68	68	71	68	65	59	58	59	59	61	64	63	65	67	75	76	79	87	87	86	68.9	6.9	
27	86	83	80	84	81	82	85	85	75	66	60	55	52	70	80	77	82	76	79	83	85	79	74	78	76.7	8.5	
28	86	90	91	90	87	87	86	85	84	86	85	85	82	79	77	79	82	83	72	77	80	84	83	83	82.9	8.7	
29	86	85	88	90	86	84	86	77	72	67	68	67	65	51	45	45	48	58	68	73	75	74	72	66	71.0	7.5	
30	67	71	70	76	79	75	80	74	72	71	65	60	67	72	73	77	77	77	82	84	83	84	86	86	74.6	7.0	
31	84	86	87	87	90	88	87	85	86	83	82	81	79	79	78	79	85	83	86	86	86	86	88	88	84.5	8.7	
Mean ...	81.4	82.1	82.0	82.5	82.5	82.2	82.9	80.6	78.9	74.1	71.5	70.2	70.3	71.0	70.8	71.5	73.1	75.2	76.8	77.7	79.4	80.4	81.4	81.1	77.5	6.3†	
Vapour Pressure* ...	mb. 6.0	mb. 6.0	mb. 5.9	mb. 5.9	mb. 5.9	mb. 5.9	mb. 6.1	mb. 6.3	mb. 6.3	mb. 6.3	mb. 6.3	mb. 6.4	mb. 6.4	mb. 6.5	mb. 6.4	mb. 6.4	mb. 6.4	mb. 6.3	mb. 6.3	mb. 6.2	mb. 6.2	mb. 6.1	mb. 6.1	mb. 6.0	mb. 6.2‡		

102. Aberdeen : North Wall Screen on Tower : h<sub>1</sub> = 12.5 metres.

April, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure.*	
1	% 91	% 94	% 93	% 93	% 94	% 91	% 91	% 91	% 91	% 91	% 90	% 90	% 91	% 92	% 93	% 94	% 94	% 91	% 89	% 86	% 86	% 86	% 89	% 92	% 90	90.9	9.3
2	% 90	% 91	% 93	% 94	% 94	% 94	% 94	% 93	% 94	% 96	% 98	% 98	% 98	% 99	% 98	% 93	% 94	% 93	% 91	% 91	% 93	% 94	% 94	% 94	% 94	94.2	9.5
3	% 97	% 97	% 96	% 91	% 93	% 96	% 99	% 99	% 100	% 100	% 100	% 96	% 93	% 89	% 85	% 83	% 84	% 84	% 80	% 84	% 76	% 71	% 65	% 65	% 65	89.3	8.0
4	% 68	% 62	% 70	% 62	% 67	% 69	% 69	% 65	% 68	% 75	% 71	% 71	% 74	% 78	% 82	% 79	% 59	% 62	% 59	% 70	% 64	% 82	% 80	% 76	% 69.8	5.9	
5	% 82	% 83	% 89	% 90	% 92	% 92	% 90	% 91	% 87	% 75	% 75	% 79	% 79	% 74	% 79	% 75	% 79	% 80	% 83	% 84	% 84	% 84	% 86	% 92	% 83.2	6.7	
6	% 93	% 93	% 93	% 93	% 95	% 96	% 95	% 94	% 91	% 93	% 90	% 90	% 90	% 90	% 86	% 84	% 87	% 88	% 90	% 91	% 93	% 91	% 91	% 91	% 91	91.3	8.2
7	% 81	% 91	% 92	% 92	% 92	% 92	% 92	% 93	% 84	% 78	% 77	% 71	% 75	% 82	% 85	% 78	% 81	% 83	% 88	% 83	% 81	% 84	% 84	% 86	% 86	84.9	8.3
8	% 94	% 86	% 86	% 87	% 88	% 88	% 84	% 84	% 84	% 81	% 82	% 82	% 82	% 86	% 85	% 90	% 91	% 90	% 90	% 91	% 93	% 93	% 94	% 96	% 87.6	8.6	
9	% 94	% 96	% 96	% 96	% 94	% 94	% 94	% 92	% 87	% 86	% 88	% 84	% 84	% 81	% 81	% 84	% 82	% 84	% 88	% 88	% 89	% 91	% 89	% 91	% 89.0	10.0	
10	% 94	% 91	% 90	% 94	% 90	% 88	% 82	% 77	% 61	% 56	% 57	% 57	% 70	% 78	% 74	% 68	% 66	% 67	% 70	% 70	% 71	% 74	% 80	% 78	% 75.4	8.3	
11	% 81	% 81	% 83	% 87	% 84	% 87	% 83	% 76	% 70	% 68	% 66	% 64	% 56	% 59	% 57	% 60	% 56	% 63	% 76	% 77	% 82	% 83	% 84	% 81	% 73.4	8.1	
12	% 84	% 84	% 82	% 80	% 78	% 72	% 69	% 62	% 65	% 57	% 54	% 61	% 75	% 72	% 66	% 66	% 75	% 75	% 82	% 86	% 87	% 82	% 78	% 80	% 73.9	7.1	
13	% 77	% 82	% 84	% 85	% 84	% 80	% 71	% 78	% 71	% 65	% 62	% 64	% 78	% 72	% 77	% 77	% 72	% 77	% 81	% 82	% 82	% 86	% 88	% 88	% 77.5	6.9	
14	% 88	% 85	% 87	% 84	% 85	% 84	% 83	% 77	% 72	% 80	% 82	% 74	% 67	% 72	% 69	% 69	% 66	% 69	% 76	% 81	% 79	% 84	% 85	% 86	% 78.5	7.5	
15	% 83	% 81	% 84	% 84	% 84	% 84	% 80	% 77	% 71	% 79	% 82	% 83	% 71	% 64	% 65	% 73	% 86	% 80	% 84	% 84	% 84						

Percentages at exact hours, Greenwich Mean Time.

103. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulbs above the ground) = 12.5 metres. May, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	76	87	87	92	95	89	78	67	64	59	49	49	50	52	55	55	74	71	83	79	71	75	61	64	70.5	7.7	
2	69	66	67	77	82	83	81	76	58	71	67	73	74	86	89	91	88	89	89	87	88	90	88	88	79.4	8.2	
3	91	89	89	90	90	89	91	89	88	88	86	84	84	80	86	81	83	83	81	83	80	82	82	82	82	85.6	8.1
4	84	86	87	90	90	87	84	83	87	84	84	82	82	82	90	90	81	81	80	78	80	83	86	86	84.4	8.3	
5	85	87	86	83	77	75	51	62	61	65	65	66	64	64	61	63	65	63	65	66	69	73	75	80	69.7	6.6	
6	76	74	74	74	76	74	71	73	75	73	73	77	81	88	88	89	86	86	86	86	88	89	87	87	80.3	8.0	
7	88	86	86	88	84	81	74	65	66	84	78	78	81	60	60	74	77	55	62	79	74	75	88	88	76.3	6.8	
8	82	88	82	84	84	85	80	73	66	70	70	73	65	59	81	67	56	51	57	62	70	73	75	74	72.3	6.1	
9	77	78	76	78	76	77	78	76	77	76	78	75	75	68	59	84	77	76	79	84	87	85	85	85	77.6	6.6	
10	84	87	85	76	81	74	70	75	70	61	62	65	63	63	67	76	78	85	85	88	86	90	86	87	76.8	7.4	
11	88	90	91	93	92	91	87	86	90	84	88	89	88	89	91	90	89	91	91	91	91	93	86	91	89.5	8.7	
12	91	90	91	92	92	94	89	87	88	82	81	82	83	77	77	80	69	76	72	78	85	88	89	89	84.3	8.1	
13	87	87	87	89	83	82	84	84	86	93	93	94	94	94	94	94	94	96	99	99	98	99	98	98	91.7	8.7	
14	94	90	91	94	96	89	88	86	98	94	94	93	96	94	93	81	81	76	80	77	87	91	93	94	90.1	9.9	
15	96	97	99	97	98	98	99	97	96	87	78	77	76	79	84	83	87	87	85	92	82	74	71	77	87.7	9.7	
16	82	80	77	79	79	76	70	71	60	57	60	55	60	68	57	48	42	42	46	51	56	57	62	65	62.7	8.7	
17	69	65	72	76	72	71	74	69	67	75	86	76	75	73	73	74	78	83	88	92	92	92	93	92	77.6	9.2	
18	84	86	70	77	74	70	66	66	61	61	54	52	48	51	50	52	55	54	54	59	62	64	65	61	63.0	7.7	
19	58	58	61	67	67	65	61	61	62	65	65	65	62	69	78	64	70	74	68	70	74	73	73	76	66.6	8.8	
20	76	79	83	82	86	87	88	89	92	95	97	92	93	94	92	89	84	81	83	91	89	89	93	93	87.9	10.6	
21	93	94	96	94	94	94	89	84	83	82	81	82	78	75	71	69	72	74	76	79	76	79	79	75	82.4	10.0	
22	75	73	86	87	87	83	73	75	76	62	71	63	75	79	83	87	84	85	87	89	91	92	91	91	80.7	9.5	
23	91	91	91	93	94	98	94	93	88	79	71	68	75	62	61	63	71	79	76	80	80	82	87	89	81.5	9.8	
24	93	92	95	95	96	96	95	94	95	88	81	86	83	85	83	85	87	92	95	96	98	96	98	96	91.5	11.2	
25	95	95	95	96	96	99	98	95	93	89	84	86	81	86	86	91	87	86	92	91	91	93	92	92	91.3	10.9	
26	91	92	94	94	94	95	91	86	81	76	79	77	80	78	87	84	76	76	84	92	93	93	95	95	86.7	10.7	
27	93	95	95	96	96	95	87	81	72	68	64	56	55	45	40	50	50	58	62	66	63	64	67	75	71.0	11.0	
28	59	63	62	65	64	56	49	47	44	51	46	47	55	62	44	49	48	42	51	53	60	61	67	66	54.8	7.1	
29	67	67	71	72	62	61	57	52	49	56	49	49	46	48	49	48	55	60	66	71	78	80	84	82	61.3	7.6	
30	86	90	88	91	93	86	81	76	74	72	57	57	72	78	69	69	74	78	78	82	83	86	87	86	78.8	9.6	
31	87	87	91	91	89	86	76	72	72	81	77	80	90	75	78	83	89	88	89	88	92	93	93	92	84.8	10.4	
Mean ...	82.8	83.5	84.0	85.5	85.1	83.4	79.3	77.4	75.5	75.0	73.2	72.5	73.7	73.0	73.4	74.3	74.4	74.8	77.1	80.0	81.1	82.4	83.1	83.7	78.7	8.8†	
Vapour Pressure* ...	mb. 8.3	mb. 8.2	mb. 8.1	mb. 8.1	mb. 8.2	mb. 8.5	mb. 8.6	mb. 8.7	mb. 8.7	mb. 8.9	mb. 8.9	mb. 9.0	mb. 9.2	mb. 9.1	mb. 9.1	mb. 9.1	mb. 9.0	mb. 8.9	mb. 8.9	mb. 8.9	mb. 8.8	mb. 8.7	mb. 8.6	mb. 8.6	mb. 8.7†		

104. Aberdeen : North Wall Screen on Tower :  $h_t$  = 12.5 metres.

June, 1930.

1	91	92	89	89	89	88	84	84	86	84	84	85	86	86	87	87	87	87	86	83	84	83	88	88	86.6	mb. 10.3	
2	86	87	81	86	84	79	78	78	74	70	71	72	68	67	69	72	70	73	73	76	77	83	84	87	87	76.9	8.9
3	88	87	86	87	87	86	82	79	78	80	82	84	87	88	88	85	90	95	93	96	96	96	98	96	96	87.9	10.4
4	95	92	95	92	91	90	88	90	86	80	76	68	63	68	71	72	84	83	82	78	85	84	87	86	86	83.0	12.2
5	80	81	78	80	81	77	72	67	63	67	59	57	52	48	50	45	45	64	70	73	77	76	78	78	78	67.6	12.6
6	79	67	71	71	65	67	60	54	63	68	74	77	75	76	78	82	93	88	87	87	88	88	89	89	76.3	12.8	
7	91	91	83	80	78	70	67	60	59	57	60	56	50	52	49	50	49	53	58	61	68	72	77	80	65.6	8.9	
8	81	77	77	77	78	77	77	70	62	62	60	57	59	55	57	60	72	78	73	64	66	66	69	71	68.7	10.0	
9	77	83	86	85	83	83	87	81	74	74	75	77	78	81	82	85	83	88	87	79	70	69	73	74	77.7	11.8	
10	80	79	80	81	78	79	77	71	62	68	52	51	50	42	38	43	41	45	51	46	56	62	68	61	61.1	8.7	
11	67	68	69	69	71	65	57	50	46	39	43	39	35	35	34	38	36	36	37	42	45	49	48	51	48.9	7.5	
12	56	59	63	68	65	62	56	54	50	53	46	57	51	54	56	57	57	59	66	64	62	65	72	73	58.9	8.8	
13	76	76	80	82	82	80	78	74	71	71	63	63	61	64	59	50	52	51	50	61	69	68	74	75	68.7	10.2	
14	79	79	81	84	86	86	75	73	70	62	55	58	52	51	53	51	50	53	56	66	73	76	77	79	67.6	10.7	
15	79	78	82	86	84	76	72	76	66	60	53	55	63	50	48	54	53	61	77	78	83	86	86	88	71.6	11.2	
16	87	88	84	84	84	74	71	73	75	70	44	67	72	59	57	79	77	73	81	83	86	87	91	91	76.5	11.9	
17	89	89	94	95	95	94	86	82	80	79	81	77	78	82	89	93	90	94	93	94	94	95	95	96	88.8	13.2	
18	98	98	99	99	99	100	99	99	97	95																	

Percentages at exact hours, Greenwich Mean Time.

105. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulbs above the ground) = 12.5 metres. July, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	83	90	88	90	91	94	95	96	97	96	90	87	86	83	82	83	89	90	91	93	94	95	95	96	96	90.3	14.6
2	97	95	96	96	94	95	94	87	88	70	61	61	59	55	54	57	54	56	60	61	65	77	81	82	82	75.1	14.2
3	91	93	92	93	94	93	95	91	90	82	75	76	74	70	61	68	67	72	73	75	76	64	76	86	86	80.2	14.4
4	89	88	88	89	86	79	71	65	64	64	64	69	68	69	67	68	68	63	66	71	73	76	81	84	84	74.0	14.3
5	83	87	89	89	90	88	82	85	83	79	75	72	69	68	57	54	53	58	57	60	66	69	73	82	82	73.7	14.1
6	86	90	89	89	88	87	82	94	88	93	88	80	72	67	86	81	78	88	85	82	59	67	67	72	72	81.8	13.3
7	74	72	71	76	69	68	64	62	54	52	47	44	45	54	46	48	50	56	55	68	70	69	71	62	60.5	9.6	
8	71	73	67	72	72	69	59	57	56	59	54	53	56	57	59	72	72	77	82	81	83	86	85	80	68.5	10.8	
9	87	87	93	89	82	76	68	64	59	54	57	53	54	47	47	52	51	51	54	59	62	64	64	64	64	63.7	10.3
10	64	65	65	63	64	63	60	58	58	53	69	69	58	52	54	54	54	51	51	65	75	77	73	72	72	61.9	9.8
11	71	76	73	72	71	75	77	79	74	64	59	55	59	55	55	57	59	66	70	74	75	79	80	79	79	68.8	9.9
12	74	71	74	71	68	72	70	67	66	66	63	66	66	64	64	63	61	66	65	70	79	81	87	87	87	69.9	10.0
13	90	89	89	90	91	89	79	81	83	78	76	67	70	71	70	76	81	85	86	88	87	87	90	91	91	82.6	11.6
14	95	96	95	97	97	98	97	96	92	92	88	88	88	86	88	85	88	88	88	93	88	87	89	89	89	91.5	13.8
15	90	91	90	92	91	90	86	81	81	72	87	91	84	87	83	85	88	88	86	91	91	95	92	95	95	87.7	13.2
16	95	96	96	96	95	97	97	96	95	93	89	93	90	91	90	95	97	98	98	97	97	98	98	98	98	95.1	14.7
17	97	97	97	97	97	98	96	98	99	98	97	97	95	90	90	97	98	96	98	99	97	98	98	97	97	96.7	15.2
18	95	94	96	90	93	95	94	90	86	84	86	86	86	86	94	91	92	92	85	86	93	96	94	94	94	91.0	14.3
19	95	93	93	93	93	91	86	77	72	70	72	70	69	72	76	80	87	86	86	87	87	87	85	87	87	84.3	13.4
20	94	90	90	91	94	93	87	85	85	85	85	82	82	75	72	68	69	78	87	84	83	85	85	84	84	84.4	12.4
21	84	83	83	86	82	82	80	74	71	67	74	69	72	70	71	79	82	83	83	85	89	92	95	94	94	80.2	10.4
22	95	94	92	92	92	99	96	94	92	92	92	92	87	86	84	83	80	82	83	81	82	80	84	81	81	88.4	11.2
23	80	81	81	81	84	81	81	80	79	76	74	74	77	75	80	85	84	79	83	84	85	88	87	85	85	80.9	10.9
24	85	83	82	87	85	85	91	85	82	75	73	70	67	66	67	68	77	65	72	76	78	82	84	87	87	78.0	10.9
25	87	89	90	91	91	89	84	74	79	80	80	79	77	71	68	64	63	70	76	82	86	82	82	85	85	80.0	11.4
26	88	90	93	93	93	90	87	89	88	83	81	86	84	81	82	85	82	79	81	87	90	91	91	92	92	86.8	13.7
27	85	89	85	88	82	87	85	77	70	61	59	63	65	59	49	67	61	73	71	75	84	88	89	83	83	75.0	13.8
28	86	90	86	87	87	88	80	67	64	62	66	67	65	73	73	71	70	72	73	80	84	89	89	90	90	77.3	13.4
29	90	92	78	92	93	90	93	95	86	80	80	79	81	77	72	74	89	90	90	91	91	92	90	90	90	86.5	13.5
30	90	90	89	86	84	83	80	73	71	65	65	60	58	59	59	60	65	69	72	78	79	79	79	85	85	73.7	11.1
31	89	86	85	82	79	81	76	73	75	72	67	70	71	68	76	75	81	77	73	80	82	88	90	91	91	78.5	11.2
Mean ...	86.5	87.1	86.3	87.1	86.1	85.9	83.4	81.0	78.8	75.0	74.0	73.2	72.1	70.5	70.2	72.2	73.8	75.6	76.6	79.7	81.5	83.4	84.6	85.3	85.3	79.6	12.4†
Vapour Pressure* ...	mb. 12.0	mb. 11.9	mb. 11.8	mb. 11.7	mb. 11.9	mb. 12.1	mb. 12.4	mb. 12.5	mb. 12.5	mb. 12.4	mb. 12.5	mb. 12.6	mb. 12.6	mb. 12.5	mb. 12.5	mb. 12.5	mb. 12.6	mb. 12.7	mb. 12.6	mb. 12.6	mb. 12.5	mb. 12.3	mb. 12.2	mb. 12.1	mb. 12.3	mb. 12.3†	

106. Aberdeen : North Wall Screen on Tower :  $h_t$  = 12.5 metres.

August, 1930.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	mb.	
1	90	91	92	93	83	85	86	78	76	71	74	76	81	81	80	85	85	87	93	95	96	93	95	96	96	85.8	12.3
2	97	99	97	93	94	94	94	95	96	97	95	94	95	97	95	96	96	96	95	97	96	98	98	98	98	95.8	14.4
3	99	98	99	98	99	98	99	97	97	92	88	81	82	73	72	67	74	78	80	86	88	88	88	88	88	86.9	14.3
4	90	94	94	93	93	93	88	86	87	87	86	87	87	90	87	86	87	88	92	93	94	93	94	95	95	90.0	14.3
5	96	97	97	96	94	91	94	95	95	94	94	92	76	80	73	80	84	84	85	86	87	88	83	86	86	88.8	13.6
6	86	83	82	83	80	80	75	68	61	61	59	60	58	57	58	67	74	72	74	80	91	90	90	91	91	74.1	12.3
7	91	93	91	91	91	90	90	78	79	79	74	68	65	64	54	72	74	80	88	78	90	92	91	93	93	81.5	13.6
8	93	92	92	89	91	92	86	79	79	76	76	67	62	67	70	79	83	88	89	88	87	90	90	90	90	83.1	13.5
9	87	90	91	94	93	93	91	90	90	80	77	67	73	81	83	78	87	89	88	88	92	93	91	94	94	86.6	14.8
10	93	91	94	94	95	92	94	85	78	75	73	80	77	82	80	79	85	84	85	89	92	92	95	93	86	86.6	14.5
11	87	83	81	85	87	81	74	68	69	68	73	84	56	55	57	71	74	81	80	82	87	80	80	78	78	76.2	13.2
12	80	80	85	85	85	82	82	88	78	76	94	91	93	93	93	94	89	88	93	95	92	91	94	94	94	87.8	13.2
13	93	90	89	89	90	87	85	79	81	75	80	70	69	80	94	91	95	96	86	93	93	94	93	93	93	86.9	13.1
14	90	87	83	84	81	79	79	74	67	62	63	72	68	64	59	63	57	62	69	74	75	75	76	75	75	72.8	11.2
15	76	79	82	86	82	78	71	73	66	64	60	57	56	59	58	59	62	65	73	76	80	7					

Percentages at exact hours, Greenwich Mean Time.

107. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulbs above the ground) = 12.5 metres.

September, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	85	89	89	84	88	88	87	78	67	59	57	59	59	68	69	83	81	87	87	89	83	78	79	79	79	78.1	11.2
2	78	79	76	74	80	77	75	74	71	67	67	64	59	56	57	60	81	82	83	83	85	87	88	85	85	74.4	11.4
3	83	85	84	84	87	90	86	83	82	81	76	75	76	78	78	81	80	86	88	88	90	90	91	93	93	83.8	12.4
4	91	89	90	90	89	90	90	90	93	94	95	93	88	87	86	88	89	93	96	97	97	97	97	97	97	91.8	13.8
5	96	97	97	97	97	96	96	95	94	94	93	92	89	88	87	90	91	92	93	94	95	95	96	94	94	93.7	14.7
6	94	90	91	92	88	91	88	80	73	69	72	70	76	74	82	83	79	91	92	95	95	96	96	95	95	85.5	13.5
7	96	97	98	98	99	98	98	97	98	95	89	81	88	84	86	84	85	84	88	91	91	91	91	93	93	91.7	14.3
8	91	95	95	94	92	89	86	75	72	72	70	70	70	67	75	76	79	85	82	86	87	89	93	96	96	83.7	12.8
9	92	94	94	95	94	94	94	93	91	89	87	86	87	87	88	93	95	95	96	95	95	96	93	95	95	92.4	13.4
10	94	91	97	98	97	97	97	96	96	98	96	97	97	98	97	98	98	98	97	98	98	99	98	98	98	86.9	14.9
11	97	96	97	96	97	97	96	96	97	96	96	97	97	95	93	92	93	93	94	94	93	93	93	94	94	95.2	14.7
12	93	94	94	93	91	90	90	89	87	87	89	91	88	89	89	90	90	94	91	93	91	94	95	96	96	91.1	13.7
13	96	94	95	96	93	93	94	92	89	80	94	89	91	89	85	86	83	82	92	93	90	85	95	96	96	90.5	12.9
14	97	95	95	95	96	93	94	97	95	94	90	83	77	70	64	63	76	75	79	86	88	91	89	91	91	86.6	11.5
15	93	89	94	89	89	88	87	85	80	77	74	76	83	77	70	76	78	81	89	89	92	93	92	94	94	84.7	10.8
16	93	93	94	94	96	93	94	89	83	81	71	67	77	73	77	76	78	78	84	91	92	92	91	92	92	85.4	11.2
17	91	89	93	93	93	93	92	91	85	75	69	70	72	70	73	75	73	78	82	79	83	86	84	73	73	82.1	10.6
18	82	87	87	91	94	95	99	94	100	100	100	100	99	100	98	93	92	90	91	88	87	90	89	88	88	92.8	12.0
19	87	87	87	86	87	89	88	89	86	85	84	81	81	86	90	89	97	95	97	96	96	98	99	98	98	89.7	12.0
20	97	96	94	94	95	96	97	95	98	97	97	98	96	96	96	96	97	97	98	99	98	98	99	99	99	96.8	13.9
21	98	97	98	99	97	97	96	94	93	87	89	90	86	81	79	78	81	87	90	90	90	91	90	91	91	90.5	13.2
22	92	95	92	92	95	95	93	91	87	89	87	84	84	84	84	88	87	91	91	94	95	95	95	96	96	90.6	12.8
23	97	97	98	99	99	99	99	99	97	91	88	87	82	82	86	86	86	85	85	85	87	84	83	84	84	90.3	15.8
24	90	92	91	90	83	87	80	75	72	67	66	66	64	61	63	62	66	71	71	74	75	77	79	82	82	76.3	12.3
25	82	79	78	66	72	82	79	80	77	76	76	80	89	89	91	88	87	92	87	91	92	92	91	87	87	83.4	10.9
26	89	89	91	88	89	91	92	89	91	85	81	80	80	82	75	75	73	73	76	79	81	83	83	80	80	83.3	10.1
27	78	72	69	68	68	72	73	75	75	86	69	71	70	70	69	81	69	76	76	83	86	86	86	85	85	75.4	8.8
28	85	87	87	88	85	85	85	84	82	77	77	74	75	76	80	81	77	79	86	89	86	89	93	93	93	83.2	9.9
29	95	94	96	96	94	96	95	94	87	88	94	81	84	83	80	83	85	92	94	95	94	95	94	96	96	91.0	11.2
30	96	96	95	95	95	95	93	94	91	89	83	73	87	84	85	87	92	95	95	95	93	91	88	83	83	90.7	11.1
Mean ...	90.9	90.8	91.2	90.5	90.9	91.2	90.8	89.0	86.5	84.3	82.6	80.8	81.7	80.8	81.1	82.6	83.9	86.6	88.3	90.0	90.2	90.7	91.0	90.8	90.8	87.4	12.4†
Vapour Pressure* ...	mb. 12.0	mb. 11.9	mb. 11.9	mb. 11.8	mb. 11.8	mb. 11.8	mb. 12.0	mb. 12.3	mb. 12.4	mb. 12.5	mb. 12.5	mb. 12.5	mb. 12.7	mb. 12.6	mb. 12.5	mb. 12.6	mb. 12.5	mb. 12.5	mb. 12.4	mb. 12.4	mb. 12.3	mb. 12.3	mb. 12.2	mb. 12.1	mb. 12.1	mb. 12.3	†

108. Aberdeen : North Wall Screen on Tower :  $h_t$  = 12.5 metres.

October, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
1	80	80	86	86	87	89	84	81	77	81	79	78	87	84	84	91	89	92	92	92	93	93	93	94	94	86.1	9.6
2	96	96	96	96	96	96	96	93	96	96	86	89	80	80	80	83	84	86	88	86	87	87	83	79	79	89.3	9.7
3	78	79	79	85	86	88	85	82	80	83	79	81	83	85	87	89	89	90	93	94	92	92	91	91	91	85.5	10.3
4	91	92	92	95	95	94	94	93	91	88	79	79	73	81	71	81	88	94	95	94	95	95	95	96	96	89.8	12.3
5	96	97	95	79	73	79	71	68	67	65	62	61	61	63	60	62	69	71	77	78	76	75	75	74	74	73.5	9.3
6	73	77	73	74	72	76	76	76	71	70	65	62	68	63	67	72	67	68	71	77	82	83	86	86	86	72.9	8.4
7	87	92	92	92	92	89	88	87	86	78	73	74	72	76	66	73	75	83	89	87	90	88	77	79	79	82.9	9.9
8	88	81	83	83	89	79	86	86	89	89	86	85	86	89	90	83	86	74	70	79	84	74	77	77	77	83.6	8.9
9	83	82	81	82	82	80	77	78	70	70	62	61	58	74	64	66	71	74	83	87	91	93	88	94	94	76.8	7.4
10	94	94	96	90	91	96	93	91	91	86	86	79	79	88	82	76	82	82	83	84	82	84	82	88	88	86.7	8.9
11	88	91	92	91	91	90	91	91	87	84	85	79	71	84	80	80	86	87	87	89	86	87	89	84	84	86.3	10.6
12	86	82	85	85	86	84	85	83	81	74	73	66	57	54	50	55	66	73	74	78	68	75	75	75	75	72.9	8.0
13	78	78	77	79	79	81	81	88	93	95	92	92	88	83	85	86	88	91	93	95	89	91	87	82	82	86.1	10.2
14	85	85	85	85	88	86	86	89	91	89	88	88	89	90	93	94	94	95	96	95	92	92	93	93	93	89.8	13.3
15	92	95	94	95	95	97	96	96	96	96	94	94	91	92	92	89	91	91	92	94	98	98	98	98	98	94.2	14.7
16	97	95	97	98	98	96	96	89	85	87	78	63	67	62	64												

Percentages at exact hours, Greenwich Mean Time.

109. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulbs above the ground) = 12.5 metres.

November, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*		
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.		
1	90	90	89	88	87	88	88	90	89	88	87	80	89	94	94	95	92	90	90	90	83	85	83	84	84	88.5	5.9	
2	84	81	82	90	87	87	89	87	90	84	79	79	79	83	78	76	82	83	83	88	96	93	87	83	83	84.6	7.5	
3	81	81	83	84	88	88	83	87	78	79	87	81	81	89	84	81	80	83	83	89	87	86	91	82	82	84.0	7.4	
4	91	89	84	78	84	84	92	89	84	82	76	89	78	70	73	71	72	73	80	82	77	80	83	83	83	81.0	6.0	
5	83	84	84	86	85	87	88	90	89	87	78	67	69	69	72	79	79	89	93	92	93	92	89	89	89	83.7	5.4	
6	89	90	83	70	73	73	80	71	68	58	55	62	61	63	71	79	77	82	79	82	84	90	87	83	75.5	5.3		
7	74	77	75	76	77	80	78	73	69	66	68	69	72	80	87	84	82	83	80	85	88	93	87	88	83	88.8	6.9	
8	89	86	72	68	69	66	74	70	65	61	59	57	59	64	65	68	68	73	73	74	78	80	84	87	84	87	71.2	7.5
9	89	88	89	88	83	81	76	82	80	59	57	59	58	55	56	60	65	66	70	68	66	65	61	63	63	70.7	8.6	
10	67	64	66	69	74	65	64	69	65	65	60	56	65	69	67	74	70	80	66	68	85	78	64	75	68.3	6.3		
11	71	66	74	76	80	78	80	80	77	80	75	72	69	69	71	78	69	71	78	77	74	78	74	74	74	74.6	6.3	
12	82	75	71	84	84	84	89	89	93	91	79	74	69	64	69	68	68	66	65	65	67	67	73	73	73	76.1	8.3	
13	76	77	76	75	79	85	80	85	78	69	67	66	64	65	64	68	91	93	95	93	79	83	80	80	80	77.7	10.8	
14	80	79	76	64	63	64	62	60	61	63	63	65	67	67	68	65	66	70	74	79	74	74	93	91	91	70.1	9.3	
15	89	90	90	90	91	88	85	85	83	83	78	76	77	74	80	77	78	93	91	92	91	92	87	87	87	85.4	6.6	
16	82	78	80	80	84	95	94	86	98	98	98	97	96	80	88	94	93	93	87	81	80	79	81	79	79	87.7	5.4	
17	78	77	77	76	81	80	88	88	80	83	89	80	83	75	76	77	78	77	78	78	75	77	77	77	77	79.5	4.8	
18	77	79	79	79	79	81	83	73	75	72	74	74	71	71	78	78	84	68	68	69	74	85	87	87	87	76.7	4.6	
19	87	84	84	85	89	85	86	84	84	82	76	77	77	74	76	79	79	78	76	76	74	76	76	76	76	80.2	7.5	
20	79	82	83	82	86	81	79	80	81	77	76	78	83	87	90	91	94	98	98	96	98	98	96	98	98	86.7	8.7	
21	96	96	94	94	83	84	84	84	81	80	82	87	90	94	96	94	96	96	97	96	97	97	94	96	96	91.2	8.8	
22	96	99	99	100	99	97	97	95	96	95	95	96	96	96	96	96	93	77	79	84	89	89	80	76	92.4	7.0		
23	76	73	75	77	74	74	73	76	76	87	84	84	66	65	67	71	73	79	77	77	85	79	82	82	82	75.7	6.1	
24	85	85	89	89	91	77	73	75	73	71	77	81	90	96	96	98	96	98	93	88	92	86	87	88	88	86.3	8.2	
25	88	89	91	93	91	88	87	85	84	81	82	85	85	85	85	90	90	88	89	92	96	93	93	94	94	88.4	8.9	
26	94	96	96	97	97	99	97	97	96	94	90	90	87	83	86	86	88	85	86	88	84	84	86	82	82	90.6	8.5	
27	80	80	82	82	82	77	74	65	66	74	70	70	67	69	72	76	77	77	77	80	78	81	82	79	79	75.8	6.9	
28	83	82	84	87	85	85	89	89	90	87	84	80	80	78	80	82	84	82	84	86	84	82	84	85	85	83.9	6.0	
29	87	87	87	91	93	89	91	89	91	91	90	88	87	87	87	91	89	91	93	91	91	92	92	90	90	89.7	6.6	
30	92	89	89	87	86	85	80	77	79	82	75	78	82	82	80	88	88	91	90	85	83	83	80	82	82	84.0	6.4	
Mean ...	83.8	83.1	82.8	82.8	83.5	82.5	82.8	81.6	80.6	78.6	77.1	76.6	76.6	77.2	78.4	80.5	81.4	82.4	82.4	83.0	83.5	83.4	83.0	83.1	81.3	81.3	7.1†	
Vapour Pressure* ...	mb. 6.8	mb. 6.7	mb. 6.6	mb. 6.6	mb. 6.7	mb. 6.6	mb. 6.6	mb. 6.6	mb. 6.7	mb. 6.8	mb. 7.0	mb. 7.1	mb. 7.2	mb. 7.3	mb. 7.3	mb. 7.3	mb. 7.3	mb. 7.2	mb. 7.0	mb. 6.9	mb. 7.0†							

110. Aberdeen : North Wall Screen on Tower :  $h_t$  = 12.5 metres.

December, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
1	83	83	79	82	79	79	82	81	84	83	84	76	78	86	84	84	84	87	89	89	89	91	90	92	83.9	8.0	
2	91	90	91	93	88	88	87	86	85	83	83	82	79	82	78	79	78	85	84	81	83	84	89	89	89	85.0	8.4
3	88	88	85	83	86	86	86	86	89	84	79	80	78	88	80	76	69	70	74	74	74	80	79	80	80.3	7.7	
4	81	89	87	90	88	90	85	88	93	90	85	84	81	82	85	86	85	92	86	87	86	94	88	87	87	86.9	7.5
5	88	91	93	92	87	90	92	88	87	85	85	82	82	81	83	83	86	82	87	88	87	85	86	88	88	86.6	6.9
6	89	89	90	92	93	95	93	98	97	97	94	93	94	93	93	94	94	94	94	94	94	94	93	91	93.4	8.4	
7	90	90	91	93	93	94	96	96	93	93	93	95	95	93	93	95	96	95	95	95	93	95	95	93	93	93.7	8.0
8	93	93	92	95	91	94	93	90	87	84	82	85	85	82	92	90	92	93	93	91	85	83	82	80	89	89.4	6.9
9	83	78	76	74	75	78	80	77	74	74	71	69	73	71	73	75	74	73	73	76	74	75	78	81	75.2	5.4	
10	80	81	84	84	85	85	86	85	87	87	85	83	82	84	75	81	81	83	85	88	85	73	71	71	82.3	4.9	
11	71	73	78	79	80	74	71	75	67	71	71	73	72	81	81	84	90	90	90	90	90	89	93	92	79.8	7.3	
12	92	93	94	94	94	96	94	94	96	94	93	92	83	87	88	84	79	81	83	81	80	83	88	93	89.0	7.6	
13	93	90	94	93	91	91	91	92	86	84	84	86	86	86	85	87	88	87	91	88	91	90	93	93	93	89.2	8.2
14	93	94	93	96	96	98	98	93	91	91	89	88	86	90	87	89	89	92	92	93	92	92	94	96	96	92.1	7.2
15	96	93	93	93	93	93	94	96	96	93	92	89	89	89	92	93	89	93	96	96	89	87	88	84	84	92.2	7.2
16	83	80	83	81	83	84	81	78	78	83	83	83	87	85	87	85	85	81	81	82	82	80	82	82	82	82.5	7.7
17	87	84	89	79																							

HUMIDITY: ANNUAL MEANS FROM HOURLY VALUES.

For exact hours, Greenwich Mean Time.

111. Aberdeen: North Wall Screen on Tower:  $h_t$  (height of thermometer bulbs above the ground) = 12.5 metres.

1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Relative Humidity ...	% 85.1	% 85.2	% 85.4	% 85.8	% 85.6	% 85.1	% 83.9	% 82.1	% 80.4	% 78.5	% 76.8	% 75.8	% 75.2	% 75.2	% 75.7	% 77.1	% 78.5	% 79.9	% 81.3	% 82.9	% 83.8	% 84.4	% 84.7	% 84.9	% 81.4
Vapour Pressure, in millibars* ...	mb. 8.5	mb. 8.5	mb. 8.4	mb. 8.4	mb. 8.4	mb. 8.5	mb. 8.6	mb. 8.6	mb. 8.7	mb. 8.8	mb. 8.9	mb. 9.0	mb. 8.9	mb. 8.9	mb. 8.9	mb. 8.8	mb. 8.7	mb. 8.6	mb. 8.8						

\* Computed from the mean temperature and mean relative humidity.

RELATIVE HUMIDITY: MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

112. Aberdeen: North Wall Screen on Tower:  $h_t$  = 12.5 metres.

1930.

Month.	Mean.	Hour. GMT.																							
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	% 82.0	% +1.8	% +1.7	% +1.1	% +1.6	% +2.0	% +1.7	% +1.2	% +1.1	% +1.5	% -0.5	% -2.3	% -3.8	% -5.2	% -5.6	% -3.9	% -2.5	% -0.7	% +0.5	% +1.2	% +1.9	% +2.4	% +1.9	% +1.8	% +1.3
Feb.	% 80.2	% +2.1	% +2.2	% +2.9	% +3.2	% +3.3	% +4.1	% +3.3	% +2.0	% +0.7	% -1.0	% -4.0	% -4.5	% -6.5	% -6.8	% -4.7	% -3.3	% -0.2	% +0.6	% +0.5	% +0.6	% +1.3	% +2.4	% +0.3	% +1.5
Mar.	% 77.5	% +3.9	% +4.6	% +4.5	% +4.9	% +5.1	% +4.7	% +5.4	% +3.2	% +1.4	% -3.4	% -5.9	% -7.3	% -7.2	% -6.4	% -6.7	% -6.0	% -4.4	% -2.3	% -0.6	% +0.2	% +1.9	% +2.9	% +3.9	% +3.6
April	% 84.0	% +2.9	% +2.8	% +3.4	% +3.9	% +3.8	% +3.5	% +2.5	% +0.1	% -3.3	% -3.7	% -3.0	% -4.4	% -4.3	% -3.7	% -4.2	% -3.7	% -3.3	% -2.0	% +0.7	% +2.0	% +1.9	% +2.8	% +2.7	% +2.4
May	% 78.7	% +4.2	% +4.9	% +5.4	% +6.9	% +6.5	% +4.8	% +0.7	% -1.2	% -3.2	% -3.7	% -5.5	% -6.1	% -5.0	% -5.7	% -5.3	% -4.4	% -3.9	% -1.7	% +1.2	% +2.4	% +3.6	% +4.3	% +5.0	% +5.0
June	% 74.0	% +7.8	% +7.9	% +8.0	% +8.9	% +7.9	% +4.9	% +1.2	% -3.0	% -5.6	% -5.6	% -8.9	% -7.9	% -9.3	% -9.3	% -8.1	% -6.6	% -3.9	% -2.5	% -1.0	% +0.9	% +4.1	% +5.4	% +6.9	% +7.7
July	% 79.6	% +7.0	% +7.7	% +6.8	% +7.6	% +6.6	% +6.4	% +3.8	% +1.5	% -0.8	% -4.5	% -5.5	% -6.4	% -7.5	% -9.1	% -9.4	% -7.4	% -5.8	% -4.0	% -3.1	% +0.1	% +1.8	% +3.7	% +4.9	% +5.6
Aug.	% 84.2	% +5.7	% +5.5	% +6.1	% +6.1	% +5.5	% +4.7	% +2.7	% -0.8	% -3.1	% -6.3	% -6.1	% -7.2	% -8.8	% -7.5	% -8.0	% -5.7	% -4.2	% -2.5	% +0.2	% +2.7	% +5.0	% +5.1	% +5.3	% +5.5
Sept.	% 87.4	% +3.5	% +3.4	% +3.8	% +3.1	% +3.5	% +3.8	% +3.4	% +1.6	% -0.9	% -3.1	% -4.8	% -6.6	% -5.7	% -6.6	% -6.3	% -4.8	% -3.4	% -0.8	% +1.0	% +2.6	% +2.8	% +3.3	% +3.7	% +3.4
Oct.	% 81.5	% +3.8	% +4.1	% +4.0	% +4.1	% +3.2	% +3.1	% +2.7	% +2.0	% +0.5	% -1.9	% -4.6	% -7.1	% -8.0	% -7.7	% -7.6	% -4.9	% -2.3	% -0.7	% +1.3	% +3.2	% +3.4	% +3.4	% +3.3	% +3.2
Nov.	% 81.3	% +2.5	% +1.7	% +1.4	% +1.5	% +2.2	% +1.2	% +1.5	% +0.3	% -0.7	% -2.7	% -4.2	% -4.7	% -4.7	% -4.0	% -2.9	% -0.8	% +0.1	% +1.2	% +1.2	% +1.8	% +2.3	% +2.2	% +1.8	% +1.9
Dec.	% 86.2	% 0.0	% -0.3	% +0.9	% +1.3	% +0.8	% +1.6	% +1.5	% +1.7	% +1.2	% +1.4	% +0.1	% -0.9	% -1.8	% -1.8	% -1.5	% -1.5	% -1.8	% -1.2	% -0.3	% +0.5	% -0.4	% -0.4	% +0.3	% +0.6
Year.	% 81.4	% +3.8	% +3.8	% +4.0	% +4.4	% +4.2	% +3.7	% +2.5	% +0.7	% -1.0	% -2.9	% -4.6	% -5.6	% -6.2	% -6.2	% -5.7	% -4.3	% -2.8	% -1.5	% -0.5	% +1.5	% +2.4	% +3.0	% +3.3	% +3.5

RAINFALL: ANNUAL TOTALS OF HOURLY VALUES.

Amounts, in millimetres, durations, in hours, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

113. Aberdeen:  $H_t$  = 11.4 metres + 0.6 metres.

1930.

Hour. G.M.T.	0	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	0
	to 1	to 2	to 3	to 4	to 5	to 6	to 7	to 8	to 9	to 10	to 11	to Noon	to 13	to 14	to 15	to 16	to 17	to 18	to 19	to 20	to 21	to 22	to 23	to 24	to 24
Amount ...	mm. 27.8	mm. 27.7	mm. 33.0	mm. 32.9	mm. 35.2	mm. 42.8	mm. 35.1	mm. 36.1	mm. 40.4	mm. 37.3	mm. 38.8	mm. 32.4	mm. 42.2	mm. 28.0	mm. 30.3	mm. 31.0	mm. 40.3	mm. 32.4	mm. 28.1	mm. 25.7	mm. 40.5	mm. 45.2	mm. 39.3	mm. 36.7	mm. 839.2
Duration ...	hr. 29.3	hr. 29.1	hr. 31.7	hr. 32.6	hr. 30.8	hr. 28.5	hr. 25.6	hr. 22.8	hr. 26.7	hr. 22.3	hr. 20.5	hr. 21.7	hr. 28.7	hr. 26.2	hr. 25.5	hr. 26.6	hr. 30.5	hr. 34.3	hr. 27.6	hr. 23.9	hr. 32.5	hr. 33.4	hr. 35.3	hr. 30.8	hr. 676.9

114. Aberdeen.

NOTES ON RAINFALL.

1930.

**Notable Falls of the Year.**—The greatest fall of the year was that of September 18—20, during which period 67 mm. of rain were recorded. Of this total 32 mm. fell on the 18th, and during the fall the intensities were:—5 mm. in 35 min., 10 mm. in 1 hr. 35 min., and 25 mm. in 6 hr. 25 min. August was, however, the month of intense precipitation, on the 19th of that month 5 mm. fell in 5 min., and 10 mm. in 1 hr. 10 min., while on the 29th another fall of 5 mm. in 5 min. occurred.

**Dry Periods.**—(Periods of 7 days or over with no rainfall or with trifling falls).

- Jan. 11—21. 11 days with 0.5 mm.
- Feb. 8—14. 7 days with no rain, followed on 17—24 by 5 days without rain.
- April 28—May 6. 9 days without rain.
- May 18—June 16. 30 days very dry spell with only 5.6 mm. of which 1.4 mm. fell on 6th June and 2.7 mm. on 9th.
- July 24—31. 8 days with 0.2 mm.

**Wet Periods.**—(With notes of the heavier rates of fall).

- Aug. 12—13. 32 mm. fell on 2 days.
- Aug. 19 & 21. 21 mm. on 19th and 21 mm. on 21st.
- Aug. 29—30. 23 mm. on 2 days. August was a very wet month, 151 mm. in all were recorded.
- Sept. 18—20. 67 mm. on 3 days, of which 32 mm. fell on the 18th. (See "Notable Falls" above).
- Oct. 8. 29 mm. fell.
- Nov. 20—22. 42 mm. on 3 days.
- Dec. 11—13. 34 mm. on 3 days.
- Dec. 26—27. 39 mm. on 2 days.







Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

121. Aberdeen : H<sub>r</sub> (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h<sub>r</sub> (height of receiving surface above ground) = 11.4 metres + 0.6 metres. July, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1	1	3.5	4.3	4	7	2.3	2	2.8	3.8	1.3	...	...	...	...	...	...	3	...	...	...	...	...	1.6	...	21.3	5.2	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	1.3	...	...	...	...	...	...	6	1	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.4	1.9
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2
11	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.2
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	4	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	1.8
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	3	...	...	...	...	3	3	1.6	2.0	...	...	...	...	...	...	1.8	3	7	1.5	1	...	2	4	1.1	2.0	2.4	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	5	1	...	9.5	7.6	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	1.9
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.6
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	7	9	3	9	8	1.1	1.2	3	2	...	...	1	1	...	...	...	...	...	...	...	...	3	4	...	0.7	1.4	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	9.2
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	5	...	...	...	...	...	...	...	...	0.7	0.8
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	(1)	...	...	...	...	...	...	...	...	...	...	...	0.1	(0.3)	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	0.1	0.2
Sum.	2.4	4.4	4.6	1.3	1.9	4.2	1.8	5.3	6.4	1.4	0.4	0.1	0.2	...	...	2.1	1.1	1.1	1.5	0.1	1.0	0.7	2.4	2.8	47.2	34.4	
Total Duration.	hr. 2.5	hr. 1.8	hr. 1.5	hr. 1.2	hr. 1.9	hr. 3.8	hr. 2.4	hr. 3.0	hr. 2.9	hr. 0.7	hr. 0.5	hr. 0.3	hr. 0.5	hr. ...	hr. ...	hr. 0.9	hr. 1.2	hr. 1.5	hr. 1.2	hr. 0.1	hr. 0.7	hr. 1.7	hr. 2.1	hr. 2.5	hr. 34.4		

122. Aberdeen : H<sub>r</sub> = 11.4 metres + 0.6 metres.

August, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration.	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	2.3
2	4	4	4	5	2	4	...	7	6	5	1.1	1	6	1.2	8	4	...	1	...	...	...	5.6	3	3	...	14.0	11.9
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	2.3	...	...	4	...	...	7	1.3	2.2	4	1	2	...	...	...	...	...	...	...	1	...	1	...	...	7.8	(4.4)	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.3
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	0.3
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.8
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.4
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	1.0	7	...	...	...	2	...	1	...	...	...	...	...	...	...	2.6	0.4
12	...	1	2	...	...	...	...	3	...	...	5.1	4.1	3	2.5	1.3	3.8	2.8	...	2	...	...	...	...	...	...	20.7	4.6
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	3.3	3.5	5	5	...	1.4	2	...	...	...	11.1	4.8
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.4
15	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.2
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	5	1.2	1.1	1.1	...	1	1.4	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	5.8	6.0
19	...	7	2.6	8	...	5.1	5.6	1.2	...	...	4	1	1	2.0	1	1.3	8	...	1	...	...	...	...	...	...	20.9	7.4
20	...	...	...	...	...	...	...	...	...	...	...	...	7	2	...	1	...	...	...	...	...	...	...	...	...	1.0	1.2
21	...	...	7	2.0	1.7	2	5	2.4	2.9	2.9	2.6	2.8	9	...	2	...	...	...	...	...	...	1.4	1	...	21.8	11.0	
22	...	...	...	...	4	1.1	...	(1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	0.9
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	1	2	7	...	...	...	...	...	...	1.2	1	5	9	1.7	...	...	...	...	...	...	...	...	5.5	2.8
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1.3	6	3	1.0	3.4	3.5
26	1.6	2.1	5	5	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1	3.5
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	2.5	2.1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2	0.6
30	2	1.3	8	3	5	8	1	...	...	...	...	...	8.6	...	...	...	...	...	9	8	9	1	1	2	16.5	6.6	
31	1	2	3	1	1	1	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	3.4
Sum.	7.1	6.9	6.2	6.1	4.3	9.7	7.1	7.4	5.8	3.8	10.6	8.4	12.7	6.0	4.6	9.9	8.9	1.4	2.7	2.4	5.1	8.2	1.4	4.8	151.5	85.3	
Total Duration.	hr. 4.0	hr. 5.4	hr. 6.4	hr. 6.5	hr. 4.1	hr. 5.0	hr. 2.7	hr. 4.3	hr. 3.2	hr. 2.4	hr. 2.8	hr. 2.8	hr. 4.8	hr. 2.4	hr. 2.4	hr. 3.4	hr. 2.8	hr. 1.7	hr. 2.8	hr. 2.1	hr. 4.1	hr. 3.7	hr. 2.6	hr. 2.9	hr. 85.3		



Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

125. Aberdeen : H, (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h, (height of receiving surface above ground) = 11.4 metres + 0.6 metres. November, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	hr.																									
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.4	3.9
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	2.3
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	2.2
4	(.2)	(.4)	(.3)	(.3)	(.1)	(*)	(.2)	...	(.7)	(.4)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	(3.4)	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.6
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.2	2.5
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	1.1
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.2
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.4
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	1.9
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.2	1.9
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.7	4.3
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1	(5.1)
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	(0.6)
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	(5.8)
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15.5	10.1
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	6.0
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28.8	16.6
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.2	6.0
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.6	4.7
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	1.6
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	0.3
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2
Sum.	2.6	2.7	2.9	4.0	4.5	3.7	2.4	1.7	3.7	1.8	2.7	3.0	3.5	5.3	6.9	7.7	6.5	6.1	1.6	2.7	5.2	3.2	3.2	1.6	89.2	81.8	
Total Duration.	hr. 3.7	hr. 3.5	hr. 4.7	hr. 5.0	hr. 3.9	hr. 3.2	hr. 2.6	hr. 1.5	hr. 2.8	hr. 2.0	hr. 2.4	hr. 1.9	hr. 3.8	hr. 5.4	hr. 5.3	hr. 5.6	hr. 5.2	hr. 3.1	hr. 1.8	hr. 2.9	hr. 4.2	hr. 3.1	hr. 3.0	hr. 1.2	hr. 81.8		

126. Aberdeen : H = 11.4 metres + 0.6 metres.

December, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	hr.																									
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.8
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.6
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	14.0
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	3.6
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.1	8.3
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.9	7.6
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.4	3.5
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	0.9
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	3.1
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.4
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	2.2
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.9
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	1.8
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25.8	17.8
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.8	4.4
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.9	4.8
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	2.1
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	4.5	1.8	6.2	5.4	2.8	1.2	4.0	4.7	5.7	6.8	6.9	5.1	2.9	2.2	2.5	1.9	1.2	2.0	4.0	5.0	5.4	7.4	5.4	6.1	101.1	76.8	
Total Duration.	hr. 3.6	hr. 2.2	hr. 3.4	hr. 3.4	hr. 3.1	hr. 1.7	hr. 2.6	hr. 3.4	hr. 4.1	hr. 3.4	hr. 3.0	hr. 2.3	hr. 2.2	hr. 2.8	hr. 3.4	hr. 3.5	hr. 3.7	hr. 3.3	hr. 3.4	hr. 3.4	hr. 3.4	hr. 4.1	hr. 4.1	hr. 3.3	hr. 76.8		

For periods of sixty minutes, between the exact hours of Local Apparent Time.

127. Aberdeen : h, (height of recorder above ground) = 20.7 metres.

January, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.7	55
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.7	70
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	51
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.4	35
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.9	57
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.3	62
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.6	37
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	43
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	7
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	25
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.2	59
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.6	77
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	7
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.2	83
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	7
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	30
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	3
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.6	71
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7	22
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	43
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.2	52
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	12
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	14
Sum.	—	—	—	—	...	0.3	7.3	13.6	15.0	14.7	9.8	6.2	0.3	...	—	—	—	—	—	67.2	—
Mean.	—	—	—	—	...	0.1	2.4	4.4	4.8	4.7	3.2	2.0	0.1	...	—	—	—	—	—	2.17	29

128. Aberdeen : h, = 20.7 metres.

February, 1930.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	2
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	24
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3	38
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.9	33
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.7	87
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.8	53
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.4	37
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.4	80
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.2	67
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.7	51
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.9	63
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.4	36
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	9
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.0	73
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.3	74
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.2	53
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	3
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	27
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	66
Sum.	—	—	—	—	...	0.1	4.2	9.5	11.0	11.8	12.9	14.0	11.5	7.1	0.3	...	—	—	—	—	82.4	—
Mean.	—	—	—	—	...	0.0	1.5	3.4	3.9	4.2	4.6	5.0	4.1	2.5	0.1	...	—	—	—	—	2.94	31
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.		

DURATION OF BRIGHT SUNSHINE.

For periods of sixty minutes, between the exact hours of Local Apparent Time.

129. Aberdeen :  $h_s$  (height of recorder above ground) = 20.7 metres.

March, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	...	...	·1	...	·8	·9	·9	1·0	1·0	1·0	...	...	—	—	—	5·7	54
2	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
3	—	—	—	...	...	...	...	·2	...	...	...	...	...	...	...	—	—	—	0·2	2
4	—	—	—	...	...	...	...	·8	·9	·5	·8	·3	·3	·2	...	—	—	—	3·8	36
5	—	—	—	...	·2	·8	·2	...	...	...	...	...	...	...	...	—	—	—	1·2	11
6	—	—	—	...	...	...	...	...	...	·3	·2	·1	...	...	...	—	—	—	0·6	6
7	—	—	—	...	...	·2	1·0	1·0	1·0	...	·1	...	...	...	...	—	—	—	3·3	30
8	—	—	—	...	...	·1	·2	...	...	...	...	...	...	...	...	—	—	—	0·3	3
9	—	—	—	...	...	·4	·7	·8	·5	·6	·7	·6	·4	...	...	—	—	—	4·7	42
10	—	—	—	...	·9	1·0	1·0	1·0	·8	·6	·8	·5	·9	·3	...	—	—	—	7·8	69
11	—	—	—	...	·1	1·0	1·0	1·0	1·0	1·0	1·0	·9	·8	...	...	—	—	—	7·8	69
12	—	—	—	...	...	·5	·8	·4	·4	·3	·4	·5	·8	·5	...	—	—	—	4·6	40
13	—	—	—	...	1·0	1·0	1·0	1·0	·8	·8	·9	·3	...	...	...	—	—	—	6·8	59
14	—	—	—	·3	1·0	1·0	1·0	1·0	1·0	1·0	·3	·1	...	...	...	—	—	—	6·7	58
15	—	—	—	·1	1·0	1·0	1·0	1·0	1·0	·9	·9	·9	1·0	1·0	·1	...	—	—	9·9	85
16	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
17	—	—	—	...	...	...	...	...	...	·3	·7	·2	...	·1	...	—	—	—	1·3	11
18	—	—	—	...	...	·1	·9	1·0	·5	·7	·5	·2	...	·5	·1	...	—	—	4·5	38
19	—	—	—	...	·6	·9	1·0	1·0	1·0	1·0	·8	1·0	1·0	1·0	·5	...	—	—	9·8	82
20	—	—	—	...	...	...	·1	·2	1·0	·5	1·0	1·0	1·0	1·0	·4	...	—	—	6·2	51
21	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...
22	—	—	...	...	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·9	1·0	·5	...	—	—	10·4	85
23	—	—	...	...	...	...	...	...	...	...	...	·1	...	...	...	...	—	—	0·1	1
24	—	—	...	·5	1·0	1·0	·9	1·0	1·0	1·0	1·0	·8	·9	·4	...	...	—	—	9·5	77
25	—	—	...	...	...	·1	·5	·7	·6	1·0	1·0	1·0	1·0	·9	·1	...	—	—	6·9	55
26	—	—	...	...	·2	·1	...	...	...	...	...	...	...	...	...	...	—	—	0·3	2
27	—	—	...	...	·3	·7	1·0	·8	1·0	·9	1·0	1·0	1·0	·9	·3	...	—	—	8·9	71
28	—	—	...	...	...	...	...	...	...	...	·2	·3	·4	...	...	...	—	—	0·9	7
29	—	—	...	·3	1·0	1·0	1·0	1·0	·9	·8	1·0	1·0	·9	·6	·4	...	—	—	9·9	77
30	—	—	...	·8	1·0	1·0	1·0	·3	·3	...	...	...	...	...	...	...	—	—	4·4	34
31	—	—	...	...	·3	·2	...	·4	·8	1·0	·9	·6	·1	...	...	...	—	—	4·3	33
Sum.	—	—	...	2·0	9·6	13·2	15·5	16·2	16·4	15·1	15·7	13·7	12·6	8·4	2·4	...	—	—	140·8	—
Mean	—	—	...	·06	·31	·43	·50	·52	·53	·49	·51	·44	·41	·27	·08	...	—	—	4·54	39

130. Aberdeen :  $h_s$  = 20.7 metres.

April, 1930.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	—	—	...	...	...	·1	·2	·9	·9	·3	·2	...	·8	·7	...	...	...	...	4·1	31
5	—	—	...	·2	1·0	·8	·9	1·0	1·0	·8	·2	...	·7	·8	·1	...	...	...	7·5	56
6	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	—	—	...	...	...	...	...	·3	...	·5	·1	1·0	·7	·3	·2	...	...	...	3·1	23
8	—	—	...	...	...	...	...	·3	·1	...	...	...	...	...	...	...	...	...	0·4	3
9	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	—	—	...	...	...	·8	·2	·4	·6	·8	1·0	1·0	1·0	·8	...	...	...	...	6·6	48
11	—	—	...	...	·8	1·0	1·0	1·0	1·0	·9	·2	·1	...	...	...	...	...	...	6·0	43
12	—	—	...	·6	·5	...	·7	·9	·7	·5	·2	·2	·3	...	·4	·1	...	...	5·1	37
13	—	—	...	·1	·1	...	·2	1·0	1·0	·8	...	·5	...	·7	·2	...	...	...	4·6	33
14	—	—	...	·5	1·0	·7	·6	·3	·3	·3	...	·4	·4	·9	·5	·2	...	...	6·1	43
15	—	—	...	...	...	·3	·1	·1	·2	·6	·6	·9	·5	·3	...	...	...	...	3·6	25
16	—	—	...	...	...	·4	·2	...	·1	·3	·3	·4	·9	·3	·3	...	...	...	3·2	22
17	—	—	...	...	·6	·8	·1	...	...	·3	·3	...	...	·1	...	...	...	...	2·2	15
18	—	—	...	·2	·8	1·0	·5	·4	·9	·8	1·0	·7	·8	·7	·5	·3	...	...	8·6	60
19	—	—	...	...	·5	·7	·7	·8	·8	1·0	·5	1·0	·8	·8	·6	...	...	...	9·0	62
20	—	—	...	...	·4	·3	...	...	...	...	...	...	...	...	...	...	...	...	0·7	5
21	—	—	...	...	·2	·5	·2	·2	·5	·5	·6	·5	·5	·4	·1	...	...	...	4·2	29
22	—	—	...	...	...	...	·2	·5	·1	...	...	...	...	...	...	...	...	...	0·8	5
23	—	—	...	...	...	...	·2	·3	1·0	1·0	1·0	·8	...	...	...	...	...	...	4·3	29
24	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	—	—	...	...	...	...	...	...	...	...	·1	...	·3	·9	1·0	1·0	·1	...	3·4	23
28	—	—	...	...	·4	1·0	1·0	·5	...	...	1·0	1·0	1·0	1·0	·3	...	...	...	7·2	47
29	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	—	—	...	...	·1	·7	1·0	1·0	1·0	1·0	·6	·6	1·0	1·0	·9	·1	...	...	9·0	59
Sum.	—	...	0·3	2·7	6·7	8·8	9·0	10·2	9·8	9·8	7·6	9·2	9·6	9·5	4·9	1·5	0·1	—	99·7	—
Mean.	—	...	·01	·09	·22	·29	·30	·34	·33	·33	·25	·31	·32	·32	·16	·05	·00	—	3·32	23
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.

For periods of sixty minutes, between the exact hours of Local Apparent Time.

131. Aberdeen : h, (height of recorder above ground) = 20.7 metres.

May, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	...	.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	—	13.8	90
2	—	.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	.2	...	—	13.3	86
3	—	...	...	...	...	...	...	...	...	.2	.7	.7	.1	...	...	...	...	—	1.7	11
4	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	...	...
5	—	...	...	...	...	...	.2	...	.1	.6	.9	.9	1.0	1.0	1.0	.9	...	—	6.6	42
6	—	...	...	.3	.7	.7	.4	.2	.9	.8	...	...	...	...	...	...	...	—	4.0	25
7	—	...	...	.4	.7	.4	...	.1	.1	.4	.2	.4	.6	.6	.8	.6	.1	—	5.2	33
8	—	.1	.6	1.0	.8	1.0	.8	.8	.8	.8	.9	.5	.6	.6	.8	.4	.1	—	10.6	67
9	—	...	...	.1	.1	...	...	...	.5	.4	.7	.7	.4	.8	.1	.1	...	—	4.1	26
10	—	...	...	...	...	.4	.9	.6	.5	.8	.8	.7	.2	...	...	...	...	—	4.9	30
11	...	...	...	...	...	...	...	...	...	...	...	.8	.2	.1	...	...	...	...	1.1	7
12	...	...	...	...	...	...	...	.4	...	.1	.2	.9	1.0	1.0	.8	.5	...	...	4.9	30
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	.1	.5	.1	.3	...	...	...	.3	.4	.3	.3	.3	1.0	.6	.4	...	...	4.6	28
15	...	...	...	...	...	...	...	.6	1.0	.5	.3	...	...	...	...	.5	...	...	2.9	18
16	...	.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.4	.4	.7	.3	.8	.7	1.0	.3	...	12.2	74
17	...	.3	.8	.6	1.0	.4	.5	...	...	...	...	...	...	...	...	...	...	...	3.6	22
18	...	.7	1.0	.6	...	.1	...	.3	.6	.7	.3	.3	.1	...	...	.5	.3	...	5.5	33
19	...	.3	.4	.2	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	1.0	6
20	...	...	...	...	...	...	...	...	...	...	...	...	.1	.1	.2	...	...	...	0.4	2
21	...	...	...	...	.7	.7	.2	.3	.4	.7	.1	...	...	.1	.6	...	...	...	3.8	23
22	...	.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.6	.7	...	14.7	87
23	...	...	...	.4	...	...	...	.2	.1	.7	.6	...	...	...	...	...	...	...	2.0	12
24	...	...	...	...	...	...	...	.1	...	.6	.3	...	.1	...	...	...	...	...	1.1	6
25	...	...	...	...	...	...	...	...	...	.5	.1	.3	1.0	1.0	1.0	.9	...	...	4.8	28
26	...	...	...	...	...	...	.2	...	.2	.7	1.0	1.0	1.0	1.0	1.0	.7	...	...	6.8	40
27	...	...	...	.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.8	...	...	...	...	...	9.4	55
28	...	.9	1.0	1.0	1.0	.4	.6	.9	.8	.6	.4	.6	.7	.8	.2	...	...	...	9.9	58
29	...	.9	.9	.3	...	...	.9	.9	1.0	1.0	.6	...	.3	.9	1.0	1.0	.7	...	10.5	61
30	...	...	.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.3	.9	.9	.2	...	...	...	10.9	63
31	...	...	...	...	...	...	...	...	...	...	.6	.8	.1	...	...	...	...	...	1.5	9
Sum.	...	4.5	9.6	10.6	11.3	10.2	11.3	12.3	12.5	15.8	14.1	13.9	12.6	13.7	11.9	9.3	2.2	...	175.8	—
Mean.	...	.15	.31	.34	.36	.33	.36	.40	.40	.51	.45	.45	.41	.44	.38	.30	.07	...	5.67	35

132. Aberdeen : h, = 20.7 metres.

June, 1930.

1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	.5	1.0	1.0	1.0	.9	1.0	1.0	1.0	1.0	1.0	1.0	.9	.3	...	...	...	...	11.6	67
4	...	.3	.2	...	...	...	...	.9	.9	.7	.7	.9	.4	...	...	...	...	...	...	5.0	29
5	...	...	...	.1	.7	.9	.8	.7	.8	.5	.9	1.0	.7	.8	.7	.1	...	...	...	8.7	50
6	...	...	.1	.5	1.0	.8	.9	.7	.3	.7	.6	.3	...	...	...	...	.3	...	...	6.2	35
7	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.8	.8	.9	1.0	1.0	1.0	1.0	1.0	1.0	.3	...	15.8	90
8	...	.1	.4	...	...	...	...	.2	...	.1	.2	...	...	...	.5	...	...	...	...	5.2	29
9	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	.1	...	...	0.2	1
10	...	.1	.1	.1	.3	.7	.5	.9	.9	1.0	.4	.2	.5	...	.2	.2	.1	...	...	6.2	35
11	.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	.8	1.0	1.0	.2	...	16.1	91
12	.1	.2	.1	.9	.8	.7	.7	.9	.5	.8	.3	.3	1.0	1.0	1.0	.8	...	...	...	10.1	57
13	...	...	...	.1	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	1.0	.7	...	...	11.4	64
14	...	...	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.7	...	...	...	13.6	76
15	...	.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	.3	...	...	14.6	82
16	...	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.7	.4	...	...	15.0	84
17	...	...	.6	.5	.7	1.0	1.0	.3	.6	.4	...	...	...	...	...	...	...	...	...	5.1	29
18	...	...	...	...	...	...	...	.3	...	.8	1.0	.9	1.0	1.0	1.0	.8	.2	...	...	7.0	39
19	...	...	.4	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.6	...	...	...	12.7	71
20	...	.3	...	...	.7	...	...	.1	.9	1.0	.9	.3	...	...	...	...	...	...	...	4.2	24
21	.2	.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.3	.2	...	...	...	...	...	11.3	63
22	...	.5	.2	.6	1.0	.7	.8	.5	.3	.3	.5	.8	.9	1.0	.7	.9	1.0	.2	...	10.9	61
23	...	1.0	1.0	.8	.8	.8	.9	1.0	1.0	1.0	1.0	.9	1.0	1.0	.7	.4	...	...	...	13.7	77
24	...	.1	1.0	1.0	1.0	1.0	1.0	.9	.3	...	...	.6	.3	.2	.8	.1	...	...	...	9.9	56
25	...	...	.8	.8	.5	.7	1.0	.8	.6	.4	.5	.1	.3	...	...	.2	...	...	...	6.7	38
26	.4	.8	1.0	.1	1.0	.8	...	.1	...	.5	.1	...	.5	.2	.4	...	...	...	...	5.9	33
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.7	.6	...	...	...	1.3	7
28	...	.3	...	.2	1.0	.8	.9	.5	.6	.7	.5	...	.2	.3	.1	.3	...	...	...	6.5	37
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	.7	.8	.6	1.0	.2	.7	.9	1.0	.9	.2	.8	.4	.1	.6	...	...	...	8.9	50
Sum.	1.4	8.5	12.8	15.0	17.9	18.8	17.5	18.4	17.6	19.8	17.7	16.8	16.8	13.7	14.2	11.2	5.5	0.7	243.8	—	
Mean.	.05	.28	.43	.50	.60	.63	.58	.61	.59	.64	.59	.56	.56	.46	.47	.37	.18	.02	8.13	46	
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	

For periods of sixty minutes, between the exact hours of Local Apparent Time.

133. Aberdeen :  $h_s$  (height of recorder above ground) = 20.7 metres.

July, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	23
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.0	56
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.5	59
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18.0	73
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.6	43
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	11
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.2	41
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.9	51
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.5	26
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.3	36
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.1	52
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.5	37
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.5	26
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1	29
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.5	14
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	2
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.9	17
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.6	33
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	8
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	7
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	6
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.3	74
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.4	20
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.6	34
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.4	57
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.7	29
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.5	40
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	5
Sum.	0.3	3.5	2.4	6.2	7.5	10.8	11.5	12.0	15.4	14.7	14.2	15.8	13.2	11.5	8.8	7.2	1.9	0.2	157.1	—	
Mean.	.01	.11	.08	.20	.24	.35	.37	.39	.50	.47	.46	.51	.43	.37	.28	.23	.06	.01	5.07	30	

134. Aberdeen :  $h_s + 20.7$  metres.

August, 1930.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	5
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	...	0.1	3.7	7.5	10.0	11.6	13.0	13.4	14.9	15.2	13.8	13.5	12.9	10.8	8.3	5.0	0.2	...	153.9	—	...	
Mean.	...	.00	.12	.24	.33	.37	.42	.43	.48	.49	.45	.44	.42	.35	.27	.16	.01	...	4.96	33	...	
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.		

DURATION OF BRIGHT SUNSHINE.

For periods of sixty minutes, between the exact hours of Local Apparent Time.

135. Aberdeen :  $h_s$  (height of recorder above ground) = 20.7 metres.

September, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%						
1	—	—	...	...	.5	.9	.9	.8	.6	...	.1	...	.2	.2	...	...	—	—	4.2	30	
2	—	—	...	...	...	...	.2	...	.3	.8	.9	.4	...	...	...	...	—	—	2.6	19	
3	—	—	...	...	.3	...	...	...	.2	.3	.9	1.0	.7	.4	...	...	—	—	3.8	28	
4	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	
5	—	—	...	...	...	...	...	...	...	...	.2	.9	.7	...	...	...	—	—	1.8	13	
6	—	—	...	.8	1.0	1.0	.5	.0	.9	.6	1.0	1.0	.9	.7	.3	...	—	—	9.7	72	
7	—	—	...	...	...	...	...	...	...	...	...	...	.3	.2	.3	...	—	—	0.8	6	
8	—	—	...	...	.5	.9	.6	.1	.2	.7	.9	.2	...	...	...	...	—	—	4.1	31	
9	—	—	...	...	...	...	...	.6	1.0	1.0	.6	.4	.1	...	...	...	—	—	3.7	28	
10	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	
11	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	
12	—	—	...	.3	.2	.6	1.0	.3	...	...	...	...	...	...	...	...	—	—	2.4	18	
13	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	
14	—	—	...	...	...	...	...	...	...	...	...	.9	1.0	.6	.5	...	—	—	3.0	23	
15	—	—	...	.1	1.0	.9	.9	.6	.8	.2	.9	.9	.7	.8	.4	...	—	—	8.2	64	
16	—	—	...	.6	1.0	1.0	1.0	.3	.8	.6	.3	...	...	.3	...	...	—	—	5.9	46	
17	—	—	...	...	.3	.2	.1	.9	.6	...	...	.1	.6	...	...	...	—	—	2.8	22	
18	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	
19	—	—	...	...	...	...	...	...	.8	.9	1.0	.4	...	...	...	...	—	—	3.1	25	
20	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	
21	—	—	...	...	...	...	...	...	...	...	.1	...	.6	.6	.4	...	—	—	1.7	14	
22	—	—	...	...	...	...	...	...	...	.2	.9	1.0	.5	.2	...	...	—	—	2.8	23	
23	—	—	...	...	...	...	...	...	...	.1	.2	...	...	...	...	...	—	—	0.3	2	
24	—	—	*	*	*	*	*	*	*	*	*	*	*	*	*	...	—	—	(6.0)†	(50)†	
25	—	—	...	...	...	.2	.5	.6	.7	...	...	...	...	...	...	...	—	—	2.0	17	
26	—	—	...	...	...	...	...	...	...	...	...	...	.1	.2	...	...	—	—	0.3	3	
27	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	
28	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	
29	—	—	...	...	...	.6	.5	.1	.3	.1	.2	.3	.1	...	...	...	—	—	2.2	19	
30	—	—	...	...	.1	.6	.1	.1	.1	...	...	.3	.1	...	...	...	—	—	1.4	12	
Sum.	†	—	...	1.8	4.9	6.9	6.3	5.4	7.3	5.5	8.2	7.8	6.6	4.2	1.9	...	—	—	(72.8) †	—	
Mean.	†	—	...	.06	.17	.24	.22	.19	.25	.19	.28	.27	.23	.14	.07	...	—	—	(2.43)†	(19)†	

\* Record not available. †Sums and means of hourly values for 29 days only.

† Total and percentage on 24th and monthly total, mean and percentage based on value for 24th as recorded at Craibstone, 4½ miles WNW of Observatory.

136. Aberdeen :  $h_s$  = 20.7 metres.

October, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
1	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	%
2	—	—	...	...	...	...	...	...	.2	...	...	...	...	...	...	...	...	...	0.2	2	
3	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	—	—	...	...	...	...	...	.3	1.0	.6	.1	...	...	...	...	...	...	...	2.0	18	
5	—	—	...	...	.3	1.0	1.0	1.0	1.0	.9	.9	.9	.3	...	...	...	...	...	7.3	65	
6	—	—	...	...	.5	1.0	1.0	1.0	.8	.7	.6	.7	.3	.1	...	...	...	...	6.7	60	
7	—	—	...	...	...	.7	.4	.9	.7	1.0	.6	.8	1.0	.8	...	...	...	...	6.9	63	
8	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	—	—	...	...	.7	1.0	1.0	1.0	1.0	.9	...	.1	...	...	...	...	...	...	5.7	52	
10	—	—	...	...	...	.1	.5	...	...	...	...	...	...	...	...	...	...	...	0.6	6	
11	—	—	...	...	.1	.4	.5	.2	1.0	1.0	.4	.8	.9	.3	...	...	...	...	5.6	52	
12	—	—	...	...	.3	.1	.1	.6	.3	.7	.7	.9	.8	.1	...	...	...	...	4.6	43	
13	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	—	—	...	...	...	...	...	.2	...	...	...	...	...	...	...	...	...	...	0.2	2	
15	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	—	—	...	...	.5	1.0	1.0	.9	1.0	1.0	1.0	1.0	1.0	.4	...	...	...	...	8.8	85	
17	—	—	...	...	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	0.2	2	
18	—	—	...	...	.5	1.0	.6	1.0	1.0	1.0	1.0	1.0	1.0	.4	...	...	...	...	8.5	83	
19	—	—	...	...	...	.4	.2	.9	.9	1.0	.6	.3	...	...	...	...	...	...	4.3	43	
20	—	—	...	...	...	.8	1.0	1.0	.8	.7	.7	.9	1.0	.2	...	...	...	...	7.1	71	
21	—	—	...	...	...	.5	.5	.4	.3	.5	...	.1	...	...	...	...	...	...	2.3	23	
22	—	—	...	...	...	.1	.9	1.0	1.0	.8	.6	.6	...	...	...	...	...	...	5.0	51	
23	—	—	...	...	...	.3	1.0	1.0	1.0	.9	.3	.5	.1	.1	...	...	...	...	6.2	63	
24	—	—	...	...	...	.1	1.0	1.0	1.0	.7	.4	.4	.9	.3	...	...	...	...	5.8	60	
25	—	—	...	...	...	.2	1.0	1.0	1.0	.9	.5	.8	.5	.6	.1	...	...	...	6.6	69	
26	—	—	...	...	.3	.6	.8	1.0	1.0	1.0	1.0	1.0	.8	...	...	...	...	...	7.5	79	
27	—	—	...	...	.2	1.0	.9	1.0	.9	.4	.1	...	...	...	...	...	...	...	4.5	48	
28	—	—	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	0.1	1	
29	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30	—	—	...	...	...	...	.1	...	...	...	.3	.7	1.0	.2	...	...	...	...	2.3	25	
31	—	—	...	...	.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	...	...	...	...	8.1	89	
Sum.	—	—	...	4.1	13.9	14.7	16.4	16.3	15.0	11.2	12.7	10.1	2.7	...	...	...	...	...	117.1	—	
Mean.	—	—	...	.13	.45	.47	.53	.53	.48	.36	.41	.33	.09	...	...	...	...	...	3.78	37	
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	

DURATION OF BRIGHT SUNSHINE.

For periods of sixty minutes, between the exact hours of Local Apparent Time.

137. Aberdeen :  $h_s$  (height of recorder above ground) = 20.7 metres. November, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	—	—	—	—	...	3.9	10.3	18.5	12.5	12.7	13.2	9.4	4.0	...	...	...	...	...	79.5	—
Mean	—	—	—	—	...	.13	.34	.45	.42	.42	.44	.31	.13	...	...	...	...	...	2.65	33

138. Aberdeen :  $h_s$  = 20.7 metres. December and Year, 1930.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	—	—	—	—	...	1.3	8.3	10.9	9.8	6.1	1.7	...	...	...	...	...	...	...	38.1	—
Mean	—	—	—	—	...	.04	.27	.35	.32	.20	.05	...	...	...	...	...	...	...	1.23	18
Annual Totals	† 1.7	16.6	28.8	45.8	72.1	102.6	127.2	150.7	160.4	160.5	145.6	132.2	105.8	74.8	52.4	34.2	9.9	0.9	1428.2 †	—
Annual Mean	† .00	.05	.08	.13	.20	.28	.35	.41	.44	.44	.40	.36	.29	.21	.14	.09	.03	.00	3.91 †	32 †
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.

† Sums and Means of hourly values for 364 days only, from 5 hr. to 18 hr.  
 ‡ Annual total, mean and percentage include interpolated value on September 24th.

Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°) : Speed in metres per second.

139. Aberdeen : Dines anemograph from Jan., 1926.

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	Day.	°	m/s.	°																				
1	220	3.4	170	2.1	190	2.3	200	4.1	210	5.4	210	6.4	210	7.1	210	7.0	210	7.0	210	5.8	200	6.3	200	3.7
2	240	7.6	240	8.0	270	11.5	290	16.5	300	16.3	310	15.6	310	14.3	310	13.5	300	9.8	300	11.2	290	11.2	290	10.7
3	190	5.8	220	7.4	230	8.1	240	9.3	240	7.9	230	6.8	220	5.0	230	4.4	220	3.6	240	3.8	240	6.6	230	5.6
4	240	5.8	240	5.6	230	5.4	210	3.2	210	4.0	230	4.4	230	2.8	210	2.3	210	3.1	220	3.6	210	3.5	180	3.6
5	170	10.3	170	8.8	180	7.3	200	4.2	210	2.8	180	4.7	180	7.0	180	6.8	180	7.8	180	8.0	180	8.5	170	9.6
6	230	3.7	260	5.0	270	5.5	280	7.5	280	7.6	270	8.3	290	9.6	290	10.6	270	7.5	280	8.2	290	7.8	270	5.8
7	210	3.1	140	2.2	200	4.4	190	4.7	210	7.0	210	8.5	200	8.4	210	9.8	210	9.3	210	8.4	210	6.5	210	9.4
8	200	7.0	200	6.4	210	5.9	200	6.4	250	6.6	300	5.0	270	2.8	250	2.8	240	3.0	230	5.1	220	6.5	210	8.0
9	220	6.6	210	7.4	210	7.0	210	7.2	210	7.1	200	5.4	190	4.4	200	4.6	200	5.6	200	7.2	210	7.0	230	6.8
10	230	4.0	210	2.8	220	3.7	230	4.1	250	2.6	240	3.1	230	3.7	220	3.4	220	3.7	210	5.5	200	5.4	190	5.5
11	220	7.8	220	7.7	220	8.0	220	8.6	220	8.6	220	8.3	210	7.2	220	5.2	210	6.0	220	7.6	210	6.4	210	6.8
12	210	7.4	220	8.4	210	8.3	200	10.4	210	9.1	220	7.1	220	5.8	230	7.5	220	7.1	210	8.7	210	8.0	210	9.2
13	280	2.5	250	5.4	250	5.2	250	5.8	240	4.8	250	4.7	230	3.4	250	5.4	240	4.4	210	3.2	240	5.5	240	6.8
14	—	1.5	—	1.5	—	1.5	—	1.4	—	1.5	230	2.1	210	1.8	250	1.8	220	2.4	250	1.8	250	2.0	250	2.4
15	290	3.9	280	3.4	280	3.5	280	3.0	250	1.7	260	1.8	280	2.8	270	2.8	250	1.7	250	3.0	230	2.1	260	4.4
16	220	2.4	230	2.0	230	3.4	—	1.5	180	1.9	250	1.8	—	1.5	280	1.7	—	1.4	250	1.7	210	1.8	200	2.2
17	170	11.3	170	11.2	180	11.0	180	11.4	190	11.6	190	12.0	190	11.6	180	11.7	180	10.2	180	11.0	180	10.2	190	9.9
18	190	7.4	200	7.1	210	6.8	200	5.8	150	3.5	190	4.3	190	6.5	190	5.5	190	4.9	190	4.5	180	5.0	180	4.3
19	160	6.0	160	7.0	170	6.2	180	8.0	200	7.9	200	6.6	190	6.9	190	7.1	190	6.9	180	8.2	190	9.2	210	7.5
20	200	5.3	200	5.2	210	6.7	200	6.9	210	7.5	210	7.0	200	7.6	220	7.9	220	7.2	220	7.0	230	6.7	240	5.6
21	250	3.2	240	1.8	—	1.2	—	0.9	210	2.4	220	1.9	190	3.2	180	3.1	210	3.6	220	3.4	200	4.1	190	5.6
22	180	9.4	180	9.5	170	8.4	180	7.3	180	7.5	190	7.4	190	7.2	200	5.2	200	5.4	190	6.1	190	5.5	190	4.7
23	210	4.4	220	2.6	220	3.7	200	4.2	190	4.4	190	3.7	200	3.6	200	8.3	200	7.4	180	4.2	200	4.0	200	7.4
24	190	4.3	170	5.6	160	6.6	160	6.8	160	6.2	160	6.6	160	8.1	150	9.0	160	7.9	160	8.2	160	9.5	160	8.6
25	210	4.2	210	2.8	200	3.1	210	2.1	210	3.0	220	2.0	200	3.7	210	3.5	200	3.4	200	4.8	200	4.5	190	4.4
26	—	1.5	180	1.7	200	2.5	200	3.5	190	2.5	220	1.8	—	1.5	220	2.0	240	1.8	220	3.7	230	3.1	280	2.2
27	280	2.8	300	3.6	290	3.8	300	3.6	300	3.6	290	2.6	300	3.6	310	4.4	300	4.1	320	2.5	310	2.7	310	3.4
28	300	4.0	290	4.0	290	2.6	280	2.5	280	3.6	280	2.8	250	3.0	260	2.6	250	3.2	270	2.2	260	2.8	220	2.6
29	220	3.2	210	3.0	210	2.8	230	2.1	—	1.3	170	1.7	200	3.0	210	2.7	220	2.3	240	2.2	200	3.3	210	3.4
30	170	6.9	180	6.1	180	4.4	180	4.2	190	3.7	180	3.1	160	3.9	200	3.0	—	1.3	230	1.6	230	1.6	190	2.6
31	210	2.5	—	1.0	170	2.7	170	2.7	160	3.8	160	4.3	150	5.5	150	5.1	160	5.7	170	4.5	140	6.5	140	6.8
Mean	—	5.1	—	5.0	—	5.3	—	5.5	—	5.4	—	5.2	—	5.4	—	5.5	—	5.1	—	5.4	—	5.6	—	5.8

140. Aberdeen : H<sub>a</sub> = 8 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	Day.	°	m/s.	°																				
1	110	16.5	110	16.8	110	17.6	110	16.5	120	16.6	110	16.5	110	17.1	100	16.4	100	16.3	100	16.7	100	15.7	100	16.2
2	100	10.6	90	10.4	80	9.4	90	12.1	90	12.0	90	12.0	80	11.0	80	10.7	80	9.6	90	9.5	100	10.0	100	10.5
3	90	10.8	100	10.6	90	9.0	100	9.5	100	9.5	110	9.3	100	9.5	100	10.6	100	10.4	100	10.3	90	9.3	90	9.1
4	260	1.8	—	1.1	230	1.6	—	0.5	—	0.6	300	2.7	310	3.1	310	2.6	30	2.2	—	1.5	170	1.6	30	1.6
5	60	6.1	360	3.6	350	4.1	340	4.6	340	4.1	320	4.3	310	4.5	310	4.6	310	4.4	320	5.4	340	6.5	340	7.0
6	360	7.2	340	6.6	340	4.9	340	7.4	350	7.6	340	7.1	350	6.4	360	7.4	360	8.3	350	7.6	350	7.6	360	7.8
7	360	5.6	350	5.6	350	5.5	350	4.6	360	5.4	10	5.0	360	4.8	360	4.9	20	4.6	30	4.5	50	6.6	50	6.5
8	300	3.2	300	3.6	290	3.5	290	3.5	300	3.4	290	4.0	290	4.3	290	3.9	290	4.4	290	4.4	300	4.0	300	4.3
9	290	3.2	—	1.2	260	2.0	250	2.0	290	2.3	280	2.8	280	3.4	280	3.1	290	4.3	290	3.2	280	4.0	270	3.7
10	290	3.0	270	2.7	260	3.2	260	3.1	260	2.7	280	3.2	260	3.4	240	3.3	230	2.6	230	2.1	240	3.1	260	4.0
11	270	2.6	260	1.7	280	3.5	280	2.6	270	2.5	230	2.5	240	2.0	250	2.1	240	1.8	270	2.0	280	1.6	—	1.4
12	—	1.4	—	0.7	280	2.2	290	3.0	290	3.6	290	3.9	280	4.0	260	3.3	280	4.0	260	2.8	280	3.7	270	4.1
13	260	2.3	—	1.4	—	1.0	240	1.8	290	2.6	—	1.5	260	1.6	—	1.3	300	1.7	—	1.1	220	2.6	250	3.3
14	220	4.6	210	4.2	220	2.8	—	1.0	190	1.7	170	1.8	230	2.0	—	1.5	200	2.0	190	4.3	190	5.5	200	7.5
15	—	1.5	260	2.2	260	3.7	280	5.5	300	7.0	320	5.9	330	5.9	340	6.6	330	4.6	330	4.6	330	6.7	320	7.0
16	310	6.4	310	5.8	320	6.0	300	5.4	310	4.8	310	5.7	310	5.0	300	4.5	310	5.4	300	5.2	300	5.4	310	5.3
17	270	2.5	290	2.0	—	1.0	—	1.3	—	1.0	—	0.5	—	0.7	—	1.1	—	1.0	—	1.0	260	2.0	290	2.1
18	*	1.7	*	3.2	*	2.3	*	1.7	*	2.4	*	2.0	*	2.2	*	2.1	*	2.0	250	2.0	210	3.0	180	3.4
19	230	2.3	250	1.7	250	1.8	—	1.5	—	1.5	—	1.5	—	1.3	—	1.3	—	1.3	220	1.8	190	3.8	170	5.2
20	190	3.8	210	2.8	220	2.5	220	3.1	200	2.9	220	1.7	230	2.4	220	3.2	220	3.1	200	3.9	190	3.3	180	5.2
21	230	2.0	—	1.5	—	1.3	—	1.0	280	2.0	280	2.4	—	1.4	—	1.2	290	3.0	300	2.0	—	0.0	—	0.7
22	250	1.6	270	1.8	—	1.2	—	1.4	—	1.3	—	1.4	290	2.5	290	2.0	290	2.1	—	0.7	—	0.6	—	1.0
23	100	4.3	100	4.3	100	4.6	110	3.4	130	4.6	130	4.4	130	5.5	140	4.2	140	3.8	140	4.6	140	5.8	130	6.4
24	150	6.8	140	6.2	140	6.6	140	6.3	140	6.1	140	6.0	130	6.7	130	7.4	130	8.7	130	8.6	140	8.6	140	9.0
25	130	7.6	130	8.6	13																			



Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°) : Speed in metres per second.

141. Aberdeen : Dines anemograph from Jan., 1926.

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	290	2.8	280	2.2	290	2.1	300	1.6	—	1.5	280	2.4	290	2.6	290	2.9	290	3.0	300	3.0	300	3.4	—	1.5
2	—	0.2	—	0.2	—	0.2	—	0.4	—	1.0	230	2.0	220	1.7	210	2.0	190	2.7	180	2.2	180	3.7	170	3.8
3	180	3.2	180	3.2	200	3.7	200	3.4	190	3.6	190	4.4	190	4.8	190	5.2	190	5.1	190	5.5	180	6.0	190	5.7
4	220	2.1	—	1.5	220	2.0	—	1.5	260	3.0	290	2.7	300	2.5	—	1.3	—	1.2	—	0.6	290	2.2	300	5.8
5	280	3.2	290	2.8	300	3.6	290	3.6	290	2.7	—	1.2	270	1.8	290	2.1	300	2.3	—	1.0	—	1.0	60	2.1
6	150	4.4	140	4.5	140	5.8	150	6.3	150	5.5	160	4.3	160	4.3	170	3.3	160	4.7	160	4.7	190	4.6	200	4.1
7	270	2.3	—	1.5	270	1.6	—	0.6	—	1.4	—	1.0	—	1.4	270	2.0	250	2.2	250	3.6	260	3.9	260	3.8
8	220	3.4	190	2.9	210	3.4	170	2.5	190	2.4	210	2.1	210	2.7	210	3.1	220	3.6	230	2.8	210	3.3	190	3.4
9	200	4.0	190	6.7	180	7.1	180	7.9	150	6.6	150	5.0	180	3.4	210	4.1	210	8.1	230	8.1	240	9.0	290	10.2
10	270	1.6	280	3.1	270	3.3	280	3.1	290	2.0	280	1.8	300	2.5	290	4.2	290	5.5	310	6.0	300	5.7	310	4.3
11	180	1.6	—	1.5	150	3.7	140	5.3	130	5.7	130	5.5	130	4.8	120	5.0	120	4.4	120	4.1	130	4.7	140	5.4
12	270	1.6	260	2.1	280	2.5	290	2.9	290	3.3	280	2.8	280	4.6	320	7.1	320	6.1	330	6.6	330	6.6	320	5.6
13	290	6.7	280	6.1	290	6.8	300	7.2	310	8.4	300	7.8	300	6.7	300	6.7	310	7.4	310	8.0	310	7.2	320	6.3
14	330	4.1	320	3.8	340	4.4	350	4.9	350	5.6	340	4.5	320	3.8	330	3.9	340	4.8	350	6.6	350	6.8	360	6.4
15	300	4.5	290	4.4	290	4.2	290	4.3	290	4.5	290	3.7	300	4.4	290	4.1	310	5.4	310	5.4	320	4.6	330	4.1
16	300	3.8	290	3.5	300	3.8	280	2.6	300	3.7	310	3.7	340	3.9	30	6.1	20	5.3	360	5.8	50	5.4	110	11.0
17	100	11.5	90	11.0	90	9.5	80	10.0	80	8.6	70	7.5	90	8.2	80	7.2	80	7.2	90	6.4	60	5.4	60	5.4
18	320	4.4	310	4.2	320	3.7	330	4.3	340	4.5	330	4.8	320	4.9	320	5.8	330	4.8	330	6.1	340	5.6	340	5.8
19	310	6.9	310	6.5	320	5.3	310	6.1	300	6.0	300	6.4	290	6.3	300	6.1	300	6.6	310	7.6	310	7.8	310	7.7
20	240	3.7	230	3.4	220	4.0	210	4.5	180	4.4	200	8.6	200	11.0	210	9.5	200	10.3	210	8.4	240	8.5	270	11.2
21	270	7.8	270	7.0	270	7.7	280	8.0	270	6.0	200	2.9	210	4.1	220	3.4	250	1.6	150	2.8	160	2.5	—	1.5
22	230	2.5	—	1.5	240	2.4	200	1.8	360	3.4	330	5.2	310	6.7	300	6.6	310	6.1	300	6.9	290	6.1	290	7.0
23	260	3.0	290	2.5	260	2.1	280	2.3	290	2.8	270	2.6	—	1.5	—	1.2	—	1.0	—	0.5	—	0.2	100	1.7
24	300	3.2	300	3.3	290	3.6	290	3.6	290	4.1	300	3.9	290	3.8	300	3.6	290	3.0	40	2.2	100	2.6	100	4.1
25	190	5.8	200	6.3	200	6.6	180	6.0	190	6.5	210	6.2	230	8.1	190	5.5	200	6.5	200	6.1	220	6.6	270	8.5
26	300	7.6	270	5.3	280	5.0	290	5.9	290	5.2	290	5.0	240	3.6	270	4.9	260	4.8	270	6.2	290	7.9	290	7.4
27	—	0.9	240	2.0	260	2.0	—	1.4	230	2.1	220	3.0	230	3.4	240	2.4	240	3.4	280	6.0	300	5.8	300	5.0
28	190	3.0	180	4.2	190	4.4	200	3.9	190	4.5	170	2.7	190	5.0	190	6.8	180	7.4	180	7.0	170	6.5	170	6.6
29	170	8.8	170	8.1	190	6.7	210	3.9	200	5.1	210	3.9	200	2.9	220	4.1	210	7.3	200	7.9	210	7.5	210	7.7
30	230	5.2	220	4.4	220	4.8	220	4.8	200	3.8	200	3.0	210	4.4	200	5.5	220	7.3	200	7.5	210	6.0	200	6.6
31	190	9.0	180	7.7	200	5.2	190	4.9	180	7.0	170	8.0	170	7.9	170	8.4	170	8.2	170	8.8	170	8.3	170	8.2
Mean	—	4.3	—	4.1	—	4.2	—	4.2	—	4.4	—	4.1	—	4.4	—	4.6	—	5.1	—	5.3	—	5.3	—	5.7

142. Aberdeen : H<sub>a</sub> = 8 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	180	4.5	170	4.6	180	4.6	180	5.4	190	5.0	180	6.6	180	6.1	170	7.1	160	7.1	150	7.6	140	11.0	140	10.0
2	180	6.7	190	5.3	190	5.1	170	6.2	170	7.0	170	6.4	170	7.0	160	7.4	160	7.8	160	7.5	150	9.1	150	8.6
3	170	3.0	160	2.8	230	1.6	—	1.4	170	2.0	130	2.9	110	4.5	140	7.1	140	6.8	140	6.4	140	6.7	130	9.6
4	120	13.6	130	13.5	120	13.1	110	14.5	110	12.6	110	11.5	110	11.7	100	11.0	110	9.6	100	9.5	90	10.0	90	10.5
5	350	2.8	330	3.5	340	4.1	330	3.6	310	3.7	300	3.9	310	3.9	310	3.5	360	2.5	60	3.2	70	4.3	80	4.8
6	320	4.5	320	5.1	320	5.5	320	5.2	320	4.7	320	3.4	350	4.4	360	5.3	20	5.2	20	5.9	30	6.0	30	5.8
7	360	3.3	360	2.2	310	1.8	300	2.8	310	2.8	300	2.7	300	2.8	310	2.6	310	2.2	—	1.0	90	2.7	100	3.4
8	180	5.0	190	4.4	170	4.4	170	5.4	180	4.4	180	5.0	190	5.0	180	5.6	180	6.6	180	7.3	170	7.9	180	8.3
9	180	4.2	200	4.6	200	4.3	200	3.3	190	2.6	180	3.3	220	1.8	—	1.0	170	2.3	170	2.2	160	3.6	200	3.5
10	—	0.4	—	0.5	—	0.8	—	0.9	—	0.5	—	0.5	—	0.5	—	1.4	190	2.5	170	3.4	160	4.7	180	8.0
11	300	1.8	—	1.1	—	0.5	—	0.5	—	0.6	—	0.5	—	1.4	190	2.5	170	3.4	160	4.7	180	6.6	180	8.0
12	230	3.4	—	1.4	260	1.8	270	1.9	270	2.2	280	3.2	270	4.1	280	4.6	270	3.7	250	3.4	230	3.6	160	6.2
13	—	1.4	—	0.6	—	0.4	—	1.0	260	1.6	220	2.8	230	3.0	230	2.4	200	2.9	190	3.8	220	3.4	220	5.4
14	300	2.6	310	2.8	300	4.4	300	4.4	300	3.8	300	4.0	310	5.6	310	5.0	330	5.5	320	5.6	330	5.0	340	5.4
15	320	6.4	320	5.4	310	4.7	310	4.8	310	5.1	310	5.3	320	6.7	320	7.9	320	8.2	330	9.3	340	9.3	340	9.7
16	330	6.2	320	6.1	320	6.2	320	5.8	320	5.7	320	5.0	320	5.8	320	6.1	330	8.4	320	7.9	320	6.7	320	7.6
17	320	8.2	310	7.8	310	7.4	310	7.9	310	8.5	320	8.8	330	9.3	330	10.5	340	9.8	330	9.7	340	10.4	340	10.7
18	340	8.2	340	8.0	340	7.9	340	8.3	340	8.0	340	7.2	330	8.0	340	9.4	340	8.6	340	9.6	340	10.5	340	10.9
19	340	11.3	340	10.6	340	10.7	350	10.6	350	9.2	360	10.5	350	10.9	360	11.4	10	11.1	20	11.8	30	12.4	30	11.6
20	360	4.7	350	6.0	360	6.2	350	5.1	350	4.2	350	4.6	350	4.6	20	6.6	360	7.6	360	7.3	350	7.1	350	7.0
21	350	6.2	340	6.5	340	6.4	340	5.4	330	5.0	330	5.6	340	5.5	340	5.8	340	7.1	350	6.5	350	6.7	340	7.3
22	220	1.8	—	0.6	—	1.4	—	1.2	—	0.6	—	0.8	—	1.4	230	3.3	200	2.1	190	3.5	270	4.9	300	4.6
23	240	3.1	240	3.2	240	2.8	220	2.4	210	2.7	200	3.5	220	3.0	220	3.6	200	4.6	170	4.6	140	5.6	140	6.6
24	150	6.1	150	7.2	150	7.4	160	5.6	180	2.9	180	3.4	150	3.2	170	4.2	150	6.8	160	5.7	140	7.8	150	6.1
25	90	2.1	80	2.5	80																			



Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°) : Speed in metres per second.

143. Aberdeen : Dines anemograph from Jan., 1926.

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	1.4	—	0.9	—	1.2	—	1.3	—	0.5	—	0.6	190	1.8	180	3.1	170	4.2	170	4.5	160	5.4	160	5.5
2	—	1.5	200	2.5	—	0.8	—	0.6	—	0.0	—	0.4	130	3.3	130	3.5	130	4.6	120	4.8	120	4.9	120	5.1
3	160	2.7	180	2.7	140	2.8	140	3.0	150	2.3	140	2.5	140	3.1	130	3.2	120	3.4	120	3.5	110	3.6	120	3.7
4	—	0.8	—	1.4	120	2.7	130	1.8	150	1.6	—	0.4	—	0.5	—	1.4	60	3.0	90	2.4	90	2.8	90	2.8
5	300	2.2	—	1.5	—	1.1	—	1.1	—	0.8	360	1.7	20	3.3	40	3.3	60	3.8	80	4.4	100	4.4	110	4.7
6	310	1.7	300	1.6	320	1.8	300	2.1	310	2.5	310	2.6	350	3.0	40	3.3	50	3.6	60	3.6	50	4.0	70	5.1
7	320	2.5	320	2.7	310	2.9	300	4.4	310	4.3	300	4.6	300	5.8	300	7.5	310	7.9	320	7.2	330	4.8	330	6.4
8	320	6.2	310	7.0	310	7.8	300	6.8	310	7.8	310	8.1	320	8.5	330	8.5	320	8.5	310	8.6	300	9.0	300	8.3
9	290	4.5	290	5.5	290	5.7	290	5.9	300	5.5	300	6.0	300	7.4	300	7.2	300	7.2	300	7.4	300	7.6	310	7.0
10	—	1.5	260	2.3	260	1.6	260	2.0	—	1.5	—	1.5	250	2.8	240	2.7	230	2.8	240	4.0	210	4.2	170	6.3
11	210	2.9	—	0.8	—	0.5	—	0.0	—	0.5	—	1.0	—	1.3	50	2.2	70	3.8	40	3.8	40	4.6	40	5.0
12	360	4.0	350	3.7	340	3.6	350	3.6	340	4.1	350	4.1	10	4.4	30	4.3	30	3.7	40	4.2	50	3.7	50	4.1
13	210	2.2	210	2.0	210	2.3	180	2.0	160	4.3	160	5.2	160	5.5	150	6.2	140	6.5	130	6.3	130	7.0	140	7.7
14	290	1.6	280	2.2	280	2.9	280	1.7	280	1.8	280	2.0	—	1.4	80	2.2	90	2.1	110	2.8	110	3.1	120	4.4
15	150	1.8	150	3.0	160	2.6	150	3.2	150	3.3	150	3.6	150	3.4	150	3.5	140	3.7	140	4.5	150	6.3	160	6.5
16	210	2.0	220	3.0	210	3.0	200	3.5	210	3.1	190	3.5	210	5.0	210	5.3	220	5.6	230	6.7	220	7.6	230	6.8
17	200	2.8	210	3.2	220	3.1	210	2.6	200	3.0	200	4.0	200	4.6	200	5.0	180	5.6	170	6.1	170	5.9	160	6.7
18	220	6.8	210	6.4	220	7.1	220	7.8	220	7.2	220	8.5	210	10.1	220	9.6	220	9.3	230	8.6	230	9.0	240	10.8
19	260	6.4	250	5.7	240	4.4	190	4.0	240	4.1	240	4.5	250	5.2	250	5.7	220	4.3	200	3.2	200	3.8	210	5.9
20	270	2.5	290	2.8	300	3.4	300	3.8	310	3.4	300	4.1	310	4.0	310	4.2	40	3.0	130	2.6	100	2.0	100	2.3
21	—	1.2	—	0.8	—	0.7	—	0.7	—	0.7	—	0.6	—	1.1	100	2.8	110	3.0	110	3.6	100	4.0	120	4.0
22	40	2.4	20	2.1	—	1.5	310	2.3	—	1.5	350	2.7	30	4.3	50	4.6	60	4.9	50	5.5	40	5.6	40	5.5
23	320	2.0	310	2.4	300	2.3	300	3.6	300	4.3	300	4.5	330	4.6	350	4.8	350	5.4	350	5.3	350	6.2	360	6.0
24	340	6.2	340	5.0	350	5.3	350	5.0	20	4.5	10	3.3	10	3.5	20	3.6	30	4.0	10	3.7	30	4.5	40	4.8
25	—	1.5	360	2.3	350	1.7	360	2.3	10	3.5	360	4.0	360	3.5	10	3.5	340	3.6	340	4.0	360	4.4	10	4.2
26	340	3.5	330	4.1	330	3.7	340	4.1	340	3.3	350	2.5	340	3.1	330	3.5	320	3.5	320	2.5	330	3.5	70	3.9
27	200	2.5	200	3.2	190	2.9	180	3.0	180	4.0	210	4.1	190	3.5	180	5.0	190	5.1	170	6.0	170	6.8	180	7.3
28	240	4.3	230	2.9	200	2.6	220	3.3	210	2.8	240	4.4	240	6.3	250	7.0	260	6.5	270	5.9	260	7.1	290	7.3
29	280	3.0	270	2.8	280	2.8	290	3.6	290	3.7	300	3.1	330	3.0	330	2.5	—	1.5	120	4.6	130	5.2	150	5.3
30	—	1.5	—	0.8	—	0.5	—	0.6	—	0.3	160	2.0	160	4.6	160	4.7	150	5.2	150	6.0	150	6.1	120	5.7
31	180	2.4	—	1.4	120	1.8	130	2.8	140	2.8	160	2.6	150	3.0	150	3.7	140	4.1	130	4.5	130	4.1	120	2.4
Mean	—	2.9	—	2.9	—	2.8	—	3.0	—	3.0	—	3.3	—	4.0	—	4.4	—	4.6	—	4.9	—	5.2	—	5.5

144. Aberdeen : H<sub>a</sub> = 8 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.8	—	1.2	10	2.0	20	3.1	20	3.1	20	3.4	20	4.2	20	4.7	20	5.5	30	5.6	30	5.7	20	5.8
2	360	3.4	350	3.5	350	3.4	350	3.4	350	3.8	350	3.8	350	3.8	350	3.9	350	4.5	350	4.1	340	4.3	350	4.4
3	300	3.4	310	3.5	300	3.8	300	3.5	300	3.2	300	2.8	—	1.6	70	2.1	70	3.1	80	4.0	90	3.5	100	4.3
4	170	3.5	180	3.8	180	4.6	190	3.7	180	4.3	180	4.0	170	4.0	190	4.3	180	4.2	180	4.2	140	4.0	140	4.1
5	—	0.4	—	0.5	—	0.5	—	0.6	—	0.7	—	0.9	200	3.3	170	3.5	180	4.0	170	4.8	160	6.4	160	6.0
6	—	0.5	230	2.2	230	2.5	230	1.8	230	2.5	—	0.8	—	0.9	20	1.8	90	2.0	60	2.7	40	2.6	40	4.0
7	300	1.6	—	1.4	290	4.3	300	3.1	300	3.0	300	5.8	310	7.0	310	8.5	310	7.6	310	7.6	310	7.8	310	6.6
8	290	2.2	260	1.8	290	2.3	—	1.0	300	1.6	—	1.2	—	0.5	—	1.4	190	1.7	130	3.1	130	3.4	160	3.7
9	220	3.1	190	3.7	190	3.7	210	5.4	210	5.1	210	6.1	200	6.5	200	5.5	210	6.5	210	8.3	210	7.8	230	5.8
10	—	1.4	220	2.7	210	3.2	220	2.8	210	2.9	200	3.1	210	3.6	200	5.9	190	6.2	190	6.6	210	6.8	190	7.5
11	200	4.2	200	4.8	200	4.2	190	5.5	210	5.8	220	7.4	230	7.4	230	8.4	220	8.6	230	9.3	220	9.7	230	8.9
12	180	2.3	190	2.7	180	3.0	210	2.7	210	4.0	210	3.9	220	4.1	200	5.2	200	4.3	190	5.5	200	5.6	160	6.6
13	—	1.5	—	1.1	290	1.7	—	1.4	—	1.4	—	0.8	—	0.8	—	0.9	100	2.3	90	3.6	100	5.4	130	5.6
14	180	2.5	180	2.1	150	2.4	170	2.4	180	1.8	170	3.2	160	4.2	160	4.6	160	5.4	150	5.8	160	6.0	150	6.6
15	200	2.0	—	1.5	—	0.7	—	0.7	—	0.4	—	1.0	110	2.8	120	3.6	120	4.7	130	5.2	140	5.4	120	6.1
16	—	1.3	—	1.2	—	1.0	—	0.7	—	0.4	—	0.2	120	2.9	120	3.6	120	4.6	120	4.8	110	5.4	110	5.4
17	—	0.8	300	2.3	300	2.5	300	2.0	300	1.9	—	0.5	—	1.1	110	2.7	110	3.4	100	4.2	100	3.8	110	4.8
18	—	1.2	—	1.2	—	1.3	—	1.4	—	1.3	—	1.3	—	1.5	—	1.4	100	2.4	110	2.2	110	2.6	110	3.7
19	140	1.8	130	1.9	—	1.3	—	0.9	—	1.0	120	1.7	320	1.7	190	2.6	200	3.4	160	4.3	160	5.2	170	5.7
20	220	2.6	220	1.8	190	2.1	210	2.6	210	2.8	200	2.1	190	4.0	180	4.6	150	4.2	140	3.5	190	4.2	180	4.4
21	—	1.3	250	1.6	—	1.5	240	1.8	240	2.1	—	0.7	—	1.4	170	2.2	140	4.7	180	5.6	200	6.1	180	6.6
22	160	5.5	170	6.1	190	5.3	190	4.5	180	2.8	240	3.4	260	3.5	250	4.9	250	4.4	250	5.6	240	4.6	190	5.3
23	190	2.3	190	2.0	200	1.7	—	1.4	220	1.6	210	1.6	200	3.6	200	4.3	190	4.6	200	5.4	180	6.5	170	7.2
24	140	5.3	160	4.6	190	4.1	210	3.5	220	3.4	210	3.8	200	4.7	190	5.3	180	5.6	160	6.1	150	6.3	150	6.9
25	260	4.2	270	3.7	280	5.4	290	5.2	290	5.7	280	5.8	290	6.6	260	5.6	280	5.4	300	4.4	280	4.2	260	3.7



Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°) : Speed in metres per second.

## 145. Aberdeen : Robinson anemograph from July, 1930.\*

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
Day.																									
1	180	6.5	170	4.0	170	4.0	90	1.8	—	1.3	130	3.6	100	2.0	130	3.6	130	3.1	120	4.0	130	4.3	140	6.1	
2	—	0.8	—	1.2	—	1.2	—	1.1	—	1.2	—	0.4	—	0.8	—	0.8	110	1.6	140	3.3	180	4.4	160	5.0	
3	—	0.9	—	0.9	—	0.4	—	0.4	—	0.4	—	1.1	—	1.4	—	1.3	110	3.1	110	3.6	120	3.1	140	4.9	
4	—	0.8	—	1.0	—	0.0	—	0.9	—	0.8	—	0.9	—	1.40	2.9	180	3.1	130	4.4	130	4.3	130	4.7	120	5.2
5	300	1.6	320	1.8	—	0.8	—	0.4	—	1.3	330	1.8	320	1.8	70	1.6	140	2.8	140	3.3	150	4.3	150	5.1	
6	180	2.7	160	3.2	190	3.2	190	2.8	220	1.8	—	1.4	290	1.8	320	3.3	320	3.6	350	4.6	340	5.7	330	3.6	
7	240	3.6	260	4.0	250	3.3	250	3.3	250	3.3	250	3.3	270	6.8	260	4.3	280	4.9	280	4.9	280	7.7	280	5.7	
8	—	0.3	—	1.1	—	1.1	—	0.9	—	0.3	—	0.8	290	1.8	270	1.7	—	0.9	130	2.8	150	5.1	170	6.1	
9	290	1.8	310	2.3	320	3.6	300	3.3	310	5.6	320	6.8	300	5.2	300	4.3	300	5.6	300	4.9	320	6.1	320	5.1	
10	310	3.0	300	2.6	290	3.3	280	3.7	290	3.3	270	3.9	280	5.5	290	4.3	280	5.4	300	4.9	310	3.6	290	3.6	
11	300	4.6	300	3.9	300	5.6	300	5.2	300	6.2	300	6.6	300	6.6	310	6.6	340	7.1	340	7.9	340	9.0	330	6.8	
12	330	7.3	330	7.6	330	6.8	320	7.0	330	7.6	330	8.7	330	8.7	330	7.9	340	9.5	340	7.9	340	7.9	340	7.9	
13	300	2.0	290	2.2	290	2.2	290	1.8	—	1.0	—	0.7	—	1.2	110	2.4	110	4.0	110	3.7	120	3.6	150	4.7	
14	—	0.9	—	1.4	—	1.4	110	1.6	—	1.1	70	1.9	60	2.2	60	1.8	60	2.7	70	4.6	70	4.0	60	3.3	
15	290	3.6	300	2.0	300	2.0	300	3.0	310	3.0	310	2.6	300	3.3	310	2.3	310	2.0	20	2.1	40	4.0	60	1.8	
16	300	2.0	—	1.3	—	1.3	—	0.8	60	2.2	80	3.6	70	4.7	70	5.9	70	5.9	70	5.9	60	5.1	60	4.3	
17	40	7.4	40	6.7	30	6.9	20	5.7	20	5.2	20	5.2	20	6.1	30	7.5	20	6.5	20	6.1	30	7.9	30	6.5	
18	70	4.7	80	5.4	110	4.7	100	4.9	80	3.3	50	3.3	60	3.3	50	3.3	50	4.0	50	3.6	50	3.6	60	4.3	
19	310	1.6	300	2.0	300	2.6	300	2.6	310	2.0	310	2.0	310	2.6	320	2.5	330	4.7	320	4.0	330	4.3	330	4.3	
20	300	3.0	330	3.6	340	3.1	340	3.9	320	4.7	330	4.7	330	5.1	330	7.9	330	7.9	330	7.9	330	7.3	330	7.6	
21	320	5.4	330	5.4	320	4.7	320	5.7	320	7.3	320	7.6	330	6.2	320	7.6	320	9.0	320	9.0	320	7.9	320	9.0	
22	320	9.4	320	10.4	320	10.4	320	11.6	320	11.6	320	8.7	320	10.8	320	11.2	330	11.6	330	10.1	330	10.4	330	10.1	
23	330	7.3	330	7.6	330	7.3	330	7.6	320	8.2	330	7.9	330	7.9	330	7.3	330	7.6	330	7.3	330	7.6	340	6.7	
24	330	5.1	330	5.1	320	4.3	320	5.4	320	5.1	330	4.3	320	4.3	320	5.4	320	4.7	340	4.3	350	5.5	350	5.0	
25	290	2.9	290	2.2	290	2.5	300	2.6	290	2.5	300	2.3	—	1.4	60	1.8	90	3.6	90	3.6	100	3.7	120	4.0	
26	170	2.1	180	2.7	190	2.2	190	2.2	190	1.8	180	1.7	170	3.5	150	4.7	160	5.5	160	5.5	160	5.5	170	6.1	
27	240	1.8	—	0.3	—	0.9	—	0.8	—	0.8	200	2.1	—	1.1	—	0.9	190	2.2	220	2.9	210	2.5	180	5.7	
28	—	0.8	—	0.4	180	3.5	180	2.7	200	4.0	220	2.9	210	3.3	220	3.6	220	4.0	220	4.0	180	6.1	170	6.9	
29	300	1.9	—	0.8	—	0.8	—	1.2	—	1.3	—	0.4	—	0.9	—	1.3	—	1.4	60	2.2	60	2.9	70	3.6	
30	350	6.0	350	5.5	340	5.2	340	4.3	340	4.7	330	4.3	340	5.9	340	6.7	340	6.2	350	7.8	340	7.1	340	8.6	
31	310	3.0	300	2.3	290	2.5	270	2.1	280	3.3	280	3.7	280	4.9	280	5.4	300	3.9	290	4.7	290	4.0	300	3.6	
Mean	—	3.4	—	3.3	—	3.3	—	3.3	—	3.4	—	3.5	—	4.0	—	4.3	—	4.8	—	5.0	—	5.4	—	5.5	

146. Aberdeen : H<sub>a</sub> = 13 metres + 23 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.8	—	0.8	—	0.7	—	0.3	—	0.9	—	0.8	100	1.6	110	1.9	120	3.1	120	3.6	110	4.0	100	4.1
2	110	3.1	100	4.1	100	4.9	100	6.1	100	7.4	110	7.4	100	8.3	100	8.3	100	9.0	100	11.5	90	10.8	90	11.5
3	100	5.7	110	4.7	120	4.0	140	2.5	170	1.7	120	1.9	—	1.4	130	1.9	130	2.8	160	4.6	160	5.5	170	5.7
4	160	2.8	140	2.9	140	3.7	140	2.9	150	4.0	140	2.5	130	3.6	130	3.1	110	4.0	110	4.3	100	2.9	80	3.3
5	310	1.6	300	3.0	310	3.3	310	3.6	300	4.6	300	4.3	310	4.9	300	4.6	300	4.6	300	4.6	300	4.6	320	4.3
6	260	2.5	270	2.6	260	2.2	—	1.3	270	2.1	270	3.0	270	3.4	270	4.7	270	5.1	290	4.7	270	4.7	190	5.0
7	—	1.3	—	1.1	290	2.5	300	3.3	340	1.9	—	0.4	—	0.4	330	1.8	70	1.9	100	2.9	110	2.8	110	3.1
8	280	2.0	280	2.9	280	2.0	290	1.8	—	1.3	—	1.3	—	1.3	—	0.8	100	1.6	120	2.8	120	3.6	160	5.0
9	—	0.4	—	0.4	290	1.8	—	1.3	—	1.3	—	0.8	—	0.9	—	1.4	100	2.0	170	3.1	200	2.7	180	2.1
10	290	2.5	270	2.1	—	0.4	—	0.0	—	0.4	—	0.8	—	0.4	—	1.3	200	3.1	180	4.0	170	5.7	170	7.5
11	280	2.5	250	2.2	230	1.8	—	1.3	—	1.4	—	1.4	220	1.8	250	2.5	240	2.5	230	2.9	—	1.3	200	2.1
12	280	3.3	260	1.8	250	1.8	—	1.4	—	0.4	—	1.4	250	1.8	290	4.0	290	3.6	290	3.6	300	2.0	70	1.6
13	300	2.6	300	3.9	300	3.6	290	2.2	290	3.3	280	3.7	290	4.0	280	4.1	290	3.6	300	4.9	290	4.3	300	3.3
14	260	2.5	280	3.5	290	6.8	290	9.4	300	7.9	290	8.7	290	9.0	300	8.5	290	10.4	290	10.1	290	9.4	290	8.7
15	280	5.7	290	6.5	290	5.4	290	6.5	290	5.4	280	8.3	280	8.6	290	8.7	290	10.4	300	9.8	290	11.2	300	10.2
16	310	7.5	300	8.2	310	7.9	290	7.3	300	5.2	300	7.2	300	7.9	300	7.9	300	7.9	300	7.9	310	7.2	300	6.2
17	—	1.4	—	0.4	—	0.8	220	1.8	280	1.6	—	0.4	—	0.8	110	1.6	100	2.9	100	2.9	130	4.0	130	4.7
18	—	1.2	—	1.2	100	1.6	100	3.6	100	4.0	110	5.2	120	6.7	130	7.1	130	7.4	130	7.9	140	7.0	140	5.7
19	—	0.9	—	0.9	340	1.6	350	2.2	30	3.0	270	3.0	—	1.3	—	1.3	340	2.8	310	3.6	310	5.9	300	7.5
20	190	5.5	200	4.4	190	6.4	190	5.5	190	5.5	190	6.9	200	5.7	200	5.2	200	6.1	200	5.7	190	7.3	180	6.9
21	130	7.1	130	9.8	140	8.6	120	9.8	110	10.2	120	10.2	120	10.2	110	12.2	110	13.8	110	12.2	110	12.2	120	12.6
22	—	0.9	200	2.1	250	2.9	260	4.7	270	7.3	270	6.5	260	6.5	260	6.5	240	6.5	230	4.3	240	7.3	240	6.8
23	190	5.5	190	2.8	190	2.2	190	2.8	200	1.7	200	3.1	190	2.2	170	4.4	170	4.0	150	6.0	150	6.8	130	6.2
24	170	2.7	160	2.2	160	2.2	—	1.3	—	0.9	—	0.3	—	1.1	290	2.2	—	1.3	360	2.1	140	2.9	180	2.1
25	—	1.4	—	1.3	270	1.7	280	2.9	280	1.6	270	1.7												

Averages for periods of sixty minutes centred at the exact hours, Greenwich Mean Time.

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 13 metres + 23 metres.

July, 1930.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day		
°	m/s.	m/s.																									
160	4.6	160	4.2	140	4.5	130	3.6	140	3.7	130	2.4	140	2.5	130	1.9	120	1.6	—	0.8	—	0.4	—	0.4	3.2	1		
160	6.0	170	5.2	150	5.1	160	5.5	160	4.6	180	3.5	170	4.8	190	3.2	—	1.3	—	0.8	—	0.9	—	1.3	2.6	2		
150	5.6	160	5.5	170	6.5	160	5.5	180	6.1	170	4.8	170	2.7	160	3.2	200	2.7	250	3.3	220	1.8	—	1.3	2.9	3		
140	7.0	150	6.4	160	6.4	160	6.0	160	6.4	160	4.2	190	4.2	200	3.5	190	2.8	190	1.8	—	1.3	270	1.7	3.3	4		
140	5.5	150	5.1	180	6.5	190	6.0	200	6.9	210	5.8	210	7.0	210	4.1	210	5.8	200	5.7	210	4.1	190	4.6	3.8	5		
360	3.5	50	3.6	120	2.8	140	3.2	170	4.0	180	3.5	190	4.2	210	3.2	260	2.5	270	3.0	250	4.3	240	2.9	3.3	6		
280	6.5	300	5.7	300	6.5	300	4.9	320	5.8	350	2.2	330	3.3	100	1.6	150	1.7	—	0.9	—	1.4	260	1.8	4.1	7		
170	6.5	170	6.5	160	6.4	150	6.0	150	4.3	160	2.8	—	0.8	—	1.3	—	1.2	—	0.8	290	1.8	300	2.3	2.6	8		
310	5.2	310	6.9	320	4.0	320	5.4	330	4.3	320	5.1	320	4.0	310	3.0	270	1.7	280	2.0	290	2.2	290	2.2	4.2	9		
350	4.2	340	4.0	340	4.3	340	4.7	340	5.5	330	5.1	340	4.7	340	3.1	320	3.3	300	2.6	300	3.6	300	4.6	4.0	10		
340	9.5	330	8.3	330	8.3	340	8.6	330	9.5	330	7.9	330	9.0	330	9.0	330	7.9	330	7.4	330	8.6	330	8.3	7.4	11		
340	7.1	340	7.9	340	7.1	340	5.9	340	6.2	350	5.5	350	5.0	350	3.6	—	1.5	310	1.6	290	2.5	—	1.4	6.4	12		
150	4.7	160	5.0	140	4.9	130	5.5	130	4.7	130	4.3	130	4.7	120	3.6	130	3.1	130	2.8	120	2.4	110	2.4	3.2	13		
60	4.0	50	3.6	40	4.6	50	4.7	50	3.6	50	3.6	50	3.6	20	2.1	20	1.7	—	1.4	300	1.6	300	2.0	2.7	14		
70	3.6	90	2.9	100	2.9	80	2.5	90	3.3	110	2.8	100	2.0	—	1.2	—	0.8	—	0.0	—	1.2	—	1.2	2.4	15		
70	5.5	60	5.1	60	4.7	40	4.7	50	5.7	50	5.1	60	4.0	60	4.7	60	5.1	50	5.4	40	7.4	50	6.5	4.3	16		
30	6.9	30	6.5	20	4.8	20	6.5	20	4.0	10	3.1	40	4.3	50	4.0	30	5.2	50	3.6	70	3.6	80	3.6	5.6	17		
60	2.5	40	3.1	40	3.9	40	3.9	30	3.1	30	2.7	350	2.2	330	2.2	—	0.8	—	1.2	—	0.8	330	1.8	3.2	18		
340	4.7	330	5.4	320	6.2	320	5.4	310	4.9	310	4.6	310	4.9	310	5.6	300	4.3	300	5.9	290	5.1	300	4.9	4.0	19		
330	7.6	330	6.8	330	6.5	330	6.2	340	5.9	350	5.0	350	6.0	340	4.0	330	4.3	330	4.0	330	5.1	320	5.4	5.5	20		
320	9.0	320	9.4	320	9.8	320	8.2	320	9.4	320	9.0	320	9.8	320	9.8	310	8.2	320	10.1	320	9.0	320	9.0	8.1	21		
330	10.8	330	8.2	330	10.4	330	9.0	330	8.2	330	10.1	320	8.7	330	7.9	330	8.2	330	7.9	330	7.3	330	7.3	9.6	22		
340	7.1	340	7.1	340	6.2	340	5.9	340	4.3	340	5.5	330	3.6	330	4.3	330	4.0	330	4.3	330	4.7	330	4.3	6.4	23		
350	6.0	350	5.0	350	3.6	360	4.4	40	3.9	350	4.6	350	2.2	340	1.9	—	1.4	—	1.0	—	1.0	—	1.4	4.0	24		
110	4.3	120	4.0	130	3.1	120	3.6	140	3.7	150	3.1	150	4.0	160	2.8	160	4.2	180	3.1	170	4.0	170	2.7	3.1	25		
160	6.0	170	5.7	160	4.2	140	3.3	160	4.2	150	2.6	110	1.6	—	1.2	180	2.1	—	0.8	210	2.0	—	1.2	3.3	26		
190	6.0	200	5.7	230	4.7	310	3.3	190	1.9	100	2.0	150	1.6	—	1.2	—	1.4	—	0.4	—	1.2	—	0.7	2.2	27		
170	7.5	160	6.0	170	5.2	180	6.5	180	5.2	180	4.4	180	3.5	180	1.7	—	0.9	—	0.9	—	0.4	—	0.8	3.5	28		
80	3.9	60	3.3	50	3.3	30	4.7	10	2.6	10	2.6	10	3.4	10	2.6	360	4.4	350	4.2	340	3.6	350	4.6	2.5	29		
340	8.3	340	7.9	330	6.8	350	7.8	340	4.3	350	5.5	350	4.2	340	2.4	—	1.3	—	1.4	—	1.4	290	2.2	300	2.6	5.3	30
290	2.2	—	1.3	90	1.8	—	1.3	200	1.7	—	1.1	—	0.8	240	1.8	—	0.8	—	1.4	340	1.6	—	1.1	2.5	31		
—	5.9	—	5.5	—	5.3	—	5.3	—	4.8	—	4.4	—	4.1	—	3.4	—	3.1	—	2.9	—	3.1	—	3.1	4.2			

August, 1930.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
110	3.1	100	4.1	100	4.1	100	3.3	120	5.5	110	4.3	100	4.1	120	4.3	140	4.1	170	3.5	140	2.9	130	2.8	2.8	1
90	10.4	90	11.5	90	12.2	90	11.5	90	10.1	100	9.4	100	10.6	100	9.4	100	8.6	100	9.4	100	8.6	100	6.5	8.7	2
170	5.7	170	6.5	180	6.1	180	6.5	180	5.2	180	5.2	190	4.2	190	5.0	190	3.2	200	2.7	180	2.7	170	2.7	4.2	3
70	2.8	50	2.5	60	3.3	60	3.6	60	3.6	40	3.6	40	3.6	20	2.7	—	1.2	—	1.2	—	1.0	—	1.3	3.0	4
330	4.7	330	4.7	340	4.7	350	4.2	330	1.8	310	1.6	—	1.3	280	2.0	260	2.2	260	2.2	270	2.6	260	1.8	3.4	5
160	5.5	150	4.3	160	4.2	160	4.2	150	2.1	170	2.1	—	1.1	—	0.8	—	0.8	—	1.3	—	0.8	—	0.4	2.9	6
130	3.6	140	4.5	140	3.7	80	2.5	40	2.8	—	1.2	100	2.5	190	1.8	—	1.3	300	1.6	290	2.9	290	2.9	2.2	7
160	5.0	150	5.1	110	3.1	100	2.0	—	1.2	—	0.8	—	1.2	290	1.8	—	1.1	—	0.3	—	1.3	—	1.3	2.1	8
160	5.5	170	3.2	180	2.7	90	1.8	—	1.4	—	0.4	—	0.8	—	0.8	300	1.9	290	1.8	—	1.4	290	2.5	1.7	9
170	5.7	170	6.5	170	6.1	180	5.2	170	4.0	160	3.6	170	2.1	180	2.1	190	1.8	190	1.8	—	0.4	—	1.1	2.9	10
270	3.0	280	3.7	350	3.2	120	2.8	140	2.9	40	1.9	—	0.8	—	0.4	—	0.4	—	1.4	—	1.4	280	2.9	2.0	11
130	2.4	110	1.6	—	0.9	—	1.2	—	1.1	10	2.1	—	1.4	300	1.6	310	2.6	310	2.6	300	3.0	310	3.0	2.1	12
320	3.3	50	2.5	—	1.2	—	1.2	—	0.8	120	1.9	190	2.8	190	4.2	190	3.2	190	4.2	190	3.2	190	3.6	3.1	13
300	8.2	280	10.6	280	11.5	280	11.5	290	9.8	280	10.3	280	10.6	280	7.4	280	7.0	290	5.7	280	6.1	280	6.1	8.3	14
300	9.8	310	9.2	300	10.5	300	9.8	310	10.2	310	8.5	300	8.2	300	7.5	310	6.9	300	7.5	300	8.2	300	7.9	8.3	15
310	4.6	310	4.6	300	2.3	130	2.8	150	3.9	160	3.2	160	1.8	—	1.3	—	1.3	—	1.3	190	1.8	—	1.0	5.1	16
120	6.2	120	6.7	110	5.9	110	4.7	110	4.0	110	4.3	110	3.6	120	3.1	140	2.9	150	3.9	140	3.2	130	1.6	3.0	17
140	5.4	130	7.4	140	5.7	130	4.7	130	4.0	140	3.3	130	1.6	—	1.3	—	1.2	—	0.9	—	0.8	—	0.4	4.0	18
300	8.9	300	10.5	290	7.3	290	7.3	260	4.3	250	4.7	230	2.5	220	2.2	220	1.8	220	3.6	210	4.9	200	5.2	3.9	19
170	4.0	170	6.5	160	6.9	160	7.8	150	6.0	170	6.5	150	6.0	150	4.7	150	6.0	140	4.5	140	7.0	140	6.5	6.0	20
130	12.6	140	11.5	140	8.6	140	7.7	150	6.8	150	6.8	180	4.0	120	1.6	160	3.6	150	2.1	—	1.3	—	1.3	8.3	21
240	5.4	250	6.2	240	6.8	230	5.7	200	6.1	210	4.5	200	4.0	190	4.2	180	1.7	200	2.1	190	3.2	180	3.1	4.8	22
130	5.9	130	5.5	140	5.7	140	6.5	140	6.1	150	6.0	160	4.6	150	4.7	160	3.2	140	4.5						

Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°) : Speed in metres per second.

147. Aberdeen : Robinson anemograph from July, 1930.\*

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	280	2.0	280	2.0	280	2.0	280	1.6	290	3.3	—	1.4	290	1.8	290	2.5	290	4.0	300	3.6	290	2.5	310	2.6
2	250	2.2	—	1.1	260	1.8	270	1.7	—	0.9	270	2.1	270	2.1	280	2.0	290	3.3	310	3.9	310	4.3	320	4.0
3	—	0.7	—	0.3	—	1.0	—	0.3	—	0.7	—	0.3	110	1.9	120	2.8	140	3.7	150	3.4	150	3.4	140	4.5
4	100	3.3	100	3.7	100	3.7	120	3.6	120	3.1	110	4.7	120	5.2	110	5.2	120	4.7	120	6.2	120	6.2	130	6.7
5	160	5.0	170	5.2	170	4.8	170	4.4	200	4.0	180	5.2	170	5.7	150	5.6	140	6.1	160	6.4	160	4.6	170	4.4
6	240	1.6	—	1.1	—	1.2	—	1.4	270	1.7	—	1.2	—	0.8	—	1.4	220	2.2	190	2.8	170	4.0	160	4.2
7	—	0.8	—	1.2	30	2.6	40	2.4	30	2.1	10	2.1	350	2.2	360	2.7	10	2.6	10	3.4	10	3.9	350	4.2
8	—	1.3	—	1.3	—	0.8	—	0.0	310	1.6	—	0.4	—	0.8	—	0.8	290	3.6	290	3.6	290	6.5	300	5.6
9	—	1.3	—	1.1	—	1.1	—	0.7	—	1.3	—	1.3	—	1.0	—	0.4	50	1.6	90	2.2	100	3.7	90	2.9
10	80	3.3	90	5.1	80	5.1	120	3.6	150	3.0	150	4.3	140	4.5	120	5.9	110	6.7	110	5.5	100	6.1	100	6.1
11	140	7.0	130	5.5	130	4.7	130	6.2	130	5.2	120	4.3	130	5.2	130	5.2	120	4.3	120	5.9	120	5.9	120	6.7
12	120	4.0	120	3.6	120	3.1	120	4.0	120	4.7	110	4.7	110	4.0	110	4.7	100	4.9	100	5.7	100	4.9	120	5.2
13	80	3.6	80	3.6	80	4.0	70	4.0	70	5.2	70	5.5	70	5.5	80	5.4	90	5.1	90	5.1	80	5.1	90	6.8
14	20	5.7	10	6.0	10	6.0	10	5.6	360	6.1	360	6.1	360	5.7	360	6.1	350	6.0	360	6.1	360	6.1	350	6.4
15	300	3.3	310	4.3	310	3.6	310	5.2	300	6.2	310	5.9	300	4.9	310	5.9	320	7.6	320	7.3	320	7.3	330	7.3
16	290	2.5	290	2.5	290	3.6	300	2.3	300	2.6	290	3.3	290	2.5	300	2.6	310	3.0	330	2.2	—	1.4	360	1.7
17	300	2.0	300	2.0	290	2.5	300	2.3	290	2.5	300	2.6	290	1.8	300	2.6	—	1.3	—	1.2	60	2.5	70	3.6
18	80	6.5	70	7.9	70	9.0	70	9.5	60	9.0	50	10.5	50	11.2	50	14.1	40	15.0	30	15.7	30	9.7	40	6.7
19	300	6.6	300	5.9	310	5.2	290	4.0	300	3.6	290	2.9	280	2.0	—	0.4	190	1.6	150	3.0	150	4.3	140	7.0
20	140	4.9	140	3.3	140	4.9	130	4.7	120	5.5	100	7.4	110	5.9	80	9.0	80	8.7	80	10.1	70	9.5	80	9.3
21	340	4.3	340	4.7	330	4.7	330	5.4	330	6.8	330	6.8	330	7.3	330	8.3	330	6.8	330	8.7	330	7.6	320	7.6
22	—	1.0	280	1.9	—	0.8	270	1.6	—	0.8	—	1.2	250	1.6	—	1.2	140	3.3	150	4.3	170	3.1	160	3.2
23	170	4.4	170	6.1	170	4.8	170	5.2	170	4.4	180	4.4	180	6.5	160	3.6	200	3.5	210	6.7	210	8.3	210	6.7
24	170	4.4	170	3.1	180	5.2	200	5.2	210	5.7	200	7.5	210	5.7	220	4.3	220	6.5	210	8.3	220	8.3	220	6.8
25	210	7.7	210	7.4	220	4.7	240	6.8	270	8.1	270	8.6	280	9.9	290	9.8	290	13.7	300	13.4	300	12.1	300	12.5
26	320	10.8	320	11.6	330	8.3	340	10.7	340	9.5	340	9.0	350	10.1	350	10.1	350	11.5	350	10.5	360	12.3	360	11.9
27	360	7.5	350	5.5	340	5.5	340	5.9	350	6.9	340	5.2	340	4.7	330	4.0	340	4.3	340	4.0	350	7.8	350	5.5
28	300	3.6	290	3.6	300	3.3	300	3.9	300	3.9	300	3.9	300	3.6	300	3.3	300	3.6	310	3.6	310	3.3	330	4.3
29	310	2.6	310	2.6	310	3.3	310	3.0	320	3.3	310	2.9	310	2.5	320	4.0	340	4.7	360	3.5	360	4.0	10	3.4
30	350	4.2	350	3.6	340	3.1	340	2.8	340	4.0	340	4.0	350	3.2	350	4.2	350	4.6	350	5.0	350	5.0	360	4.7
Mean	—	3.9	—	3.9	—	3.8	—	3.9	—	4.2	—	4.3	—	4.3	—	4.6	—	5.3	—	5.7	—	5.8	—	5.7

148. Aberdeen : H<sub>a</sub> = 13 metres + 23 metres.

Hour.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	330	2.5	330	2.2	330	2.9	330	2.5	320	2.9	340	2.8	330	2.2	330	2.9	340	2.4	350	3.6	10	3.0	10	3.0
2	—	1.0	310	1.6	—	1.1	—	1.3	—	0.8	—	1.0	—	1.3	—	0.4	—	0.0	—	0.4	—	0.9	—	1.2
3	270	1.7	270	2.1	—	1.1	—	0.9	—	0.0	—	0.0	—	0.4	—	0.8	—	1.0	—	0.9	70	1.9	—	1.4
4	200	1.7	—	1.4	—	1.3	—	0.8	—	0.8	—	1.1	—	0.4	—	0.4	—	0.4	—	0.4	—	1.0	—	1.4
5	180	2.7	230	1.8	270	8.1	290	9.0	290	15.2	290	12.2	300	11.5	300	10.8	290	8.7	290	9.0	290	11.9	290	7.6
6	280	3.7	280	3.7	290	5.1	290	4.0	280	4.9	280	3.7	280	3.3	280	3.3	280	6.5	290	6.5	290	7.6	290	6.5
7	300	5.9	300	5.2	290	5.7	300	4.3	310	4.9	310	5.6	300	5.2	300	6.2	300	4.9	320	5.4	290	6.5	290	5.1
8	110	8.3	110	9.5	110	9.0	130	4.7	120	5.5	80	6.8	70	8.3	50	9.0	40	11.8	20	9.6	20	10.0	20	10.0
9	310	4.6	300	4.3	300	4.9	310	5.2	300	6.6	290	5.6	280	4.9	270	6.0	280	8.3	280	8.6	280	9.0	290	8.2
10	—	0.8	—	0.4	—	1.2	340	1.6	—	0.8	—	0.4	—	0.8	—	0.8	—	0.4	140	2.0	190	2.8	210	4.9
11	210	4.9	210	4.9	210	4.5	210	3.7	200	4.0	180	2.1	190	3.6	200	2.7	200	2.1	190	5.5	190	5.0	180	6.5
12	210	4.9	200	5.4	200	6.5	200	5.4	190	4.6	190	5.0	200	5.2	200	6.1	190	2.8	220	4.3	260	5.4	260	5.7
13	220	2.5	230	2.9	220	2.9	210	3.3	200	1.7	200	4.0	200	3.1	190	2.8	190	2.2	190	2.8	190	5.0	200	5.2
14	220	6.2	200	4.4	200	5.2	190	4.2	190	4.6	160	2.8	200	3.1	180	5.2	180	6.1	180	6.5	170	5.7	180	7.9
15	200	6.1	170	1.7	180	4.4	180	5.7	180	5.7	190	6.0	190	4.2	170	5.7	160	6.4	160	9.2	160	9.7	170	6.5
16	190	5.5	190	4.6	190	6.0	190	5.5	190	6.4	190	4.2	190	5.5	180	5.7	180	4.4	210	4.1	210	5.4	220	4.3
17	180	6.5	200	6.1	210	4.1	210	4.5	230	3.3	230	4.7	210	3.3	—	1.4	200	3.1	200	3.1	—	1.3	180	1.7
18	160	8.7	160	9.7	180	11.9	200	8.8	200	10.5	210	10.6	210	11.5	200	10.9	200	10.9	200	13.1	210	12.7	210	9.4
19	200	6.1	190	5.0	180	2.7	180	2.7	180	2.7	180	4.0	180	5.2	170	9.6	170	10.9	170	9.6	170	8.8	170	9.2
20	150	10.7	160	9.2	170	8.3	180	6.9	200	4.8	180	4.0	200	3.5	200	4.4	200	5.7	190	5.5	200	5.7	200	6.9
21	200	2.7	170	6.1	170	5.7	180	5.7	170	4.8	170	6.1	170	5.2	170	6.1	160	8.7	160	7.8	140	7.4	150	8.1
22	300	3.6	290	3.3	290	3.6	290	4.3	290	3.3	300	4.3	280	3.3	290	5.1	290	3.6	290	4.7	300	3.6	300	4.6
23	200	4.0	210	3.7	210	4.1	220	2.2	—	1.3	280	2.9	280	2.0	270	2.1	280	7.4	280	4.1	280	5.4	270	4.3
24	190	1.8	210	2.5	—	1.4	210	2.9	190	4.2	230	2.9	220	2.5	210	2.5	230	4.0	200	3.5	200	4.4	240	4.0
25	230	1.8	280	3.3	270	5.6	270	4.7	290	7.6	290	7.9	290	7.9	290	6.8	290	10.1	300	9.8	310	9.8	310	6.9
26	290	8.3	290	5.4	290	6.8	290	7.3	290	7.3	290	6.5	300	7.5	310</									



Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°) : Speed in metres per second.

149. Aberdeen : Robinson anemograph from July, 1930.\*

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	290	2.2	290	2.9	290	3.6	280	4.1	290	2.9	290	2.9	280	2.9	290	4.0	290	4.0	290	3.6	290	4.7	290	3.6
2	270	1.7	280	2.5	290	4.0	290	4.0	260	1.8	290	2.5	290	3.3	310	3.0	70	5.9	90	8.7	80	7.9	70	8.3
3	350	6.0	340	5.5	340	4.3	330	4.3	320	4.7	320	4.7	330	4.7	350	6.9	340	4.0	340	7.1	350	6.5	350	8.3
4	320	6.2	310	4.6	320	5.1	310	5.9	300	7.9	300	6.6	300	7.2	300	7.9	300	7.2	310	6.6	310	6.6	300	6.9
5	270	2.1	290	1.8	280	1.6	—	1.3	280	2.0	290	2.2	290	1.8	—	0.8	—	1.1	—	1.1	300	2.0	290	2.2
6	290	2.5	280	1.6	270	2.6	250	2.9	280	2.0	—	1.1	—	1.1	260	2.2	—	1.4	250	2.5	270	3.0	230	2.2
7	290	7.3	290	7.9	290	7.6	290	5.7	260	2.5	240	3.3	210	3.3	220	3.3	210	2.9	200	3.1	200	4.4	210	4.1
8	300	4.3	310	5.2	310	5.9	310	6.2	290	5.4	280	4.5	260	2.5	270	4.7	250	2.9	270	5.6	250	4.7	250	4.0
9	190	3.2	190	4.6	190	4.2	210	4.9	210	7.0	230	7.3	240	5.7	260	5.7	280	9.9	280	9.9	280	8.6	280	8.6
10	270	5.1	270	6.5	260	6.5	250	5.1	260	4.0	260	5.7	270	8.1	270	7.3	270	7.7	270	8.6	270	8.6	280	9.0
11	280	11.9	280	15.1	280	12.7	290	11.2	290	13.0	290	11.6	300	9.8	300	9.5	300	10.2	300	10.2	300	10.8	310	11.5
12	190	1.8	220	2.5	220	2.5	210	3.3	210	4.1	200	4.0	200	4.8	200	5.2	190	4.6	200	4.0	230	5.1	180	4.4
13	240	6.8	250	6.8	240	6.8	240	9.0	220	6.5	230	4.0	230	5.1	220	4.0	230	5.4	250	7.3	260	6.8	270	7.7
14	190	2.8	190	1.8	160	2.8	220	4.7	220	4.7	240	5.1	240	5.4	220	4.3	230	6.2	210	5.4	240	7.3	250	6.5
15	320	6.8	320	5.4	310	5.9	310	4.9	300	3.9	300	4.9	290	4.7	300	4.3	300	4.6	300	3.6	290	4.3	300	4.6
16	280	5.7	300	6.9	290	6.8	310	6.2	300	6.2	300	6.9	300	5.2	300	5.9	310	4.6	310	4.3	320	3.6	290	3.3
17	280	4.5	290	4.7	290	6.2	290	5.7	290	6.2	290	3.6	290	5.1	280	6.5	290	6.2	290	5.4	290	5.4	300	4.9
18	280	2.9	290	1.8	290	2.5	290	2.9	290	2.5	290	1.8	—	1.4	—	1.1	—	1.1	—	1.4	230	2.5	220	1.8
19	140	9.4	140	9.9	130	9.5	120	10.7	110	9.0	110	8.6	120	9.5	110	8.3	110	9.0	110	7.9	110	7.4	110	5.9
20	160	5.5	160	5.5	180	4.4	160	5.5	170	6.5	160	7.3	150	9.0	150	10.7	150	9.7	150	11.1	140	9.4	150	10.7
21	—	1.4	—	1.4	—	1.3	280	2.9	270	5.1	240	1.8	240	1.8	240	3.6	260	2.2	290	3.6	290	3.6	250	1.8
22	50	7.6	40	5.5	50	6.2	50	5.4	30	4.7	350	5.0	350	8.7	350	6.4	340	6.2	360	9.3	360	6.9	360	6.5
23	300	11.5	300	11.5	290	11.6	290	11.6	290	11.6	290	13.8	290	13.0	290	10.8	300	10.5	300	8.2	290	9.4	290	6.2
24	—	1.3	190	1.8	210	2.0	200	2.1	190	3.2	170	6.1	160	7.3	160	8.3	150	8.6	150	12.0	140	12.3	140	13.9
25	200	4.8	200	3.1	200	3.1	200	3.1	210	2.5	220	3.6	190	1.8	220	3.3	220	2.9	220	3.6	200	1.7	220	3.6
26	110	1.6	—	1.2	—	0.8	—	0.8	270	1.7	—	0.8	250	2.2	—	1.4	240	2.5	240	3.3	250	3.6	260	4.7
27	280	4.1	280	4.5	270	3.4	270	4.7	260	3.3	270	4.7	270	6.0	280	8.3	280	5.4	280	5.7	280	5.7	280	7.7
28	260	1.8	—	1.1	240	1.8	—	1.1	—	0.8	—	1.1	—	0.9	—	1.1	280	2.0	290	2.9	280	2.9	290	2.2
29	290	4.7	300	4.9	300	5.6	300	3.9	310	3.6	300	4.9	300	4.9	300	5.6	300	3.6	300	6.2	300	4.3	300	5.2
30	260	2.2	240	2.2	—	1.1	—	0.8	—	1.1	—	1.1	—	—	1.4	—	0.4	—	1.2	—	1.1	—	—	0.4
Mean	—	4.7	—	4.7	—	4.7	—	4.8	—	4.7	—	4.7	—	5.0	—	5.2	—	5.1	—	5.8	—	5.7	—	5.7

150. Aberdeen : H<sub>a</sub> = 13 metres + 23 metres.

Hour.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	200	7.9	210	4.9	220	5.1	190	4.2	210	5.7	210	6.5	200	7.5	220	4.7	210	6.1	220	5.1	210	4.5	250	2.9
2	210	2.5	200	1.7	—	1.4	190	1.8	210	2.9	200	2.7	200	3.5	190	3.2	200	3.1	210	2.7	210	2.5	200	2.1
3	240	1.8	—	1.1	230	2.2	230	1.8	—	1.4	240	1.8	—	1.4	220	2.2	—	1.1	230	2.9	210	3.7	—	1.3
4	—	0.9	210	1.6	—	1.3	230	0.8	—	0.7	270	1.7	—	1.1	—	0.9	—	0.3	200	1.7	—	1.3	210	1.6
5	—	1.3	310	2.3	—	1.3	300	3.3	310	2.6	—	1.1	—	1.3	—	1.4	—	1.1	—	1.3	—	0.3	—	0.4
6	—	0.9	—	1.4	—	1.3	—	1.3	—	1.4	—	0.7	—	0.9	—	1.0	280	1.6	—	1.3	—	1.4	210	2.0
7	210	2.0	—	0.9	200	1.7	—	1.3	—	1.3	—	1.4	300	3.6	300	3.9	300	4.9	300	4.6	300	3.6	300	4.3
8	—	0.3	—	1.1	—	1.1	—	1.1	220	2.2	200	1.7	190	1.8	200	2.1	—	1.4	200	3.1	200	2.7	210	2.9
9	270	4.3	280	5.7	280	5.7	270	4.3	270	3.4	270	4.3	270	2.6	260	2.5	270	4.3	270	3.0	260	2.2	280	4.5
10	—	0.9	—	0.9	—	1.1	—	1.4	—	1.4	—	1.4	270	2.1	280	2.0	290	2.5	—	1.1	280	1.6	—	1.4
11	160	7.3	170	7.9	160	8.7	160	9.7	160	10.5	150	10.3	150	10.3	150	12.7	140	12.3	140	12.7	140	12.7	140	13.5
12	170	4.0	210	2.0	—	0.9	—	1.1	—	1.3	290	1.8	280	2.0	290	1.8	—	0.9	—	0.9	—	0.8	190	2.2
13	150	14.4	160	16.5	150	13.3	180	9.2	220	4.3	210	4.9	200	3.5	200	4.0	210	3.7	210	2.9	230	3.3	220	2.9
14	—	0.8	—	0.4	—	0.8	—	0.8	—	0.8	—	0.8	—	1.1	—	1.3	—	0.8	—	0.8	290	2.9	290	2.5
15	300	3.6	300	3.6	310	3.9	310	3.6	310	3.3	300	3.6	300	2.6	300	3.3	290	3.6	300	3.3	300	3.9	300	3.3
16	170	5.7	180	5.2	170	4.4	170	6.5	160	5.5	170	6.9	170	5.2	170	6.9	160	6.0	180	6.5	180	6.5	180	6.1
17	210	1.6	220	1.8	—	1.1	180	3.5	190	2.8	170	4.4	190	4.6	200	3.1	210	3.3	190	3.6	210	3.3	210	4.1
18	220	4.7	220	5.1	230	4.3	230	2.9	210	2.0	210	2.5	200	4.8	190	1.8	210	5.7	210	4.9	200	3.1	200	4.8
19	—	1.4	240	4.0	210	3.7	210	5.7	220	3.6	220	3.3	210	4.9	220	4.3	210	4.9	220	5.1	210	4.1	210	2.9
20	210	3.7	190	2.8	190	4.2	210	4.9	230	3.6	220	4.0	230	1.8	—	0.8	260	2.9	—	1.4	—	1.3	—	0.4
21	250	3.6	240	2.9	220	3.3	230	3.6	230	4.0	220	4.7	210	4.1	210	5.7	210	4.9	200	4.8	240	4.0	190	2.8
22	270	1.7	280	1.6	290	2.5	300	2.0	280	2.0	—	1.1	—	1.1	—	1.1	—	1.1	210	2.5	200	2.1	200	1.7
23	180	5.7	210	4.9	200	4.8	190	4.2	210	6.1	220	4.7	220	7.3	210	6.1	210	6.1	210	4.7	210	3.3	200	4.4
24	260	1.8	280	2.0	280	2.0	—	1.4	300	2.6	290	1.8	290	2.5	300	2.0	300	1.6	330	2.5	200	1.7	290	2.2
25	300	2.3	300	2.6	300	2.3	290	2.5	300	3.0	290	1.8	300	1.6	300	2.6	290	2.2	—	1.2	—	1.2	—	1.2
26	140	13.1	140	14.7	140	14.7	140	15.6	140	16.7	140	16.4	140	14.4	160	12.9								



151. Aberdeen :  $H_a=8$  metres+13 metres.

1930.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.
Day.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.
1	17	23 0	23	4 30	5	12 50	17	10 50	9	13 55	9	14 10	12	0 40	8	16 50	7	9 50	6	10 5	7	21 5	12	6 10
2	30	4 20	18	4 30	7	19 45	14	6 30	7	12 45	8	10 50	9	13 0	16	15 0	8	14 10	6	13 20	13	22 25	6	8 25
3	19	4 0	15	0 25	10	14 30	19	23 25	8	14 30	6	14 55	10	14 55	11	16 55	7	14 10	5	19 20	13	14 50	5	10 55
4	20	22 40	11	20 50	11	15 40	21	1 25	5	8 15	9	3 0	9	15 40	6	4 20	9	14 50	10	22 30	15	14 0	4	13 10
5	17	0 5	14	23 0	6	23 50	8	2 50	7	14 20	11	11 5	10	17 10	9	14 10	9	12 5	20	6 30	5	11 35	6	19 35
6	19	8 5	16	5 0	11	17 45	9	13 10	7	13 45	10	19 25	9	11 00	9	12 15	8	11 0	14	22 35	10	21 35	7	18 5
7	17	12 30	10	13 30	8	20 35	7	20 10	18	18 10	15	11 10	11	13 30	7	12 40	8	15 35	11	11 10	11	2 10	7	9 15
8	15	23 0	7	8 45	11	22 20	13	12 50	17	7 30	9	14 5	11	13 55	7	14 25	10	12 50	19	16 20	13	4 0	10	14 10
9	14	13 0	7	13 0	19	12 0	8	17 25	12	7 10	16	10 15	13	6 45	7	13 25	5	14 55	14	11 00	19	8 30	10	2 50
10	22	20 30	7	12 35	9	8 40	9	9 10	11	14 10	13	15 10	10	9 30	11	13 25	9	11 50	10	21 20	22	23 15	10	23 35
11	16	4 50	5	2 40	9	15 15	13	14 45	7	22 35	16	11 10	17	16 15	8	14 40	10	12 0	13	18 25	19	13 25	20	9 10
12	19	4 15	7	12 20	16	15 40	11	17 20	7	7 30	11	16 15	16	9 50	8	10 40	8	12 30	13	10 45	19	18 45	17	23 55
13	13	14 10	9	15 50	14	5 35	10	12 20	12	14 35	11	16 5	8	12 50	9	9 40	12	18 35	11	17 20	14	14 5	20	1 0
14	5	13 10	16	13 45	13	14 35	13	13 50	7	12 40	10	11 55	6	14 55	17	15 45	12	12 50	14	17 45	14	13 50	8	17 35
15	8	12 20	15	16 55	9	8 35	17	15 10	13	12 35	8	12 30	5	4 25	19	9 45	13	9 50	14	11 35	9	0 50	6	4 10
16	18	23 35	14	3 5	18	24 0	18	16 15	13	16 15	7	12 5	8	23 0	14	2 40	5	9 5	14	23 35	11	1 55	11	10 40
17	21	2 5	5	1 10	17	0 5	19	13 55	16	21 40	7	11 55	11	7 20	9	13 50	9	23 0	14	17 50	10	8 40	11	19 30
18	15	20 35	9	21 45	17	15 0	21	15 40	19	13 30	7	13 10	7	2 25	11	10 20	17	16 0	21	10 0	13	20 25	12	16 15
19	15	4 30	9	17 50	13	12 5	20	3 55	10	0 45	11	17 50	11	23 5	18	14 40	22	19 40	19	17 0	15	4 0	8	22 35
20	14	4 50	10	13 25	24	13 55	14	10 35	7	8 40	10	15 40	14	12 25	12	10 50	13	9 10	17	0 35	16	15 0	7	4 10
21	19	22 5	6	9 20	13	0 35	13	15 15	5	13 5	12	22 55	17	22 30	20	11 0	13	10 45	13	10 20	8	23 30	8	10 40
22	17	1 50	7	22 25	13	16 35	9	11 30	9	14 30	11	12 55	17	13 5	13	8 10	8	15 45	9	6 0	16	23 55	10	22 50
23	15	8 20	11	19 10	5	21 35	10	14 45	13	17 25	14	16 20	14	6 45	11	22 50	17	13 20	11	9 15	18	0 10	12	7 5
24	17	18 20	14	13 35	9	15 55	11	11 20	10	0 10	11	12 10	8	3 15	7	17 5	15	20 45	10	12 5	25	15 55	7	5 10
25	10	14 45	14	11 20	22	16 35	9	8 15	7	11 25	12	6 50	7	22 40	10	22 45	23	10 50	17	9 35	11	20 20	17	23 40
26	6	3 25	5	0 15	14	0 25	6	17 55	8	14 55	11	16 25	10	11 40	11	1 40	21	11 10	13	10 50	9	14 5	24	5 5
27	8	18 35	5	0 40	11	10 10	6	15 55	14	14 5	13	9 5	10	13 55	11	12 0	10	12 5	9	17 10	12	12 55	23	10 0
28	8	22 50	5	13 10	17	19 15	8	23 5	16	13 45	9	12 0	11	11 45	7	13 10	8	5 45	14	15 15	6	23 40	19	0 40
29	12	23 10	—	—	15	1 5	7	1 0	9	14 0	9	9 35	7	24 0	10	12 10	10	10 40	7	14 25	9	13 20	9	18 20
30	13	0 15	—	—	16	24 0	9	15 45	9	11 5	13	13 55	13	11 35	8	13 25	9	11 30	14	19 55	10	22 40	9	1 5
31	22	23 20	—	—	17	0 20	—	—	6	14 0	—	—	10	8 15	8	12 15	—	—	5	1 15	—	—	7	13 30

\* See note in Introduction, p. 86.

DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES TUBE AND ROBINSON CUP ANEMOGRAPHS.\*

152. Aberdeen :  $H_a=$  { 8 metres+13 metres. Tube Anemograph.  
13 metres+23 metres. Cup Anemograph.

1930.

Month.	DISTRIBUTION OF WIND SPEED.									EXTREME VELOCITIES.				
	More than 17.1 m/s.		10.8 to 17.1 m/s.		5.5 to 10.7 m/s.	1.6 to 5.4 m/s.	Less than 1.6 m/s.	No Record.	Highest Hourly Wind.			Highest Gust.		
	Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Date.	
Jan. ...	—	hr. 0	6	hr. 35	291	392	26	0	290	17	day. 2 hr. 4	30	day. 2 hr. 4 m. 20	
Feb. ...	1st	1	3	35	167	355	114	0	110	18	1 3	23	1 4 30	
Mar. ...	—	0	4	22	249	422	51	0	300	13	20 14	24	20 13 55	
April ...	—	0	6	36	255	381	48	0	110	15	4 4	21	18 15 40	
May ...	—	0	1	1	192	464	87	0	240	11	18 12	19	18 13 30	
June ...	—	0	0	0	160	467	93	0	220	10	11 11	16	11 11 10	
July ...	—	0	1	6	200	426	112	0	320 } 320 } 330 }	12	22 { 4 5 9	17	11 16 15	
Aug. ...	—	0	4	16	164	441	123	0	110	14	21 9	20	21 11 0	
Sept. ...	—	0	5	30	195	430	65	0	30	16	18 10	23	25 10 50	
Oct. ...	—	0	4	23	251	366	104	0	290	15	5 5	21	18 10 0	
Nov. ...	24th	1	7	35	239	390	55	0	130	19	24 16	25	24 15 55	
Dec. ...	26th, 27th	3	7	57	101	433	150	0	150 } 160 }	18	{ 26 27 } 10	24	26 5 5	
Year ...	4 days	5	48	296	2,464	4,967	1,028	0	130	19	Nov. 24 16	30	Jan. 2 4 20	

\* See note in Introduction, p. 86.

153. Aberdeen.

Readings, in degrees absolute, at 9h, Greenwich Mean Time.

1930.

Month.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	79.0	78.3	77.2	77.8	79.6	81.6	83.6	84.6	85.3	84.7	82.7	80.2
2	79.0	78.3	77.1	77.8	79.6	81.7	83.7	84.7	85.4	84.6	82.7	80.1
3	78.9	78.2	77.2	77.9	79.6	81.7	83.7	84.7	85.4	84.5	82.6	80.1
4	78.9	78.2	77.2	78.0	79.7	81.8	83.8	84.8	85.4	84.4	82.4	80.0
5	78.9	78.2	77.2	78.2	79.8	81.8	83.9	84.7	85.4	84.5	82.3	80.0
6	78.9	78.1	77.2	78.2	79.9	81.9	84.0	84.8	85.4	84.4	82.2	80.0
7	78.8	78.1	77.2	78.2	80.0	82.1	84.1	84.9	85.3	84.4	82.1	79.9
8	78.8	78.1	77.3	78.3	80.1	82.1	84.2	84.8	85.4	84.4	81.8	79.9
9	78.8	78.1	77.3	78.3	80.1	82.2	84.3	84.9	85.3	84.3	81.7	79.8
10	78.8	78.1	77.4	78.4	80.1	82.3	84.3	84.9	85.3	84.2	81.6	79.8
11	78.8	78.0	77.6	78.4	80.1	82.4	84.4	85.0	85.3	83.9	81.4	79.7
12	78.8	77.9	77.7	78.6	80.1	82.4	84.4	85.0	85.4	83.9	81.3	79.6
13	78.8	77.9	77.7	78.7	80.1	82.4	84.4	85.1	85.4	83.8	81.3	79.5
14	78.7	77.8	77.8	78.8	80.2	82.6	84.4	85.1	85.4	83.8	81.2	79.5
15	78.7	77.8	77.8	78.9	80.2	82.6	84.4	85.1	85.4	83.7	81.1	79.3
16	78.6	77.7	77.7	78.9	80.3	82.7	84.4	85.1	85.4	83.7	81.2	79.3
17	78.4	77.7	77.7	78.9	80.3	82.7	84.5	85.1	85.3	83.6	81.2	79.3
18	78.4	77.6	77.6	78.9	80.4	82.8	84.5	85.1	85.2	83.6	81.1	79.3
19	78.4	77.6	77.6	79.0	80.4	82.8	84.6	85.1	85.2	83.6	81.1	79.3
20	78.3	77.5	77.6	79.1	80.5	82.9	84.6	85.1	85.1	83.7	80.9	79.3
21	78.4	77.4	77.5	79.1	80.6	83.0	84.7	85.1	85.1	83.6	80.8	79.3
22	78.4	77.3	77.4	79.1	80.6	83.2	84.7	85.1	85.1	83.6	80.7	79.3
23	78.4	77.3	77.3	79.1	80.7	83.3	84.7	85.1	85.0	83.6	80.7	79.3
24	78.4	77.2	77.3	79.1	80.7	83.4	84.7	85.1	85.0	83.5	80.6	79.3
25	78.4	77.2	77.3	79.2	80.8	83.4	84.6	85.0	85.0	83.5	80.5	79.3
26	78.4	77.2	77.2	79.2	80.9	83.4	84.6	85.0	85.0	83.4	80.4	79.3
27	78.4	77.2	77.3	79.2	81.1	83.5	84.6	85.0	85.0	83.3	80.4	79.2
28	78.4	77.2	77.3	79.3	81.2	83.6	84.6	85.1	84.9	83.2	80.4	79.1
29	78.4	—	77.4	79.4	81.3	83.6	84.6	85.1	84.9	83.0	80.3	79.1
30	78.4	—	77.5	79.5	81.4	83.6	84.6	85.1	84.8	82.9	80.2	79.1
31	78.3	—	77.6	—	81.5	—	84.6	85.2	—	82.8	—	79.1
Mean ...	78.6	77.8	77.4	78.7	80.4	82.7	84.4	85.0	85.2	83.8	81.3	79.5

Annual Mean at 124 cm. 281.2

MINIMUM TEMPERATURE "ON THE GRASS" DURING THE INTERVAL 18h. to 7h. G.M.T.

154. Aberdeen.

Readings, in degrees absolute.

1930.

Month.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	72.5	75.9	70.7	77.6	69.1	79.7	85.0	80.4	79.7	80.4	67.8	72.0
2	76.9	73.4	67.0	79.2	68.6	80.8	82.4	84.1	80.3	77.4	70.8	73.4
3	76.2	74.2	75.2	73.9	77.5	75.4	82.2	85.8	81.8	79.7	76.9	71.6
4	71.9	69.3	70.8	76.5	78.8	81.0	81.3	80.7	83.1	80.9	72.0	69.9
5	76.5	73.0	70.2	71.6	73.0	77.3	81.6	84.2	85.3	80.3	64.8	69.4
6	72.4	72.6	75.1	76.3	70.3	82.1	86.0	80.4	77.6	75.2	64.2	72.2
7	76.4	72.9	74.3	77.4	78.1	75.9	78.9	81.9	84.1	79.6	69.3	75.9
8	74.2	71.4	74.6	77.7	72.6	78.0	78.8	77.9	83.1	73.0	74.1	69.1
9	74.0	66.8	77.9	78.7	72.0	82.3	81.3	81.7	77.1	73.4	79.7	71.8
10	72.9	69.6	67.1	78.0	70.2	78.5	81.4	81.2	83.2	74.7	73.2	65.8
11	72.9	69.7	69.8	75.3	74.1	77.9	79.9	78.9	85.8	75.4	74.1	69.8
12	70.4	68.8	68.2	75.8	77.4	77.3	82.9	80.3	83.3	77.4	71.3	74.8
13	69.3	65.7	69.0	70.7	72.6	77.4	77.8	78.8	81.4	73.1	81.5	77.6
14	69.9	66.3	68.8	71.2	75.7	80.8	84.4	81.8	82.7	81.3	75.8	68.4
15	68.2	69.1	66.9	74.7	74.1	75.6	82.1	82.0	77.6	83.7	74.2	73.6
16	66.6	69.3	66.2	78.1	74.3	75.2	77.2	81.0	75.8	84.1	70.8	70.8
17	76.8	68.1	73.9	75.2	75.8	78.1	85.9	80.3	76.8	77.9	65.3	75.1
18	79.6	65.9	69.6	74.8	78.2	84.7	84.9	84.1	82.1	80.3	63.7	72.4
19	79.5	67.6	68.0	74.7	76.4	82.9	82.8	84.6	80.4	76.8	76.2	76.7
20	74.7	69.1	65.2	74.7	81.8	83.2	84.1	77.6	83.0	79.2	77.4	74.5
21	66.9	65.8	68.5	74.4	76.5	78.3	81.4	84.1	84.4	76.9	75.7	69.1
22	77.5	66.0	65.2	72.7	75.7	84.3	81.3	83.0	77.4	74.3	76.8	71.4
23	76.3	72.1	67.2	74.1	76.9	79.6	81.8	81.2	84.1	73.7	73.1	74.6
24	71.7	75.8	69.8	79.2	80.9	80.8	82.4	83.9	84.1	69.7	69.1	72.9
25	74.4	73.7	74.8	79.4	80.9	78.6	78.0	74.8	83.1	69.6	75.7	71.7
26	65.8	67.3	75.2	79.5	80.8	77.3	81.9	84.7	79.8	73.6	74.1	76.8
27	69.6	73.3	77.3	79.2	80.9	81.9	80.0	81.9	79.1	69.6	72.6	76.9
28	67.3	67.7	72.1	76.3	75.1	75.9	80.8	85.1	78.1	77.4	69.7	75.0
29	73.7	—	77.0	77.8	74.0	80.1	77.2	84.1	79.0	77.3	72.9	76.2
30	71.3	—	72.5	76.5	71.0	82.1	83.3	84.8	79.1	77.6	67.9	67.8
31	68.4	—	78.6	—	80.8	—	78.8	83.0	—	68.4	—	67.4
Mean ...	72.7	70.0	71.2	76.0	75.6	79.3	81.4	81.9	81.1	76.5	72.4	72.4

Annual Mean 275.9

NOTES.—(1) The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is written 75.0.  
 (2) The minimum "on the grass" refers to the interval from 18h on the previous day to 7h on the day to which it is entered.



157. Aberdeen.

March, 1930.

Table for Aberdeen, March 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility, Precipitation, and Remarks on the Weather of the Day.

158. Aberdeen.

April, 1930.

Table for Aberdeen, April 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility, Precipitation, and Remarks on the Weather of the Day.

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.						Remarks on the Weather of the Day.	
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>		
1	Ci.	Fr-St.	Fog.	1	1	1	1	1	0	H	k	k	k	k	i	...	...	...	...	...	...	...	Fine throughout.
2	Ci.	Ci.	St-Cuf.	1	1	1	1	5	10	H	H	j	j	j	i	...	...	...	...	...	...	...	b a : b to bc p : bc to o n.
3	St.	St.	St.	10	10	7	8	10	10	H	H	H	i	i	i	...	...	...	...	...	...	...	o to bc a : c to o p : o n.
4	St-Cu : Fr-Cu.	A-St : Cu.	A-St : Nb.	10	10	10	10	10	7	j	j	j	j	k	k	...	...	...	...	...	...	...	c, c ● <sup>0</sup> a and p : bc, c n.
5	St-Cu.	St-Cu.	St-Cu.	9	9	8	6	1	2	k	k	k	k	k	j	...	...	...	...	...	...	...	c a : c to b p : b n.
6	St-Cu.	A-Cu : Cu.	A-Cu : St-Cuf.	6	3	7	8	9	6	k	k	j	j	j	j	...	...	...	...	...	...	...	bc a : bc, c p and n.
7	St-Cu : Cu.	Cu-Nb.	F. Ci : Cu-Nb.	8	9	9	6	6	1	k	l	k	l	k	k	...	...	...	...	...	...	...	bc, c p ● <sup>0</sup> a and p : bc p ● <sup>0</sup> n.
8	A-Cu : Cu-Nb.	Cu-Nb.	F. Ci : A-Cu : Cu.	2	6	7	3	5	1	k	l	k	k	k	k	...	...	...	...	...	...	...	bc p ● <sup>0</sup> a : bc p ● <sup>0</sup> n.
9	Ci-Cu : St-Cu.	A-Cu : Cu : Fr-Cu.	F. Ci : A-Cu : Cu-Nb.	7	9	9	8	8	1	k	k	k	l	H	k	...	...	...	...	...	...	...	bc and c p ● <sup>0</sup> a and p : c p ● <sup>0</sup> to b n.
10	A-Cu : Nb.	Ci-Cu : A-Cu : Cu-Nb.	A-Cu : St-Cu : Cu-Nb.	9	3	6	8	10	7	j	k	k	k	i	H	...	...	...	...	...	...	...	c p ● <sup>0</sup> , bc a : bc, c ● <sup>0</sup> p : c ●, bc n.
11	A-Cu : Nb.	A-Cu : Nb-Cuf.	A-Cu : St-Cu : Nb-Cuf.	9	10	9	7	9	10	j	j	j	j	j	j	● <sup>0</sup>	● <sup>0</sup>	...	...	...	...	...	p ● <sup>2</sup> early, c ● <sup>0</sup> a : bc and c p : c ● <sup>0</sup> n
12	A-Cu : Nb.	A-Cu : Nb-Cuf.	A-Cu : St-Cu.	10	9	8	2	3	1	k	j	k	k	k	k	...	...	...	...	...	...	...	c ● <sup>0</sup> a : ● <sup>0</sup> to b and bc p : b n.
13	St-Cu : St.	A-St : Nb.	Nb.	9	10	10	10	10	10	j	j	H	H	H	H	...	...	...	...	...	...	...	c to c ● <sup>0</sup> a : c ● <sup>0</sup> to o ● <sup>0</sup> p : o ● <sup>0</sup> n.
14	Ci-St : A-Cu : St-Cu.	A-Cu : St.	A-Cu cast.	7	10	6	6	2	1	j	E	H	i	i	H	...	...	...	...	...	...	...	o, c, of to c p ● <sup>0</sup> a : c p ● <sup>0</sup> , p ● <sup>2</sup> , b p : b n
15	Fog.	Ci-Cu : A-Cu : St-Cu.	A-Cu : St-Cu.	10	9	9	10	8	1	D	E	i	i	H	k	...	...	...	...	...	...	...	b to o f e to bc a : c ● <sup>0</sup> p : bc, b n.
16	A-Cu cast : St-Cu.	Ci : Ci-St : Cu-Nb.	Ci-Cu : A-Cu : Cu.	1	2	7	8	5	2	k	l	l	k	k	k	...	...	...	...	...	...	...	b to bc p ● <sup>0</sup> a : c p ●, bc y p : b, bc n.
17	Ci-St : A-Cu-lent.	A-Cu : A-St : Nb.	A-St : Nb.	7	8	9	9	10	10	k	k	j	k	k	k	...	...	...	...	...	...	...	bc to c a : c ● <sup>0</sup> p : o ● <sup>0</sup> to ● <sup>0</sup> n.
18	A-Cu : Nb.	F. Ci : A-Cu : Cu.	A-Cu-lent : St-Cu.	6	8	8	9	9	7	k	k	k	k	k	k	...	...	...	...	...	...	...	● <sup>0</sup> early, bc to c a : c p : bc n.
19	A-Cu : St-Cu : St-Cuf.	A-Cu : A-St : St-Cu.	St-Cu : Cu.	8	9	9	9	9	10	k	k	k	j	k	j	...	...	...	...	...	...	...	bc, c a : c and c ● <sup>0</sup> p : c n.
20	A-St : Nb.	A-St : Nb.	St-Cu : Cu.	10	10	10	9	8	9	k	k	H	H	j	j	● <sup>0</sup>	...	...	...	...	...	...	c ● <sup>0</sup> a : c ● <sup>0</sup> , bc, c p : c n.
21	St-Cu.	Ci : Ci-Cu : St-Cu.	St-Cu.	9	9	7	9	5	9	i	j	i	k	k	j	...	...	...	...	...	...	...	c to b, bc a : bc and c p : c n.
22	Cu : St-Cuf.	Ci : Cu.	Fr-St.	5	1	1	1	2	7	k	l	l	l	j	j	...	...	...	...	...	...	...	bc to b a : b p : b to o n.
23	St.	A-Cu : Cu.	St-Cu.	8	9	7	9	10	10	i	j	k	l	l	j	...	...	...	...	...	...	...	o, c, bc a : bc, c p : c ● <sup>0</sup> to o ● <sup>0</sup> n.
24	Nb-St.	Ci : A-Cu : St-Cu.	A-Cu : St-Cu.	10	9	4	6	6	10	H	j	j	j	j	G	...	...	...	...	...	...	...	● <sup>0</sup> early, o to bc a : bc p : bc to o ● <sup>0</sup> n.
25	St.	A-Cu : Fr-St.	A-Cu : Fr-St.	10	10	8	4	1	9	G	i	k	k	j	i	...	...	...	...	...	...	...	o m f to c a : c to b p : b to o n.
26	St.	St-Cuf.	A-Cu : Cu.	10	9	8	4	1	10	j	k	j	i	i	H	...	...	...	...	...	...	...	o ● <sup>0</sup> to bc and c a : bc, b p : b to o m n
27	St.	A-Cu : Cu.	A-Cu : Cu : Fr-Nb.	1	1	2	2	10	7	i	j	j	j	j	j	...	...	...	...	...	...	...	o m early, b a : b to c p : c p ● <sup>0</sup> , bc, b n
28	A-Cu : Cu.	Cu : Cu-Nb.	F. Ci : St-Cu : Cu.	1	8	7	7	8	4	l	l	k	k	k	k	...	...	...	...	...	...	...	b y, c, bc p : c ● <sup>0</sup> a : bc p ● <sup>0</sup> , c p : bc n.
29	A-Cu.	A-Cu-lent.	A-Cu-lent.	7	8	3	7	1	1	k	k	k	k	k	j	...	...	...	...	...	...	...	bc, c y, bc y a : bc y, b p : b n.
30	A-Cu : Cu : St-Cuf.	Ci : Ci-Cu : A-Cu.	Ci-Cu : A-Cu : Fr-St.	3	1	3	7	7	8	k	j	k	j	j	j	...	...	...	...	...	...	...	b and bc a : bc p : bc, c n.
31	A-Cu : Cu.	A-Cu : A-St : Nb-Cuf.	A-Cu : Fr-Nb.	9	9	9	8	9	9	j	k	j	j	j	k	...	...	...	...	...	...	...	c to c ● <sup>0</sup> a : c ● <sup>0</sup> , c p : c n.
Mean Cloud Am't.				6.9	7.1	6.7	6.5	6.4	6.1														

160. Aberdeen.

June, 1930.

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.						Remarks on the Weather of the Day.	
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>		
1	St-Cu : Fr-St.	St-Cu : Fr-St.	St-Cu : Fr-St.	10	10	10	10	9	10	k	k	k	k	k	k	...	...	...	...	...	...	...	Cloudy throughout.
2	St-Cu : Fr-St.	St-Cu.	St-Cu.	10	10	10	10	10	4	k	k	k	k	k	j	...	...	...	...	...	...	...	c a and p : bc, b n.
3	St-Cu.	Ci : Cu.	St : Fog.	2	4	1	1	10	10	k	k	j	j	D	F	...	...	...	...	...	...	...	b a : b to o f p : o m and f n.
4	A-St : Fr-St.	Ci-St : Cu.	A-St : Cu.	9	9	6	6	9	3	j	j	k	k	i	i	...	...	...	...	...	...	...	f early, c, bc a : bc and c p and n : ⊕ 9 <sup>h</sup>
5	Ci-St : A-Cu-lent.	Ci-St : A-Cu.	Ci-St : A-Cu.	6	5	6	6	8	6	k	k	k	k	i	j	...	...	...	...	...	...	...	bc a : bc, c y p : bc n : ⊕ 8 <sup>h</sup> -13 <sup>h</sup> .
6	Ci-St : A-Cu.	Ci-St : A-Cu : Cu.	Ci-St : A-St : Fr-Nb.	7	8	7	9	9	2	k	k	j	i	k	k	...	...	...	...	...	...	...	bc and c a : c, c ● <sup>0</sup> p : p ● <sup>0</sup> , b n.
7	Ci : A-Cu : Cu.	F. Ci : Cu : Cu-Nb.	St-Cu : Cu.	1	6	6	4	2	1	l	l	l	l	l	k	...	...	...	...	...	...	...	b and bc a, p and n.
8	A-St : A-Cu.	A-Cu : Cu.	Ci-St : A-Cu : Cu.	10	9	2	2	7	7	k	k	k	k	j	j	...	...	...	...	...	...	...	b, c to b y a : bc p and n : ⊕ 18 <sup>h</sup> .
9	A-St : A-Cu : Nb.	A-St : A-Cu : Nb.	A-St : A-Cu : Fr-Nb.	9	9	10	10	9	3	j	k	k	k	i	j	...	...	...	...	...	...	...	c ●, c a : c, c ● <sup>0</sup> p : bc n.
10	Ci-Cu : St-Cu : Fr-Nb.	Ci-Cu : A-Cu : Cu.	A-Cu : Cu.	9	5	6	6	8	7	k	k	k	k	k	k	...	...	...	...	...	...	...	bc p ● <sup>0</sup> a : bc y p : bc, b n.
11	Cu.	Cu.	Cu.	1	2	3	4	1	1	k	l	l	l	l	k	...	...	...	...	...	...	...	b and bc a, p and n.
12	Ci-St : Ci-Cu.	Ci-St : A-Cu : Cu.	Ci-Cu : A-Cu.	3	6	7	7	2	5	k	k	k	k	j	j	...	...	...	...	...	...	...	bc a : bc y p : b and bc n : ⊕ 7 <sup>h</sup> .
13	A-Cu : St-Cu : Cu.	...	Ci : Ci-Cu.	9	2	0	1	1	1	i	i	k	k	k	k	...	...	...	...	...	...	...	c to b y a : b y p : b n.
14	Ci-Cu : Fr-St.	Ci.	Ci.	1	1	1	1	1	1	k	k	k	k	k	k	...	...	...	...	...	...	...	Fine throughout.
15	...	Ci.	Ci.	0	0	1	1	1	1	k	k	k	k	k	k	...	...	...	...	...	...	...	Fine throughout.
16	Ci : A-Cu.	Ci.	Ci.	1	1	1	2	2	2	j	j	k	k	k	k	...	...	...	...	...	...	...	Fine throughout.
17	Ci-St : A-Cu : Fr-St.	Ci-St : A-Cu : Cu.	A-St : A-Cu : Nb.	6	6	8	10	10	10	j	j	j	i	H	H	...	...	...	...	...	...	...	f early, bc, c a : c ● <sup>0</sup> p : o ● <sup>0</sup> n.
18	Nb.	A-Cu.	A-Cu : St.	10	10	7	3	3	3	E	H	i	i	i	i	...	...	...	...	...	...	...	● <sup>2</sup> early, f, c ● <sup>0</sup> a : bc p and n.
19	Ci-Cu : A-Cu.	Cu.	Ci.	2	0	1	0	1	1	H	i	H	i	i	j	...	...	...	...	...	...	...	Fine throughout.
20	A-Cu : St-Cu.	Ci : Ci-St : Cu.	A-St : Fr-Nb.	9	10	6	9	10	10	k	j	k	j	i	H	...	...	...	...	...	...	...	bc and c ● <sup>0</sup> a : bc, c ● <sup>0</sup> p : c ● <sup>0</sup> n.
21	Ci : A-Cu.	Ci : A-Cu : Cu.	A-St : A-Cu.	3	2	2	3	9	10	k	l	j	k	k	j	...	...	...	...	...	...	...	bc, b a : b to c p : c ● <sup>0</sup> to o ● <sup>2</sup> n.
22	Ci : St-Cu : Cu.	St-Cu : Cu.	St-Cu : Cu.	2	7	6	7	4	1	l	l	l	k	k	k	...	...	...	...	...	...	...	o ● early, b and bc a : bc p : b n.
23	A-Cu : St-Cu : Cu.	Ci-Cu : A-Cu : Cu.	Ci : A-Cu : Cu.	2	6	3	6	1	7	k	k	k	k	k	k	...	...	...	...	...	...	...	b and bc a and p : bc and c n.
24	Ci : A-Cu : Cu.	A-Cu : Cu : Nb.	F. Ci : A-Cu : Cu-Nb.	4	2	9	7	2	7	k	k	i	j	j	j	...	...	...	...	...	...	...	bc, c p ● <sup>0</sup> a : c p ● <sup>0</sup> p : p ●, bc and c n
25	F. Ci : A-Cu : Cu.	F. Ci : A-Cu : Cu-Nb.	F. Ci : A-Cu : Cu-Nb.	7	5	9	8	9	9	k	l	k	k	j	j	...	...	...	...	...	...	...	bc, c p ● <sup>2</sup> , p ● <sup>0</sup> a and p : ● <sup>0</sup> , c n.
26	Ci : Ci-St : A-Cu.	Ci-St : A-Cu : Cu.	Ci-St : A-Cu : Cu.	8	7	7	9	5	3	k	l	l	k	j	j	...	...						

161. Aberdeen.

July, 1930.

Table for Aberdeen, July 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Rows 1-31 show daily observations.

162. Aberdeen.

August, 1930.

Table for Aberdeen, August 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Rows 1-31 show daily observations.

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.						Remarks on the Weather of the Day.
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	
1	A-Cu : Cu.	A-Cu : St-Cu : Cu.	Ci-St : A-Cu : Cu.	9	3	8	9	9	8	i	l	l	j	j	j	...	...	...	...	...	...	bc and ca : cp : p : cn.
2	St-Cu.	Ci : Ci-Cu : Cu.	St-Cu : Cu.	9	9	4	8	9	9	k	l	m	j	j	j	...	...	...	...	...	...	c, bc a : bc, c () p : cn.
3	St-Cu.	A-Cu : Cu.	Ci-St : A-Cu : Fr-St.	9	9	7	4	9	9	j	j	k	k	j	j	...	...	...	...	...	...	c, bc a : bc p : cn.
4	A-St : Nb-Cuf.	A-St : Fr-Nb.	Nb.	10	10	9	10	10	10	j	j	H	i	H	H	...	...	...	...	...	...	c to o : a : c to o : p : o : n.
5	Nb.	A-St : Fr-Nb.	Ci : A-Cu : Fr-St.	10	10	9	2	8	8	i	G	H	H	G	G	...	...	...	...	...	...	o, ca : c, b, cp : cn.
6	Ci.	Ci : Cu.	Ci : A-Cu : St-Cu.	1	3	3	3	4	10	H	k	j	j	j	i	...	...	...	...	...	...	c to b and bc a : bc p : cn.
7	A-St : Nb.	A-St : Nb-Cuf.	Ci-Cu : A-Cu : Fr-St.	10	10	10	9	5	10	H	H	j	j	j	i	...	...	...	...	...	...	c : o, ca : c, bc p : bc, b to on.
8	St-Cu.	St-Cu : Cu.	St-Cu : Cu.	6	7	7	8	8	9	j	l	l	k	j	j	...	...	...	...	...	...	early, bc a : cp : cn.
9	A-Cu : St.	Ci : A-Cu : St-Cuf.	Ci : St-Cuf.	9	9	6	8	9	10	G	i	k	j	i	i	...	...	...	...	...	...	c, bc a : bc, cp : cn.
10	Nb.	Nb.	Nb.	10	10	10	10	10	10	F	G	G	F	F	...	...	...	...	...	...	...	c, o : a : o : n, m p : o : m n.
11	A-St : Nb.	Nb.	Ci-Cu : A-Cu : Fr-Nb.	9	10	10	9	9	9	H	H	G	H	H	j	...	...	...	...	...	...	c, c to o : n, a : o : n, cp : cn.
12	A-Cu : St-Cu : Cu.	St-Cu : Cu.	St-Cu : Cu.	2	3	9	9	6	8	j	j	i	i	i	i	...	...	...	...	...	...	c to b, bc p : a : c, bc p : bc and cn.
13	Ci : A-Cu : Cu.	Nb : Fr-Nb.	A-St : Nb-Cuf.	8	10	10	10	9	10	j	j	i	i	j	i	...	...	...	...	...	...	cp : o, o : a : o : p : o : n.
14	Nb.	A-Cu : Cu.	Ci-Cu : A-Cu : Cu.	10	10	9	3	5	2	H	i	l	l	k	k	...	...	...	...	...	...	o to ca : bc p : b and bc n.
15	St-Cu : Cu.	St-Cu : Cu : Cu-Nb.	St-Cu : Cu.	2	4	5	3	7	1	k	l	l	l	k	j	...	...	...	...	...	...	b, bc p : a : bc p : b n.
16	Ci : St-Cu.	Ci-Cu : St-Cu : Cu.	A-Cu : St-Cu.	1	2	7	9	8	8	H	k	k	k	k	j	...	...	...	...	...	...	b, bc a : bc and cp and n.
17	Ci-St : A-Cu : A-St.	A-Cu : St-Cu : Cu.	A-Cu : St-Cu : Cu.	6	9	9	8	10	10	H	H	G	G	k	k	...	...	...	...	...	...	bc and ca and p : cn.
18	Nb.	Nb.	A-St : Nb.	10	10	10	10	10	10	H	H	G	G	k	k	...	...	...	...	...	...	o and a : o : p : c : n.
19	St-Cu.	Ci : Cu.	Nb.	8	10	3	6	10	10	i	G	j	i	H	H	...	...	...	...	...	...	early, ctobca : bctoo : p : o : n and a.
20	Nb.	A-St : Nb.	Nb.	10	10	9	10	10	10	H	H	H	H	H	H	...	...	...	...	...	...	o and a : c : o, op : o : n. [q n.
21	Nb.	Nb-Cuf.	A-Cu : St-Cu.	10	9	10	8	3	9	j	j	k	k	k	i	...	...	...	...	...	...	c and o : a : o, c, bc p : cn.
22	A-Cu : St-Cu.	Ci-St : A-Cu : Cu.	Ci : A-Cu : St-Cu.	10	9	6	2	7	10	H	j	k	j	j	j	...	...	...	...	...	...	c : o, bc a : b and bc p : c : o, on.
23	Nb.	Ci : A-Cu : Fr-St.	A-Cu : St-Cu.	10	9	8	9	9	7	H	i	k	j	j	j	...	...	...	...	...	...	o, c q a : c q, cp : bc and cn.
24	A-Cu : St-Cu : Cu.	A-Cu : St-Cu : Cu.	A-Cu : St-Cu : Fr-Cu.	2	3	7	6	2	8	k	k	k	k	j	j	...	...	...	...	...	...	b and bc a and p : b and cn.
25	A-Cu : St-Cu : Nb-Cuf.	Cu-Nb : Nb-Cuf.	Nb.	7	9	10	10	9	10	k	j	j	j	j	i	...	...	...	...	...	...	bc, cp : a : o : a : o : n, c : p : o : n.
26	A-St : Nb.	A-St : Nb.	St-Cu : Cu.	9	10	9	9	4	3	i	k	j	k	j	j	...	...	...	...	...	...	c and o : a : c : o, bc p : b and cn.
27	A-Cu : St-Cu.	St-Cu.	St-Cu.	9	10	10	9	9	8	k	k	k	k	k	j	...	...	...	...	...	...	Cloudy throughout.
28	St-Cu.	St-Cu : Cu.	St-Cu.	9	9	9	9	10	8	k	k	k	k	k	j	...	...	...	...	...	...	ca and p : c : o, en.
29	St-Cu : Fr-Nb.	St-Cu : Cu.	St-Cu : St.	5	7	8	9	8	10	i	j	k	k	k	k	...	...	...	...	...	...	early, bc, cp : a : c p : c : o : n.
30	A-Cu : Fr-Nb.	Nb-Cuf : Nb.	Nb.	7	6	9	8	9	6	j	k	k	k	k	j	...	...	...	...	...	...	bc and c : o : a : c, c : o : p : bc and c : n.
Mean Cloud Am't.				7	6.8	6.8	6.7	6.7	8.4													

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.						Remarks on the Weather of the Day.	
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>		
1	St-Cu.	St-Cu : Cu.	Nb.	9	9	9	9	10	9	k	j	k	k	j	j	...	...	...	...	...	...	...	c : o a and p : o, c : o n.
2	St-Cu : Fr-Nb.	St-Cu : Cu.	St-Cu : Cu.	5	10	9	9	9	10	i	H	H	j	F	G	...	...	...	...	...	...	...	early, bc, o : a : cz p : cn.
3	St.	St-Cu.	A-St : St-Cu.	10	10	10	10	10	10	H	F	G	k	F	H	...	...	...	...	...	...	...	c, o, ca : c, c : o z p : c : o, cz, m n.
4	A-St : Fr-St.	Ci-St : A-Cu : St-Cu.	Nb.	10	9	10	9	10	10	F	G	k	k	F	H	...	...	...	...	...	...	...	early, cm, b, ca : ctoo : mp : o : n.
5	A-Cu-lent : Fr-Nb.	F-Ci : A-Cu : Cu.	Ci-St : A-Cu : Cu.	4	1	7	5	9	4	k	l	l	k	j	j	...	...	...	...	...	...	...	early, b and bc q a : bc, cp : bc n : [15:30.
6	Ci : Ci-Cu : Cu-Nb.	Ci : A-Cu : Cu.	Ci-St : A-Cu : St-Cu.	3	5	4	8	9	10	k	k	k	k	k	i	...	...	...	...	...	...	...	bc, p : o : a : cp : p : c : n.
7	Ci : St-Cu : Nb-Cuf.	A-Cu : Cu.	St-Cu : Cu.	8	7	4	3	3	9	k	j	k	k	k	H	...	...	...	...	...	...	...	bc and cp : a : bc p : bc, c : n.
8	Nb.	A-St : Nb.	A-Cu-lent : Cu-Nb.	10	10	10	10	9	8	H	H	H	k	k	j	...	...	...	...	...	...	...	early, o : c : o q a : c q p : bc and c : n.
9	A-Cu : Cu-Nb.	A-Cu : Cu-Nb.	A-St : St-Cu : Nb.	3	2	7	10	10	9	k	k	k	k	j	i	...	...	...	...	...	...	...	bc p : b and bc a : cp : p : c : o, cn.
10	Ci : Ci-Cu : St-Cu.	A-St : St-Cu : Cu.	A-St : St-Cu : Fr-St.	9	7	10	9	9	9	i	G	j	j	j	i	...	...	...	...	...	...	...	early, bc and ca : c : p : c to bc n : [8:30 to 9 <sup>h</sup> .
11	Ci : Ci-Cu : St-Cu.	A-Cu : Cu.	A-Cu : St-Cu.	3	8	6	5	8	6	k	j	k	k	k	j	...	...	...	...	...	...	...	bc and ca : bc p : c, bc, c : n.
12	A-Cu-lent : St-Cu.	A-Cu : Fr-Cu.	A-Cu : St-Cu.	7	6	6	3	7	1	k	k	l	k	k	k	...	...	...	...	...	...	...	c, bc, cp : a : bc y p : bc, b n.
13	A-St : St-Cu.	Ci-St : A-Cu : Nb.	A-St : St-Cu.	9	10	10	10	10	9	k	G	j	j	H	F	...	...	...	...	...	...	...	bc, c : a : c p : c : o, cn : [13 <sup>h</sup> .
14	Ci : A-Cu : St-Cu.	A-St : Fr-Nb.	A-St : Fr-Nb.	9	9	10	10	9	9	j	j	j	j	F	H	...	...	...	...	...	...	...	cp : a : c and o : p : c : o, bc n.
15	A-Cu-lent : St.	A-St : Nb.	A-St : Fr-St.	9	10	10	10	7	10	j	i	H	H	H	i	...	...	...	...	...	...	...	c : o, o : a : c : o, bc p : c, o : n.
16	A-Cu : Fr-St.	Cu.	Ci-St : St-Cu.	8	5	1	1	1	8	j	k	l	j	j	k	...	...	...	...	...	...	...	c : o early, bc to ba : bp : b too q n.
17	A-Cu.	A-Cu : A-St.	A-Cu : A-St : Fr-Nb.	2	7	10	10	10	9	k	j	j	H	H	i	...	...	...	...	...	...	...	early, b to ca : c, c : o p : c : o, q n.
18	St-Cu.	Cu.	St-Cu : Cu.	2	3	5	3	1	1	k	k	k	k	j	j	...	...	...	...	...	...	...	c : o, q, bq, bc a : bc y p : b n. [20:30.
19	A-Cu : St-Cu : Cu.	A-Cu : Cu.	Fr-St.	3	7	3	8	6	6	j	j	j	k	j	i	...	...	...	...	...	...	...	b, bc q a : bc and c q p : bc q n.
20	A-St : A-Cu : Fr-Cu.	Cu.	F. Ci : St-Cu : Cu-Nb.	8	2	5	1	5	1	j	j	j	k	k	j	...	...	...	...	...	...	...	bc, e : n, b and bc a : b and bc p : b n.
21	Ci-Cu : Cu.	Ci : A-Cu : Cu.	A-St : Cu-Nb : Nb.	7	7	6	9	9	10	j	i	k	i	H	H	...	...	...	...	...	...	...	bc a : bc, cp : p : c : o, cn.
22	Ci : A-Cu.	Cu.	Ci : Ci-St.	2	2	3	6	7	10	i	k	l	i	H	H	...	...	...	...	...	...	...	b and bc a : bc p : c, o later n.
23	A-Cu : St-Cu.	A-Cu : St-Cu : Cu.	St-Cu.	2	1	7	7	2	0	j	k	k	k	H	H	...	...	...	...	...	...	...	early, b and bc a : bc y, bp : b n.
24	A-Cu : A-St.	Ci : A-Cu : St-Cu.	Ci : Ci-Cu : A-Cu-lent.	1	1	8	6	2	1	k	k	k	k	j	j	...	...	...	...	...	...	...	b to cy a : cy to bp : b n.
25	St-Cu : Cu-Nb.	A-Cu : Cu-Nb.	A-Cu : St-Cu : Cu-Nb.	1	2	8	8	2	1	k	l	l	l	k	k	...	...	...	...	...	...	...	b and cp : a : bc and cp : p : b n : [18 <sup>h</sup> -24 <sup>h</sup> .
26	St-Cu : Cu-Nb.	St-Cu : Cu.	St-Cu : Cu-Nb.	1	5	3	1	2	1	l	k	l	l	k	k	...	...	...	...	...	...	...	b, bc p : a : bp and n : early and at night.
27	A-Cu.	A-Cu : Cu.	Nb.	1	1	8	9	10	9	k	E	j	j	j	j	...	...	...	...	...	...	...	b, l, f m to ca : c, o : p : c : o, cn.
28	Ci-Cu : A-Cu : Fr-Nb.	Ci-Cu : A-Cu : Cu.	A-Cu : St-Cu : St.	8	10	8	8	8	10	k	i	j	j	k	j	...	...	...	...	...	...	...	Cloudy throughout.
29	A-Cu : A-St.	A-Cu : A-St.	A-St : St-Cu.	9	10	9	9	10	10	k	i	j	j	H	H	...	...	...	...	...	...	...	ca : c : o p : c : o, n.
30	A-Cu : St-Cu.	A-St : Nb : Fr-Nb.	A-Cu : St-Cu : Cu.																				

165. Aberdeen.

November, 1930.

Table for Aberdeen, November 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

166. Aberdeen.

December, 1930.

Table for Aberdeen, December 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.



METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1930

Comprising the meteorological and geophysical results obtained from autographic records and eye observations at the observatories at Lerwick, Aberdeen, Eskdalemuir, Cahirciveen (Valentia Observatory), and Richmond (Kew Observatory), and the results of soundings of the upper atmosphere by means of registering balloons.

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ESKDALEMUIR

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METEOROLOGICAL COMMITTEE



LONDON  
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

1932

## ESKDALEMUIR OBSERVATORY.

Latitude	..	..	..	..	..	55° 19' N.
Longitude	..	..	..	..	..	3° 12' W.
G.M.T. of Local Mean Noon	..	..	..	..	..	12h. 13m.

*Heights in metres above Sea-Level.*

Barometer	..	..	..	..	..	237·3
Rain-gauge	..	..	..	..	..	242·0
Dines Tube Anemograph	..	..	..	..	..	250

*Heights in metres above ground.*

Thermometer Bulbs	..	..	..	..	..	0·9
Sunshine Recorder	..	..	..	..	..	1·5
Dines Tube Anemograph	..	..	..	..	..	15
Beckley Rain-gauge Rim	..	..	..	..	..	0·4

## INTRODUCTION.

## HISTORICAL.

Early in the twentieth century the increasing artificial magnetic disturbance at Kew Observatory, Richmond, due to the westward extension of the electric tramway system from London, made desirable the establishment of a magnetic observatory in a locality unlikely to be affected, at least for a large number of years, by electric power or traction system. A committee of the Royal Society of London selected a site in the parish of Eskdalemuir, Dumfries-shire, for the new observatory. The nearest towns or industrial centres are Langholm and Lockerbie, distant approximately 16 and 18 miles (26 and 29 km.) by road, and there is no point of railroad within 9 miles (14 km.) of the Observatory. Installation of the instrumental apparatus commenced in the summer of 1908, the Observatory at that time forming a part of the then recently established National Physical Laboratory.

Although the Observatory was established primarily in the interests of the study of terrestrial magnetism the field of geophysical work undertaken has been considerably wider and has included, almost from the beginning, meteorology, atmospheric electricity (mainly atmospheric potential gradient), and seismology. In the earlier years Milne, Wiechert, Omori, and Galitzin seismographs were in operation at Eskdalemuir, but seismological observations ceased in October, 1925, when the three-component installation of Galitzin seismographs was transferred to Kew Observatory. In 1910, when the majority of the various initial difficulties had been overcome, Eskdalemuir passed from the control of the National Physical Laboratory to that of the Meteorological Office. In consequence of this change the meteorological work assumed increased importance, and from the beginning of 1914 the Observatory has served as a telegraphic reporting station of the Meteorological Office.

Summaries of the results of observations made in 1909-10 were published in the Report of the Observatory Department of the National Physical Laboratory, 1909-10. The results for subsequent years are included in the publications mentioned in the Preface to the present volume.

## SITE.

Eskdalemuir Observatory, some  $3\frac{1}{2}$  miles ( $5\frac{1}{2}$  kilometres) north-north-west of Eskdalemuir Parish Church in the county of Dumfries-shire, is situated on a rising shoulder of moorland which is bounded on the east by the road leading north to Ettrick and Selkirk, on the west by the small Davington Burn, and at the southern extremity by the small hamlet of Davington.

The hillside in the immediate vicinity of the Observatory slopes generally from the north-west to south-east. The mean height above sea level of the Observatory site is about 800 feet (244 metres). Cassock Hill, slightly more than a mile distant to the north-west, is 1,205 feet (367 metres), while the bench mark at Davington School,  $\frac{1}{4}$  mile (0.4 km.) to south-east, is 699 feet (213 metres) above M.S.L. To the east the ground slopes fairly rapidly to the valley bottom, the level of the Ettrick road at a point about  $\frac{1}{4}$  mile (0.4 km.) east of the underground magnet house being 682 feet (208 metres). The River White Esk is rather less than  $\frac{1}{2}$  mile (0.8 km.) to the east. Immediately beyond the river, and almost due east of the Observatory, Dumfedling Hill rises to a height of nearly 1,200 feet (366 metres) above M.S.L. Some 4 or 5 miles (8 km.) to the north is a high ridge, following approximately the boundary between Dumfries-shire and Selkirkshire, the highest point of which is Ettrick Pen (north-north-west) 2,200 feet (670 metres) above M.S.L. Rather more than half a mile (0.8 km.) to the west, and beyond Davington Burn, the ground rises to 1,040 feet (317 m.), and reaches nearly 1,200 feet (366 m.) half a mile (0.8 km.) further on. To the south and south-south-east the Observatory commands a view of the White Esk Valley as far as Hart Manor, 4 miles ( $6\frac{1}{2}$  km.) distant, and beyond that the upper slope of Cauldkine Hill, about 10 miles (16 km.) distant, is visible. The surrounding country is bare and wild and there are but few trees to relieve the monotony of the grass-covered hills and moorland.

Within the Observatory grounds the soil is peaty and in many places is more or less boggy at all seasons. Some two feet, or less, below the surface a clay-like substance containing soft rock is encountered. The local geological formation is described as "rock of the Tarannon Llandovery series traversed by igneous dykes."

Photographs, site plan, and a brief description of the Observatory will be found in the Introduction to the Observatories' Year Book, 1928.

### METEOROLOGY.

The elements dealt with in the following tables are:—Atmospheric pressure, air temperature, humidity, rainfall, sunshine, solar radiation, wind speed and direction, earth temperature and minimum temperature on the grass. There is also a diary of cloud and weather.

### Notes on Instruments.

Brief descriptions of the recording instruments and of the methods of tabulating the records, with notes on the information contained in the Tables, are given in the General Introduction to the Tables. The following particulars, which refer specially to Eskdalemuir, are to be regarded as amplifying the information contained therein. References to full accounts of other instruments used at Eskdalemuir appear below.

From 1st January, 1929, the former standard Kew pattern mercury barometer was superseded by a Fortin barometer, obtained from the National Physical Laboratory. From 1st January to 17th April, 1930, the instrument was situated in the ground-floor laboratory. From 17th April to 31st December it was in its initial position in the north-east ground-floor room, which has a small daily range of temperature, the cistern being on the same level as before.

When the Fortin barometer was first set up it appeared to read 0.4 mb. higher than the Kew pattern instrument. The average value of the difference in January, 1929, was 0.34 mb. and it was found that the difference was reduced appreciably if the Kew instrument was tapped before reading (prior to 1929 it had not been customary to tap the Kew pattern barometer before reading.) The illumination of the cistern and scales of the new barometer was improved and closer agreement between the readings was obtained, the mean value of the difference being only 0.1 mb. in June,

1929. The following table gives mean values of the difference obtained from 343 readings during the first four months of 1930, the two barometers being in the same room :—

		Mean Difference. (Fortin <i>minus</i> Kew)
Barometer rising	.. ..	+0.12 mb.
Barometer steady	.. ..	+0.045 mb.
Barometer falling	.. ..	+0.002 mb.
Mean of all observations		<u>+0.065 mb.</u>

Since the probable error of an individual reading is of the order 0.1 mb., it is legitimate to conclude that the determinations of pressure made with the new Fortin instrument are for practical purposes identical with those made with the Kew pattern barometer. The vernier setting edge over the mercury column of the Fortin barometer is not quite horizontal but is inclined at an angle of 7 minutes of arc to the horizontal. The maximum error introduced by variations in the point of apparent contact between the mercury and the edge is less than 0.01 mb. The smallest division on the vernier scale is 0.05 mb.

The photographic mercurial barograph is situated in the east room of the underground magnet house. The daily range of temperature to which the instrument is subject is normally less than 0.05°C., the annual range being about 4°C. The scale value of the records is 1 millimetre on the paper = 0.85 millibar, and the time scale is 9.1 millimetres on the paper = 1 hour.

As in former years, records of pressure were also obtained from (a) a Dines float barograph<sup>1</sup>, and (b) a Richard barograph, pen recording, the records of which are changed weekly.

*Temperature.*—The photographic thermograph and the standard mercurial thermometers, dry bulb and wet bulb, are situated in a wooden hut, provided with louvered sides and double roof, which is some 200 feet (60 m.) north-north-east of the main building. The installation is similar to that described on p. 10, except that a special enclosure is provided inside the hut to accommodate the optical and photographic arrangements. The auxiliary thermometer temporarily in use from 30th October, 1929, was replaced by a new Standard Wet Bulb Thermometer on 17th May.

The scale values of the thermograph records are 1a. = 3.064 mm. and 2.438 mm. on the paper for the dry and wet bulb records respectively, while the time scale is 1 hour = 9.250 mm.

Auxiliary records of temperature are obtained from one or more instruments of the bimetallic type described in the *Meteorological Observers' Handbook*. These instruments are situated in the hut which contains the photographic thermograph.

*Humidity.*—In addition to the dry and wet bulb thermograph described above there is a Richard hair hygograph which is situated in the louvered hut.

As is stated in the General Introduction, the records from this instrument are utilised when the wet bulb reading does not exceed 273°A. On the records obtained in 1930 a change of 10 per cent. in relative humidity is represented by about 0.8 centimetre, the time scale being 1 hour = 3 millimetres.

*Rainfall.*—The recording instrument is a Beckley self-registering rain-gauge, which is described on page 11. The time scale of the record is 1 hour = 9.24 millimetres on the paper and the rain scale has a magnification of 3.35. The instrument has been in use at Eskdalemuir since 1908 and was originally installed at Fort William in July, 1890.

The conical part of the gauge funnel is surrounded by a cylindrical copper casing lined with asbestos on the inner side and of diameter equal to that of the funnel, viz.

<sup>1</sup> Q.J.R. Meteor. Soc., Vol. LV, pp. 37-53, 1929.

11.27 inches (28.6 cm.). Within the enclosure so formed is a gas jet, and a flame of suitable dimensions is maintained, as circumstances dictate, to melt snow which may be collected.

The gauge is surrounded by a circular turf wall or dyke, the top of which is on a level with the rim of the gauge; the external and internal diameters of the dyke being 11.5 feet (3.5 m.) and 7 feet (2 m.) respectively.

A standard 8-inch (20.3 cm.) rain-gauge is situated some 24.5 feet (7.5 m.) to the east of the Beckley gauge and is surrounded by a turf dyke of similar dimensions. Readings of amounts of rain received in the 8-inch gauge are made at 7h and 18h G.M.T. It is customary to adjust the indications of the recording gauge to agree with the readings of the standard check gauge.

Until May 14 and again after November 8, 1928 auxiliary autographic records of precipitation were obtained by means of a Hellmann-Fuess snow-gauge. In the former period the exposure of the instrument was as described on p. 142 of *The Observatories' Year Book*, 1927. Since then the gauge has been in a somewhat deeper pit 8 feet (2.4 m.) almost due north of the 8-inch standard gauge, the pit being surrounded by a low wall of earth and turf—the top of the wall being approximately level with the rim of the gauge. The records so obtained are used only in the event of failure or uncertainty of the Beckley autographic record.

*Sunshine.*—The record of sunshine is obtained from a Campbell-Stokes recorder described on p. 11.

The recorder is fixed on a stone pillar and has a reasonably free exposure, the chief obstacles being hills to east and west. The elevation of hills between  $70^\circ$  and  $110^\circ$  east of south varies from  $2.5^\circ$  to  $5^\circ$ , while between  $50^\circ$  and  $135^\circ$  west of south the high ground varies in elevation from  $3^\circ$  to  $4.4^\circ$ , being generally about  $3.5^\circ$ . As sunshine can be recorded when the sun is  $3^\circ$  above the horizon only in the most favourable circumstances, it appears that the loss of record occasioned by the neighbouring high ground is of relatively small extent and is confined mainly to a possible defect of record at the beginning of the day during a few weeks centred about the equinoxes.

*Solar Radiation.*—Measurements of the intensity of radiation received from the sun by a surface which is normal to the line drawn from the instrument to the sun are effected by means of an Ångström compensating pyrheliometer.<sup>1</sup> The intensity of radiation is expressed in milliwatts per square centimetre (1mw. per sq. cm. = 0.01435 gramme calorie per sq. cm. per minute). In addition, the value is given of the function  $(p/p_0) \sec Z$ , in which  $p$  is the barometric pressure at the observatory in millibars at the time of the observation,  $p_0$  is 1000 millibars, and  $Z$  is the zenith distance of the sun. This affords a measure of the mass of atmosphere which the solar radiation has had to penetrate before reaching the earth. Entries in the column headed "Sky" are intended to show the presence or absence of haze, mist or cloud in the direct path of the solar radiation recorded.

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<sup>1</sup> For description see *The Observer's Handbook*, 1921, Ed., Meteorological Office, London; *Astrophysical Journal*, Vol. IX, 1899; *Actes de la société royale des Sciences d'Upsal*, 1893; also *Geophysical Memoirs*, No. 21 (1923), Meteorological Office, London.

Following some structural repairs to the observatory building, the pyrheliometer was re-erected in an embrasure of the tower in June 1930.

*Wind.*—A Dines tube anemograph, furnished with direction recorder, is situated in the main building. The vane-head is 15 metres above a tangent plane to the slope of the hillside and approximately 7 metres above the general level of the roof of the building.

The anemograph vane in use throughout 1930 is that which was introduced in August, 1925. It differs from that formerly in use in that the greatest dimension of the fin is vertical instead of horizontal, and that the cross-section of the fin is of aerofoil shape. A twin-lever direction recorder has been in use since June, 1925. In this instrument a pen is carried by each of two pivoted arms, upper and lower. A projection from each arm engages with a flange of a dual helical device cut in a short cylinder (of vertical axis) which rotates with the vane, being connected thereto by a steel tube 1.5 cm. in external diameter.

Apart from the surrounding hills, the exposure of the vane-head is tolerably free in all directions save to the west where at a distance of some 130 feet (40 m.) is a rather large building, of which the height is somewhat greater than that of the main building. With winds from nearly due west the direction records show markedly greater turbulence than with other winds.

*Earth Temperature.*—Readings have been made at 9h G.M.T. of the earth temperature at nominal depths of one foot and four feet below the surface of the grass lawn a few yards south of the thermometer hut. The thermometers and the method of exposure are of the standard type described in the *Meteorological Observers' Handbook*. The depths of the thermometer bulbs below the grass-covered surface of the ground are 30 and 123 cm. Graduation is on the Fahrenheit scale.

*Minimum Temperature on the Grass.*—The thermometer used for readings of grass minimum temperature is of the spirit type with index; and when exposed, between 18h and 7h G.M.T., is supported at a height of one or two inches (4 cm.) above close-cropped grass a few metres from the louvered thermometer hut.

*Visibility.*—The descriptions of the selected visibility objects, together with the distances and bearings from the point of observation, are given in the subjoined table. Auxiliary objects and guide criteria are given in brackets. Certain of the nearer objects may be identified by reference to the photographs and site plan. Unless otherwise stated, the distances and bearings are with reference to certain of the windows on the upper floor of the main building.

The situation of the Observatory and the nature of the immediate surroundings allow of only a very limited choice of objects. The objects A to D are situated mainly to the north, while the more distant objects are towards south to south-east, *i.e.*, down valley. Four miles or so to the north of the Observatory the hills rise in places to rather more than 2,000 feet above sea level and at times visibility in this direction is distinctly less than towards south. On other occasions the hills to the north are visible, but nearer objects down the valley are invisible owing to valley mist. With the exception of the cottage at Finglandshiel, and Cauldkine Hill, the objects more distant than D are below the level of the Observatory. There are no objects at distances which approximate sufficiently closely to the standard distances for objects H, J, and K. When it is estimated that the range of visibility is such that objects at these standard distances would be visible the corresponding small letter entries are made in the Diary of Cloud and Weather. The estimates of visibility in the dark depend largely on the judgment of the observer. There are no lights other than those in the Observatory buildings and in two cottages within a radius of one mile.

VISIBILITY OBJECTS AT ESKDALEMUIR.

Object.	Description.	Distance.	Bearing.
A	(i) White wooden post .. .. .	25 yards	NE.
	(ii) Twigs on trees nearest the boundary wall in front of the main building .. .. .	25 "	S.
	(iii) Small thermometer screen—viewed from steps facing the back entrance to the main building .. .. .	26 "	NNE.
B	(i) Theodolite pillar .. .. .	55 "	N.
	(ii) Chimney (or cowl) on the large thermometer screen .. .. .	60 "	NE.
C	Posts and shafts on underground magnetograph house .. .. .	107 "	N.
D	Standards on Observatory water reservoir .. .. .	217 "	NNW.
E	(i) Church and Manse, Davington .. .. .	550 "	SE.
	(ii) (Davington Farm House) .. .. .	470 "	SSE.
F	(i) Chimneys at Burncleuch .. .. .	1180 "	SSE.
	(ii) (Cottage at Finglandshiel) .. .. .	1550 "	NE.
G	Trees at Garwaldwaterfoot .. .. .	2160 "	SSE.
H (h)	(Lower slope of Raeburn Hill) .. .. .	2½ miles	SSE.
I	Hart Manor .. .. .	4 "	SSE.
J (j)	(Cauldkine Hill, 1,478 feet, near Westerkirk; not clearly visible) .. .. .	10½ "	SSE.
K (k)	(Cauldkine Hill, 1,478 feet, near Westerkirk; plainly visible) .. .. .		
L (l)	No objects available .. .. .		
M (m)			

Note.—The descriptions of auxiliary objects and guide criteria are given in brackets.

IDENTIFICATION NUMBERS OF INSTRUMENTS IN USE IN 1930.

Standard Fortin Barometer .. .. .	M.O.	1716/27
Standard Dry Bulb Thermometer .. .. .	M.O.	19123
Standard Wet Bulb Thermometer—		
January 1—May 17 .. .. .	M.O.	127748
May 17—December 31 .. .. .	M.O.	1695
Hair Hygograph .. .. .	M.O.	59
Recording Beckley Rain-gauge .. .. .		4
Control Rain-gauge .. .. .	M.O.	391
"    "    glass for— .. .. .	M.O.	1565
Campbell-Stokes Sunshine Recorder .. .. .	M.O.	99
Ångström compensating Pyrheliometer .. .. .		116
Dines Tube Anemograph .. .. .	M.O.	1032
Grass Minimum Thermometer .. .. .	M.O.	23008
Earth Thermometer, 1 Ft. .. .. .	M.O.	18334/27
"    "    4 Ft. .. .. .	M.O.	18337/27

CORRECTIONS TO INSTRUMENTS IN USE IN 1930.

The corrections to the instruments in use during 1930 are given below. Except in the case of the standard wet bulb thermometer used up to 17th May, the corrections are those given in the certificate of examination issued by the National Physical Laboratory. The corrections here given have been applied. The date on which each of the instruments mentioned was brought into use is given for purposes of reference.

Fortin Barometer, M.O. 1716/27. January 1st, 1929.  
 at 880 910 940 970 1,000 1,030 1,050 mb.

+0.05 +0.05 +0.05 +0.05 +0.10 +0.10 +0.05

Attached Thermometer, No. 5592. January 1st, 1929.  
 at 273 278 283 288 293 298°A.

0.0 -0.1 -0.2 -0.3 -0.3 -0.2

Dry Bulb Thermometer, M.O. 19123. January 27th, 1919.  
 at 263 268 273 278 283 288 293 298 303°A.

+0.2 +0.1 0.0 0.0 0.0 -0.1 -0.1 -0.1 -0.1

Wet Bulb Thermometer, M.O. 1695. May 17th, 1930.  
 at 253 263 273 283 293 303 313°A.

0.0 0.0 -0.1 0.0 0.0 0.0 0.0

Wet Bulb Thermometer, M.O. 127748. October 30th, 1929.  
 at 30° 35° 40° 45° 50° 55° 60° 65° 70° F.

0.0 0.0 0.0 0.0 -0.1 -0.1 -0.2 -0.1 -0.1

Grass Minimum Thermometer, M.O. 23008 at 253 263 273 283 293 303°A.

-0.1 -0.2 0.0 0.0 -0.1 -0.2

Earth Thermometer 1 Ft. M.O. 18334/27, from 27° F. to 42° F., +0.1.  
 " " 4 Ft. M.O. 18337/27, " " " " Nil.

#### NOTE ON THE REDUCTION OF BAROMETER READINGS.

The Fortin barometer, M.O. 1716/27 by Casella, London, has been used as the standard since 1st January, 1929. Before this date a Kew pattern mercury barometer M.O. 1320 by J. Hicks, London, was the standard instrument from 16th December, 1913.

1. *Reduction to Pressure at Station Level.*—The corrections for index error (including those for capacity and capillarity) as given in the N.P.L. certificate dated June 28, 1928, are reproduced above. The corrections for temperature are those given in the *International Meteorological Tables* as appropriate to a Fortin barometer.

The corrections for the variation of gravity as obtained from the expression

$$g = 980.617 (1 - 0.00259 \cos 2\lambda) (1 - 5z/4E)$$

where  $\lambda$  = latitude

$z$  = height of the station.

$E$  = earth's radius

are as follow:—

at reading of 900 920 940 960 980 1000 1020 1040 mb.

Correction +.78 +.80 +.81 +.83 +.85 +.87 +.88 +.90 mb.

2. *Reduction to Mean Sea Level.*—The correction to reduce pressure at station level to pressure at sea level is calculated according to the usage of the *International Meteorological Tables* with certain minor modifications which are set out in *The Observatories' Year Book, 1928*. In the same volume is given a copy of the Table actually in use.

## NOTES ON THE METEOROLOGICAL SUMMARIES.

The number of years for which meteorological results are available is insufficient as yet to yield a completely representative set of normal values. Although certain meteorological data are available for 1909 and 1910 it is only since 1911 that the reductions have been made in accordance with an approximately uniform plan. In the following notes the normal or average values referred to are for the period 1911 to 1926, unless otherwise stated.

*Pressure.*—As was the case generally in the British Isles the mean pressure for the year was below normal, the decrease at Eskdalemuir being 1.7 mb. Only in February, May and December were the monthly means above normal. The extreme instantaneous values recorded were 1012.9 mb. on February 9, and 942.8 mb. on January 10. The greatest and least mean daily values are 1012.4 mb. on February 9, and 947.6 mb. on January 11. The largest value of the range during a calendar day is 32.9 mb. on November 24. The mean value of the absolute daily range of pressure varies between 13.3 mb. in November, and 4.6 mb. in July. The annual mean value of the daily range is a little above normal.

*Pressure (Diurnal Variation).*—In the mean diurnal inequality for each month there are two maxima, in the late forenoon and usually an hour or two before midnight, and two minima, in the early forenoon and afternoon. In all months, excepting January, February, May, October and November, of 1930, the night maximum is the larger and except for January, February and November this is true of the representative inequalities for the years 1911–20. The principal minimum in the latter inequalities is in the afternoon except in February, March, August and November, but in 1930 the principal minimum falls in the early forenoon in January, March, July, August, September and October. Compared with the mean diurnal inequality for 1911–20 <sup>(1)</sup> the values of the mean inequality for the year 1930 are algebraically greater from 5h to 19h and less from 20h to 4h. In other words, relatively speaking, in 1930 the early morning and afternoon troughs and the night crest are diminished, while the forenoon crest is enhanced.

The results of the harmonic analysis of the monthly and seasonal mean diurnal inequalities for 1930 are given in the accompanying table. For purposes of comparison the corresponding data <sup>(1)</sup> derived from the mean inequalities for the period 1911–20 are also given. In computing the Fourier co-efficients for 1930 the unit employed was .001 mb. Although for 1930, as for recent years, the phase angles are given to the nearest 1°, this course is scarcely justified, at least for the third and fourth components, by the character of the data from which the harmonic co-efficients for the months and seasons of a single year are computed. The phase angles  $\alpha_1$  etc. given in the table below refer to Local Mean Time, whereas in the corresponding tables for 1922 and 1923 the phase angles refer to Greenwich Mean Time.

As is usually the case the amplitude and phase of the 24-hour term fluctuate irregularly from month to month. The ratio of the mean of the twelve monthly values of  $c_1$  to the value of  $c_1$  for the year as a whole considerably exceeds unity.  $c_1$  is noticeably high for January and for October, low for February. The values of  $c_2$  for the year, winter and summer, are nearly equal to the corresponding normals, that for the equinox being less. The variation in the 8-hour term from month to month is fairly normal, the amplitude being largest in winter months and least at the time of equinoctial phase transition.

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<sup>(1)</sup> "On the Diurnal Variation of Atmospheric Pressure at Eskdalemuir and Castle O'er, Dumfriesshire," by A. Crichton Mitchell, D.Sc., *Quarterly Journal of the Royal Meteorological Society*. Vol. I., No. 210, April, 1924.

HARMONIC COEFFICIENTS OF THE DIURNAL INEQUALITY OF ATMOSPHERIC  
PRESSURE—ESKDALEMUIR, LONGITUDE 3° 12' W.

Values of  $c_n$ ,  $\alpha_n$  in the series  $\sum c_n \sin (15nt^\circ + \alpha_n)$ ,  $t$  being Local Mean Time reckoned in hours  
from midnight.

Month and Season.	$c_1$		$\alpha_1$		$c_2$		$\alpha_2$		$c_3$		$\alpha_3$		$c_4$		$\alpha_4$	
	1930.	1911- 20.	1930.	1911- 20.	1930.	1911- 20.	1930.	1911- 20.	1930.	1911- 20.	1930.	1911- 20.	1930.	1911- 20.	1930.	1911- 20.
Jan. .. ..	mb. .59	mb. .094	° 276	° 346.4	mb. .32	mb. .235	° 138	° 151.6	mb. .16	mb. .125	° 8	° 345.3	mb. .03	mb. .046	° 245	° 213.9
Feb. .. ..	.06	.118	100	215.1	.35	.273	149	138.1	.12	.083	354	341.2	.03	.042	108	67.7
Mar. .. ..	.29	.128	135	185.3	.26	.304	145	145.3	.04	.053	306	335.0	.04	.051	17	24.5
Apr. .. ..	.27	.205	71	92.3	.28	.299	166	154.8	.04	.022	200	156.3	.04	.045	10	355.7
May .. ..	.29	.225	25	52.7	.25	.270	160	147.4	.06	.075	162	160.1	.03	.035	346	330.1
June .. ..	.32	.152	24	53.9	.27	.234	138	146.1	.08	.084	157	160.6	.03	.018	298	325.7
July .. ..	.17	.171	142	69.4	.22	.211	143	141.2	.05	.077	185	155.8	.01	.023	197	300.0
Aug. .. ..	.23	.114	164	114.6	.16	.239	166	147.7	.05	.057	138	157.2	.02	.047	349	330.8
Sept. .. ..	.35	.121	164	87.7	.30	.313	146	151.6	.01	.012	296	110.7	.01	.050	5	344.7
Oct. .. ..	.48	.110	290	76.0	.24	.315	172	159.5	.05	.060	25	8.2	.02	.041	308	32.9
Nov. .. ..	.23	.125	352	183.5	.22	.242	173	168.1	.13	.101	338	9.2	.07	.015	167	146.2
Dec. .. ..	.29	.137	122	97.1	.17	.213	167	146.9	.15	.124	1	4.2	.07	.067	193	212.8
Arithmetic mean	.30	.142	...	...	.25	.262	...	...	.08	.073	...	...	.03	.040	...	...
Year .. ..	.017	.085	80	90.8	.246	.260	154	150.1	.030	.020	2	41.7	.003	.016	269	341.9
Winter .. ..	.089	.038	291	165.4	.258	.236	154	150.9	.138	.106	357	355.5	.041	.023	179	189.1
Equinox .. ..	.116	.108	65	103.9	.219	.306	150	152.8	.059	.021	160	4.4	.018	.044	327	8.9
Summer .. ..	.077	.153	161	67.2	.264	.238	156	145.8	.013	.074	320	158.5	.025	.030	3	324.3

NOTE.—*Winter* comprises the four months January, February, November, December.

*Equinox* the months March, April, September, October.

*Summer* the months May to August.

*Temperature.*—The mean temperature,  $279.98^\circ A.$  ( $44.6^\circ F.$ ) for the year 1930 is slightly higher than the normal value. The extreme temperatures recorded during the year were  $301.1^\circ A.$  ( $82.6^\circ F.$ ), on August 27, a record for the Observatory, and  $262.0^\circ A.$  ( $12.2^\circ F.$ ), on March 20. March 19 with mean daily temperature of  $268.0^\circ A.$  ( $23.0^\circ F.$ ) was the coldest day of the year. According to the mean daily temperature August 28 with  $292.7^\circ A.$  ( $67.5^\circ F.$ ) was the hottest day of the year. The minimum temperature was  $273.0^\circ A.$  ( $32.0^\circ F.$ ), or less, on 101 days, 22 being in February. There were only two "ice-days," *i.e.*, days with maximum temperature below  $273.0^\circ A.$

The values of the absolute range of temperature within a calendar month vary between  $23.7^\circ A.$  ( $42.0^\circ F.$ ) in May and August, and  $15.4^\circ A.$  ( $27.7^\circ F.$ ) in July.

*Humidity.*—As is mentioned in the General Introduction, owing to a change in the hygrometric tables used the results from 1926 onward are not strictly comparable with those of earlier years. Compared with the mean values for 1911–25 the chief departures of the values of mean relative humidity in 1930 are +4 in December, –4 in May and –3 in June. The mean relative humidity, 83.4 per cent., for the year, is slightly less than that for the years 1911–25, whilst the mean vapour pressure, 8.3 mb., is slightly smaller than the mean for the years 1922–29. The extreme daily mean values of relative humidity and vapour pressure were 98.7 per cent. on December 18, 57.5 per cent. on June 15, 19.7 mb. on August 28, 2.6 mb. on March 19. The lowest hourly reading of relative humidity was 29 on May 1.

*Precipitation.*—1930 was a wet year, the total amount of rainfall, 1730.8 mm. (68.14 in.), being 11.3 per cent. over the mean for the period 1911–28. The most outstanding months were October with 292.2 mm. (11.50 in.) and January with 275.4 mm. (10.84 in.). The driest month was February with 19.9 mm. (0.78 in.) or 14 per cent. of normal. The greatest amount recorded during a calendar day was 44.5 mm. (1.75 in.) on October 11. There were 133 days on which either no precipitation was recorded or in amounts too small to be measured. Precipitation amounting to 0.2 mm. or more was recorded on 232 days; to 1.0 mm. or more on 192 days; to 20.0 mm. or more on 20 days.

Snow or sleet fell on 76 days, but on no day from May 18 to October 24 inclusive. Observations of "snow lying" at 7h number 17, 8 of which were in March. There were no large falls of snow.

*Sunshine.*—The year's total duration of bright sunshine, 1127.3 hr. represents 25 per cent. of the theoretically "possible" duration; whereas the average percentage of "possible" for the years 1911–26 is 27.1. As regards the percentage of "possible" June was the sunniest, and December the least sunny month of 1930. In all, there were 90 days without sunshine, 17 of these being in December, and 14 in January, and 63 days with 50 per cent. or more of the "possible" sunshine. The days with most sunshine were June 16 and July 12, with 15.0 hr. July 12 with 15.0 hr. and November 5 with 8.0 hr. (89 per cent.) represent the highest value of the percentage of "possible" sunshine.

*Wind.*—The mean speed for the year, 4.9 m/s (11.0 mi/hr) was less than the normal. In comparison with the normal values for individual months the mean speeds for April and October exhibit the most considerable excess, and those for February and December the greatest relative deficiency. There were 31 hours of gale force (mean speed greater than 17.1 m/s), 18 being in January. The highest gust of the year, 36 m/s (80 mi/hr) occurred on January 2, the highest hourly speed, 26 m/s (57 mi/hr) on January 2, and the highest mean daily speed, 14.3 m/s (32.0 mi/hr) on April 19. The quietest day was February 12, with a mean speed of 0.3 m/s.

There was a marked predominance of winds between south and south-west, in all months except February, April, May and September, when the prevailing direction was northerly. February was again conspicuous by the dearth of westerly winds (between south-south-west and north-north-west).

*Grass Minimum Temperature.*—There were 112 occasions of ground frost (*i.e.*, grass minimum temperature not greater than 272.1°A. or 30°·4 F.), but none of these occurred between July 12 and September 9. The lowest grass minimum temperature was 259.4°A. (7.5 F.) on November 5. The mean grass minimum temperature for each of the months January, February, March, November and December is less than 273.0°A. (32°·0 F.), that for February 268.2 A.°(23°·4 F.) being the lowest value for the month of that name since 1917.

*Cloud and Weather.*—(A) The mean amount of cloud observed at the six hours of observation is 7.6, which is equal to the normal. January has the largest mean amount, 8.4, and February has the smallest, 6.0. The largest mean amount for an observational hour is 8.9 at 13h in January and December; the least is 5.0 at 21h in February. For the year as a whole there was most cloud at 13h and least at 21h. In ten months the mean cloud amount was least at 21h, but there was no consistent hour of maximum cloud amount. February 20 is the only day of the year on which no cloud was seen at the normal hours of observation. On 43 days the amount 10 was recorded at every hour of observation.

(B) Thunder was heard on 17 days, while there were observations of solar halo on 10 days, of lunar halo on 7 days, and of aurora or auroral glow on 10 days.

(c) The numbers of occasions on which the range of visibility was estimated to be (1) not greater than 500 metres (550 yards), corresponding with the entries X to E, and (2) at least 20 kilometres (12½ miles), corresponding with the entries k, l, m, are summarized below. The limitations to which the estimates of visibility are subject are mentioned on p. 152. It is to be noted that the group (1) above consists of the occasions which are held to merit the description as "fog, moderate, thick, or dense," while the entries k, l, m, denote "very good or excellent visibility."

There were fewer occasions of fog and more of estimates k, l, and m than in 1929. Fog was most frequent in December and March, but entirely absent (at the standard hours of observation) in June and July. There were 42 estimates of m, visibility 50 km. (31 mi) or more, distributed among 27 days. 26 of the occasions were associated with increasing barometric pressure, and 25 with winds from west-south-west through north to north-east.

		NUMBER OF OCCASIONS OF—															
		VISIBILITY X TO E.							VISIBILITY k, l, m.								
		7h	9h	13h	15h	18h	21h	Total.	7h	9h	13h	15h	18h	21h	Total.		
1930.																	
Jan.	..	..	1	1	1	—	1	—	4	8	11	11	9	6	3	48	
Feb.	..	..	2	2	—	—	—	—	4	9	10	9	11	8	7	54	
Mar.	..	..	3	1	—	—	—	3	7	9	10	11	12	16	12	70	
April	..	..	2	1	—	—	—	1	4	9	13	16	18	17	13	86	
May	..	..	2	—	—	—	—	—	2	18	20	19	21	20	12	110	
June	..	..	—	—	—	—	—	—	—	19	21	17	20	20	21	118	
July	..	..	—	—	—	—	—	—	—	17	19	20	24	22	18	120	
August	..	..	2	—	—	—	—	—	2	11	11	17	18	18	15	90	
Sept.	..	..	2	2	—	—	—	—	4	14	16	16	17	17	10	90	
Oct.	..	..	2	1	—	—	—	1	4	16	15	19	20	16	12	98	
Nov.	..	..	—	—	—	—	—	—	—	13	14	20	15	12	11	85	
Dec.	..	..	2	—	1	3	3	4	13	5	7	10	12	8	6	48	
Year	..	..	18	8	2	3	4	9	44	148	167	185	197	180	140	1017	

## ATMOSPHERIC ELECTRICITY.

### Notes on the Instruments.

Until May 13 autographic records of atmospheric electrical potential gradient were obtained by means of an electrograph of the Kelvin water-dropper type, the potential at the water-jet being registered by a Dolezalek quadrant electrometer. Thereafter, owing to building alterations, a temporary recorder was installed in the south porch, in which the tank and jet of the water-dropper were replaced by a radio-active collector supported on an insulated boom, 325 cm. above the ground and 80 cm. from the south wall. A comparison of the two electrographs over an overlapping period of two months showed that they were in excellent agreement, and no discontinuity will arise in the published values of potential gradient by the substitution of the temporary electrograph for the Kelvin water-dropper instrument. In all essential details the electrograph arrangements, the method of making scale and insulation tests and the method of reducing the autographic curve readings to potential gradient in the open were as described in *The Observatories' Year Book*, 1928, pp. 160-161.

The scale value of the photographic record obtained by means of the Dolezalek electrometer used in conjunction with the water-dropper remained at about 3.1 volts per mm. The scale value of the record from the temporary electrograph was 2.5 volts per mm. until September 5. From this date to October 27 the scale value varied, owing, it was discovered later, to a faulty suspension of the electrometer needle. A new suspension was fitted on October 27 and the scale value remained at 2.8 volts per mm. until the end of the year. The number of determinations of the reduction factor (*i.e.*, the ratio of the potential at one metre above the ground in the open to the potential at the water-jet) varied from four in December to twenty in April, each determination being based on about fifteen or more readings (at intervals of half a minute) of the potential in the open. The builder's hut, referred to last year, remained unmoved throughout the year. The values of the monthly reduction factor finally adopted for 1930 were obtained by a smoothing process, the adopted value for a given month being  $\frac{a + 2b + c}{4}$ , where a, b, c are the unsmoothed monthly

mean factors for the three successive months centred in the given month. To avoid smoothing across the discontinuity due to the change in instruments, the values for the earlier and later parts of May were obtained from the formula  $\frac{a + 2b}{3}$ , where b

is the unsmoothed mean factor for the given period and a is the unsmoothed factor for April in the case of the earlier period, and June in the case of the later period. The final values are given in Table 265. On October 6, the former radio-active collector was replaced by a new one containing polonium. The distance of the collector from the south wall was then reduced by 15 cm. and the reduction factor was changed from 5.32 to 5.75. The factor on either side of the discontinuity was smoothed by a process similar to that described above.

All determinations of scale value and reduction factor were obtained with a particular Wulf quartz-thread electrometer. This instrument was calibrated on a number of occasions during the year by means of a high tension battery, the potentials of which were measured by a potentiometer and standard cell. The calibration used for the determination of scale values of the electrograph and reduction factors throughout the year was that of March 14. This was the same as that used for the latter part of 1929.

#### IDENTIFICATION NUMBER OF INSTRUMENT USED IN 1930.

Wulf bifilar electrometer    ..    ..    ..    ..    ..    ..    3040

#### Notes on the Tables and Results.

As far as possible an electrical character figure is assigned to each day and values of potential gradient are assigned for 3h, 9h, 15h and 21h G.M.T. of all days, while values for all hours are assigned on days classified as *oa*, *1a* or *2a*. The character figures are given in Table 268, the significance of these symbols being as follows:—

- 0, denotes a day during which from midnight to midnight no negative potential was recorded.
- 1, denotes the existence of negative potential at one or more times during the same period, but with a total duration of less than three hours.
- 2, denotes negative potential extending in the aggregate over three hours or more during the same period.

- a*, denotes that within the 25 periods of 60 minutes for which an estimate of the mean potential gradient has to be made in the process of tabulation there was in no case a range of potential gradient in the open exceeding 1,000 volts per metre.
- b*, denotes that, during the same period, a range of 1,000 volts or more per metre was reached in one hour at least but in fewer than six hours.
- c*, denotes that, during the same period, a range of 1,000 volts or more per metre was reached in at least six hours.

Table 265 contains the values of electrical potential gradient at 3h, 9h, 15h and 21h G.M.T. daily, the value for a given hour representing the mean for the period of 60 minutes centring at that hour. Blanks indicate that the trace was in some way defective. If it is possible to assign an approximate value of the potential gradient on such days, this value is given in brackets. The reduction factors used in converting the potential at the water-jet to potential gradient in volts per metre, in the open, are also given.

In Table 266 are given, for *oa* days, (1) the mean diurnal inequalities for the months, seasons and year, (2) particulars of the number of days and of the non-cyclic changes and (3) the corresponding mean values of potential gradient. The inequalities, or the mean values, for the year and seasons are the means of the inequalities or means, respectively, for the appropriate months.

Corresponding data for *1a* and *2a* days combined appear in Table 267.

It should be noted that, in these tables, *Winter* denotes the four months January, February, November, December; *Equinox* the four months March, April, September, October; and *Summer* the four months May to August.

In addition to the electrical character for each day, Table 268 contains the daily, monthly and annual values of duration (in hours and tenths) of negative potential gradient. On 11 days of defective record when negative potential may have occurred dashes are entered; the sign of the gradient has been assumed positive during periods of defective records in which no precipitation was observed. If precipitation was recorded for less than an hour during such defective periods an approximate value of the duration of negative potential for that hour has been assigned, and the total for the day given in brackets. When, during highly oscillatory gradients, there was uncertainty as to the times of changes of sign, half of the total duration of doubtful sign was accounted negative. The total duration of negative potential gradient in each month and the average daily duration are entered in the lower part of the table. For the 354 days of assignable duration of negative potential gradient the total number of hours was 806.0 as compared with 697.4 in 1929; an average of 2.28 hours per day, as against 1.93 hours per day in 1929.

Following the practice adopted in 1923 the mean values of potential gradient given in Table 265 are of two kinds, viz., (*a*) the mean of all the positive values of potential in the column and (*b*) the algebraic mean derived from all days on which all four hours were represented. The mean values for the month, as derived from the (*a*) and (*b*) values respectively, are shown in the last line, and the means for the year are given at the foot of the December table. It is to be expected that the mean derived from the values at 3h, 9h, 15h and 21h, on a sufficiently large number of days, will approximate closely to the mean value derived from all hourly values of all the days.

The (*a*) mean exceeds the (*b*) mean in all months of the year, and is exceeded by the mean value on *oa* days, in all months except October. The general tendency is for the 1930 values to be lower than those of 1929, this being the case in nine months for the (*a*) mean, and eight months for the (*b*) mean.

Annual mean values for recent years, derived by giving equal weight to the twelve monthly means, of the (*a*) and the (*b*) means and of the means for *oa* days are as follow :—

				<i>oa</i>	( <i>a</i> )	( <i>b</i> )
				v/m.	v/m.	v/m.
1922	..	..	..	257	225	182
1923	..	..	..	278	235	159
1924	..	..	..	236	214	157
1925	..	..	..	284	243	209
1926	..	..	..	249	201	177
1927	..	..	..	259	223	193
1928	..	..	..	237	219	150
1929	..	..	..	276	240	216
1930	..	..	..	247	211	194

The highest values of the (*a*) and (*b*) means occur in December. The mean value on *oa* days for December was also high, being 341 volts per metre, although the actual highest monthly mean for *oa* days was 432 volts per metre in January.

Noteworthy occasions of high potential gradient were as follow :—

- (i) January 15d 15h 30m to 23h 10m. Associated with calms or light airs, the potential gradient was between 500 v/m and 1350 v/m throughout this period. The mean for the whole period was about 850 v/m.
- (ii) March 1d 17h 20m to 2d 2h 10m. Except for 15 minutes the potential gradient remained between 700 v/m and 1150 v/m, the mean for the period being about 850 v/m. This was a clear, frosty night, with slight mist.
- (iii) March 20d 7h 30m to 9h 0m. Associated with snow and a strong SW wind, the potential gradient was between 700 v/m and 1650 v/m throughout, the mean for the whole period being about 1100 v/m.
- (iv) November 16d 16h 50m to 17d 22h 40m. Except for half an hour the potential gradient remained between 650 v/m and 1100 v/m., the mean being about 800 v/m. This was a clear, frosty night, with slight mist.
- (v) December 4d 14h 20m to 5d 8h 0m. During continuous mist or fog the potential gradient was between 500 v/m and 1300 v/m with a mean of about 650 v/m. for the whole period.
- (vi) December 5d 14h 30m to 20h 30m. During continuous dense fog, when at times the air was saturated, the potential gradient remained between 700 v/m and 1450 v/m. The mean for the whole period was about 950 v/m.

The following were the noteworthy occasions of continuous negative potential gradient : -

- (i) March 9d 3h 50m to 11h 0m. This was a period of continuous moderate rain and slight mist. The limit of registration (—1300 v/m) was exceeded continuously for an hour and a half and for further intervals of a few minutes.

- (ii) May 17d 15h 45m to 18d 0h 40m. The limit of registration ( $-800$  v/m) was exceeded for most of the time. Continuous moderate rain was falling throughout.
- (iii) July 17d 14h 30m to 23h 30m. Nine hours of negative potential gradient, associated with continuous moderate rain and slight mist. The limit of registration ( $-800$  v/m) was exceeded for about 3 hours in four long periods of between 20 and 50 minutes and at other times for a few minutes.
- (iv) November 7d 14h 50m to 22h 10m. The limit of registration ( $-1000$  v/m) was exceeded almost continuously from 15h 30m until 21h. Continuous moderate rain, associated with slight mist, fell throughout.
- (v) November 18d 22h 10m to 19d 5h 0m. This was an occasion of continuous sleet. The limit of registration ( $-850$  v/m) was only occasionally exceeded. The mean potential gradient for the whole period was about  $-275$  v/m.
- (vi) December 7d 5h 20m to 17h 0m. Nearly 12 hours of negative potential gradient, associated with occasional moderate rain. The limit of registration ( $-650$  v/m) was exceeded for about half the period, the longest period when the potential gradient was continuously below  $-650$  v/m being 3 hours.

On the following occasions long periods of negative potential gradient were broken by short excursions to the positive side :—

- (i) January 7d 14h 40m to 8d 5h 10m. The continuity of negative potential gradient was broken by two isolated excursions to the positive, each lasting for about one minute. The limit of registration ( $-1200$  v/m) was only occasionally exceeded. Rain was falling for the greater part of the period.
- (ii) August 4d 12h 0m to 23h 10m. During continuous light rain the potential gradient remained negative except for two excursions to the positive for 5 minutes and 20 minutes. The limit of registration ( $-900$  v/m) was exceeded from 16h until 17h 10m and from 17h 50m until 21h except for two periods of less than ten minutes.
- (iii) November 26d 0h 0m to 12h 30m. This was a period of occasional rain followed by continuous rain. The continuity of negative potential gradient was broken by several excursions to the positive in the first part of the period, the duration of these amounting altogether to about 1h 40m. The limit of registration ( $-800$  v/m) was exceeded continuously between 6h 30m and 8h 30m and occasionally at other times.
- (iv) December 16d 1h 50m to 16h 30m. Continuous sleet was interrupted by a period of drizzle during which the potential gradient was positive for a quarter of an hour. During the first period of sleet the limit of registration ( $-650$  v/m) was exceeded for ten hours ; during the second period of sleet the potential gradient did not fall below  $-500$  v/m.

There are considerable irregularities in the mean diurnal inequalities of potential gradient on *oa* days for individual months, and the mean inequalities for the seasons vary considerably from the normals for 1913-23. As is usual, the principal minimum

in winter occurs in the early morning, and the principal maximum at 19h. The tendency towards a small secondary maximum before noon, and a small secondary minimum after noon, is almost negligible. In the mean diurnal inequality for the four equinoctial months the chief features are the absence of the usual secondary maximum about 8h, and the reduction of the secondary minimum, occurring usually at noon. The crest at 14h is due in the main to the effect of the March inequality. In the summer inequality the minimum occurs about noon, though there is little difference between the values from 10h to 15h, and the chief maximum at about the normal time, viz., 22h. The secondary minimum at 4h is more clearly defined than usual.

## TERRESTRIAL MAGNETISM.

### Notes on the Instruments.

The standard magnetographs,<sup>1</sup> which have been in regular use since 1909, are situated in the east chamber of the underground magnet house and are arranged so as to record changes of the three geographical components of terrestrial magnetic force, viz., the north component, N (or + X), west component, W (or - Y), and the vertically downward component, V (or + Z).

The instruments for the north and west components are of the Adie bifilar type, in which torsion of the bifilar suspension, of fine tungsten or steel wire, is utilised to bring the magnets into an azimuth approximately perpendicular to the directions of the components whose changes they respectively record. In each of these instruments the magnet is about 13.8 cm. in length and is suspended within a copper shell, or frame, of suitable dimensions to ensure that the movements of the magnet are sufficiently damped. To the magnet is rigidly attached a semi-circular plane mirror, immediately beneath which is a fixed mirror of similar form and dimensions. Each magnet and mirror system is contained within a brass cylindrical case, cemented on to a pier and surmounted by a tall bell-jar of glass. Light from a brightly illuminated slit passes through a collimator, is incident upon the two mirrors and after reflection passes along a wooden channel and thence, through a horizontal hemi-cylindrical lens, to photographic paper wound on a clock-driven cylinder. The hemi-cylindrical lens is set in the side of the case containing the recording drums, and matters are so arranged that the beams of light reflected from the two mirrors are brought to a focus by the lens which condenses the two vertical images to two sharply focussed dots on the paper. Hence the record obtained consists of two traces, the one straight and known as the base line, the other curved and representing the angular movements of the suspended magnet, and, therefore the changes in the component of terrestrial magnetic force.

The standard instrument for the vertical component is a Watson multiple-magnet balance.<sup>2</sup> In this instrument the magnet system consists of eight magnetised steel rods, each 10 cm. long and 0.2 cm. in diameter, carried by an aluminium frame to the centre of which are attached the moving mirror and also the knife-edge, which bears upon an agate plane and about which the system balances. Copper damping plates and a temperature-compensating device are provided. The recording arrangements are similar to those described above, save that the hemi-cylindrical condensing lens and the recording drum are vertical.

One clock serves to operate the three drums and also makes the time marks at two-hourly intervals.

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<sup>1</sup> For a general description of magnetograph arrangements see "A Dictionary of Applied Physics," Vol. II, Macmillan, London.

<sup>2</sup> Terrestrial Magnetism, Vol. VI.

To the containing case of each instrument is fitted a drying tube containing calcium chloride.

Determinations of the azimuth of the magnets of the north and west component magnetographs are carried out, at intervals of a year or two, by comparing the deflections produced by an auxiliary magnet with its axis (*a*) true north-south, or east-west and (*b*) inclined at a known small angle to those azimuths. Drift of the magnet system of the Watson balance has been compensated from time to time by adjusting the position of a small control magnet which is fixed vertically to the lower part of the pier on which the balance stands.

The azimuth lines in use in the east chamber are those which were determined in 1914 and of which particulars are given on p. 70 of *Hourly Values from Autographic Records, Geophysical Section, 1913*.

The diurnal range of temperature in the east chamber of the magnet house is normally negligible. Temperature is ascertained daily at 9h 30m by the thermometers within the instrument cases. The daily values appear in Tables 272, 276, etc.; the monthly means of the readings so obtained during 1930, together with the mean values for the years 1911-1929, were as follow:—

EXCESS OF MEAN TEMPERATURE ABOVE 280°A.

Month.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Mean 1930 ..	3.1	2.3	1.7	1.9	2.6	3.7	4.9	5.7	6.1	5.9	4.9	3.8
Mean 1911-29 ..	3.6	3.0	2.6	2.5	2.8	3.7	4.7	5.7	6.4	6.2	5.6	4.5

The annual range of temperature during 1930 was 4°·4 C., the mean range for the previous eighteen years being 4°·2 C.

The constants of the standard magnetographs were as follow:—

	North.	West.	Vertical.
Time scale .. .. . 1 hour =	15.5 mm.	15.5 mm.	15.5 mm.
Time marks .. .. .	Every two hours, beginning at exact hour.		
Error of time mark .. .. .	Not more than $\pm 1$ min.		
Period of vibration, seconds .. .. .	13.9	9.9	7.4
Logarithmic decrement <sup>1</sup> .. .. .	.365	.569	—
Angular equivalent of 1 mm. on paper, radians .. .. .	.00032	.00032	.0003
Twist of bifilar suspension .. .. .	60°	30°	—
Ratio $\frac{\text{length of bifilar suspension}}{\text{mean breadth of suspension}}$ .. .. .	66	100	—
Temperature coefficient, per 1° C. .. .. .	—9 $\gamma$	—2 $\gamma$	+26 $\gamma$
Direction of marked pole .. .. .	West.	North.	—
Azimuth of magnet .. .. .	270°	0°	346°

<sup>1</sup> Log. decr. =  $\text{Log. } a_n - \text{log. } a_{n+1}$ ; where  $a_n, a_{n+1}$  are the amplitudes of two successive swings on the same side of the zero position.

Determinations of scale value of the standard magnetographs are carried out at intervals of two weeks. The method adopted consists essentially in measuring the photographically recorded deflection of the suspended or pivoted magnet produced by an auxiliary or test magnet of known magnetic moment situated at a known distance from the deflected magnet. Two sets of relative positions of the deflecting and deflected magnets are used. For the north and west instruments they may be termed the "end on" and "broadside on" positions, the magnet axes being in one plane. In the case of the vertical instrument the deflecting magnet is vertical; in one position the line joining its centre to that of the deflected magnet is collinear with the axis of the latter, but in the other position it is perpendicular thereto. On a given occasion deflections are produced with the test magnet first on one side of the deflected magnet and then, at the same distance, on the other side, two deflections being produced at each side by reversal of the test magnet. Thus four deflection dots are obtained on the record. The two sets of relative positions of the magnets are employed on alternate occasions. The distance between the deflected and deflecting magnets is about 90 cm., and approximate values of the double deflections produced are 44 and 87 mm. for the north instrument, 33 and 65 mm. for the west, and 51 mm. for the vertical. In deducing the scale values allowance is made for the distribution of magnetism in the magnets by assuming that the latter consists of point poles separated by four-fifths of the length of the steel<sup>1</sup> and thence computing values of  $P$ , the distribution coefficient, for the different relative positions of the magnets. The moment of the auxiliary or test magnet is determined at intervals of about one month by deflections at two distances on the Kew magnetometer, the value of the horizontal component of the earth's field being obtained from the result of an absolute observation made on the same day.

In the following table are given the scale values, obtained by overlapping means, which were employed in reducing the curve readings for 1930.

SCALE VALUES OF THE MAGNETOGRAPHS ( $\gamma$  per mm. on the paper).

Month.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
North Instrument ..	5.07	5.07	5.03	4.97	4.98	5.02	5.03	5.01	5.02	5.03	5.03	5.01
West Instrument ..	6.70	6.70	6.68	6.66	6.69	6.67	6.65	6.66	6.65	6.67	6.69	6.69
Vertical Instrument ..	3.95	†4.50	4.43	4.33	4.32	4.31	4.29	4.29	4.29	4.29	4.29	4.25

In addition to the standard magnetographs there are in the west chamber of the underground magnet house auxiliary instruments of the Adie pattern (formerly the standard instruments at Kew Observatory) which record changes in declination,  $D$ , horizontal force,  $H$ , and also vertically downward force,  $V$ . Declination records have been obtained since August, 1927, while the vertical force (Adie) and horizontal force records commenced in March and December, 1928. The general arrangements of these instruments are similar to those of the instruments in the east chamber. The declination magnet is suspended by a bundle of silk fibres (the torsion effect of which is negligible) and the scale value of the record is 1'.17 to 1 mm. The vertical force balance consists of a single magnet, of which the dimensions are approximately 13.5 cm.  $\times$  2 cm.  $\times$  0.2 cm. With the object of reducing loss of record during magnetic storms the scale values of the auxiliary  $H$  and  $V$  records are arranged to

<sup>1</sup> Chree, Phil. Mag. 1904.

† In the preparation of the values printed in Table 274 the scale value 4.50 was applied throughout the month. It now appears almost certain that the change from the January value of 3.95 took place following instrumental adjustments on 4th February about 12h. The printed values of  $V$  for the first 3½ days of February are on this account probably about 16% too high.

be considerably greater than those of the standard N and V records. Thus, in 1930 the scale values of the Adie H and V records were approximately 9 $\gamma$  per mm. The scale value of the H magnetograph was affected in the earlier part of the year and also in the autumn by a woolly growth between the magnet and the copper damping box. The original scale value was restored by cleaning the magnet. Determinations of scale value are made by the method due to Broun. To facilitate the necessary adjustment, from time to time, of the azimuth of the horizontal force magnet, magnetic meridian lines (and lines perpendicular thereto) representing a sufficient range of values of declination were laid down in the west chamber in December, 1928, on the basis of simultaneous observations of declination in the chamber and in the east magnetic hut.

The routine absolute observations of the magnetic elements are made in the east magnetic hut; as a rule two complete sets of observations are made every week, but in 1930 a determination of declination was made on nearly every week-day. Declination and horizontal force were determined by means of the Kew pattern unifilar magnetometer (which was employed by Rücker and Thorpe in their magnetic surveys of the British Isles, 1886–1892) placed on Pier No. 5. Determinations of inclination (dip) are made by means of the Schulze inductor placed on Pier No. 6. Owing to the building of an extension to the east hut, absolute observations were made in the west hut from October 28, the Kew unifilar magnetometer on Pier No. 2, and the dip inductor on Pier No. 1.

For a detailed description of the method of observation with the Kew pattern magnetometer reference should be made elsewhere.<sup>1</sup>

In determining declination four readings are taken, two with the magnet erect, two with the magnet inverted. A correction is applied to the mean of the observations for the observed torsion in the silk suspending fibre. The fixed mark is about one half-mile (0.8 km.) distant from Pier No. 5, and its bearing is taken as 8° 12' 30" west of south.

Determination of the horizontal intensity comprises observations of (a) the time of vibration of the collimator magnet, and (b) the deflection of a mirror magnet by the collimator magnet. Deflection observations are made for three distances of the collimator magnet, the order of the position of the latter being: on east arm at 35 cm., 30 cm., 25 cm.; on west arm at 25 cm., 30 cm., 35 cm. Thus the mean times for the deflections at the three distances are very nearly, if not exactly, identical and the observations are concentrated at the 25 cm. distance. The time interval between the mean times of the vibration and deflection experiments is usually about half an hour. The horizontal intensity, H, is calculated from  $H = \sqrt{mH_v \times H_R/m}$  where  $mH_v$  is obtained from the vibration experiment and  $H_R/m$  from the deflections made at the 25 cm. distance,  $m$  being the moment of the collimator magnet.  $H_R/m$  is corrected for the distribution of magnetism in the magnets. From the latter part of 1913 until the end of 1923 the value of this correction, viz.,  $\log_{10} (1 + P/25^2 + Q/25^4)$ , applied to the observations of a given month was a mean value derived from the observations obtained during the seven months including the given month as fourth of the seven. The monthly values so derived show considerable fluctuations, and it is improbable that P and Q actually varied to the extent implied. Commencing in 1924 the value of the correction used in reducing the horizontal intensity observations has been the mean of the mean values for each of the years 1917–24, 1917–25, etc. The value employed for 1930 is 0.00543. The mean value of the logarithm for the years 1917–29 is also 0.00543. A variation of 0.0020 in the value of  $\log_{10} (1 + P/25^2 + Q/25^4)$  corresponds with a variation of about 4 $\gamma$  in the derived value of H.

<sup>1</sup> Dict. of Applied Physics, Vol. II, p. 532 or Stewart and Gee's "Practical Physics."

The values of P, Q, and  $\log_{10}(1+P/25^2+Q/25^4)$  for individual years are as follow :—

Year.	P.	Q.	$\log_{10}(1+P/25^2+Q/25^4)$ .
1917	+ 6.862	+ 418.9	.00520
1918	+ 7.604	+ 68.6	.00533
1919	+ 9.126	- 603.5	.00563
1920	+ 8.224	- 216.6	.00544
1921	+ 7.978	+ 25.3	.00554
1922	+ 6.607	+ 513.1	.00513
1923	+ 6.371	+ 614.3	.00508
1924	+ 7.899	- 128.6	.00531
1925	+ 8.214	- 261.7	.00538
1926	+ 9.675	- 938.4	.00564
1927	+ 10.422	- 1265.0	.00580
1928	+ 8.713	- 547.2	.00541
1929	+ 9.741	- 917.4	.00571
1930	+ 8.683	- 536.5	.00540

The Schulze inductor<sup>1</sup> consists essentially of a coil of insulated wire which can be rotated continuously and rapidly about an axis which coincides with a diameter of the coil. This axis is capable of rotation about a horizontal and vertical axis. The inclination and azimuth of the coil axis are read off on a vertical and a horizontal scale respectively. The windings of the coil are led off from a commutator to a Broca galvanometer. To effect a determination of magnetic inclination, the coil is set so that its axis of rotation lies in the plane of the magnetic meridian. The coil is then rotated steadily at the rate of about 360 revolutions per minute and the inclination of the axis of rotation is adjusted until the galvanometer deflection is the same in magnitude and sign whether the sense of rotation is positive or negative. In this position the rotation axis of the coil coincides with the direction of the earth's field and the inclination to the horizontal may be read off from the vertical circle. Two series of settings are made, one with the vertical circle facing east, the other with the circle facing west.

The base line values of the magnetograph records are deduced from the results of the absolute observations, any of the latter obtained during times of considerable disturbance being excluded. For a set of absolute observations on a given day the mean ordinates of the north and west component curves are determined for the periods of time corresponding to the declination, the vibration, and the 25 cm. deflection observations.

From these values, and from the value of H obtained as described above, the value of H corresponding to the mean ordinates during the declination observation is derived, and thence the base line values of N and W are computed. Similarly, by the combined use of the curve ordinates at the times of the inclination and horizontal force observations the value of H corresponding to the inclination observation is obtained and thence the base value for V. The base line values finally adopted are obtained from a curve drawn smoothly through points given by the deduced values, due allowance being made for discontinuities in the records.

The results of the absolute determinations of D, I and H are summarized in the subjoined table, and the values of *m*, the moment of collimator magnet 60a, are also given. For each set of absolute observations are shown the deduced base line values of N, W, and V and, in brackets, the adopted base line values. Thus, the entry 15823 (18) signifies :—deduced base line value 15823, adopted base line value 15818. The adopted values were obtained as described in the foregoing, and therefore the base line values corresponding to dates between those given in the table may be obtained by interpolation.

<sup>1</sup> For descriptions of, and discussion of method of observation with, earth inductors see papers by—  
H. Wild. *Met. Zeit.*, 1895, p. 41.  
O. Venske. *Ber. über die Tät. des Preuss. Met. Inst. in 1924*, p. 91 (and references given therein).  
N. E. Dorsey. *Terr. Mag.*, Vol. 18, p. 1, 1913.

ABSOLUTE DETERMINATIONS OF D, I AND H, AND BASE LINE VALUES OF N, W, AND V.

Eskdalemuir.

1930.

Date.	Declination.			Inclination.		Horizontal Force.			Base Line Values (deduced and adopted).				
	Mean Time.	D.		Mean Time.	I.	Mean Time.	H.	m.	North.	West.	Vertical.		
	h. m.	°	'	"	h. m.	°	'	h. m.	γ		15,000 γ +	4,000 γ +	44,000 γ +
Jan. 8	12 31	14	56	3	—	—	—	11 51	16583	905.6	765 (57)	69 (65)	—
10	12 27	14	55	40	11 13	69	44.0	11 49	16587	906.1	763 (57)	69 (65)	773 (49)
14	12 37	14	54	37	11 25	69	43.5	11 59	16597	905.7	755 (57)	67 (65)	745 (52)
21	12 31	14	58	26	11 38	69	42.5	14 50	16594	906.4	778 (56)	73 (66)	726 (55)
24	12 39	14	54	35	11 57	69	43.6	14 49	16594	905.1	753 (56)	65 (66)	780 (56)
28	12 25	14	55	10	12 45	69	42.9	11 47	16586	905.5	753 (56)	62 (66)	771 (57)
31	12 45	14	55	22	11 31	69	43.9	12 7	16591	907.1	773 (55)	70 (66)	792 (57)
Feb. 5	12 55	14	58	43	11 41	69	42.9	12 17	16581	906.1	760 (55)	66 (67)	746 (57)
7	12 55	14	55	43	11 41	69	43.4	12 17	16592	905.6	762 (55)	68 (67)	776 (56)
11	12 25	14	54	57	11 13	69	42.8	11 47	16596	905.8	752 (55)	64 (67)	745 (56)
13	10 57	14	53	17	9 46	69	46.0	10 21	16545	906.2	755 (55)	70 (67)	729 (56)
18	12 55	14	59	36	11 41	69	43.2	12 17	16593	906.9	763 (54)	67 (67)	696 (754)
21	12 25	14	53	22	—	—	—	11 47	16574	906.4	751 (54)	67 (67)	—
26	12 47	14	54	5	11 29	69	44.3	12 8	16588	906.7	759 (53)	66 (67)	788 (55)
28	12 29	14	56	0	11 16	69	45.2	11 51	16578	905.6	748 (52)	63 (67)	787 (55)
Mar. 4	12 45	14	56	13	11 29	69	43.2	12 6	16580	905.7	752 (51)	63 (67)	737 (56)
7	12 39	14	55	7	11 25	69	43.1	12 8	16571	905.7	748 (51)	65 (67)	732 (56)
12	16 3	14	55	43	—	—	—	15 25	16594	905.9	749 (50)	62 (67)	—
18	12 17	14	57	38	—	—	—	11 38	16586	905.9	749 (50)	67 (67)	—
20	12 51	14	59	3	—	—	—	12 5	16594	906.5	766 (50)	74 (67)	—
22	11 51	14	56	53	—	—	—	11 15	16565	905.7	751 (50)	67 (67)	—
25	—	—	—	—	14 15	69	40.9	—	—	—	—	—	761 (60)
26	15 35	14	54	40	14 21	69	43.9	15 7	16592	905.3	746 (50)	64 (66)	772 (60)
28	—	—	—	—	11 36	69	48.6	—	—	—	—	—	741 (60)
Apr. 2	15 4	14	57	19	12 51	69	44.6	16 15	16608	905.8	746 (51)	62 (66)	790 (61)
5	12 33	14	54	31	10 55	69	43.0	11 32	16589	905.5	753 (51)	62 (66)	752 (61)
7	—	—	—	—	14 25	69	42.7	—	—	—	—	—	806 (761)
9	12 49	14	59	23	11 38	69	44.0	12 13	16558	906.0	759 (52)	68 (66)	678 (761)
11	12 29	14	57	43	11 12	69	43.9	11 50	16568	905.2	741 (52)	61 (66)	724 (61)
15	11 45	14	54	33	—	—	—	11 5	16541	905.4	758 (53)	68 (66)	—
19	9 25	14	45	55	8 15	69	43.8	8 47	16618	905.8	755 (54)	65 (66)	816 (760)
21	—	—	—	—	13 34	69	43.7	—	—	—	—	—	750 (59)
23	11 31	14	53	47	—	—	—	10 53	16574	906.5	768 (55)	71 (66)	—
25	11 43	14	50	55	10 29	69	43.1	11 5	16543	905.0	759 (55)	67 (66)	717 (57)
29	—	—	—	—	13 43	69	43.5	—	—	—	—	—	753 (54)
30	11 51	14	52	1	—	—	—	11 13	16565	905.3	755 (56)	67 (66)	—

ABSOLUTE DETERMINATIONS—*continued.*

Date.	Declination.			Inclination.			Horizontal Force.			Base Line Values (deduced and adopted).			
	Mean Time.	D.			Mean Time.	I.		Mean Time.	H.	m.	North.	West.	Vertical.
	h. m.	°	'	"	h. m.	°	'	h. m.	γ		15,000 γ +	4,000 γ +	44,000 γ +
May 2	11 57	14	52	3	10 50	69	43.2	11 23	16578	905.4	752 (56)	62 (66)	726 (52)
7	12 13	14	55	55	10 58	69	43.1	11 34	16569	905.6	755 (56)	64 (66)	693 (749)
9	13 47	14	56	17	13 27	69	43.1	11 31	16589	905.7	759 (56)	65 (66)	768 (48)
14	13 37	14	54	56	13 23	69	43.3	13 59	16581	905.6	761 (56)	71 (66)	767 (46)
16	12 7	14	49	23	10 55	69	43.1	11 31	16589	905.5	758 (56)	67 (66)	730 (45)
20	11 45	14	51	20	10 31	69	44.4	11 7	16596	906.6	783 (56)	74 (66)	788 (43)
23	11 53	14	51	35	10 41	69	43.5	11 17	16566	905.2	752 (55)	65 (66)	701 (41)
27	13 5	14	54	3	—	—	—	11 23	16564	905.1	743 (55)	60 (66)	—
28	—	—	—	—	11 16	69	43.1	—	—	—	—	—	705 (39)
30	11 55	14	51	35	10 47	69	45.2	11 20	16576	905.3	759 (55)	64 (66)	790 (38)
June 5	11 43	14	49	23	10 29	69	45.4	11 5	16573	904.9	751 (54)	66 (66)	823 (734)
10	11 9	14	49	23	9 55	69	44.6	10 31	16550	905.0	753 (55)	67 (67)	695 (732)
14	9 51	14	48	30	8 41	69	43.3	9 15	16560	905.7	773 (55)	70 (67)	626 (730)
19	11 49	14	51	13	10 37	69	43.3	11 13	16581	905.7	779 (56)	71 (68)	663 (729)
21	11 15	14	50	23	—	—	—	10 37	16567	905.0	761 (56)	70 (68)	—
23	9 19	14	42	40	8 9	69	43.5	8 43	16565	904.9	759 (57)	70 (68)	744 (28)
25	—	—	—	—	11 19	69	44.1	—	—	—	—	—	769 (28)
26	9 33	14	45	40	8 21	69	43.2	8 55	16576	904.8	758 (58)	65 (68)	753 (28)
July 4	—	—	—	—	12 29	69	42.7	10 49	16564	904.8	—	—	641 (729)
5	9 39	14	47	25	—	—	—	—	—	—	750 (61)	78 (69)	—
10	14 16	14	53	36	15 9	69	43.0	8 36	16586	905.6	761 (63)	62 (69)	713 (30)
18	11 51	14	48	37	10 41	69	45.5	11 15	16555	904.7	765 (66)	66 (69)	782 (32)
22	11 37	14	51	17	—	—	—	11 1	16565	905.1	759 (69)	63 (70)	—
24	9 23	14	45	7	8 14	69	43.1	8 47	16596	905.3	778 (70)	72 (70)	766 (33)
30	9 5	14	46	20	8 46	69	44.0	11 50	16547	905.5	773 (72)	63 (70)	688 (734)
Aug. 1	9 15	14	41	40	8 55	69	44.8	11 3	16587	905.5	784 (72)	74 (70)	805 (734)
8	11 57	14	50	10	10 50	69	49.4	11 23	16558	905.4	778 (75)	69 (70)	734 (34)
13	8 59	14	46	17	8 39	69	46.2	11 6	16558	905.9	780 (76)	68 (70)	773 (32)
15	9 7	14	47	23	8 49	69	42.7	10 50	16574	905.2	769 (77)	68 (70)	726 (31)
20	8 42	14	42	3	8 22	69	42.7	11 0	16577	905.4	782 (78)	70 (70)	703 (28)
22	8 47	14	43	48	8 28	69	43.6	11 30	16558	904.9	775 (79)	64 (70)	698 (727)
26	—	—	—	—	13 10	69	42.9	—	—	—	—	—	743 (24)
27	11 51	14	51	10	—	—	—	11 14	16566	905.6	784 (80)	69 (70)	—
Sept. 3	9 17	14	44	20	8 58	69	43.5	11 13	16543	905.1	771 (80)	66 (70)	638 (719)
5	8 41	14	41	35	—	—	—	11 2	16550	905.2	763 (80)	69 (70)	—
9	—	—	—	—	13 51	69	43.5	—	—	—	—	—	665 (717)
12	8 33	14	42	20	8 14	69	44.4	11 16	16561	904.7	773 (80)	70 (70)	720 (16)
16	8 35	14	41	5	8 17	69	44.5	11 11	16569	905.6	780 (80)	69 (70)	747 (15)
23	9 5	14	44	35	8 45	69	43.7	11 11	16566	905.6	791 (80)	70 (69)	694 (714)
26	8 55	14	39	45	8 25	69	44.5	10 56	16573	905.2	783 (80)	61 (69)	769 (14)
30	8 45	14	48	50	8 25	69	44.7	10 32	16512	905.7	791 (80)	73 (69)	626 (714)

ABSOLUTE DETERMINATIONS—*continued.*

Date.	Declination.				Inclination.		Horizontal Force.			Base Line Values (deduced and adopted).			
	Mean Time.	D.			Mean Time.	I.	Mean Time.	H.	m.	North.	West.	Vertical.	
	h. m.	°	'	"	h. m.	°	'	h. m.	$\gamma$		15,000 $\gamma$ +	4,000 $\gamma$ +	44,000 $\gamma$ +
Oct. 2	13 9	14	50	25	—	—	—	13 38	16551	904.6	771 (80)	66 (69)	—
10	15 13	14	48	35	13 58	69	43.5	14 35	16588	905.4	784 (78)	73 (68)	713 (16)
16	16 9	14	43	43	16 47	69	42.4	12 31	16576	905.3	780 (78)	67 (68)	676 (718)
16	16 15	14	43	33	—	—	—	15 25	16577	905.0	781 (78)	66 (68)	—
17	14 25	14	56	18	12 25	69	47.3	11 28	16602	904.6	800 (77)	71 (68)	726 (19)
22	14 41	14	45	33	—	—	—	12 21	16576	905.5	774 (77)	64 (67)	—
24	11 39	14	46	8	15 18	69	43.6	12 28	16557	904.6	764 (76)	62 (67)	705 (24)
30	12 55	14	45	13	—	—	—	12 12	16566	905.9	787 (75)	68 (67)	—
Nov. 7	9 41	14	41	23	—	—	—	10 5	16589	906.8	786 (73)	71 (66)	—
12	12 23	14	44	58	—	—	—	11 48	16574	906.3	766 (72)	64 (65)	—
15	11 7	14	40	33	—	—	—	10 32	16526	905.6	774 (71)	65 (65)	—
19	10 27	14	42	18	—	—	—	10 25	16595	906.7	792 (70)	70 (64)	—
21	12 39	14	45	37	11 29	69	44.4	12 3	16576	905.2	763 (69)	62 (64)	767 (62)
26	10 17	14	43	41	10 35	69	46.5	9 41	16540	905.1	754 (67)	62 (63)	747 (70)
27	—	—	—	—	10 29	69	46.0	—	—	—	—	—	746 (72)
28	15 16	14	41	51	14 20	69	45.3	10 47	16578	905.3	768 (66)	58 (63)	804 (773)
29	—	—	—	—	9 33	69	45.5	—	—	—	—	—	883 (775)
Dec. 2	14 29	14	41	44	—	—	—	12 13	16555	905.0	745 (65)	52 (62)	—
4	11 59	14	46	12	15 30	69	45.0*	12 29	16540	905.4	777 (64)	64 (62)	747 (83)
5	—	—	—	—	12 3	69	45.6	—	—	—	—	—	862 (784)
6	10 15	14	41	1	—	—	—	11 17	16571	905.5	723 (63)	58 (62)	—
9	11 11	14	41	48	14 57	69	45.1	11 51	16581	905.6	756 (62)	59 (61)	801 (790)
12	10 49	14	43	0	9 32	69	43.5	11 23	16590	905.4	761 (61)	62 (61)	797 (94)
17	11 28	14	39	8	14 23	69	43.5	12 6	16581	905.4	764 (59)	47 (59)	809 (01)
19	10 55	14	41	38	14 56	69	44.5	11 29	16595	905.6	762 (58)	57 (59)	814 (04)
24	11 13	14	43	13	—	—	—	11 41	16573	905.7	759 (56)	59 (58)	—
26	12 23	14	41	25	14 57	69	45.2	12 24	16571	905.8	754 (55)	55 (58)	818 (12)
30	11 53	14	44	0	15 4	69	45.0	12 20	16584	906.0	754 (53)	61 (57)	848 (16)

\*Dip Circle

The hourly readings are obtained from the magnetograms, standardized as described in the foregoing, by means of a ruled glass scale. The reading for any given hour G.M.T. is that ordinate estimated to be the mean reading for 60 minutes centring at the given hour. The product of this ordinate and the scale value is added to the adopted base line value, and the sum so obtained is the hourly value printed in the tables.

## IDENTIFICATION NUMBERS OF INSTRUMENTS IN USE IN 1930.

Unifilar Magnetometer, Kew pattern .. .. . Elliott, No. 60.  
(with collimator magnet, 60a, and mirror magnet,  
60c).

Dip Inductor .. .. . Schulze, No. 103.

**Notes on Tables.**

The hourly values of N, W, and V, obtained as described above, appear in three of the four monthly tables. The mean value for the day is computed according to the expression

$$x = \left\{ \frac{1}{2} (x_0 + x_{24}) + x_1 + x_2 + \dots + x_{23} \right\} / 24.$$

The letters "Q" and "D" denote the five quiet and the five most disturbed days as selected at De Bilt.

In the fourth table for each month are given :—

- (a) the values and times of the daily maximum and minimum and the values of the absolute daily range for each of the components N, W and V.
- (b) the value of  $\Sigma R^2$  for each day.  $\Sigma R^2$  is written for  $R_N^2 + R_W^2 + R_V^2$  where  $R_N$ ,  $R_W$ ,  $R_V$  denote the absolute ranges for a calendar day of the north, west and vertical components.
- (c) the daily magnetic character figures, assigned according to the international scheme wherein "0," "1," "2," respectively, denote quiet, moderately disturbed, and highly disturbed conditions.
- (d) the daily values of temperature in the underground magnetograph chamber.

In *The Observatories' Year Book* for the years 1922-6 the fourth table for each month contains the values of the "characteristic ratio,"  $\rho$ , which is the ratio of the value of  $\Sigma R^2$  for a given day to the mean monthly value of  $\Sigma R^2$ . To some extent this ratio serves as an index of the degree of disturbance on a given day relatively to other days of the same month. It enables the most highly disturbed days to be identified with fair certainty, but is of less use in distinguishing between the quieter days of a month, especially in summer months, when even the quiet day range is large, and in months in which very large disturbance occurs. Another defect is the great difference in the significance, in different months, of one and the same value of the ratio. Further, as long as record is liable to be lost during the larger disturbances the exact value of the ratio cannot be computed in some cases. Some of the drawbacks mentioned could be diminished by relating the ratio of the daily value of  $\Sigma R^2$  not to the mean value of  $\Sigma R^2$  for the month but to a quantity which approximates to the mean value of  $\Sigma R^2$  for a long period, e.g., for 11 years. It is considered that, on the whole, the application of  $\Sigma R^2$  as a criterion of disturbance or activity is not materially widened by the publication of the values of " $\rho$ ," and it was decided as from 1927 to discontinue the publication of this ratio.

Hourly values of declination are not given in this volume. They have been published weekly, primarily for the use of mine surveyors, in "The Colliery Guardian" and "The Iron and Coal Trades Review."

Mean diurnal inequalities of the components N, W, V, H, D, and I on all days and on international quiet and disturbed days are given, for the months, seasons and year, in Tables 317 to 334. In calculating diurnal inequalities the non-cyclic change has been eliminated on the assumption that its time-rate is linear. The inequalities of H, D, and I have been computed from those of N, W, and V, by means of the formulæ :

$$\begin{aligned} \delta D &= \frac{180 \times 60}{\pi} \left( \frac{\delta W \cos D - \delta N \sin D}{H} \right) \\ \delta H &= \delta N \cos D + \delta W \sin D \\ \delta I &= \frac{180 \times 60}{\pi} \cos I \left( \frac{\delta V \cos I - \delta H \sin I}{H} \right) \end{aligned}$$

in which  $\delta D$  and  $\delta I$  are expressed in minutes of arc, and where H, D, and I for any given month are the respective mean values for that month as published in Table 338. The values of the range of the mean diurnal inequalities of the several elements on the three different types of day are brought together in Table 335, and the values of the non-cyclic change of N, W, and V are given in Table 336.

The results of harmonic analysis of the mean diurnal inequalities of N, W, and V for the months, seasons<sup>1</sup> and year are to be found in Tables 339 and 340, in which are given the values of  $a_n$ ,  $b_n$ ,  $c_n$ , and  $\alpha_n$ , in the two equivalent series  $\Sigma (a_n \cos 15nt^\circ + b_n \sin 15nt^\circ)$  and  $\Sigma c_n \sin (15nt^\circ + \alpha_n)$ . In the former series  $t$  is reckoned in hours from midnight G.M.T., whilst the published values of  $\alpha_n$  refer to Local Mean Time. The values of the harmonic coefficients have been computed from the unrounded values of the inequalities and have been corrected, where necessary, on account of the fact that the hourly values are not instantaneous values but are mean values. The factors by which the coefficients have to be multiplied (*vide* Report of the British Association, 1883, p. 98) are 1.00286 for  $a_1, b_1, c_1$ ; 1.01152 for  $a_2, b_2, c_2$ ; 1.02617 for  $a_3, b_3, c_3$ ; and 1.04720 for  $a_4, b_4, c_4$ . Finally, the values were rounded off to 0.1  $\gamma$ .

The mean values of the squares of the absolute daily ranges are summarized in Table 337.

In Table 338 appear for the months and year the mean values of N, W, V, D, I, H and Total Force, T. The means of the four latter elements are derived from the corresponding mean values of N, W and V, which are the means of hourly values on all days in the month or year. Tables 341 and 342 contain mean values of the magnetic elements for 1930 and recent years at a number of observatories.

#### Review of Results of Magnetic Observations.

*Mean and Extreme Values of the Magnetic Elements, 1930.*—The mean values<sup>2</sup> are given below in Table I along with the corresponding values for the previous year. The values of N, W, and V have been computed from the hourly values derived from the autographic records of all days, standardized by means of the absolute observations; those of H, D, I, and T have been deduced from the values of N, W, and V.

TABLE I.

Year.	H.	D. (West).	I.	N.	W.	V.	T.
	$\gamma$	$^\circ \quad '$	$^\circ \quad '$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1929 .. ..	16603	14 58.9	69 41.9	16038	4292	44878	47851
1930 .. ..	16585	14 47.1	69 43.2	16036	4232	44881	47847

Westerly declination was on the average 11'.8 less in 1930 than in 1929. The rate of decrease is slightly less than the average rate, 12'.4, during the years 1920–27. Between 1913 and 1920 the average rate of decrease was 9'.3. As compared with the 1929 value horizontal force shows a fall of 18 $\gamma$ , which is greater than the average annual rate of decrease between 1912 and 1927. Practically no change in the average value of the north component has occurred since 1925, but as in recent years the west component decreased by some 60 $\gamma$ . Inclination has increased by 1'.3. The values of vertical and total force have changed little.

Mean values derived from (a) international quiet days and (b) international disturbed days are as follow: (a) N, 16043 $\gamma$ ; W, 4235 $\gamma$ ; V, 44883 $\gamma$ ; (b) N, 16026 $\gamma$ ; W, 4229 $\gamma$ ; V, 44879 $\gamma$ .

<sup>1</sup> The seasons are defined for this purpose as follows:—*Winter*, January, February, November, December; *Equinox*, March, April, September, October; *Summer*, May, June, July, August.

<sup>2</sup> See remarks on p. 168.

The differences between the mean annual values of N, W, and V, derived from all, international quiet, and international disturbed days in 1926, 1927, 1928, 1929 and 1930, are given below, together with the mean differences for the years 1915-1925. In every year of the series quoted the mean value of N and of W on quiet days exceeded the mean value on all and on disturbed days. The only years in the period 1915-25, for which either the all or the disturbed day mean value of V exceeded the quiet day value were 1917, 1919, 1921.

	Quiet day mean—All day mean.			Quiet day mean—Disturbed day mean.		
	N	W	V	N	W	V
	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1930 ..	+7.0	+2.8	+1.6	+16.1	+5.6	+3.7
1929 ..	+3.8	+1.4	+0.2	+11.1	+2.8	+1.9
1928 ..	+4.5	+1.4	-1.6	+ 7.7	+2.6	-3.4
1927 ..	+2.9	+1.1	-0.3	+ 9.1	+2.4	-2.7
1926 ..	+4.8	+2.0	-0.7	+16.1	+5.7	-1.4
1915-1925	+2.7	+1.2	+0.7	+ 8.5	+3.3	+1.5

The resultant vector representing the average excess of the mean values on quiet days over the mean values on all days, for the years 1915-1925, has a magnitude of  $3\gamma$ ; its azimuth is  $336^\circ$ , measured from true north through east, and it is inclined at about  $77^\circ$  to the downwardly directed vertical. The vertical plane which contains this vector approximates very closely in azimuth to the vertical plane passing through Eskdalemuir and the pole (taken as  $78^\circ\text{N}$ ,  $68^\circ\text{W}$ ) of the axis of magnetization of the earth. (cf. S. Chapman, *On certain average characteristics of world-wide magnetic disturbance*. Lond. Proc. Roy. Soc. Series A. Vol. 115, p. 242).

The extreme values of N, W, and V actually recorded during 1930 are given in Table II. It seems fairly certain, however, that the value quoted for N was exceeded on the afternoon of December 3 when the upper limit of registration was passed for some 10 minutes.

TABLE II.

Component.	Maximum.			Minimum.			Absolute Annual Range.
	Value.	Date, 1930.			Value.	Date, 1930.	
North .. ..	$\gamma$ 16456	Oct.	d h m 17 17 16	$\gamma$ 15756	April	d h m 8 0 32	$\gamma$ 700
West .. ..	4542	Oct.	17 17 16	3901	Oct.	17 21 35	641
Vertical ..	>45325	{ Dec.	3 15 8 and 3 17 50 to 18 5	44538	May	31 1 31	>787

*Magnetic Character of the Year.*—General agreement not having been reached yet as to the most suitable method of obtaining a numerical measure of magnetic activity, the Eskdalemuir practice of tabulating for each day the value of  $\Sigma R^{2(1)}$ , i.e., the sum of the squares of the absolute daily ranges of N, W and V, has been continued. The evaluation of the mean daily values of  $\Sigma r^2$ , the sum of the squares of the hourly ranges of N, W, and V, has not been carried out since 1925, but the values of hourly ranges of some further years have been tabulated and are available for the purposes of investigation. The magnetic character figures which were assigned in accordance with the international scheme are summarized in Table III. These character figures were assigned quite independently of knowledge of the values of  $\Sigma R^2$ . Table III contains also the monthly mean value of the international character figures, which

<sup>(1)</sup> See p. 169.

for 1930 are based on the estimates made at 41 observatories, and the mean monthly values of  $\Sigma R^2$  for all, "0," "1," "2," international quiet (Q), and international disturbed (D) days.

The Eskdalemuir mean character figure for the year, like the international mean character figure, is greater than for 1928 and 1929; the international mean character figure in fact is the highest during the present sunspot cycle. The mean sunspot numbers for the years 1923-30, are, in order, 5.8, 16.7, 44.3, 63.9, 69.0, 76.8, 64.2 and 38.9. Both the Eskdalemuir and the international mean character figures increased concurrently with the sunspot numbers up to 1926, but the concurrence since then has not been maintained.

The Eskdalemuir character figures and the mean values of  $\Sigma R^2$  for all days suggest that May was the most disturbed month.

In Table III the annual mean values are the means of the monthly values entered in the corresponding columns. The mean value of  $\Sigma R^2$  for all days exceeds the value for any of the other years since 1919 with the exception of that for 1926.

TABLE III.

Month.	Magnetic Character Figures. Number of			Mean Character Figure.		Mean Value of $\Sigma R^2/100\gamma^2$ .					
	"0" days.	"1" days.	"2" days.	Eskdalemuir.	International.	All days.	Q days.	"0" days.	"1" days.	"2" days.	D days.
1930.						$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$
January ..	6	22	3	0.90	0.69	181	21	31	131	854	624
February ..	6	17	5	0.91	0.89	396	56	66	224	1374	1374
March ..	6	21	4	0.90	0.90	356	37	38	332	959	699
April ..	5	23	2	0.90	1.04	668	151	192	614	2473	1735
May ..	8	17	6	0.94	0.93	707	102	120	424	2291	2236
June ..	7	20	3	0.87	0.87	490	90	98	450	1672	1341
July ..	7	22	2	0.84	0.87	373	66	93	368	1411	1112
August ..	6	22	3	0.90	0.88	426	113	128	369	1440	1139
September ..	10	16	4	0.80	0.85	434	89	104	336	1647	1411
October ..	7	21	3	0.87	0.88	660	36	50	366	4141	2789
November ..	12	15	3	0.70	0.61	231	18	41	183	1234	921
December ..	14	14	3	0.65	0.54	303	9	23	141	2367	1550
Year, 1930 ..	94	230	41	0.85	0.83	435	66	82	328	1822	1411
Year, 1929 ..	118	213	34	0.75	0.67	368	61	72	223	2240	1329
Year, 1928 ..	96	246	24	0.80	0.63	337	70	76	209	4393	763
Year, 1927 ..	95	231	39	0.85	0.63	258	66	68	164	1244	908
Year, 1926 ..	90	227	48	0.89	0.65	465	63	65	180	2167	2048
Year, 1925 ..	145	191	29	0.69	0.56	172	48	56	154	767	541
Year, 1924 ..	191	153	22	0.54	0.55	121	39	43	113	715	424
Year, 1923 ..	235	111	19	0.41	0.48	115	32	42	129	776	408
Year, 1922 ..	174	145	46	0.65	0.65	205	47	64	221	720	601

*Diurnal Inequalities.*—The mean diurnal inequalities for all days, international quiet and disturbed days, for the months, seasons and the year, are given in Tables 317-334, and the corresponding inequality ranges in Table 335. The inequalities of N, W, and V for international quiet and disturbed days are shown graphically in Plates III and IV, the representation in the latter plate being in the form of vector diagrams.

The ranges of the mean diurnal inequalities of N on all days in 1930 are markedly greater than in 1929, and about equal to those of 1928, which were high; the ranges of W on all days are less than in any recent year and of about the same order as in 1924; the ranges of V on all days are decidedly greater than in any recent year. The unusual magnitude of the N and V ranges arises from the high mean ranges attained by these elements on the disturbed days.

# DIURNAL VARIATION OF MAGNETIC FORCE ESKDALEMUIR 1930

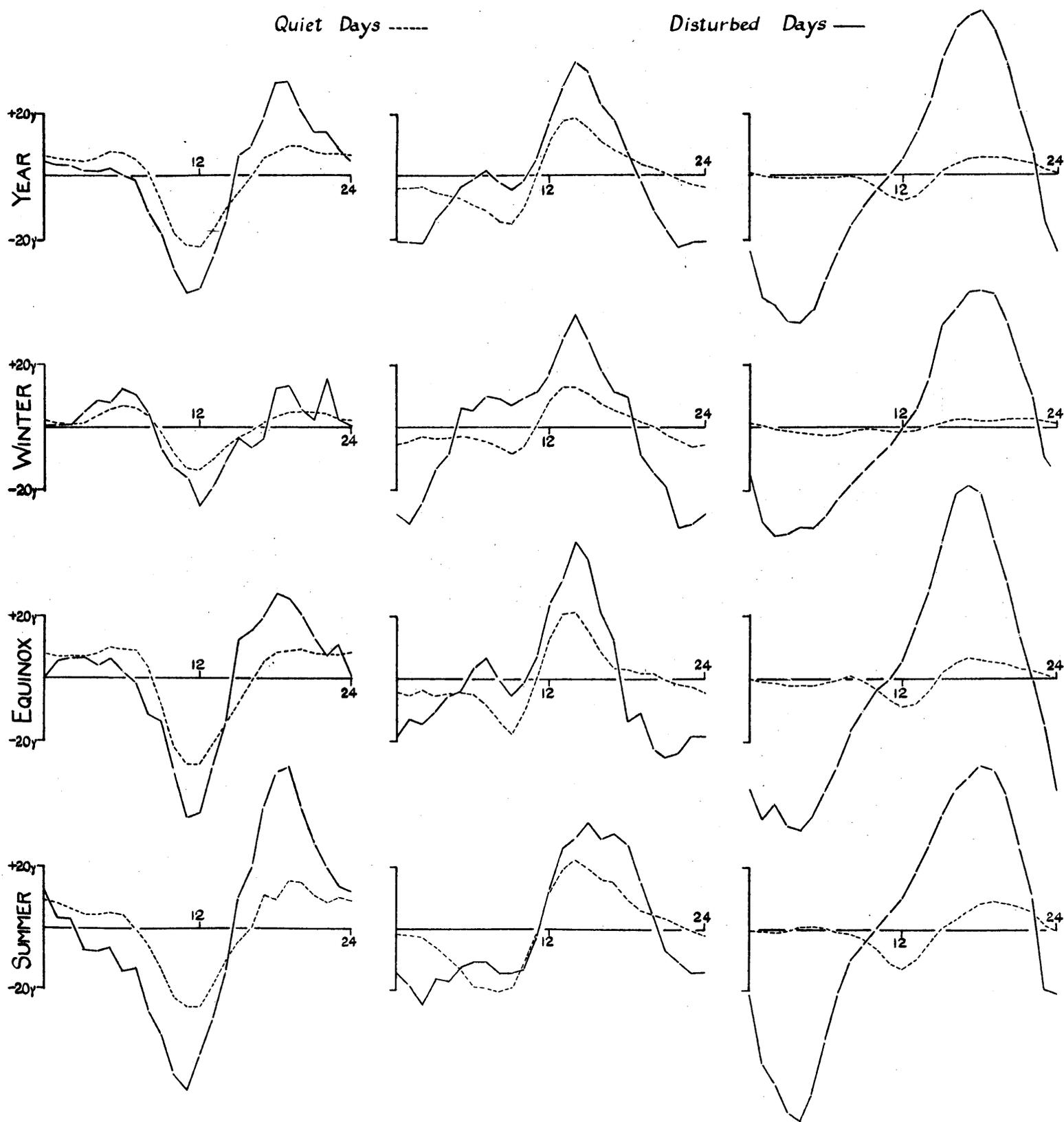
North Component

West Component

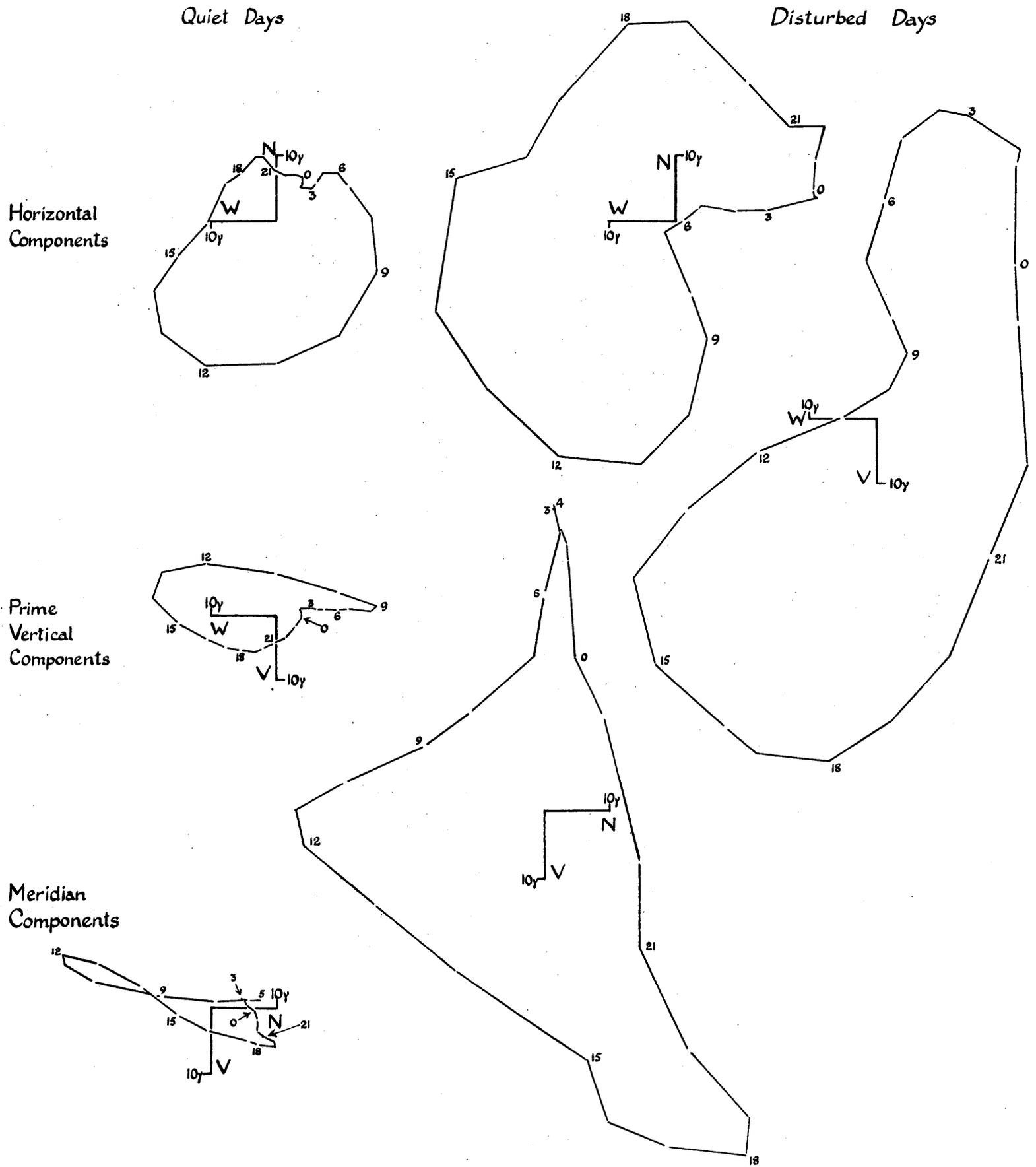
Vertical Component

Quiet Days -----

Disturbed Days —



# VECTOR DIAGRAMS ILLUSTRATING DIURNAL VARIATION OF MAGNETIC FORCE ESKDALEMUIR 1930



The average values of the diurnal inequality ranges for the year and seasons for the period 1916-26 (not the values of the range of the representative mean diurnal inequalities for this period) are given below, along with the 1930 values expressed as a percentage of the average values. The units employed are  $\gamma$  for force and  $\gamma'$  for declination. The mean sun-spot number for 1916-26 is 46.7; that for 1927 is 69.0, for 1928 76.8, for 1929 64.2, and for 1930 38.9. The 1930 values, unless in the case of W, are nearly all above the average. The most conspicuous deficiency is W for quiet days in summer.

Year,		All days.					International quiet days.					International disturbed days.				
		N.	W.	V.	H.	D.	N.	W.	V.	H.	D.	N.	W.	V.	H.	D.
Year,	1916-26 ..	36.6	38.7	21.9	35.6	8.26	32.7	37.0	12.1	32.4	8.00	48.3	53.7	65.6	49.7	11.14
	1930 % ..	123	94	174	121	97	97	91	113	97	91	140	109	151	132	118
Winter,	1916-26 ..	22.1	27.7	15.9	18.3	6.31	19.0	19.4	5.2	15.9	4.42	30.1	49.5	53.8	27.5	10.50
	1930 % ..	116	119	147	120	116	110	109	96	116	107	135	137	145	126	134
Equinox,	1916-26 ..	41.5	44.2	27.2	39.0	9.57	37.8	42.0	13.1	37.2	9.04	56.0	65.3	82.0	55.4	13.76
	1930 % ..	121	97	166	119	104	98	93	119	95	98	127	104	133	115	109
Summer,	1916-26 ..	54.0	55.6	26.5	56.1	11.33	45.6	53.4	19.8	46.7	11.12	78.3	67.9	70.2	85.5	12.80
	1930 % ..	122	82	175	122	80	89	80	116	89	82	133	87	162	124	93

*Daily Range.*—The values of mean absolute daily range for the months and seasons of the year, together with the corresponding means for 1916-26 are given in Table IV; the ranges are also expressed as percentages of the mean absolute daily range for the year.

TABLE IV.—ABSOLUTE DAILY RANGE. MEAN MONTHLY VALUES.

Month.	Mean Absolute Daily Range.						Mean Daily Range expressed as Percentage of Yearly Mean.					
	1930.			Mean 1916-26.			1930.			Mean 1916-26.		
	N.	W.	V.	N.	W.	V.	N.	W.	V.	N.	W.	V.
January .. ..	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	%	%	%	%	%	%
February .. ..	71	78	41	69	73	39	61	78	57	80	88	81
March .. ..	100	109	71	69	76	38	86	109	99	80	92	80
April .. ..	116	98	71	95	94	57	99	98	99	110	113	119
May .. ..	163	125	109	98	88	54	139	125	151	114	106	113
June .. ..	159	115	111	102	88	59	136	115	154	119	106	123
July .. ..	147	102	82	92	85	46	126	102	114	107	102	96
August .. ..	131	87	66	86	82	43	112	87	92	100	99	90
September .. ..	135	103	76	98	88	55	116	103	106	114	106	115
October .. ..	117	109	79	100	92	63	100	109	110	116	111	131
November .. ..	128	123	75	94	93	57	110	123	104	109	112	119
December .. ..	79	75	45	62	66	34	68	75	63	72	80	71
Year .. ..	64	79	44	60	64	33	55	79	61	70	77	69
Winter .. ..	79	85	50	65	70	36	68	85	69	76	84	75
Equinox .. ..	131	114	83	97	92	58	112	114	115	113	111	121
Summer .. ..	143	102	84	95	86	51	122	102	117	110	104	106
Year .. ..	117	100	72	86	83	48	—	—	—	—	—	—

The values of the mean daily range for the year are greater even than the corresponding values for 1926, the most disturbed of recent years. The mean ranges are conspicuously high in all three seasons.

The frequency distribution of absolute daily ranges recorded in 1930 is shown in Table V, which also contains the percentage distribution for the period 1916-1926.

TABLE V.—FREQUENCY DISTRIBUTION OF ABSOLUTE DAILY RANGE.

Range.	Number of Cases 1930.			Percentage Distribution.					
				N.		W.		V.	
	$\gamma$	N.	W.	V.	1930.	1916-26.	1930.	1916-26.	1930.	1916-26.
0-9	0	0	16	0.0	0.0	0.0	0.0	4.4	6.3
10-19	4	2	46	1.1	1.7	0.5	0.9	12.6	20.2
20-29	11	11	52	3.0	4.9	3.0	4.5	14.2	24.8
30-39	19	14	31	5.2	7.8	3.8	7.5	8.5	14.3
40-49	26	20	35	7.1	9.9	5.5	10.6	9.6	8.1
50-59	21	30	32	5.8	12.2	8.2	12.0	8.8	4.8
60-69	28	32	22	7.7	12.9	8.8	13.1	6.0	4.2
70-79	27	45	14	7.4	10.3	12.3	12.4	3.8	3.1
80-89	25	32	16	6.8	8.1	8.8	8.6	4.4	2.3
90-99	26	36	17	7.1	6.5	9.9	7.5	4.7	2.1
100-109	15	25	8	4.1	5.3	6.8	4.7	2.2	1.1
110-119	16	25	10	4.4	4.0	6.8	3.5	2.7	1.2
120-129	19	16	7	5.2	3.5	4.4	2.7	1.9	0.8
130-139	17	12	11	4.7	2.6	3.3	2.2	3.0	0.8
140-149	14	19	7	3.8	1.7	5.2	2.2	1.9	0.5
150-159	14	5	4	3.8	1.3	1.4	1.2	1.1	0.7
160-169	9	8	5	2.5	1.2	2.2	0.9	1.4	0.5
170-179	9	4	7	2.5	0.8	1.1	1.0	1.9	0.4
180-189	13	2	2	3.6	0.6	0.5	0.7	0.5	0.5
190-199	7	3	1	1.9	0.5	0.8	0.6	0.3	0.3
200+	45	24	22	12.3	4.4	6.6	3.1	6.0	3.1
Days omitted	0	0	0	..	..	..	..	..	..

TABLE VI.—PRINCIPAL MAGNETIC DISTURBANCES RECORDED AT ESKDALEMUIR, 1930.

Where the beginning of a disturbance has been marked by a "sudden commencement," the serial number is followed by an asterisk (\*), and the time entered in the second column is that of the sudden commencement, estimated to the nearest minute. In other cases, the exact hour nearest the time at which disturbance may be regarded as having begun is entered in the second column. To the tabulated values of maximum and minimum the following have to be added:—N, 15000γ; W, 4000γ; V, 44000γ.

No.	From	To	North Component.					West Component.					Vertical Component.				
			Max.	Time.	Min.	Time.	Range	Max.	Time.	Min.	Time.	Range	Max.	Time.	Min.	Time.	Range
1	d h m Jan. 4 13	d h Jan. 8 2	γ 1170	d h m 4 19 10	γ 924	d h m 4 19 24	γ 246	γ 365	d h m 4 19 16	γ 142	d h m 4 21 21	γ 223	γ 999	d h m 6 16 11	γ 837	d h m 6 4 39	γ 162
2	Feb. 11 23	Feb. 17 23	1172	12 21 52	861	12 23 12	311	348	{ 12 13 31 and 13 14 18	-1	12 22 45	349	995	13 18 22	673	12 23 10	322
3	Feb. 25 2	Feb. 26 4	1143	25 18 16	966	25 12 15	177	296	25 12 44	127	25 21 58	169	945	25 18 8	831	26 0 39	114
4	Feb. 28 6	Mar. 3 18	1144	2 21 6	965	1 10 28	179	309	1 14 55	145	2 17 46	164	938	2 16 7	829	1 3 58	109
5	Mar. 11 12	Mar. 19 6	1199	18 18 20	881	12 12 29	318	329	14 14 22	114	12 4 26	215	988	12 17 49	736	12 5 42	252
6	Mar. 21 14	Mar. 24 20	1097	21 23 3	890	24 8 20	207	307	{ 22 13 53 and 24 14 46	181	22 3 20	126	933	22 17 25	807	22 4 0	126
7	Apr. 6 12	Apr. 14 4	1159	8 20 35	756	8 0 32	403	332	10 23 22	86	8 1 56	246	955	7 18 6	(570)	{ 8 0 35 About	365
8	Apr. 15 10	Apr. 17 8	1130	16 22 48	951	15 11 10	179	292	15 13 48	153	16 23 7	139	929	15 17 32	812	16 3 28	117
9	Apr. 19 5	Apr. 23 22	1178	22 19 3	873	20 6 0	305	378	20 6 12	127	{ 19 19 14 and 22 0 20	251	1012	19 19 6	745	22 23 38	267
10	May 4 2	May 10 6	1212	7 18 43	830	7 1 0	382	308	5 13 12	83	5 2 20	225	936	5 13 55	655	5 3 38	281
11	May 11 21	May 14 6	1125	13 19 34	962	13 5 24	163	301	13 13 50	147	12 0 49	154	901	13 18 28	751	12 1 50	150
12	May 16 12	May 23 3	1274	16 18 59	875	17 6 24	399	352	16 17 26	99	16 18 53	253	1017	16 18 51	757	19 2 4	260
13	May 30 13	June 4 24	1240	31 17 58	760	31 1 31	480	342	31 18 54	79	31 0 28	263	928	31 17 53	538	31 1 31	390
14*	June 5 21 34	June 8 24	1116	6 23 18	934	7 2 43	182	299	7 7 12	145	8 1 28	154	904	7 18 54	729	7 23 2	175
15*	June 11 21 56	June 14 17	1188	12 16 44	922	13 7 43	266	348	12 15 20	180	12 8 52	168	956	12 17 6	788	12 23 22	168
16	June 15 10	June 21 18	1166	18 17 18	809	16 8 22	357	364	16 8 28	126	16 10 23	238	930	18 17 10	765	17 1 33	165
17	June 27 1	June 30 24	1154	29 18 30	970	28 8 29	184	308	28 14 54	159	28 8 21	149	913	27 17 54	797	29 3 42	116
18*	July 9 14 53	July 14 2	1213	13 17 0	884	11 2 59	329	329	9 18 9	122	11 4 30	207	958	13 16 50	612	11 3 27	346
19	July 16 6	July 17 24	1147	16 18 53	967	16 9 33	180	289	16 15 58	182	17 1 58	107	912	17 17 40	804	17 2 43	108
20	July 24 16	July 26 20	1142	24 22 12	936	25 11 8	206	301	25 13 15	133	25 1 57	168	930	25 17 23	791	25 0 53	139
21	Aug. 5 10	Aug. 13 6	1236	8 19 32	880	7 11 21	356	342	6 14 52	94	6 20 56	248	1016	6 15 7	760	8 2 43	256
22	Aug. 14 13	Aug. 15 20	1212	14 20 12	957	15 7 32	255	270	15 0 51	93	14 20 4	177	936	15 16 4	812	15 1 30	124
23	Aug. 21 10	Aug. 25 5	1130	23 16 31	923	22 2 54	207	302	21 15 30	150	22 2 22	152	921	24 17 42	761	22 3 59	160
24	Sept. 1 12	Sept. 2 8	1091	1 16 40	936	1 12 49	155	312	2 1 10	192	2 3 36	120	954	1 16 33	793	2 2 59	161
25	Sept. 3 3	Sept. 4 16	1155	3 15 30	935	4 9 19	220	349	3 15 31	89	3 20 57	260	1061	3 15 43	752	4 0 48	309
26	Sept. 5 2	Sept. 8 22	1165	5 18 52	916	6 11 42	249	286	6 13 46	148	5 20 30	138	937	5 17 59	839	6 2 50	98
27*	Sept. 18 8 52	Sept. 19 22	1128	18 18 57	856	18 10 51	272	361	18 13 28	76	18 18 58	285	1036	18 17 50	769	19 2 20	267
28	Sept. 28 2	Sept. 30 20	1157	29 18 20	839	30 6 14	318	383	30 4 39	100	29 18 32	283	919	29 13 40	637	30 4 49	282
29	Oct. 2 12	Oct. 4 24	1126	3 20 14	914	3 10 53	212	274	3 13 11	108	{ 2 22 12 and 3 20 5	166	943	3 16 5	827	3 20 44	116
30*	Oct. 14 4 23	Oct. 15 3	1096	14 7 0	956	14 21 27	140	279	14 14 59	79	14 21 8	200	920	14 20 0	838	14 7 0	82
31*	Oct. 17 3 38	Oct. 21 8	1456	{ 17 17 16 About	817	17 21 19	639	542	17 17 16	-99	17 21 35	641	1194	17 17 10	788	17 21 40	406
32	Oct. 25 12	Oct. 30 24	1178	30 20 8	907	26 0 26	271	312	26 13 53	74	30 19 57	238	1006	26 16 6	746	26 0 50	260
33*	Nov. 13 19 28	Nov. 15 24	1141	14 19 39	913	14 21 6	228	376	14 20 29	120	15 2 33	256	1059	14 20 37	872	15 4 32	187
34	Nov. 23 16	Nov. 27 20	1150	24 22 10	902	25 18 14	248	303	25 5 0	94	25 22 50	209	1004	25 16 16	764	26 1 20	240
35*	Dec. 3 1 8	Dec. 5 4	>1301	{ 3 15 8 and 3 17 35 -46 About	891	3 15 26	>410	430	3 17 49	36	3 23 45	394	>1325	{ 3 15 8 and 3 17 50 to 18 5 About	761	4 5 33	>564
36	Dec. 20 15	Dec. 24 4	1130	20 18 55	958	{ 20 19 59 and 21 9 18	172	246	{ 20 18 0 and 21 7 40	45	20 18 51	201	1031	20 18 37	894	24 0 4	137

The intervals of maximum frequency in 1930 lie between 60 and 79 $\gamma$  for N and W, and 20–29 $\gamma$  for V. These are much the same as in recent years. In 1923, the year of the last sunspot minimum, the intervals were 40–49 $\gamma$  for N and W, 10–19 $\gamma$  for V.

On 88 days in 1930 the absolute range in either N or W was 160 $\gamma$  or more. The numbers of such days in the years 1915 to 1929 were, in order, 30, 47, 35, 56, 58, 36, 27, 32, 11, 10, 24, 46, 41, 48, 50. The frequency of occurrence in 1930 of ranges in excess of 199 $\gamma$  is greater even than in 1926. There were 16 days on which the range in each of N, W, and V was 200 $\gamma$  or more, as compared with 18 such days in 1926, seven in 1927, five in 1928, and nine in 1929.

*Irregular changes in Declination.*—In connexion with the supply of declination data to mine surveyors it has been the practice to classify the hourly periods between the exact hours G.M.T. into four groups according to the range in declination within each period. The range limits, which were adopted in consultation with representative mine surveyors, are:—less than 5', between 5' and 15', between 15' and 30', and greater than 30'. This method of classification has been applied to the declination records obtained in the year 1930 and the actual frequencies of occurrence of hourly ranges in the last three of the four divisions mentioned are set out below. A range of 30' is equivalent to a change of 145 $\gamma$  in the component of horizontal force perpendicular to the magnetic meridian.

Range Interval.	Number of cases per month.												Year.
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
5' to 15' ..	92	147	175	211	187	182	136	180	116	142	87	75	1730
15' to 30' ..	10	19	23	28	30	9	7	22	20	39	13	12	232
>30' ..	1	0	0	1	2	1	0	4	7	6	2	4	28

Range Interval	Hourly Distribution. 1930.																							
	Hour ending at (G.M.T.)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
5' to 15' ..	120	95	88	76	65	61	63	61	67	42	42	54	41	42	51	45	69	78	80	97	99	88	102	104
15' to 30' ..	12	13	10	7	8	4	7	3	1	1	0	1	0	2	5	9	10	21	28	20	20	19	15	16
>30' ..	1	1	0	0	0	0	0	0	1	0	0	0	0	0	2	3	1	2	6	4	3	3	1	0

On the average quiet day the most conspicuous change in declination is that from the most easterly value at about 8h or 9h to the most westerly value at about 13h or 14h, the rate of change being greatest between 10h and 12h. The hourly range due to the regular diurnal variation at this time of day is less than 5', but doubtless it happens at times that the occurrence of slight disturbance will result in the hourly range exceeding 5', whereas the occurrence of the same degree of irregularity at another hour of the day would not cause the hourly range to exceed 5'. Thus the figures given above for the range interval 5'–15' tend to exaggerate somewhat the incidence of irregular changes between 9h and 13h. The hourly distributions of the frequency of occurrence of ranges between 5' and 15' and between 15' and 30' exhibit the well known tendency for irregular changes to occur predominantly during the "night" hours—at least in Europe.

*Principal Magnetic Disturbances during 1930.*—Particulars of the principal magnetic disturbances recorded during the year are given in Table VI. Corresponding information for the same disturbances is given in the Lerwick Section. The magnetograms for the most highly disturbed days are not reproduced in this volume, but photographic copies may be obtained on application to the Director, Meteorological Office, Air Ministry, Kingsway, London, W.C. 2.

**Remarks on Magnetic and Allied Phenomena, 1930.**

*January.*—(Average Character Figure 0.90). After slight activity during the first two days of the month a moderate disturbance began at 3d 8h. Disturbance was greatest on the afternoons of the 4th, 5th and 6th, the most conspicuous movement occurring at about 4d 19h, when there was a rapid drop of  $70\gamma$  in V and oscillations with a range of  $240\gamma$  in N and  $160\gamma$  in W. During each of the three nights W was generally below its undisturbed value; V rose to a maximum each afternoon, falling gradually to a minimum in the early hours of the following morning. The ranges in this period were:—N,  $246\gamma$ ; W,  $223\gamma$ ; V,  $162\gamma$ . The disturbance died away during the 7th and 8th.

The next eight days, though not very quiet, were free from large disturbance. Considerable activity occurred on the evening of the 17th and again on the following evening, continuing with intermissions till the end of the 23rd. A small "sudden commencement" at 20d 15h 10m, after several hours of comparative quiet, marked the beginning of increased activity, which lasted till 21d 2h.

From 26d 2h to 28d 8h conditions were very quiet, but activity was renewed during the remainder of the month.

*February.*—(Average Character Figure 0.96). There was continual disturbance of a minor order throughout the first three days of the month. Disturbance was greatest on the afternoon and evening of the 3rd; small humps in V, with maxima at about 14h and 17h 30m, were accompanied by dips in W and rapid fluctuations in N; large oscillations occurred in N between 19h 30m and 21h. The ranges during these three days were:—N,  $137\gamma$ ; W,  $133\gamma$ ; V,  $80\gamma$ . Disturbance diminished during the 4th and 5th and conditions were fairly quiet from the 6th to 11th inclusive.

A large disturbance began at 11d 23h with small and rapid oscillations in N and W. These were followed at 23h 15m by a drop in W, which reached a minimum,  $45\gamma$  below its undisturbed value, at 12d 0h 35m, and thereafter rose again irregularly. From 6h to 7h there were further small rapid oscillations in N and W, accompanied by a hump in both and a dip in V. These events in themselves are hardly worthy of description, but they are interesting because a similar sequence can be detected on the previous night, but several hours earlier.

During the 12th movements were not large until after 21h. Shortly before 22h however, N and V rose rapidly to sharp peaks, and immediately began to fall, reaching nearly simultaneous minima soon after 23h; the range of this movement was  $311\gamma$  in N and  $278\gamma$  in V. Thereafter both components oscillated irregularly till 13d 3h, though generally rising till 8h; their movements during the whole of this period were very similar. W began to fall at 12d 21h 15m and reached a minimum at 22h 45m, some  $270\gamma$  below its value at 21h. Thereafter W also rose, with large fluctuations at first, till 13d 8h.

Conditions were disturbed for the next four days, the most notable movement being a dip of about  $165\gamma$  in V between 0 and 5h on the 14th, with its minimum at 2h 24m. A much sharper dip of  $125\gamma$ , with a practically simultaneous minimum, occurred in N between 2 and 3h.

The disturbance died away during the 17th, but there was fresh activity on the night of the 18th–19th. The ranges during the 12th to 17th inclusive were:—N,  $311\gamma$ ; W,  $349\gamma$  (an unusually large range compared with the other components); and V,  $322\gamma$ .

On the 25th occurred a small disturbance, of which the most noteworthy movements were two dips of some  $110\gamma$  in W, the first at about 18h and the second from 21h till midnight. Between 18h 0m and 28m, N rose and fell smoothly by  $130\gamma$ ; this was accompanied by a small maximum in V, which afterwards fell gradually to a rounded minimum at 26d 1h.

During the rest of the month there was continued activity of a low order.

*March.*—(Average Character Figure 0.94). A small disturbance, beginning during the last day of February, continued for the first three days of March. There was a somewhat unusual degree of activity, consisting of oscillations of an amplitude large compared with their short period (about 3 or 4 minutes), in all components during March 1st from 6h to 13h and again around 15h. These took place again the next day but were less marked. During the intervening night, and to a larger extent the following night (2nd—3rd), all components underwent irregular fluctuations, W being generally below its undisturbed value. On the afternoon of the 3rd the rapid oscillations set in again; these had a period of about 4 minutes and a range of the order of 15γ in N and 10γ in W, and the two components were closely in phase with one another. They ceased abruptly shortly before 18h, and there was little further disturbance.

From 4d 20h till the afternoon of the 11th conditions were very quiet. At 11d 14h 38m, however, N fell rapidly by 37γ and W by 40γ, and V rose slightly. Nothing further occurred for several hours, but at 18h N and W began to fluctuate irregularly; the fluctuations increased during the night and morning (with a temporary break from 0 to 2h), W being below its normal value till 8h. The most marked movements of long period were those of V, which rose rapidly from 11d 20h to a maximum soon after 21h, from which it fell gradually. At 12d 3h its fall became very rapid until nearly 4h; it then fluctuated irregularly till 5h 40m, when, after a sharp minimum, it rose rapidly, remaining, however, below its undisturbed value for some three hours longer.

During the 12th—15th the movements were continual and rapid, but not very large; the disturbance was hardly less during the next three days, and indeed the most notable individual movement of N during this storm occurred on the 18th. This consisted of a rise of 170γ between 18h 4m and 20m, followed by a rapid but irregular return to the original value.

The ranges during the 11th to 18th inclusive were:—N, 253γ; W, 215γ; V, 252γ.

Conditions were disturbed for the rest of the month. On the 24th between 7 and 10h, N made a large dip of 160γ, but no noteworthy movements took place in the other components. Much activity of a low order was in evidence during the morning and early afternoon hours of the 26th, 27th, 28th and 29th.

*April.*—(Average Character Figure 0.90). Minor activity continued for the first five days of April. A disturbance began on the afternoon of the 6th, increased during the night and, after a temporary abatement on the morning and afternoon of the 7th, attained considerable intensity on the night of the 7th—8th. After this conditions were disturbed until the morning of the 14th. A moderate-sized sunspot passed the central meridian at 7.1d in Lat. 17°N.\* During the first night (6th—7th) the most disturbed period was from 22h 45m to 23h 45m, when several oscillations, with ranges of 130γ in N and 70γ in W, were accompanied by a sharp dip of some 130γ in V.

This feature was repeated on a greatly enlarged scale the following night. N began to fall soon after 22h, and reached its minimum half-an-hour after midnight, after a fall of about 300γ; it immediately rose by 340γ to a maximum at 1h 6m and rapidly returned to an approximately normal value. W was below its normal value from 7d 22h till the early hours of the 8th, except during a sharp peak of 170γ with a maximum at 0h 36m; a smaller peak occurred at 1h 24m and was followed by a drop of 130γ to the minimum value for the storm at 1h 56m. V also, after a maximum at 7d 18h, was below its normal value from 22h till 8d 6h; the minimum for the storm occurred at about 0h 35m, after a drop of nearly 200γ beginning a few minutes after midnight.

Small and rapid oscillations took place in all components from 8d 6h till after 14h; between 11 and 13h there was a sharp but irregular dip in N, and the maximum of V for the day occurred in a hump at the unusually early hour of 12h 5m. Disturbance continued throughout the night and during the 9th. On the night of the 9th—10th two dips about 3 hours in length and 50γ in depth occurred in V, with minima at about

\* Nature, Vol. 125, p. 613.

midnight and 4h; similar but sharper dips occurred also on the next night. Disturbance was of about the same intensity on the 10th and 11th, and slightly less on the 12th and 13th, the movements being of the same general type throughout, viz., in V one or more humps during the afternoon, a gradual fall during the night and a double dip between midnight and 6h; in N irregular fluctuations superposed on the diurnal oscillation which has its maximum around 18h, and irregular dips or oscillations in the early morning; in W a similar kind of irregular fluctuation, with enhanced activity during the night and early morning, at the time of normal minimum.

The 14th was less disturbed, but there was some renewal of disturbance on the night of the 14th—15th and the next two nights.

A considerable disturbance began on the morning of the 19th and lasted till the end of the 23rd. After a shallow dip in N from 11 to 14h, all components rose gradually till 18h. V then began to rise more rapidly and reached a maximum, 130 $\gamma$  above its undisturbed value, at 19h 6m, forming a sharp and narrow peak, from which it fell with diminishing rapidity until 23h. Between 18h 57m and 19h 8m, N made a rapid oscillation, with maximum at 19h 6m; this was followed by a further peak at 19h 22m and a fall till 20h. W fell by 100 $\gamma$  from 18h 45m till 19h 17m, rising again till 20h. Both N and W were roughly 50 $\gamma$  lower after this movement than before. From 19d 20h till 20d 5h conditions were fairly quiet; but soon after 5h N and V began to fall and W to rise. N made a sharp dip of 190 $\gamma$  to a minimum at 6h 0m, returning to its former value in about 20 minutes; the dip of 65 $\gamma$  in V was more gradual, the minimum occurring 40 minutes later and recovery occupying some 4 hours; while W rose to a sharp peak at 6h 12m, 150 $\gamma$  above its value at 5h. N and W were very active during the rest of the morning and the early afternoon; the afternoon maximum of V was double, with humps at 16h and 17 $\frac{1}{2}$ h, the first coinciding with a dip of 80 $\gamma$  in W. Comparative quiet prevailed from 18h till 22h, when the fall in V, which in the interval had been slow, became more rapid, and in the next two hours there was increased activity in N and W. A shallow dip in V continued until 21d 6h, at about which time the familiar rapid oscillations of N and W began. No movements of interest took place during the 21st, until nearly 23h, the afternoon maximum of V being less pronounced and earlier (15h) than on the previous day. At 22 $\frac{1}{2}$ h, however, the sequence of events of the previous night was repeated on an enlarged scale. V fell rapidly till midnight, oscillated around a value some 100 $\gamma$  below normal for over an hour, and then rose irregularly till 6h. From 22 $\frac{1}{2}$ h till 2h there were large fluctuations in N and W.

The disturbance continued on the 22nd, the most notable movements being a dip of 100 $\gamma$  in N between 16 $\frac{1}{2}$ h and 17 $\frac{1}{2}$ h; several sharp peaks in N, rapid oscillations in W and a rapid drop of 45 $\gamma$  in V, all beginning with abrupt movements, somewhat like a "sudden commencement," at 18h 55m, and occupying about an hour; and a drop of 130 $\gamma$  in V from 22h 45m to a minimum at 23h 38m, followed by a partial recovery in the next two hours, the whole movement accompanied by large fluctuations in N and W. Fluctuations were small but continual and rapid in N and W during the 23rd until 19h, when there was an outburst of fresh activity; this lasted about 2 hours and the disturbance then died away.

No day during the rest of the month was free from disturbance of some kind, noteworthy movements occurring at 24d 16–18h, 25d 14–15h, 26d 6–9h, 28d 17–19h, 29d 21–24h and 30d 17–19h.

*May.*—(Average Character Figure 0.94). The first three days were quiet, but a disturbance, beginning on the morning of the 4th, became large in the early hours of the 5th and lasted till the morning of the 10th. The first noteworthy movement was a shallow dip in V between 4d 2 and 8h; W also was slightly below its undisturbed value. During the 4th disturbance was slight, but at midnight large fluctuations of all components set in. N oscillated by some 70 or 80 $\gamma$  on either side of its normal

path during the next 6 hours, but W and V were below their undisturbed values until about 5d 7h. During the 5th movements were vigorous but not very large. On the 6th between about 3h and 4h 17m V fell by 130 $\gamma$ , returning to its former value by 6h 30m; N fell by 140 $\gamma$  between 3h 30m and 4h 0m, returning to its former value by 5h 30m; and there was a small peak in W at 4h 0m. On the following night V made a much longer and deeper dip, beginning at 6d 21h, reaching a minimum at 7d 1h after a fall of 230 $\gamma$ , and rising irregularly till 8h. N rose by 100 $\gamma$  between 0h 13m and 27m, fell rapidly by 275 $\gamma$  to a minimum at 1h 0m, rose irregularly by 265 $\gamma$  to a second peak at 2h 7m, and returned to its original value at 2h 43m. There was a dip of 100 $\gamma$  in W between 1h and 4h, with a minimum shortly before 2h. During the rest of the 7th events followed a normal course; the period of greatest activity was from 22h till 8d 1h during a dip in V. Disturbance was less on the 8th and 9th and died away on the morning of the 10th at 6h, after a long dip in V from 9d 20h.

The ranges between the 4th and 10th were :—N, 382 $\gamma$ ; W, 225 $\gamma$ ; V, 281 $\gamma$ .

A moderate disturbance began on the night of the 11th. There was a dip of about 110 $\gamma$  in V between 11d 23h and 12d 6h, a shallower one the next night between 12d 22h and 13d 4h, and a further small one between 13d 5 and 8h accompanied by a dip of 85 $\gamma$  in N. Conditions were, as usual, most disturbed during the dips in V. This disturbance died out during the 13th and early hours of the 14th.

Another disturbance began at 16d 12h. This developed rapidly, all three components rising irregularly during the afternoon. Between 18 and 19h there was very great activity, the maxima of N and V and the minimum of W occurring within a few minutes of one another in abrupt and rapid movements at about 18h 55m. The V trace during this hour is disturbed by many very abrupt movements, in marked contrast with its usually rather rounded character. (It seems worth remarking that W, having fallen very rapidly to its minimum, made an equally rapid but only partial recovery and remained rather low until 17d 5h). After three hours of comparative quiet, disturbance set in again at about 22h and continued throughout the night and the following day. The most noteworthy movement was a rise of 140 $\gamma$  in N between 17d 20h 48m and 20h 57m, a drop of 240 $\gamma$  to a minimum at 21h 10m and a sharp rise to near the original value; there was also a peak of 110 $\gamma$  in W at 21h 2m, these movements occurring during a dip in V around 21h. Further activity took place during a second dip in V around 23h and again shortly before 18d 4h; the last, consisting of dips in N and V and a slight hump in W, was repeated on a larger scale 22 hours later. The disturbance lasted until the morning of the 23rd.

Conditions after this were not perfectly quiet, but the period 26d 6h to 29d 14h was relatively free from disturbance.

A slight increase of activity during the afternoon of the 29th and again in the early hours of the 30th seems to have been the prelude to a large disturbance which developed on the night of the 30th–31st. After rising irregularly till the early evening, all components fell with increasing rapidity till after midnight. At 0h 33m V began to fall very rapidly, falling by 175 $\gamma$  in 16 minutes; after a pause of some 20 minutes it fell by a further 85 $\gamma$  to a sharp minimum at 1h 31m; thereafter it rose rapidly and, after a further dip between 3 and 6h, continued to rise during the morning and afternoon. The movements in N were somewhat similar, but more regular. There was a sharp minimum simultaneous with that of V, followed by a rise of 315 $\gamma$  in half-an-hour. After this there was an irregular fall and a sharp dip with minimum soon after 4h. The minimum of W occurred at 0h 28m and was followed by rapid oscillations; soon after 4h there was a small peak. Between 5h and 9h there were several series of remarkably large oscillations of short period in all components; the period was about 4 minutes, and the amplitudes of the order of 15 $\gamma$  in N, 8 $\gamma$  in W and <1 $\gamma$  in V; the oscillations are most noticeable in N, and there appear to have been subsidiary oscillations, of about 1-10th or 1-12th the period, superposed. The evening of the

31st was very disturbed after 17½h. The maxima of N and V, and a small dip in W, occurred shortly before 18h. Sharp dips occurred in N with minima at 18h 59m, 22h 33m and June 1st 1h 30m; W was below its normal value after a rapid fall between 18h 54m and 19h 6m, until about 5h; there was a large dip in V from 22½h till 6h, with a hump about midnight.

*June.*—(Average Character Figure 0·87). The disturbance was of the same general form, but less intense, on the 1st, 2nd and 3rd. There is frequently a tendency for rounded humps and dips of some 2 hours' duration to be superposed on the more rapid fluctuations during the morning and this is marked on the 3rd from midnight till 8h, particularly in N. During the 4th movements were rapid and irregular, but smaller, and the disturbance died out at about midnight, after an outburst of activity during the last four hours of the day.

The ranges during this storm (May 30—June 4) were:—N, 480γ; W, 263γ; V, 390γ. The maxima all occurred near 18h, and the minima near 1h, on May 31st.

A very small "sudden commencement" at 5d 21h 34m did not lead immediately to any noteworthy disturbance; but at 23h 2m on the following day a similar movement, consisting of very small and rapid oscillations in N and W, superposed on a sharp rise, and a drop in V, marked the beginning of a small disturbance, which lasted until the end of the 8th. The most noteworthy features are small dips in N and V, with humps in W, at 7d 3h and 7h and a dip of 120γ in V between 22h and midnight.

Another small "sudden commencement" occurred at 11d 21h 56m and a considerable disturbance developed during the afternoon of the 12th. This was unusual on account of the large fluctuations in N between 12 and 18h, while V was rising to its maximum; these had a range between consecutive maxima and minima of the order of 100γ and were closely in phase with smaller movements in W. Conditions were less disturbed from 19h to 22h, but from then till midnight there was increased activity, along with a dip in V. During the 13th movements were mostly small but rapid and irregular, the most notable feature being a dip of 100γ in N around 8h. The disturbance died out on the 14th. The ranges from the 11th to 14th were:—N, 266γ; W, 168γ; V, 168γ.

From 14d 20h to 15d 10h conditions were unusually quiet for the time of year. A small movement, somewhat like a "sudden commencement," at 15d 10h 32m was followed by very small, rapid oscillations, and there was another and similar movement at 15h 54m; fluctuations were continuous but extremely small throughout the evening and night and until 16d 4h. V fell slowly from 4h till 6h, rose slowly till 8h, and fell by 60γ in the next 40 minutes; it then remained nearly constant for half-an-hour and rose gradually till 13h. Both N and W fell from 6h till 8h; at 8h N began to fall much more rapidly and W began to rise, N reaching a sharp minimum at 8h 22m and W a maximum at 8h 28m; W fell again rapidly but N, after a rise of 100γ, remained below its normal value, though oscillating vigorously, till 12½h, when it began to rise quickly. From 13h onwards movements were small but rapid and irregular. At 21h V began to fall, making a dip of some 130γ below its normal value during the night; fluctuations in N and W were somewhat greater and of longer period between 21h and 2h, while V was falling. Disturbance was less intense on the 17th and the next three days, and died out during the 21st. The ranges between the 15th and 21st were:—N, 357γ; W, 238γ; V, 165γ.

The succeeding days were comparatively quiet, until a small disturbance began in the early hours of the 27th. (A prelude to this seems to have been an augmentation of the normal oscillation of V between the noon minimum and the afternoon maximum on the 26th.) A shallow dip occurred in V between 27d 0 and 7h and W was below its normal value from 2h till about 10h. The dip in V was greater on the next two nights and N and W were moderately disturbed throughout until the end of the 30th. Ranges:—N, 184γ; W, 149γ; V, 116γ.

*July.*—(Average Character Figure 0.84). There was almost continuous activity of a minor order for the first eight days of the month. The 9th was comparatively quiet until a "sudden commencement" at 14h 53m marked the beginning of great activity. This continued through the night, the hours from 0 to 4h being the most disturbed. The most noteworthy movements on the 10th were a dip of 175 $\gamma$  in N between 2 $\frac{3}{4}$ h and 4h, and a rapid rise of 45 $\gamma$  to a maximum at 17h 43m, followed by an irregular fall. On the 11th there was a symmetrical V-shaped dip in V, between 2 and 6h, consisting of an almost linear fall of 215 $\gamma$  to a minimum at 3h 27m, followed by a rise at about the same rate until 5h but slower thereafter. Simultaneously there were large fluctuations in the other components, a dip in N extending from 2 $\frac{1}{2}$ h till 6h. No large movements took place on the 11th. On the 12th between 4 and 7h there was a shallow dip in V and two dips in N; very similar movements occurred about 24 hours later. Another case of recurrence is found on these two days. Between 12d 20h 20m and 21h 20m N executed an oscillation consisting of a drop of 55 $\gamma$  and a rise of 140 $\gamma$  followed by an irregular fall, the maximum of a very small hump in V and the minimum of a dip in W, both at 20h 33m, coinciding with the greatest rate of increase of N; movements of exactly the same description occurred on the 13th, between 16h 30m and 17h 40m, the range of N in this case being 215 $\gamma$ . The disturbance died away during the following night. The ranges from the 9th to 14th were:—N, 329 $\gamma$ ; W, 207 $\gamma$ ; V, 346 $\gamma$ .

It may be noted that there were two large prominences on the sun's east limb on July 13-14.\*

During the night of the 14th-15th, from 21h to 4h, and from 18h to 4h the next night, conditions were comparatively quiet. There was a small disturbance, with ranges of 180 $\gamma$  in N, 107 $\gamma$  in W and 108 $\gamma$  in V, on the 16th and 17th. Agitation decreased during the 18th and 19th and from 19d 22h to 24d 14h conditions were quiet.

There was slight disturbance during the afternoon of the 24th increasing after 21h to a disturbance which lasted for some 48 hours, with ranges of 206 $\gamma$  in N, 168 $\gamma$  in W and 139 $\gamma$  in V. V began an irregular fall at 21h 10m, and, as is usual at Eskdalemuir during a storm, was below its normal value during the night and early morning. W was also low throughout the night, while N fluctuated irregularly until 1h. From 25d 5h till 14h there were small but very rapid oscillations in N and W. Between 16h 50m and 17h 35m N fell and rose again by about 90 $\gamma$ , the minimum occurring at 17h 16m; the minimum of a small dip in W and the maximum of a hump in V occurred at 17h 25m, while N was rising rapidly. Between midnight and 26d 6h there were two humps in N of three hours' duration, such as are often seen at this time of day, the minima occurring at about 0h, 3h and 6h. The disturbance died away during the 26th, but minor activity continued throughout the rest of the month.

*August.*—(Average Character Figure 0.90). Minor activity was continuous throughout the first four days of the month. On the afternoon of the 5th a considerable disturbance developed, which lasted for about 8 days, being at its greatest intensity on the 6th, 7th and 8th. The ranges during this period were:—N, 356 $\gamma$ ; W, 248 $\gamma$ ; V, 256 $\gamma$ ; but the disturbance was greater, judged from the curves, than is suggested by these figures, since the movements in all components were more numerous and rapid than usual. The general characteristics of the storm were of the usual type. V rose to a maximum during the afternoon of each day and fell very irregularly to a minimum in the early hours of the morning; N and W oscillated rapidly during the afternoon and night, with many large peaks and dips, but during the morning oscillations were small and of a few minutes' period, with rounded humps of about 2 hours' period separated by V-shaped dips. The maximum of V for the storm occurred on the 6th soon after 15h, in a tall peak which coincided with a rapid drop in W. Between 6d 20h and 7d 6h there were several humps in V with dips between; the humps

\*Nature, Vol. 126 (1930) p. 146.

tend to coincide with quiet periods in N and W, while the greatest activity in these components took place while V was falling or at its lowest values. The maximum value of N occurred on the 8th at 19h 32m in a peak of 175 $\gamma$  between 19h 20m and 50m ; a small peak in V and a sharp minimum in W occurred about 2 minutes earlier. Other isolated peaks in N appear at 7d 0h 33m, 8d 17h 9m, 10d 17h 26m, 11d 20h 39m, 12d 18h 49m and 21h 41m, 14d 20h 12m ; in practically every case a minimum in W preceded the maximum of N by a few minutes.

From the morning of the 13th till the afternoon of the 14th conditions were less disturbed, but disturbance was renewed at about 14d 18h. Shortly before 20h W began to fall, reaching a minimum, 140 $\gamma$  below its former value, at 20h 4m ; a second minimum, at 20h 45m, was separated from the first by a peak and was followed by a return to near the normal value by 22h. Between 19h 59m and 20h 12m N rose by 170 $\gamma$ , falling again by 135 $\gamma$  in 23 minutes, and after a small peak at 20h 54m, continuing its fall till 21h 40m. There was a small peak in V at 20h 5m. On the morning of the 15th two dips, of about 80 or 90 $\gamma$ , occurred in N between about 4h 50m and 8h 40m ; in the afternoon, after small and rapid oscillations in N and W, culminating in a small outburst of activity from 15h till 16h and a gradual rise in V to a rounded maximum at 16h, the disturbance died away, and from 15d 20h till 16d 2h conditions were unusually calm.

During the rest of the month no day was free from disturbance of a minor order. The most disturbed periods were 21d 10h to 22d 8h and 23d 14 to 22h.

*September.*—(Average Character Figure 0.80). After slight disturbance on the 1st, the 2nd was quiet after 8h, but a considerable disturbance began in the early hours of the 3rd. Movements were only small at first, but the disturbance developed rapidly after 13h. Between 14 and 16h N and W made several rapid oscillations with a range of about 150 $\gamma$  and 120 $\gamma$  respectively ; both rose during this period, their maxima occurring at 15h 30m, but after a rapid fall at about 16h the amplitude of the oscillations was greatly reduced. The maximum of V occurred at 15h 43m in a very narrow peak ; soon after 16h a smooth but rapid fall began ; this was slower from 18h till 20h, but more rapid again in the next 1½ hour, while from 20h till 22h there were large oscillations in N and W. Between 21½h and midnight there was a small hump in V, followed by a dip in V and N. V remained below its undisturbed value till 4d 7h. After this there was little further disturbance, beyond a dip in N from 8h till 13h. The ranges were :—N, 220 $\gamma$  ; W, 260 $\gamma$  ; V, 309 $\gamma$ .

Conditions were quiet from the afternoon of the 4th till a few hours after midnight. On the next four days there was a small disturbance, with ranges of 249 $\gamma$  in N, 138 $\gamma$  in W, 98 $\gamma$  in V. The range of N was large compared with the other components. The degree of disturbance was small, and the maximum of N occurred at 5d 18h 52m in a narrow peak 120 $\gamma$  high among a series of smaller fluctuations ; the movement of V was small, and of a normal type, with maxima in the evenings and minima soon after midnight. From the 9th to 17th inclusive conditions became progressively quieter, and the only movement worthy of notice was a peak of 75 $\gamma$  in N between 21½h and 22h on the 12th, accompanied by a small peak in W and a dip in V.

Activity of a very small order in N and W on the afternoon of the 17th, accompanied by a slight rise in V, was followed by very quiet conditions from 17d 22h till 18d 6h, but seems to have been the prelude to a moderate disturbance which followed a small " sudden commencement " at 18d 8h 52m. Between 10h 20m and 10h 30m N fell by 115 $\gamma$  ; after oscillating around a low value for about an hour, it rose irregularly to its evening maximum ; the absolute maximum occurred in a tall peak at 18h 57m and was followed by large oscillations till 20½h. V rose to a sharp maximum shortly before 18h and then fell rapidly till 19½h and thereafter more slowly. W, after a maximum at 13h 28m, fluctuated slightly from 14h to 16h and fell by some 200 $\gamma$  between 16h and 18h ; between 18h and 20h it oscillated vigorously, and then

followed a quiet interval till 22h. At about 22½h V began to fall rapidly, reaching a minimum at 23h and remaining nearly constant till midnight; during this hour and a half there were large oscillations in N and W. After a hump of 2 hours' duration, V fell to a further minimum at 19d 2h 20m, afterwards rising till 9h. The disturbance died away during the 19th and was succeeded by moderately calm conditions till the end of the 25th, though there was much minor activity. The 26th, 27th and early hours of the 28th were quiet, but a disturbance took place on the last 3 days of the month, the most disturbed period being 29d 18h to 30d 9h. Movements were irregular and not very large on the 28th, but during the 29th they became more rapid, and V rose to a rather early maximum at 13h 40m, remaining very near the same value till 18h. From shortly after 18h till 20h there were large and very rapid fluctuations in N and W and smaller but comparatively rapid oscillations in V; N rose by 165γ between 18h 12m and 19m. Further large fluctuations occurred during a deep dip of some 200γ in V from 30d 0h to 9h, an unusual feature being a large hump in W between about 2h and 8h, the maximum at 4h 39m being some 200γ above the normal. The disturbance died away quickly after 9h, only small and rapid oscillations taking place during the rest of the day. The ranges were:—N, 318γ; W, 283γ; V, 282γ.

*October.*—(Average Character Figure 0·87). Small and rapid oscillations continued until the afternoon of the 1st, though the only disturbance of note was a peak of 75γ in N at 18h, with a corresponding dip in W; this occurred again soon after 22h on the following day. On the 3rd the midday minimum was marked by a uniform dip of over 100γ in N between 10h and 12h, and rapid oscillations over a range of 150γ in both N and W lasted until midnight. Fluctuations of moderate intensity marked the afternoon rise in N on the 4th, but after that conditions became steadily quieter until the 14th. In both N and W the small oscillations were most rapid in the 8 hours preceding the daily maxima, but throughout the 9 days there were few sharp movements. At 6d 18h 40m W began to fall, and reached a minimum nearly 100γ below normal at 19h 50m. At the same time N fell about 25γ and rose to its absolute maximum at 19h 36m. Peaks of about 70γ in N at 8d 20h 0m and 9d 22h 33m coincided with dips in V. A large group of sunspots in Lat. 7½°N\* on October 11th was not associated with any noteworthy magnetic disturbance.

The quiet period ended abruptly with a "sudden commencement" at 14d 4h 23m, when there began rapid oscillations of small amplitude. A steady mean value was maintained until V reached its absolute maximum at 20h, when there was a drop in all three traces, W falling about 270γ in 1½ hours; conditions became quiet again shortly after midnight, and remained steady until after a small "sudden commencement" at 17d 3h 38m. In all three components there was a slight dip centred about 7h, and the traces were shaky until noon when increasingly violent oscillations began, reaching their maxima in very sharp high peaks at 17h 13m. The curves then fell to lower values than before (N dropped over 400γ in 6 minutes) and dipped sharply to minima at about 21h 40m; the oscillations died down at 1h on the 18th, but conditions remained disturbed until the morning of the 21st. The ranges on the 17th—the most disturbed day of the month—were N, 542γ; W, 641γ; V, 304γ. During this storm the range of Declination at Greenwich was 55'. Aurora was seen on the 17th† from as far south as the south-eastern counties of England.

No disturbances of note occurred for the next few days, the 23rd and 24th being particularly quiet. At about midday on the 25th small and rapid oscillations began, to be followed by irregular movements which persisted till the end of the month. All changes were of moderate amplitude, but ceased only during a quiet period from 30d 22h to 31d 6h. On the 26th the range of V reached the rather high value of 260γ.

\* Nature, Vol. 126 (1930) p. 625.

† Nature, Vol. 126 (1930) p. 661.

*November.*—(Average Character Figure 0.70). There was little disturbance this month, the only noteworthy periods being the evening of the 14th and about 48 hours beginning in the early hours of the 24th.

The beginning of the month was marked by activity of a very low order, with an occasional outburst near midnight. From 11d 0h conditions were very quiet until a "sudden commencement" at 13d 19h 28m. Only minor activity followed this for the first 22 hours, but the oscillations increased in amplitude after 14d 18h; the most disturbed period was from 19 to 22h, during which time the maxima of all components occurred. The disturbance then died away, though there was some slight activity during the 15th. Ranges:—N, 228 $\gamma$ ; W, 256 $\gamma$ ; V, 187 $\gamma$ .

Conditions similar to those at the beginning of the month prevailed for several days; the 20th–23rd inclusive were very quiet. At 23d 16h began a disturbance which attained moderate dimensions during the 24th–26th. V rose to a double maximum on the afternoon of the 24th, with peaks at about 17h and 18h, afterwards falling to a minimum at 25d 1h, followed by another soon after 5h. N and W were most active between about 16h and 2h, W being mainly a little below its undisturbed value. A tall peak occurred in N between 21h 55m and 22h 30m. From 4h till noon on the 25th, while V was gradually rising, the oscillations in N and W were small but rapid. A very similar sequence of events occurred on the next night, but there was no second minimum in V and the dip in W, extending from 25d 15h to 26d 2h, was somewhat deeper. Both N and W made several large and smooth oscillations between 18h and 19h.

The disturbance was greatly diminished during the 26th and died away during the 27th. The ranges were:—N, 248 $\gamma$ ; W, 209 $\gamma$ ; V, 240 $\gamma$ . There was an eruption near the centre of the sun's disc on November 25.\*

During the remainder of the month there was continual minor activity.

*December.*—(Average Character Figure 0.65). After two quiet days, a "sudden commencement" at 3d 1h 8m marked the beginning of a large disturbance. Oscillations of very small amplitude and period were continuous from the "sudden commencement" until shortly after 14h, when the disturbance developed rapidly. At 18h 40m N and V began to rise very rapidly, passing beyond the limits of registration simultaneously at 15h, and reappearing some 10 minutes later during an equally rapid fall. Large fluctuations took place in W also, and continued in all components till about 15h 40m. Conditions were then temporarily less disturbed until about 16h 40m, when further violent fluctuations began; these decreased at about 22h, though there was considerable disturbance until the afternoon of the 4th.

From this time, apart from a slight disturbance from 12d 20h to 14d 24h, conditions were fairly quiet until the afternoon of the 19th. There was then a slight increase of activity, which developed into a disturbance of small dimensions during the afternoon and evening of the 20th. There were considerable fluctuations between 18h and 20h, during which interval the maxima of N and V and the minimum of W occurred, but apart from this there were no noteworthy movements and the disturbance may be regarded as ending on the morning of the 24th. The ranges were:—N, 172 $\gamma$ ; W, 201 $\gamma$ ; V, 137 $\gamma$ .

The range of declination at Stonyhurst on December 20–21 was 39' and an auroral display was seen on that night.†

During the rest of the month there was some minor activity on most days, though the periods 28d 12h to 29d 12h and 30d 1h to the end of the month were quiet.

\* Nature, Vol. 126 (1930) p. 969.

† Nature, Vol. 127 (1931) pp. 89–90.



Readings in millibars at exact hours, Greenwich Mean Time.

167. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

January, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Station Level 1-31). Includes sub-headers for Day, Station Level, and Mean (Station level/Sea level).

168. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

February, 1930.

Table with 25 columns (1-24 hours + Mean) and 28 rows (Station Level 1-28). Includes sub-headers for Day, Station Level, and Mean (Station level/Sea level).

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

169. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

March, 1930.

Hour. G.M.T.	Station Level												Sea level												Mean
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
Day.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.
1	007.0	007.0	007.0	006.8	006.7	006.7	006.8	007.0	007.1	006.9	006.7	006.6	006.0	005.7	005.2	004.7	004.6	004.7	004.9	004.9	005.1	005.0	004.6	004.2	006.0
2	004.1	003.2	002.9	002.5	002.4	002.3	002.1	001.8	001.7	001.4	001.3	001.0	000.5	000.7	000.9	000.8	000.8	000.8	000.8	000.8	000.8	000.8	000.7	000.6	000.6
3	009.9	009.5	009.1	009.1	009.5	009.5	009.5	009.5	009.5	009.8	009.8	009.5	009.4	009.8	009.2	009.1	009.1	009.2	009.2	009.5	009.4	009.4	009.4	009.7	009.2
4	004.7	004.4	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0	004.0
5	000.3	000.2	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0
6	007.4	006.9	006.2	005.7	005.3	004.8	004.2	004.0	003.9	003.4	003.3	003.1	002.9	002.9	002.9	002.8	002.8	002.7	002.7	002.7	002.7	002.6	002.6	002.6	002.6
7	005.6	005.4	005.6	005.4	005.6	005.8	006.1	006.2	006.6	006.7	006.8	006.7	006.7	006.4	006.4	006.1	006.3	006.7	006.7	006.7	006.7	006.7	006.5	006.6	006.4
8	005.9	005.7	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	005.4	
9	007.5	007.4	007.3	007.2	007.1	007.0	006.9	006.7	006.7	006.7	006.7	006.7	006.6	006.6	006.6	006.6	006.6	006.6	006.6	006.6	006.6	006.6	006.6	006.6	
10	007.3	007.3	007.3	007.3	007.4	007.4	007.4	007.4	007.4	007.4	007.4	007.3	007.3	007.3	007.3	007.2	007.2	007.2	007.1	007.1	007.1	007.1	007.1	007.1	
11	006.7	006.6	006.7	006.8	006.8	006.9	007.0	007.1	007.2	007.3	007.3	007.4	007.3	007.3	007.3	007.2	007.2	007.1	007.1	007.1	007.1	007.0	007.0	007.0	
12	007.0	007.0	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	
13	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	007.2	
14	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	006.5	
15	006.8	006.8	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	006.7	
16	006.6	006.5	006.4	006.3	006.3	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	
17	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	006.4	
18	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	006.2	
19	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	
20	007.2	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	
21	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	006.9	
22	007.3	007.3	007.4	007.5	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	007.6	
23	008.7	008.7	008.6	008.6	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	008.5	
24	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	009.2	
25	009.4	009.3	009.2	009.2	009.1	009.0	008.9	008.8	008.7	008.6	008.5	008.4	008.3	008.2	008.1	008.0	007.9	007.8	007.7	007.6	007.5	007.4	007.3	007.3	
26	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	009.1	
27	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	009.3	
28	008.2	008.1	008.0	008.0	007.9	007.9	007.8	007.7	007.6	007.5	007.4	007.3	007.2	007.1	007.0	006.9	006.8	006.7	006.6	006.5	006.4	006.3	006.2	006.2	
29	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	006.0	
30	007.6	007.6	007.7	007.7	007.8	007.9	008.0	008.1	008.2	008.3	008.4	008.5	008.6	008.7	008.8	008.9	009.0	009.1	009.2	009.3	009.4	009.5	009.6	009.6	
31	007.8	007.9	007.6	007.5	007.4	007.4	007.3	007.3	007.3	007.2	007.2	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	007.1	
Mean (Station level)	080	080	080	079	079	079	079	079	079	079	079	079	079	079	079	079	079	079	079	079	079	079	079	079	
Mean (Sea level)	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	

170. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

April, 1930.

Hour. G.M.T.	Station Level												Sea level												Mean
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
Day.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	
1	074.0	073.8	073.7	073.7	073.6	073.4	072.9	072.7	071.7	071.7	071.5	070.7	070.0	069.2	068.7	068.4	068.3	068.7	069.8	070.0	070.3	070.5	070.7	071.2	
2	070.6	070.6	070.2	069.6	069.5	069.2	069.0	069.2	069.5	069.2	069.0	068.7	068.0	067.5	067.1	067.2	067.3	067.9	068.5	069.0	069.5	069.7	069.9	071.7	
3	076.2	076.2	076.7	076.9	077.1	077.4	077.4	077.3	077.0	076.5	076.1	075.6	075.3	075.3	074.9	074.3	074.4	074.9	075.1	075.0	075.5	075.6	075.9	075.9	
4	076.2	075.8	075.9	076.4	076.6	077.3	077.8	077.5	077.8	078.1	078.2	078.4	078.5	078.5	078.6	078.8	079.4	079.9	080.5	080.9	081.0	081.3	081.6	078.5	
5	081.4	081.3	081.3	081.5	081.6	081.9	082.1	082.4	082.6	082.6	082.7	082.8	082.8	082.8	082.8	082.8	082.9	083.5	083.5	083.9	084.0	084.1	084.0	082.7	
6	083.6	083.4	083.2	083.2	083.2	083.4	083.4	083.6	083.8	083.7	084.0	084.0	084.7	085.4	085.9	086.4	087.1	087.6	088.2	088.9	089.5	090.0	090.5	085.6	
7	090.8	091.2	091.4	091.9	092.2	092.8	093.2	093.5	093.8	094.1	094.4	094.5	094.4	094.5	094.4	094.5	094.5	094.5	094.5	094.5	094.5	094.5	094.5	088.8	
8	094.6	094.0	093.7	093.2	092.9	092.7	092.4	092.1	091.8	091.8	091.7	091.5	091.0	090.6	090.2	090.7	091.2	091.7	092.2	092.7	093.2	093.7	094.2	089.6	
9	084.5	084.2	083.9	083.7	083.3	083.0	082.4	082.1	081.4	081.1	080.4	079.7	079.0	078.3	077.6	077.0	077.4	077.8	078.2	078.6	079.0	079.4	079.8	083.7	
10	082.9	082.6	082.4	082.2	082.4	082.7	083.1	083.3	083.8	083.9	083.9	084.0	083.9	083.9	083.9	084.0	084.4	084.7	085.0	085.5	085.5	085.8	085.8	083.9	
11	085.6	085.3	085.2	085.1	085.1	085.1	084.8	084.5	084.2	083.4															

Readings in millibars at exact hours, Greenwich Mean Time.

171. Eskdalemuir :  $H_b$  (height of barometer cistern above M.S.L.) = 237.3 metres.

May, 1930.

Hour G.M.T.	Station Level												Sea level												
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day. 1	993.5	993.5	993.7	993.7	994.3	994.6	994.9	994.9	994.9	994.9	994.3	994.1	993.7	993.4	992.9	992.5	992.5	992.5	992.8	993.2	993.3	993.3	993.5	993.4	993.7
2	993.0	992.5	992.0	991.7	991.7	991.7	991.9	991.4	991.0	990.9	990.7	990.5	990.2	990.1	989.6	989.6	989.8	990.1	990.7	991.5	992.1	992.2	992.5	992.6	991.3
3	992.5	992.5	992.4	992.3	992.3	992.6	992.7	992.8	992.6	992.5	992.4	992.4	992.2	992.1	991.9	991.6	991.3	991.2	991.3	991.7	992.1	992.0	991.9	991.6	992.1
4	991.4	991.1	989.9	990.7	990.4	990.2	990.1	990.1	989.9	989.9	989.7	989.4	988.9	988.3	987.9	987.9	987.5	987.5	987.6	987.7	987.7	987.6	987.3	987.1	989.1
5	986.9	986.6	986.3	985.9	985.5	985.5	985.5	985.4	985.2	984.8	984.7	984.2	983.7	983.3	982.9	982.9	982.9	983.1	983.3	983.4	983.5	983.8	984.0	984.0	984.5
6	983.9	983.8	983.9	983.9	983.9	984.6	984.9	985.5	985.7	985.7	985.8	985.6	985.6	985.6	985.3	985.5	985.9	986.2	986.6	987.4	987.7	987.9	987.9	985.6	
7	987.4	987.3	987.3	987.2	987.3	987.3	987.3	987.1	986.9	986.7	986.3	985.7	984.8	984.0	984.3	984.9	985.2	985.8	986.3	986.9	987.2	987.3	987.3	987.2	986.5
8	986.7	986.1	985.7	985.7	985.5	985.5	985.3	984.7	984.5	984.5	984.1	983.8	983.2	983.0	982.2	982.4	982.0	981.1	980.4	979.4	978.3	977.8	977.7	977.9	983.0
9	977.6	977.5	977.2	976.9	976.6	976.4	975.9	975.4	975.4	975.4	975.1	974.5	974.3	974.2	974.1	974.2	974.2	974.4	974.5	974.9	975.2	975.4	975.5	975.5	975.5
10	977.4	975.4	975.2	975.3	975.5	975.7	975.7	975.7	975.5	975.3	974.9	974.5	974.7	974.1	973.5	973.0	972.4	972.1	971.9	971.9	970.5	969.8	969.0	968.3	973.7
11	967.7	967.1	966.7	966.3	966.4	966.7	967.3	967.8	968.0	968.8	969.5	970.3	971.1	971.7	971.9	972.2	972.6	973.4	973.7	974.5	975.1	975.3	975.4	975.9	970.5
12	976.4	976.5	976.7	976.8	977.3	977.8	978.2	978.6	978.8	979.0	979.0	979.0	979.0	979.1	979.2	979.2	979.3	979.4	979.6	980.0	980.2	980.2	980.2	980.2	978.7
13	979.9	979.6	979.1	978.3	977.9	977.4	977.5	977.0	976.6	975.7	975.0	974.8	974.6	974.4	974.5	974.5	974.8	975.1	975.3	975.7	976.1	976.2	976.5	976.4	976.5
14	976.9	977.0	977.6	978.0	978.3	979.1	980.0	980.1	980.7	981.1	981.6	982.2	982.4	982.9	983.5	983.9	984.1	985.0	985.4	985.9	986.6	986.7	986.8	986.7	982.0
15	986.9	986.8	986.5	986.4	986.1	985.9	985.6	985.5	984.6	983.6	983.0	982.8	982.9	982.9	983.5	983.9	983.1	983.3	983.5	984.5	985.3	985.4	985.9	986.3	984.7
16	986.6	986.9	987.1	987.7	988.0	988.5	989.0	989.1	989.1	989.4	989.8	990.0	990.1	990.4	990.5	990.6	990.6	991.0	991.4	991.9	992.3	992.6	992.4	992.5	989.8
17	992.1	992.0	991.7	991.3	991.3	991.0	990.7	990.4	989.3	988.7	988.1	986.3	985.3	984.3	983.7	981.7	980.3	979.1	977.4	976.2	974.9	974.1	974.8	974.6	984.9
18	975.1	975.7	975.7	976.2	976.3	977.1	977.3	978.0	978.0	977.7	977.9	978.7	978.4	978.4	978.5	978.7	979.7	980.6	981.2	981.6	982.7	983.1	983.8	984.4	978.7
19	985.0	985.3	985.7	985.7	986.1	986.7	987.0	986.9	986.8	986.6	986.6	986.4	986.2	986.2	986.2	985.9	986.0	986.3	986.3	986.9	987.1	987.4	987.5	987.4	986.4
20	987.3	987.6	987.8	987.7	987.7	988.1	988.1	989.6	989.5	989.7	989.7	990.3	990.6	990.8	991.2	990.9	991.0	991.7	991.8	992.4	992.8	993.1	993.4	993.6	990.1
21	993.7	993.9	994.0	994.3	994.6	995.1	995.5	995.7	995.8	996.1	995.8	995.7	995.6	995.5	995.3	995.0	995.0	994.9	995.0	995.2	995.8	995.8	995.8	995.7	995.2
22	995.5	995.5	995.5	995.8	995.9	995.9	995.9	996.1	996.0	996.0	995.9	995.8	995.7	995.5	995.4	995.5	995.8	995.8	996.0	996.4	997.0	997.4	997.7	997.7	996.0
23	997.8	997.4	998.0	997.8	997.9	998.0	998.0	997.8	997.5	997.5	997.1	997.0	996.9	996.8	996.7	996.2	995.9	995.9	995.7	995.9	995.9	995.7	995.2	994.8	986.9
24	994.3	994.6	994.1	993.7	993.6	993.8	993.7	994.3	994.5	994.3	993.9	993.8	993.6	993.4	993.3	992.7	992.6	992.3	992.4	992.4	992.4	992.1	991.8	991.4	993.4
25	990.9	990.3	990.0	989.5	989.3	989.1	988.9	988.5	988.3	987.9	987.6	987.3	987.0	986.5	985.9	985.1	984.7	984.5	984.2	984.0	983.9	983.3	982.8	982.7	987.0
26	981.9	981.6	981.1	980.7	980.5	980.2	980.0	979.6	979.5	979.3	978.9	978.5	978.4	978.3	977.5	977.2	977.2	977.2	977.1	977.4	977.5	977.2	976.7	976.7	978.9
27	976.4	976.3	975.8	975.7	975.5	975.5	975.5	975.7	975.7	975.2	974.8	974.4	974.1	973.9	973.5	973.5	973.0	973.4	973.3	972.8	972.7	973.0	973.1	973.2	974.5
28	973.8	974.4	974.8	975.5	976.2	976.4	977.1	977.9	978.5	979.0	979.8	980.5	981.3	982.1	982.6	983.3	983.7	984.7	985.2	986.1	987.0	987.7	988.2	988.6	980.7
29	989.1	989.5	989.5	989.6	989.9	990.5	991.1	991.0	991.1	991.2	991.3	991.5	991.5	991.5	991.3	991.2	991.1	991.0	991.2	991.8	992.5	992.9	993.1	992.9	991.0
30	992.5	992.3	992.4	992.4	992.4	992.4	992.7	992.6	992.9	993.1	992.7	992.8	992.3	992.2	992.2	992.3	992.4	992.5	992.8	993.1	993.4	993.2	993.2	993.1	992.7
31	993.2	993.2	993.4	994.0	993.4	993.6	993.5	993.4	993.4	993.3	992.9	992.6	992.4	992.2	992.1	992.2	991.8	991.6	991.7	991.5	991.2	991.4	991.1	990.8	992.5
Mean (Station level)	985.85	985.80	985.70	985.70	985.73	985.89	986.02	986.05	985.99	985.90	985.72	985.66	985.49	985.39	985.24	985.12	985.11	985.24	985.35	985.59	985.80	985.86	985.90	985.85	985.67
Mean (Sea level)	1014.84	1014.82	1014.74	1014.77	1014.76	1014.82	1014.91	1014.69	1014.52	1014.35	1014.07	1013.95	1013.74	1013.63	1013.47	1013.40	1013.41	1013.63	1013.83	1014.23	1014.57	1014.68	1014.78	1014.78	1014.30

172. Eskdalemuir :  $H_b$  = 237.3 metres.

June, 1930.

Hour G.M.T.	Station Level												Sea level												
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	990.4	989.8	989.0	988.7	988.5	988.0	987.6	987.1	987.0	987.0	986.3	985.8	985.4	985.2	984.7	984.4	984.4	984.4	984.5	984.5	984.8	985.0	984.9	985.0	986.5
2	985.4	985.3	985.0	984.9	985.0	985.4	985.7	986.1	986.5	986.5	986.5	986.6	986.7	986.7	987.0	987.0	987.0	987.3	987.3	987.8	988.6	988.6	988.8	986.6	
3	989.0	989.0	989.1	989.8	989.6	989.2	989.3	989.5	989.6	989.6	989.8	990.0	990.0	989.6	989.6	989.6	989.8	990.3	990.3	990.9	991.3	992.0	992.5	990.1	
4	993.3	993.3	993.4	993.7	994.0	994.6	995.2	995.4	995.5	995.7	995.3	995.5	995.8	995.9	996.0	996.0	996.0	995.9	996.2	996.5	997.3	997.5	997.5	995.4	
5	997.4	997.4	996.9	996.9	996.9	997.0	996.9	996.8	996.3	996.0	995.8	995.6	995.2	994.9	994.4	994.1	993.9	993.6	993.4	993.3	993.3	993.0	992.9	992.8	995.3
6	992.5	991.9	991.6	991.2	990.9	990.5	990.3	990.2	989.8	989.5	988.9	988.6	988.2	987.9	987.7	987.4	987.3	987.7	987.7	988.0	988.7	989.3	989.8	990.3	989.5
7	990.9	991.0	990.9	991.1	991.4	991.7	992.1	992.4	993.0	993.4	993.4	993.6	993.7	993.9	994.1	994.4	994.7	994.9	995.2	995.7	996.1	996.7	996.9	997.1	993.5
8	997.1	997.0	996.7	996.6	996.5	996.4	996.3	996.2	996.0	995.9	995.6	995.5	995.4	995.0	994.3	993.9	993.6	993.3	993.1	993.0	992.9	992.6	992.0	991.3	
9	990.9	990.2	989.5	988.8	988.5	987.8	987.0	986.6	985.9	985.2	984.3	983.7	983.2	982.1	981.0	980.1	979.3	978.5	978.0	978.0	978.0	978.0	977.9	983.6	
10	977.6	977.4	977.0	976.9	976.3	976.0	976.2	975.6	975.3	975.1	974.7	974.6	974.7	974.8	974.6	974.3	974.5	974.3	974.4	974.4	974.7	975.1	975.2	975.3	975.4
11	975.5																								

173. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

July, 1930.

Table for July 1930 showing hourly pressure readings at Eskdalemuir. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level/Sea level). Rows show hourly data for each day of the month.

174. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

August, 1930.

Table for August 1930 showing hourly pressure readings at Eskdalemuir. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level/Sea level). Rows show hourly data for each day of the month.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

175. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

September, 1930.

Table for September 1930 showing hourly pressure readings at Eskdalemuir. Columns include Hour G.M.T., Station Level (1-30), and Mean (Station level). Rows show pressure in millibars for each hour.

176. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

October, 1930.

Table for October 1930 showing hourly pressure readings at Eskdalemuir. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level). Rows show pressure in millibars for each hour.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

177. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

November, 1930.

Hour. G.M.T.	Station Level												Sea Level												Mean
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
Day.																									
1	983.7	981.9	981.8	981.1	980.3	979.2	978.7	977.9	977.2	976.5	975.9	974.9	974.1	973.4	972.8	972.4	972.1	971.6	971.1	970.5	969.7	968.7	967.6	966.4	975.4
2	964.8	963.0	960.6	958.3	956.0	953.0	950.4	948.6	946.6	945.7	944.9	944.1	943.7	943.3	943.0	943.5	944.0	944.7	945.4	946.4	947.9	949.1	949.8	951.2	949.8
3	953.0	954.3	955.5	956.7	957.8	959.1	959.2	960.1	960.3	960.6	961.2	961.6	962.0	962.3	962.4	963.2	964.2	964.5	965.0	965.8	967.0	967.6	968.8	969.4	961.4
4	970.2	970.9	971.6	972.3	973.1	974.1	975.2	976.2	976.9	977.4	977.9	978.2	978.4	978.8	979.3	979.2	979.2	979.5	979.9	980.0	979.9	979.8	979.7	979.5	976.8
5	979.3	979.0	978.6	977.9	977.9	977.8	977.8	977.5	977.5	977.7	977.7	977.2	976.9	977.0	977.3	977.8	978.4	979.4	979.9	980.0	979.9	980.0	980.3	980.3	978.4
6	980.7	981.1	981.1	981.3	981.6	981.8	982.0	982.4	982.6	982.9	982.9	982.8	982.7	982.3	982.5	982.5	982.6	982.4	982.5	981.8	981.5	980.8	980.3	980.3	981.9
7	980.4	980.9	981.7	982.5	983.1	983.3	983.7	983.2	983.5	982.9	982.5	981.6	980.6	979.3	977.9	976.4	975.4	974.0	972.2	970.8	969.6	969.3	968.8	970.4	978.3
8	971.5	973.2	974.9	977.3	979.6	979.9	983.5	984.8	986.2	987.5	987.7	989.1	989.0	989.2	989.9	990.0	990.0	990.3	990.1	989.4	988.5	987.7	986.7	986.1	985.8
9	985.3	984.4	984.3	984.9	985.4	984.9	985.7	986.5	986.5	987.0	987.4	988.3	988.9	989.2	989.3	989.5	990.0	990.0	990.8	991.0	991.2	991.6	991.9	992.2	998.0
10	992.4	992.6	992.1	992.1	992.1	992.1	991.8	992.5	993.1	993.6	994.0	994.4	994.3	993.4	993.2	993.6	993.6	994.5	994.9	995.2	995.9	996.2	996.9	996.2	993.6
11	996.3	996.5	996.8	997.2	997.6	998.0	998.7	999.0	999.0	999.1	999.2	999.4	999.4	999.5	999.5	999.5	999.7	999.7	999.7	999.7	999.7	999.7	999.7	999.7	1000.0
12	008.3	007.9	007.4	006.8	006.6	005.8	005.7	006.0	005.1	004.7	004.3	003.5	003.0	002.9	002.4	001.5	001.7	001.5	001.1	001.0	001.3	001.2	000.8	000.3	003.9
13	000.0	009.6	009.2	008.7	008.8	008.8	008.5	008.8	008.9	008.8	008.9	009.7	009.6	009.6	009.5	009.7	009.7	009.7	009.7	009.6	009.5	009.4	009.3	009.6	007.8
14	993.4	993.4	993.0	992.1	991.7	990.3	989.7	989.8	989.7	989.4	989.1	988.1	987.0	986.3	986.0	985.5	985.3	985.1	984.0	983.1	981.9	980.6	979.7	978.6	987.6
15	978.2	976.7	975.9	976.0	976.4	976.6	977.6	978.5	979.3	979.8	980.9	981.2	981.6	981.7	982.1	982.9	983.4	984.1	984.8	985.6	985.9	987.1	987.3	988.5	981.3
16	989.4	990.0	990.7	990.8	991.2	991.5	992.0	992.6	992.9	993.3	993.9	993.9	994.1	994.6	995.0	995.5	995.8	996.3	996.7	997.0	997.4	997.6	997.6	997.6	993.8
17	997.6	998.1	998.0	998.4	998.2	998.3	998.6	998.7	998.9	999.1	999.1	999.1	999.1	999.1	999.2	999.5	999.7	999.7	999.7	999.9	999.9	999.9	999.9	999.9	999.0
18	998.3	997.6	997.0	996.2	995.4	994.8	994.0	993.5	992.4	991.7	990.6	989.2	987.8	986.1	984.8	983.2	981.6	980.5	979.1	978.5	976.1	974.4	972.4	970.9	987.5
19	969.7	968.6	968.1	967.3	967.7	968.2	969.4	971.1	971.8	972.3	973.4	975.6	976.6	977.7	978.4	979.4	980.1	981.1	981.3	981.4	981.5	981.6	981.8	981.9	974.9
20	980.3	979.7	978.9	978.4	978.1	977.4	976.6	975.9	975.1	974.3	973.8	974.7	976.2	975.9	975.6	975.8	975.7	975.7	975.7	975.7	975.4	975.1	974.8	974.5	965.7
21	954.3	954.2	955.0	956.1	956.9	957.4	957.5	957.6	957.9	958.1	958.3	957.5	957.1	956.4	955.8	955.1	954.2	953.5	953.0	951.9	952.3	951.6	951.6	952.6	955.3
22	952.6	951.9	952.0	951.6	951.1	950.7	950.2	950.1	949.4	949.1	948.4	947.9	947.2	947.4	949.3	951.0	953.0	954.8	957.9	962.3	965.6	968.1	968.2	968.2	958.6
23	970.6	972.3	974.6	976.2	977.4	978.5	980.6	981.7	982.1	982.7	984.5	985.0	984.9	985.2	986.0	986.0	986.1	986.5	986.7	986.8	986.1	985.6	984.7	983.8	981.9
24	982.6	981.3	980.1	978.5	976.7	974.8	972.8	970.5	967.3	974.4	961.1	957.2	953.9	951.8	951.2	951.9	952.6	952.8	952.8	953.3	953.1	953.4	953.6	954.4	963.2
25	955.2	955.8	956.6	957.3	957.9	958.6	959.6	960.0	959.9	959.9	959.7	958.6	957.7	957.2	957.3	957.3	957.2	957.0	957.0	957.0	957.0	957.0	957.0	957.0	954.8
26	950.1	950.6	950.6	951.1	951.5	952.4	953.1	953.7	954.4	955.7	955.9	956.0	956.2	956.5	957.0	957.6	958.4	959.0	959.8	959.5	961.4	962.0	962.7	963.5	955.9
27	964.4	965.2	966.1	966.8	967.6	968.5	969.5	969.6	971.6	972.5	973.3	974.1	974.8	975.5	976.0	976.7	977.3	978.0	978.9	979.8	980.1	980.5	980.9	981.9	973.4
28	981.0	981.3	981.1	981.1	981.4	981.4	981.8	982.1	982.3	982.5	982.2	981.8	981.5	981.7	981.7	982.0	982.5	982.7	982.4	983.2	983.5	983.8	983.7	982.1	982.1
29	983.9	984.2	984.7	985.1	985.2	985.8	986.1	986.7	987.0	987.2	987.2	986.6	987.3	987.8	987.3	987.4	988.7	989.0	989.4	989.6	990.0	990.3	990.5	987.2	987.2
30	991.1	991.9	992.4	992.6	993.2	993.6	994.4	995.2	995.3	995.8	996.2	996.1	995.6	995.5	995.5	995.7	995.8	995.8	996.0	996.1	996.2	996.2	996.1	996.1	994.8
Mean (Station level)	978.62	978.60	978.67	978.72	978.84	978.77	978.96	978.87	979.24	979.28	979.29	978.98	978.68	978.45	978.38	978.45	978.66	978.76	978.87	978.83	978.95	979.03	978.92	978.99	978.82
Mean (Sea level)	1007.67	1007.65	1007.72	1007.78	1007.90	1007.85	1008.05	1007.95	1008.27	1008.25	1008.19	1007.80	1007.45	1007.20	1007.16	1007.33	1007.59	1007.73	1007.85	1007.83	1007.98	1008.06	1007.97	1008.05	1007.80

178. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

December, 1930.

Hour. G.M.T.	Station Level												Sea Level												Mean
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
1	995.9	995.7	995.4	994.8	994.6	994.6	994.7	995.1	995.6	995.4	995.2	995.2	994.8	994.8	994.7	994.8	995.0	995.4	995.5	995.5	995.8	995.6	995.8	995.9	995.2
2	995.9	995.7	995.7	995.7	995.7	996.0	996.3	997.1	997.1	997.6	997.9	997.7	997.6	997.7	997.5	998.1	999.1	999.5	999.9	1000.1	1000.2	1000.0	1000.8	1000.7	999.1
3	000.5	000.5	000.9	001.0	001.2	001.3	001.8	002.2	002.8	002.9	002.8	002.6	002.3	001.9	002.0	002.2	002.4	002.7	002.7	002.5	002.7	002.7	002.4	001.9	002.0
4	001.3	000.8	000.5	000.2	999.9	999.8	999.7	999.2	999.0	998.7	998.0	998.4	997.1	996.6	996.1	996.0	996.0	995.8	995.5	995.2	995.1	995.2	994.9	994.4	997.8
5	994.2	993.9	993.5	993.3	993.0	993.0	992.9	993.1	993.2	992.8	992.9	992.6	992.1	991.8	991.4	991.7	991.7	991.8	991.6	991.3	991.0	990.8	990.5	990.5	992.4
6	989.8	989.3	988.8	987.7	987.3	986.9	986.7	986.5	986.1	985.9	985.5	984.4	983.7	983.1	982.4	982.1	981.7	981.2	980.9	980.5	979.8	979.7	979.5	978.8	984.3
7	978.7	978.4	978.0	977.8	977.5	977.5	977.7	977.8	977.7	977.7	977.6	977.0	976.8	976.6	976.4	976.3	976.3	975.9	975.8	975.5	975.3	975.3	975.3	974.9	976.9
8	974.8	974.6	974.4	973.9	973.4	972.6	971.7	970.9	970.4	969.6	969.1	968.5	967.8	967.5	967.5	967.6	967.8	968.2	968.8	969.6	970.0	970.5	970.8	970.9	970.5
9	971.1	971.0	971.0	971.2	971.6	972.1	972.6	973.2	973.9	974.6	974.7	974.8	975.3	975.8	976.3	977.2	977.7	978.6	979.3	979.7	979.9	980.0	980.8	975.3	975.3
10	980.9	981.7	982.1	982.5	982.7	982.8	983.1	983.7	984.0	983.5	983.0	983.0	982.6	982.4	982.0	981.8	981.9	981.2	980.2	979.2	978.0	977.0	975.3	981.7	981.7
11	974.4	972.3	970.7	968.9	966.5	965.0	963.8	962.4	961.6	960.9	960.5	959.9	959.4	959.2	959.6	960.3									

PRESSURE AT STATION LEVEL AND AT SEA LEVEL.  
ANNUAL MEANS FROM HOURLY VALUES.

1930.

From readings in millibars at exact hours, Greenwich Mean Time.

179. Eskdalemuir :  $H_b = 237.3$  metres.

1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Station Level.	981.84	981.72	981.61	981.54	981.56	981.62	981.72	981.86	982.00	982.03	981.98	981.87	981.71	981.60	981.51	981.48	981.53	981.63	981.74	981.86	981.93	981.95	981.93	981.86	981.75
Sea Level.	010.71	010.59	010.49	010.42	010.43	010.47	001.52	010.59	010.65	010.63	010.50	010.35	010.14	010.02	009.94	009.94	010.04	010.21	010.39	010.57	010.67	010.75	010.78	010.71	010.44

PRESSURE AT STATION LEVEL : MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

180. Eskdalemuir :  $H_b = 237.3$  metres.

1930.

Month.	Mean.	Hour. 1.	GMT. 2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	972.06	-0.42	-0.43	-0.42	-0.55	-0.56	-0.37	-0.09	+0.38	+0.80	+1.00	+0.99	+0.82	+0.51	+0.28	+0.09	-0.01	-0.11	-0.11	-0.19	-0.22	-0.33	-0.40	-0.33	-0.34
Feb.	993.47	+0.17	+0.01	-0.16	-0.31	-0.36	-0.29	-0.18	+0.07	+0.28	+0.36	+0.43	+0.23	-0.05	-0.34	-0.43	-0.41	-0.28	-0.04	+0.09	+0.18	+0.23	+0.28	+0.29	+0.25
Mar.	979.90	+0.28	+0.04	-0.21	-0.28	-0.32	-0.39	-0.33	-0.27	-0.70	+0.01	-0.04	-0.03	-0.09	-0.15	-0.17	-0.28	-0.26	+0.07	+0.32	+0.46	+0.44	+0.48	+0.42	+0.39
April	982.09	+0.24	+0.04	-0.02	-0.12	-0.07	+0.09	+0.12	+0.15	+0.12	+0.07	-0.02	-0.16	-0.29	-0.36	-0.45	-0.53	-0.48	-0.25	+0.02	+0.31	+0.39	+0.48	+0.40	+0.37
May	985.67	+0.14	+0.10	0.00	0.00	+0.04	+0.21	+0.34	+0.37	+0.32	+0.23	+0.05	-0.01	-0.17	-0.27	-0.41	-0.53	-0.54	-0.41	-0.29	-0.04	+0.17	+0.23	+0.27	+0.22
June	986.25	+0.27	+0.17	+0.03	+0.04	+0.06	+0.15	+0.24	+0.31	+0.32	+0.27	+0.10	+0.02	-0.08	-0.21	-0.37	-0.53	-0.59	-0.60	-0.45	-0.19	+0.11	+0.29	+0.33	+0.31
July	981.12	+0.10	-0.07	-0.24	-0.27	-0.25	-0.22	-0.18	-0.09	-0.05	0.00	+0.06	+0.06	-0.05	-0.03	-0.11	-0.15	-0.15	-0.08	+0.03	+0.23	+0.38	+0.43	+0.39	+0.26
Aug.	981.09	+0.04	-0.18	-0.30	-0.38	-0.30	-0.20	-0.18	-0.09	-0.03	-0.03	-0.08	-0.11	-0.05	+0.03	+0.02	0.00	+0.06	+0.10	+0.21	+0.36	+0.35	+0.31	+0.31	+0.16
Sept.	984.83	+0.05	-0.14	-0.35	-0.57	-0.56	-0.51	-0.45	-0.21	-0.08	+0.01	+0.06	+0.13	+0.02	0.00	-0.10	-0.09	+0.01	+0.10	+0.33	+0.50	+0.50	+0.55	+0.51	+0.29
Oct.	976.95	-0.39	-0.42	-0.46	-0.33	-0.15	-0.03	+0.25	+0.59	+0.75	+0.70	+0.63	+0.51	+0.30	+0.16	-0.04	-0.16	-0.10	-0.13	-0.21	-0.23	-0.15	-0.27	-0.39	-0.41
Nov.	978.82	-0.02	-0.05	0.00	+0.04	+0.13	+0.05	+0.22	+0.12	+0.47	+0.50	+0.49	+0.17	-0.16	-0.40	-0.51	-0.43	-0.24	-0.15	-0.06	-0.12	-0.01	+0.05	-0.08	-0.03
Dec.	980.12	+0.20	+0.13	+0.09	-0.12	-0.23	-0.32	-0.35	-0.22	-0.03	+0.10	+0.04	-0.19	-0.37	-0.48	-0.41	-0.09	+0.08	+0.22	+0.27	+0.33	+0.34	+0.36	+0.37	+0.26
Year	981.76	+0.05	-0.07	-0.17	-0.24	-0.22	-0.15	-0.05	+0.09	+0.23	+0.27	+0.22	+0.12	-0.04	-0.15	-0.24	-0.27	-0.21	-0.11	+0.01	+0.13	+0.20	+0.23	+0.21	+0.14

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY.

Maximum and minimum for the interval 0 h. to 24 h., Greenwich Mean Time.

181. Eskdalemuir :  $H_b = 237.3$  metres.

1930.

Month.	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	986.7	973.5	960.3	948.9	907.2	904.2	974.0	968.2	995.0	992.4	990.8	984.2	978.6	975.1	987.0	976.9	999.4	997.7	999.6	984.4	966.4	996.1	994.5	994.5
2	978.8	973.0	968.9	960.3	904.2	997.4	976.0	968.9	993.4	989.5	989.0	984.6	987.1	978.5	976.9	963.7	000.3	999.0	002.4	964.2	943.2	996.0	995.5	995.5
3	972.0	967.3	968.8	964.8	997.6	994.0	977.5	974.3	992.8	991.1	993.3	988.8	983.5	979.9	968.9	966.0	000.3	997.2	002.4	989.7	969.4	951.2	003.0	000.2
4	970.1	951.9	972.3	964.7	000.3	993.9	981.6	975.8	991.6	987.1	997.6	993.2	985.9	983.4	969.5	965.6	997.5	987.7	989.7	962.5	980.0	969.4	001.9	994.4
5	960.8	948.1	984.3	972.3	000.3	998.1	984.1	981.2	987.1	982.7	997.5	992.8	987.0	984.1	971.2	968.6	987.7	983.4	970.2	962.9	980.3	976.8	994.4	990.5
6	981.0	960.8	998.5	984.2	998.1	986.3	990.7	982.9	988.0	983.7	992.8	987.2	989.3	982.5	974.7	970.4	984.1	979.7	966.7	964.8	983.0	980.2	990.5	978.8
7	977.2	970.5	908.9	998.5	987.3	985.2	995.1	990.5	987.9	983.9	997.1	990.3	994.0	989.3	983.9	974.7	982.3	979.2	972.4	964.2	983.7	968.8	978.8	974.9
8	975.1	968.7	012.7	008.9	986.0	975.9	994.9	984.6	987.2	977.6	997.2	991.3	993.5	989.9	988.3	983.9	982.5	980.8	967.1	949.5	990.4	970.4	974.9	967.8
9	970.8	965.3	012.9	011.8	975.9	969.0	984.6	982.9	978.0	973.9	991.3	977.9	996.8	990.9	989.2	986.9	982.3	980.9	981.3	967.1	992.3	984.1	980.8	970.8
10	967.4	942.8	012.5	010.7	974.5	968.3	986.0	982.1	975.8	968.3	978.0	973.9	996.4	991.5	988.0	979.4	985.2	981.8	982.5	977.8	996.2	991.7	984.0	975.3
11	951.9	944.5	011.0	005.6	974.1	967.5	985.8	972.8	975.9	966.3	986.9	975.3	991.5	987.2	979.4	977.5	989.1	985.1	977.8	967.1	008.4	996.2	975.3	958.9
12	954.9	943.3	006.1	001.3	979.9	969.0	971.9	970.3	980.3	975.9	992.3	986.9	994.0	984.5	978.0	974.7	989.5	985.2	978.0	966.7	008.4	000.3	970.5	956.1
13	972.4	954.8	001.3	992.1	972.9	965.6	970.3	964.0	980.2	974.4	997.0	992.1	985.5	978.6	978.8	965.0	985.2	978.4	980.7	978.0	000.3	994.6	962.0	952.6
14	973.0	970.6	992.1	978.8	968.2	964.6	986.3	966.4	986.8	976.4	000.6	996.7	978.6	975.5	975.9	964.3	990.4	979.8	980.6	973.8	994.6	979.7	973.6	962.0
15	988.6	972.9	994.3	979.1	968.7	966.2	991.8	986.3	987.0	982.5	000.7	998.2	977.2	972.2	987.5	975.9	992.5	990.4	978.0	970.6	988.5	975.6	979.6	973.6
16	994.6	988.6	002.0	994.3	966.2	961.8	991.9	987.0	992.6	986.3	000.0	995.6	972.2	964.7	990.3	988.5	991.3	985.2	978.2	970.5	997.7	988.5	986.1	973.2
17	987.7	985.9	008.0	002.0	967.0	963.1	990.9	985.1	992.5	973.8	995.6	988.4	964.7	962.9	988.9	984.7	985.2	971.2	981.0	963.0	000.2	997.2	995.9	986.1
18	987.3	977.4	008.5	005.7	969.1	961.2	992.6	986.1	984.4	974.6	988.4	984.3	969.0	961.4	984.7	971.4	974.6	958.7	981.0	963.0	998.7	970.9	999.8	994.7
19	979.4	972.4	005.7	998.3	973.1	969.1	986.1	980.4	987.5	984.4	985.5	981.6	976.7	969.0	982.0	968.5	974.1	953.9	981.0	966.2	981.7	967.1	002.5	999.8
20	988.7	979.1	999.8	997.7	972.5	961.6	986.7	983.2	993.6	987.2	985.0	979.3	977.4	976.0	984.1	976.4	961.8	950.7	971.9	967.2	980.9	954.0	003.1	999.4
21	988.8	981.7	000.7	998.3	973.6	963.9	984.3	982.1	996.1	993.6	987.9	979.5	980.5	975.7	976.4	961.4	983.4	961.8	971.0	964.1	958.6	951.4	004.0	002.6
22	981.7	978.0	001.8	999.8	988.4	973.2	983.4	976.1	997.8	995.3	982.1	977.3	984.4	979.8	984.6	965.0	984.7	983.3	979.1	971.0	968.2	946.9	004.7	996.5
23	978.5	975.3	003.9	001.1	991.7	985.2	976.1	968.0	998.1	994.8	997.8	975.9	985.2	983.6	983.7	978.7	983.6	976.9	964.7	971.9	986.9	968.2	996.5	980.1
24	975.3	962.5	003.7	993.2	997.6	991.7	974.1	968.1	994.8	991.6	975.3	970.7	987.8	984.5	991.8	981.5	978.7	975.5	972.0	964.2	983.8	950.9	980.1	973.1
25	971.8	964.9	993.2	983.4	995.6																			

Readings in degrees absolute at exact hours, Greenwich Mean Time.

182. Eskdalemuir : Louvred Hut :  $h_1$  (height of thermometer bulb above ground) = 0.9 metres.

January, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	74.0	74.8	74.9	75.1	74.4	73.8	74.4	75.0	75.7	77.8	78.3	79.4	80.1	80.8	81.0	80.9	80.8	81.2	81.6	81.8	82.3	81.1	78.5	77.6	78.1
2	76.9	78.0	78.7	78.1	79.4	79.3	79.2	79.0	78.8	78.8	79.0	78.9	79.4	79.2	78.8	78.2	78.0	77.2	77.9	78.0	78.9	79.5	80.0	80.2	78.7
3	80.7	80.9	81.0	80.6	81.5	80.5	80.7	80.3	79.9	79.4	78.5	78.0	77.8	77.0	76.5	75.9	74.9	75.0	74.2	73.8	73.2	74.8	74.1	73.9	77.8
4	73.8	74.1	73.2	73.1	73.7	74.0	73.9	73.8	72.7	72.8	74.3	74.4	74.0	74.7	75.0	75.3	76.2	76.2	77.0	77.9	78.6	78.9	79.0	77.3	75.1
5	77.3	77.4	77.2	77.0	76.7	76.0	75.5	75.3	76.0	76.2	76.9	76.0	76.2	77.0	77.6	77.7	77.5	77.3	76.5	76.6	76.6	76.0	76.8	77.1	76.7
6	76.9	76.8	76.7	76.5	76.4	76.5	75.8	75.5	75.3	76.0	76.1	76.3	76.7	76.8	76.9	77.3	77.5	77.9	77.5	78.2	78.8	79.7	79.9	80.3	77.1
7	80.8	81.1	81.3	81.5	81.9	81.9	81.2	81.0	80.9	81.0	81.3	81.7	81.6	81.4	81.3	81.4	81.3	81.3	79.9	79.7	79.2	78.7	78.3	78.5	80.8
8	78.6	78.5	76.5	77.0	76.5	74.9	74.8	74.8	74.3	74.1	74.7	75.2	76.0	75.7	75.4	75.7	75.6	75.1	75.8	75.6	75.9	75.9	75.0	75.5	75.8
9	75.3	75.4	75.3	75.3	75.7	75.9	73.8	75.0	75.6	75.9	75.8	76.0	76.0	76.2	75.9	75.3	74.7	74.4	74.0	73.7	74.1	74.1	74.1	74.4	75.1
10	74.9	75.0	75.0	74.9	74.2	73.8	73.8	73.5	73.5	73.8	74.5	75.0	76.1	76.1	75.9	75.5	75.0	75.1	74.6	75.2	76.2	78.1	77.0	76.7	75.1
11	75.1	74.1	73.9	73.7	73.7	73.7	73.5	73.0	73.1	72.7	73.0	72.1	73.0	73.0	72.7	72.5	72.0	71.9	72.0	72.0	72.0	72.1	72.1	72.7	73.0
12	72.3	72.8	73.1	73.7	74.1	74.4	74.6	74.7	74.9	75.0	75.4	75.8	74.4	74.0	73.5	73.4	73.7	73.5	73.6	73.7	74.0	74.0	74.1	74.4	74.0
13	75.0	74.0	74.3	74.9	74.8	74.5	73.9	74.0	74.4	74.5	75.0	75.0	75.5	75.5	75.1	75.1	75.4	76.2	76.5	76.5	76.7	76.8	77.0	77.0	75.3
14	77.1	77.0	76.8	76.0	75.3	74.9	74.5	74.4	74.3	74.5	74.6	75.1	75.5	75.5	75.3	74.5	73.8	73.9	73.9	73.9	73.9	73.8	73.9	73.6	74.9
15	73.5	73.1	73.0	72.5	71.7	71.2	70.8	71.7	71.8	73.2	73.6	74.3	75.7	74.9	75.2	74.7	74.2	74.9	74.7	75.0	75.0	75.1	74.9	75.0	73.7
16	75.2	75.1	74.9	74.0	72.7	71.2	70.6	70.6	71.7	72.3	73.0	74.0	74.8	74.7	75.0	75.0	75.1	75.5	75.6	76.6	77.1	77.6	77.1	77.1	74.4
17	77.0	77.7	77.9	78.0	77.7	77.6	77.5	77.5	77.6	77.7	78.3	79.0	79.1	79.5	79.5	79.8	79.9	80.1	80.2	80.3	80.7	80.9	80.9	80.7	78.9
18	80.6	80.3	80.0	79.9	79.9	80.0	80.3	80.0	80.0	79.8	80.0	80.0	79.9	79.8	79.6	79.5	79.6	79.7	80.0	80.3	80.7	80.8	80.9	81.6	80.1
19	82.1	82.0	81.6	81.1	81.0	81.4	81.3	81.7	81.8	81.7	82.0	82.0	82.0	81.0	80.0	79.9	79.8	79.5	78.0	77.2	76.6	75.6	75.3	75.3	80.1
20	76.3	76.3	76.2	76.2	76.0	76.0	76.2	76.3	76.8	76.0	76.3	76.6	77.3	77.1	76.6	76.5	76.1	75.3	73.8	72.9	73.6	73.4	71.9	71.7	75.5
21	72.0	72.8	72.8	72.0	72.8	72.5	72.8	73.3	74.0	74.3	74.9	85.8	76.7	77.0	77.0	77.0	76.9	77.0	77.0	77.2	77.5	77.6	77.1	77.1	75.1
22	76.9	76.9	76.6	76.5	76.8	77.0	77.1	76.8	77.4	77.1	77.3	77.9	78.1	78.2	78.3	78.4	78.6	78.5	78.6	78.9	78.7	78.3	78.5	78.7	77.7
23	78.8	78.5	78.4	78.7	78.5	78.5	78.9	79.0	79.0	79.0	79.0	79.1	79.1	79.1	79.0	78.3	77.2	77.8	77.7	77.6	77.5	76.2	76.0	75.7	78.3
24	75.8	75.5	76.0	77.4	77.5	77.6	78.3	78.5	79.0	79.7	80.0	80.4	80.5	79.8	79.7	79.6	78.3	77.0	76.5	76.0	76.0	77.0	76.7	76.5	77.9
25	76.0	76.0	75.5	75.0	75.0	74.0	73.9	74.0	74.3	74.0	75.4	75.5	76.4	76.0	75.5	74.8	74.5	74.3	73.8	73.7	73.0	73.2	73.0	73.1	74.7
26	73.1	73.0	73.0	73.2	73.4	73.7	73.5	73.5	73.4	73.5	73.9	74.3	75.5	75.3	74.8	74.2	73.6	73.6	73.5	73.9	74.0	74.0	74.7	74.8	73.9
27	74.8	75.0	74.3	73.9	73.4	73.8	73.7	73.6	73.8	74.0	74.3	74.4	74.5	74.6	74.2	74.0	73.8	73.7	73.7	73.3	72.5	71.7	70.1	69.2	73.6
28	68.4	67.6	67.0	67.0	66.9	66.5	66.5	66.6	68.0	69.9	71.3	73.2	73.7	73.8	73.5	72.9	72.6	72.2	72.5	72.9	73.1	73.1	72.9	73.0	70.5
29	73.0	73.0	72.9	73.0	73.4	74.0	74.0	73.3	74.0	74.6	74.7	75.3	75.3	76.0	76.1	75.8	73.5	72.9	73.8	73.6	73.3	73.6	74.1	74.0	73.9
30	74.0	73.7	73.5	73.5	73.5	73.5	73.6	73.7	74.0	74.9	75.0	75.0	75.3	76.3	76.0	76.1	74.3	72.7	71.1	71.1	70.6	69.8	70.3	70.5	73.4
31	69.8	70.0	69.1	69.5	69.0	70.5	73.0	73.7	73.2	73.1	73.8	74.0	74.3	74.7	75.3	75.2	75.7	75.8	75.7	75.8	75.4	75.2	75.3	75.6	73.3
Mean ...	75.7	75.7	75.5	75.4	75.4	75.3	75.2	75.3	75.4	75.7	76.1	76.4	76.8	76.8	76.7	76.5	76.1	76.0	75.8	75.9	76.0	76.0	75.8	75.8	75.9

183. Eskdalemuir : Louvred Hut :  $h_1$  = 0.9 metres.

February, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	75.6	75.9	75.8	75.4	75.3	75.2	75.8	75.9	75.6	75.6	75.6	74.9	75.0	75.0	74.5	74.3	73.9	73.9	73.9	73.7	73.9	74.1	74.1	74.3	74.9
2	74.4	74.4	74.5	74.6	74.5	74.5	74.5	74.5	74.3	74.5	74.9	75.3	75.8	75.7	75.6	75.3	75.0	74.8	74.7	74.5	74.1	74.0	74.0	74.0	74.7
3	74.0	73.9	74.0	73.9	73.9	74.0	73.9	74.0	74.1	74.3	74.8	75.5	75.7	75.9	76.0	75.4	74.9	74.6	74.0	74.0	74.2	74.1	74.1	74.1	74.5
4	74.0	73.2	73.5	73.5	73.8	73.8	73.8	73.9	74.4	74.4	75.3	75.9	76.7	76.0	76.0	76.0	74.9	75.0	74.8	74.8	74.9	75.4	75.1	75.0	74.7
5	75.0	74.7	74.8	74.6	74.0	74.0	74.0	74.1	74.5	74.7	75.8	75.0	75.3	75.6	75.5	75.1	74.3	73.8	74.2	74.0	74.0	73.8	73.2	73.4	74.5
6	73.1	73.0	73.0	72.9	73.5	72.9	73.7	73.3	74.0	74.8	75.0	74.7	75.1	74.9	74.0	74.0	73.9	73.5	73.1	73.8	73.4	72.8	72.3	72.8	73.7
7	72.8	72.6	72.6	73.1	73.2	72.6	72.9	72.8	73.3	73.2	73.8	74.0	74.3	74.3	73.8	73.2	73.2	72.5	71.9	72.9	72.2	71.0	69.5	68.9	72.7
8	68.3	68.0	69.6	69.2	69.9	70.3	71.0	71.4	72.0	72.9	73.6	74.9	74.3	75.0	74.3	74.3	73.9	73.7	73.7	73.7	73.4	73.1	73.1	73.0	72.3
9	73.0	73.0	73.0	72.9	72.9	72.5	72.9	72.9	73.6	74.8	76.0	75.9	76.1	75.8	76.0	75.3	74.0	73.4	72.3	70.9	70.1	69.3	68.5	67.8	73.1
10	67.0	67.0	67.1	66.6	66.8	65.9	66.5	66.7	68.5	72.1	73.5	75.2	75.9	76.0	76.0	75.0	72.7	71.4	69.5	68.8	68.0	68.0	67.8	67.8	70.0
11	67.4	67.3	67.0	68.7	67.8	68.7	69.5	70.3	71.1	71.9	75.1	78.0	79.2	79.2	78.9	77.5	74.3	72.9	71.2						

Readings in degrees absolute at exact hours, Greenwich Mean Time.

184. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulb above ground) = 0.9 metres.

March, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	73.0	72.9	73.5	73.1	73.9	73.9	73.5	74.5	76.0	77.9	79.1	80.0	81.9	82.5	82.8	81.8	80.7	77.3	75.8	75.1	76.2	75.4	74.9	73.9	76.6
2	73.5	73.9	71.7	71.9	72.1	72.8	73.1	74.2	74.5	75.0	76.0	76.9	77.1	77.0	76.7	76.5	76.0	75.0	74.7	74.1	74.2	74.1	73.9	73.7	74.5
3	73.4	73.3	73.0	72.3	72.9	73.1	73.5	73.8	74.3	74.9	75.9	77.3	78.4	78.5	78.8	78.7	78.7	77.1	75.9	75.2	74.6	75.0	75.9	76.0	75.4
4	76.0	76.4	76.8	76.8	78.0	77.9	78.1	78.2	78.6	79.0	79.1	79.2	79.4	80.2	81.8	80.3	80.0	78.9	78.0	77.3	76.8	77.0	77.1	77.1	78.2
5	77.1	76.9	76.9	76.9	76.9	76.9	77.1	77.3	78.0	78.7	79.9	79.9	80.1	79.9	79.5	79.2	79.0	78.9	78.7	78.5	78.5	78.4	78.4	78.4	78.3
6	78.0	77.9	78.2	77.7	76.5	76.5	77.0	77.3	77.5	77.8	78.2	78.2	78.9	79.7	79.7	79.0	78.8	78.5	78.3	77.9	77.7	77.2	77.0	76.9	78.0
7	75.0	74.8	75.0	75.1	75.4	76.0	76.5	76.2	78.1	80.2	79.9	80.0	81.1	80.9	80.6	80.6	79.9	79.8	79.9	79.1	79.4	78.9	78.7	78.7	78.3
8	78.8	78.7	78.3	78.3	78.1	78.0	78.0	78.2	78.5	79.0	79.8	80.0	79.9	79.8	78.7	78.4	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.3
9	78.5	78.5	78.5	78.5	78.3	78.2	78.2	78.3	78.8	79.0	80.0	80.0	79.7	79.0	79.7	79.8	78.7	77.6	77.3	77.0	76.0	75.5	74.7	74.5	78.2
10	74.8	74.3	73.1	71.7	71.1	70.3	70.0	72.8	74.5	75.1	76.0	77.0	77.1	77.6	76.0	76.5	75.4	74.9	73.9	73.1	74.1	74.1	73.2	73.0	74.2
11	73.1	72.3	71.7	71.6	72.0	72.0	72.1	72.7	73.4	74.9	75.9	76.0	77.0	77.8	77.3	76.3	75.5	74.0	72.5	71.0	70.1	69.9	69.8	70.0	73.3
12	70.7	71.1	71.8	72.0	72.3	72.9	72.9	73.2	75.0	75.3	76.8	77.9	78.9	76.0	76.3	76.0	75.4	74.0	73.2	73.0	72.3	71.9	70.7	70.0	73.7
13	68.7	69.9	70.3	69.3	68.7	68.3	70.3	73.2	74.9	75.3	75.3	76.1	76.1	75.3	75.1	75.0	74.2	73.3	72.9	72.2	71.7	70.0	70.1	71.3	72.1
14	71.8	71.5	71.3	71.8	72.0	70.7	71.8	72.7	73.7	74.1	73.3	73.3	74.8	74.8	75.1	75.2	74.4	73.5	73.0	72.6	72.9	72.1	71.9	71.7	71.7
15	71.0	71.3	71.9	71.9	72.0	71.9	72.7	72.8	73.1	73.2	74.0	74.3	74.7	75.0	75.0	73.7	73.6	73.1	72.7	72.8	72.4	72.2	72.2	72.5	72.9
16	72.5	72.3	72.2	72.4	72.5	72.6	72.5	72.7	72.8	72.8	72.7	74.1	74.7	74.8	74.8	74.2	74.0	73.8	73.6	73.5	73.5	73.5	73.5	73.2	73.3
17	73.1	73.0	73.0	72.9	72.8	72.7	72.9	73.8	74.2	74.0	74.0	74.3	74.3	74.4	74.3	74.0	73.8	73.6	73.5	73.3	73.2	73.0	72.9	72.8	73.4
18	72.5	72.8	72.5	72.3	72.0	71.9	71.8	72.7	72.6	74.0	74.3	74.9	74.9	75.0	75.0	74.2	73.2	72.2	71.6	71.4	70.6	70.5	70.3	70.2	72.6
19	69.2	68.8	68.7	66.9	65.0	63.9	64.5	67.9	69.3	70.3	70.7	71.0	71.8	72.1	72.0	71.9	70.1	68.7	67.2	65.0	64.0	63.4	63.0	62.4	68.0
20	63.4	64.4	64.8	67.8	65.0	68.2	71.5	72.3	72.8	73.1	73.6	73.7	74.7	75.8	75.8	75.5	74.8	73.5	72.2	71.1	71.3	70.4	71.3	71.4	71.0
21	70.8	69.0	68.8	67.3	67.9	68.3	69.5	72.8	74.8	74.8	75.0	75.5	75.6	74.5	74.5	74.1	73.3	72.4	72.0	71.3	70.0	69.9	70.0	68.8	71.8
22	70.0	71.4	72.8	73.0	72.6	73.1	73.3	74.3	75.3	75.9	76.8	77.1	77.7	77.1	77.9	77.5	77.0	74.2	73.3	70.9	71.0	69.9	68.7	68.8	73.7
23	68.7	67.0	68.3	70.3	71.4	71.8	72.6	72.9	73.3	74.8	76.0	76.5	76.8	76.9	76.0	76.9	75.1	74.5	74.6	74.4	74.8	74.3	74.2	74.2	73.6
24	74.1	74.0	74.1	74.0	74.1	74.0	74.0	74.9	76.0	77.2	77.9	79.0	79.5	79.9	79.8	79.5	79.0	77.3	75.0	74.8	74.8	74.3	74.3	74.8	76.1
25	75.5	76.0	76.1	76.0	76.1	76.3	76.8	77.1	77.6	78.0	79.0	81.0	80.8	81.1	80.3	80.3	80.1	79.9	79.5	79.1	78.4	78.3	77.9	77.6	78.2
26	76.8	76.7	76.2	76.7	76.1	76.3	77.9	79.1	81.1	80.0	81.4	82.6	83.5	83.4	83.2	82.0	81.1	79.8	79.4	79.0	78.8	78.3	78.0	78.0	79.4
27	78.0	78.0	78.0	78.0	78.1	78.1	78.9	79.2	79.5	80.1	82.3	82.1	81.5	81.4	81.2	80.7	80.3	79.8	79.3	79.0	78.8	79.4	78.5	78.6	79.5
28	78.4	78.3	78.4	78.1	78.1	78.3	78.7	78.9	79.1	79.0	79.0	78.6	78.5	78.3	78.7	79.0	79.1	79.0	79.3	79.8	79.7	79.2	79.6	79.3	78.8
29	78.8	78.3	77.4	77.0	77.0	77.2	77.3	78.0	78.0	78.0	78.5	76.5	78.0	78.3	78.2	78.8	77.0	76.8	77.3	76.3	76.1	75.8	75.5	75.7	77.5
30	75.5	75.3	75.6	75.8	75.8	75.6	76.0	77.0	77.9	79.5	78.9	79.5	79.8	79.9	79.4	80.0	79.9	79.4	80.0	79.8	79.8	79.8	79.5	79.0	78.2
31	78.6	78.5	78.5	78.6	78.6	78.3	78.8	79.3	80.2	81.0	81.9	82.6	81.0	80.9	81.2	81.6	81.9	81.7	81.2	80.9	80.8	79.9	79.0	79.0	80.2
Mean ...	73.8	73.8	73.8	73.8	78.7	73.8	74.2	74.9	75.9	76.4	77.2	77.5	78.0	78.0	78.0	77.7	77.1	76.2	75.6	75.1	74.9	74.5	74.3	74.2	75.5

185. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

April, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	79.0	79.5	79.1	79.0	79.3	79.5	79.8	80.3	81.7	82.0	82.2	82.9	83.0	83.3	83.2	84.0	84.2	83.9	82.5	82.5	82.3	82.2	81.7	81.6	
2	81.7	81.6	81.6	81.8	82.0	81.8	82.2	81.1	81.0	80.7	80.8	81.0	81.2	81.9	82.4	82.3	82.0	81.6	81.1	79.9	80.1	79.5	79.0	79.9	
3	79.6	79.8	79.4	79.0	77.6	78.0	81.1	82.2	84.3	84.1	84.0	85.5	81.0	78.9	77.6	76.8	76.5	76.4	76.3	76.1	76.0	75.7	75.7	79.3	
4	75.2	75.0	74.8	74.8	74.8	74.6	74.8	74.8	75.0	74.7	75.3	75.3	75.6	75.3	75.7	75.6	74.9	74.3	74.1	74.0	73.8	73.9	73.8	73.2	
5	73.1	73.3	73.0	73.2	73.5	73.8	73.7	74.6	76.6	77.3	76.9	77.0	78.1	78.0	77.7	77.7	76.8	76.3	75.8	74.7	72.0	72.8	73.1	73.7	
6	74.0	74.3	74.1	74.3	75.0	75.2	75.6	76.1	78.3	78.6	79.0	79.9	79.6	79.1	79.1	78.8	78.1	77.7	77.6	77.5	77.3	77.2	77.4	77.7	
7	77.4	77.4	77.1	77.1	77.2	77.2	77.7	78.0	78.9	78.7	79.9	79.9	79.9	80.5	80.8	80.4	80.0	79.5	79.0	78.8	78.4	78.1	77.3	77.6	
8	77.3	77.1	77.1	77.1	77.0	76.8	77.1	79.0	79.1	79.7	80.0	79.2	78.0	78.3	78.3	78.3	79.0	79.2	79.3	79.4	79.5	79.6	79.6	79.6	
9	79.6	79.7	79.6	79.5	79.2	79.1	79.4	79.7	79.7	79.9	80.5	82.1	82.9	83.9	83.8	83.0	82.7	81.8	80.7	80.0	79.5	79.0	78.9	78.6	
10	77.9	78.0	78.1	78.2	79.3	80.3	80.6	81.5	82.2	83.8	83.9	84.2	84.4	84.3	84.3	84.0	83.0	82.9	81.0	78.0	77.3	75.7	74.3	73.5	
11	73.0	72.2	71.8	70.7	70.4	69.9	72.9	78.0	81.0	81.9	82.5	82.0	82.8	81.8	80.5	79.7	79.0	78.7	78.3	78.3	78.1	77.3	77.3	77.4	
12	78.1	78.3	78.0																						

Readings in degrees absolute at exact hours, Greenwich Mean Time.

186. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulb above ground) = 0.9 metres.

May, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	74.2	73.8	73.3	73.2	74.1	76.4	79.8	83.1	84.0	85.8	87.5	88.0	89.0	89.5	89.8	89.5	88.2	86.7	84.5	81.0	79.0	77.5	76.7	75.7	81.7
2	74.5	74.3	73.6	74.0	75.1	77.1	80.3	82.9	84.8	86.1	87.1	88.2	88.0	88.5	88.9	88.3	87.2	85.9	83.3	80.5	79.9	78.9	77.6	75.8	81.7
3	76.0	74.9	74.9	74.0	74.2	75.2	78.4	81.3	85.1	86.3	87.3	87.8	88.2	87.7	87.0	86.8	86.3	85.8	83.7	82.3	79.9	79.0	78.6	78.3	81.6
4	78.2	78.2	77.9	77.4	77.4	78.0	78.2	79.0	80.2	80.6	81.9	83.7	83.8	84.9	84.7	82.9	83.0	82.7	82.0	81.0	79.9	79.5	79.1	79.0	80.6
5	79.0	78.8	78.7	78.7	78.4	78.4	78.4	79.1	80.7	81.3	82.3	81.9	83.9	83.5	83.4	83.4	82.6	81.5	80.7	79.7	78.9	78.6	78.5	78.1	80.4
6	77.9	77.8	77.8	77.4	77.4	77.6	77.9	78.4	78.9	79.1	79.2	80.0	80.1	81.7	83.0	82.9	82.1	81.2	80.0	77.5	77.3	77.6	77.2	77.8	79.1
7	77.8	77.2	77.8	77.6	78.1	78.5	79.0	80.3	81.0	81.0	81.7	81.0	83.9	82.9	79.8	77.9	77.0	76.5	76.4	75.7	74.8	74.0	73.9	72.9	78.3
8	72.6	72.9	73.0	72.0	73.3	74.9	76.7	77.3	79.4	78.0	78.4	80.2	81.5	81.0	82.5	79.0	77.2	77.3	77.0	77.0	77.5	77.8	77.6	75.5	77.0
9	75.2	75.2	74.2	73.7	73.1	74.6	76.7	77.7	77.7	77.7	77.8	79.7	81.8	80.3	82.6	80.3	80.2	79.3	78.7	75.6	74.0	74.1	73.1	71.9	77.0
10	71.0	69.8	69.3	68.7	69.3	74.0	76.1	77.9	80.0	80.0	80.2	81.8	81.9	80.2	79.4	80.3	79.9	79.2	78.7	77.8	77.3	76.9	75.0	75.0	76.6
11	75.3	75.3	75.9	75.7	76.0	76.7	77.3	78.9	79.7	79.9	80.2	81.1	81.9	81.2	82.4	82.1	82.7	79.7	80.2	80.0	79.7	78.0	76.3	77.0	78.8
12	76.9	76.7	76.8	75.9	76.6	78.8	79.9	81.3	81.6	82.0	84.0	84.9	86.2	84.7	84.2	81.2	82.1	81.7	81.3	80.4	79.7	79.0	78.7	78.5	80.5
13	78.5	78.5	78.2	78.4	78.9	79.0	79.4	79.9	80.6	81.2	80.8	80.8	80.9	81.8	82.9	86.0	85.2	83.9	81.1	79.5	78.8	78.5	77.1	77.1	80.7
14	77.3	79.0	79.0	79.2	78.9	79.4	81.0	82.7	83.4	83.4	84.0	85.3	87.1	87.5	88.0	86.5	86.0	84.0	83.4	82.5	80.1	79.2	79.3	76.8	82.2
15	77.5	78.0	77.5	76.0	76.7	78.8	80.3	83.1	84.0	86.2	87.0	85.6	83.9	82.8	82.9	82.9	83.3	83.8	83.9	82.5	80.0	78.9	78.5	78.9	81.3
16	79.2	78.0	77.0	77.3	77.6	79.5	80.6	81.9	82.8	83.6	83.6	84.0	85.0	84.3	85.0	86.0	84.9	84.3	83.3	82.2	81.7	81.3	81.0	80.9	81.8
17	80.8	80.8	80.8	80.9	81.0	81.1	81.1	82.2	83.0	84.5	85.2	85.4	85.3	84.3	82.9	82.5	82.5	82.5	82.4	82.2	82.1	81.9	81.0	80.7	82.4
18	79.7	78.9	78.8	78.4	78.6	78.9	79.5	80.1	81.6	82.0	81.6	81.1	82.3	84.0	82.9	82.0	81.1	81.0	80.3	80.2	80.2	80.0	79.9	79.8	80.4
19	79.8	79.7	79.7	79.7	79.1	79.3	80.7	80.3	80.8	81.2	81.9	81.9	82.2	82.9	83.5	83.6	83.7	82.5	82.7	82.0	81.8	81.8	81.6	81.5	81.3
20	81.4	81.2	81.0	81.0	81.0	81.2	81.7	82.7	84.0	85.5	87.1	86.0	84.5	85.1	85.1	85.5	86.6	84.5	83.9	83.1	83.0	82.0	81.3	80.9	83.3
21	80.2	79.6	77.7	77.3	77.5	79.5	82.1	83.5	85.5	85.5	87.0	87.0	87.6	87.9	88.1	87.8	88.0	87.8	85.9	85.1	83.7	82.4	82.1	82.0	83.8
22	81.9	81.5	80.8	80.4	80.1	80.8	80.8	81.2	83.0	84.4	86.0	86.0	87.0	87.4	86.9	85.8	85.1	83.5	82.8	81.5	81.0	80.7	80.1	80.0	82.9
23	79.8	79.2	79.8	79.6	79.9	80.0	81.1	82.9	84.8	86.3	87.2	86.9	86.2	87.0	86.5	87.9	87.0	86.0	84.9	84.1	81.9	81.7	81.5	81.1	83.4
24	80.8	80.8	80.7	81.0	81.1	81.0	81.6	82.9	83.1	83.4	84.9	85.2	86.0	87.2	87.2	87.9	86.9	86.0	85.3	84.3	82.2	82.0	81.4	81.4	83.5
25	81.8	81.9	81.4	81.9	82.6	83.3	83.7	84.5	85.7	84.8	84.6	84.8	85.4	85.0	85.0	84.9	84.7	85.0	84.8	84.0	83.3	83.1	83.1	82.7	83.8
26	82.3	81.5	80.8	79.9	80.8	82.9	86.9	88.8	89.2	90.0	91.4	92.0	87.0	87.1	89.5	88.2	89.4	90.0	88.3	86.1	85.1	83.8	82.6	82.2	86.1
27	80.4	79.0	79.4	79.9	80.8	81.7	82.5	83.0	84.0	86.0	88.1	88.8	89.4	90.2	90.0	87.8	87.9	85.1	84.6	83.9	84.3	84.2	83.3	83.3	84.5
28	81.9	81.0	80.9	80.0	80.8	81.2	82.3	82.6	83.1	83.3	84.0	85.7	86.6	85.7	86.4	86.0	85.7	85.0	84.0	81.3	77.8	76.2	75.8	74.1	82.3
29	72.8	72.5	72.8	72.2	73.5	77.0	81.3	84.2	85.9	86.3	88.4	88.4	89.6	89.8	89.8	89.6	89.7	89.7	85.7	84.5	82.0	82.1	82.0	81.7	82.8
30	81.5	81.2	81.2	80.7	80.8	82.0	83.6	83.8	84.5	86.0	87.8	89.2	90.2	90.3	89.1	87.3	86.9	86.3	85.3	83.5	82.5	82.2	82.0	81.8	84.6
31	80.4	80.0	80.3	80.0	80.2	80.3	81.2	82.4	83.9	85.5	87.8	88.4	87.8	87.5	86.7	86.3	86.3	85.3	84.0	82.0	80.9	80.3	79.6	79.7	83.2
Mean ...	78.3	78.0	77.8	77.5	77.8	78.9	80.3	81.6	82.7	83.4	84.4	84.9	85.3	85.3	85.4	84.8	84.5	83.7	82.8	81.4	80.3	79.8	79.3	78.8	81.5

187. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

June, 1930.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	79.8	79.8	79.8	80.0	80.3	81.1	81.8	81.9	83.3	83.4	85.0	85.2	84.8	85.5	85.5	85.0	84.9	84.1	83.2	81.7	81.0	81.2	81.0	80.9	82.5
2	80.8	80.5	80.4	80.5	81.0	80.9	81.0	81.8	82.7	82.7	83.8	84.1	84.9	85.7	85.5	85.9	85.5	85.3	84.4	82.5	80.8	79.7	79.1	77.9	82.5
3	77.3	77.4	78.3	79.6	80.2	82.5	84.6	86.0	87.2	88.3	89.5	89.9	91.1	91.9	91.8	92.9	92.0	90.3	89.3	88.0	85.2	83.4	81.8	80.8	85.7
4	79.6	78.2	78.7	78.0	79.0	80.7	84.0	84.8	86.1	87.5	89.7	90.8	91.9	92.5	92.2	91.9	92.0	91.3	90.2	88.6	87.0	84.6	83.1	82.1	86.0
5	80.8	80.9	79.9	79.4	79.9	82.6	86.8	90.2	91.2	92.9	93.8	94.5	94.6	95.1	95.1	94.3	94.5	93.5	92.5	89.2	87.1	85.3	84.0	83.3	88.4
6	82.1	80.8	80.0	79.8	81.0	82.8	84.9	88.5	91.8	93.1	93.5	94.4	94.3	94.0	94.0	93.8	91.5	88.0	88.5	86.2	84.1	82.7	81.9	80.3	87.2
7	78.3	77.0	78.4	79.8	81.4	82.8	83.5	84.5	85.8	86.5	87.3	87.9	88.5	89.7	89.6	89.0	88.3	87.7	86.2	84.0	82.8	82.2	81.4	79.5	84.3
8	77.9	76.7	75.3	75.3	77.0	80.0	85.0	87.0	87.9	88.1	88.1	88.1	88.2	89.8	90.0	89.5	89.0	89.0	87.3	85.2	84.6	82.6	81.9	82.0	84.3
9	82.4	81.8	82.1	82.4	83.0	83.0	83.2	84.0	83.8	84.3	83.4	83.1	82.6	82.9	83.1	83.2	83.6	83.7	83.8	84.0	83.8	81.9	82.8	82.5	83.2
10	81.7	80.5	80.7	81.0	81.7	82.0	82.7	83.9	84.1	84.3	86.3	85.8	86.9	84.1	84.8	85.8	85.1	85.0	84.4	83.8	83.3	82.4	81.7	81.7	83.5
11	81.2	81.2	80.9	81.1	81.4	82.0	82.8	83.1	83.8	85.5	86.8	87.0	87.2	88.1	87.3	87.1	86.3	85.8	85.0	8					

Readings in degrees absolute at exact hours, Greenwich Mean Time.

188. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulb above ground) = 0.9 metres.

July, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	89.9	89.9	89.7	89.4	89.4	89.6	91.3	92.4	91.8	90.9	90.2	90.8	91.8	91.7	91.9	92.8	92.2	90.4	90.4	89.1	87.3	86.9	86.2	85.8	90.2
2	86.1	85.1	83.2	82.0	81.3	82.2	85.0	89.1	89.9	90.8	91.5	90.8	93.0	93.2	92.8	92.1	92.6	91.9	91.4	88.3	86.2	85.0	86.5	87.3	88.2
3	87.2	87.1	87.0	87.0	87.0	87.9	88.7	89.1	88.6	89.0	89.5	91.0	90.9	91.5	90.1	89.6	90.3	86.8	87.1	87.1	86.5	86.2	86.2	86.3	88.3
4	86.2	86.0	85.9	85.8	85.9	86.3	86.2	86.3	87.5	88.1	87.0	85.4	89.3	91.5	90.0	88.9	88.2	87.9	87.4	86.9	86.7	86.2	86.1	86.1	87.0
5	85.6	84.9	83.9	83.5	84.7	85.1	86.7	88.0	87.8	88.8	88.3	89.9	89.8	90.1	89.6	89.2	89.5	88.3	87.5	86.3	86.2	86.1	86.2	86.1	87.2
6	86.0	85.9	86.1	86.1	86.3	86.4	86.3	86.6	87.2	88.0	88.1	88.8	89.5	89.5	88.4	86.9	86.9	86.6	85.4	84.6	84.1	83.6	83.8	83.0	86.5
7	83.1	82.8	82.7	82.7	82.4	83.2	85.0	83.3	83.2	86.0	86.1	88.0	87.5	87.0	86.6	86.3	86.1	87.0	86.1	85.0	83.6	84.0	82.7	80.8	84.7
8	79.8	80.3	80.8	81.6	82.0	83.5	85.8	86.8	88.7	88.0	87.3	88.4	88.1	87.2	87.4	88.1	87.9	87.5	88.0	87.3	86.9	86.2	86.2	86.0	85.7
9	85.9	85.9	85.3	85.2	84.9	85.0	87.7	87.7	88.5	88.4	89.3	89.7	89.6	89.8	90.1	90.1	88.9	89.0	87.0	85.7	84.3	82.2	80.8	80.5	86.8
10	80.2	79.1	79.0	79.0	81.3	82.9	84.3	84.0	84.1	84.0	83.9	84.5	85.0	85.2	85.8	86.5	87.1	86.0	85.5	83.6	83.3	82.0	81.1	81.0	83.3
11	80.7	79.9	80.3	80.0	81.4	82.7	84.4	84.8	84.9	85.8	86.6	87.0	87.3	88.3	87.7	88.8	87.9	87.4	86.3	84.8	81.1	80.0	78.9	81.3	84.1
12	82.4	82.0	80.6	78.8	80.1	82.9	85.9	87.1	88.7	89.8	90.9	91.4	92.0	92.8	93.2	93.7	92.1	90.7	89.0	86.9	84.9	83.4	82.3	81.8	86.8
13	81.2	81.0	81.1	81.2	81.5	83.2	84.8	86.2	87.4	87.0	88.0	88.0	88.0	87.5	88.8	87.5	86.2	86.1	85.9	85.8	85.8	85.5	85.0	84.9	85.2
14	85.0	84.9	84.8	84.7	84.7	84.9	85.1	85.7	87.1	88.2	88.0	86.8	87.1	86.9	86.2	85.6	86.0	85.8	85.9	85.4	85.1	84.3	83.8	83.2	85.7
15	82.8	82.3	82.1	81.9	82.1	84.2	84.8	85.6	86.7	88.8	89.6	89.6	88.8	88.9	89.8	87.4	88.0	87.2	86.2	85.6	85.3	84.9	84.9	85.3	85.9
16	85.0	84.8	84.9	84.8	85.0	85.8	85.8	86.0	85.7	85.9	86.0	85.9	86.3	86.6	86.5	87.1	86.9	86.9	86.9	86.4	86.1	86.0	85.7	85.8	85.9
17	85.8	85.9	85.6	85.5	85.5	85.2	85.2	85.7	85.8	85.8	86.0	86.2	85.8	85.7	85.2	85.4	85.5	85.3	85.0	84.9	84.3	84.1	84.1	84.2	85.4
18	83.9	83.7	83.6	83.4	83.4	83.5	83.8	84.2	84.7	84.9	85.0	85.9	87.7	87.2	86.9	86.1	86.0	86.5	86.1	85.6	85.2	83.1	82.9	82.8	84.9
19	82.8	82.7	82.8	82.5	82.3	83.7	84.1	85.4	86.0	85.0	87.0	87.3	88.1	89.0	90.2	89.0	88.1	88.0	87.7	86.9	85.9	85.2	84.3	84.7	85.8
20	84.5	84.8	84.9	85.0	85.0	85.2	85.8	87.0	89.0	87.9	87.2	86.7	87.3	88.0	88.1	86.9	85.7	85.2	84.6	84.3	84.0	83.6	83.4	83.3	85.8
21	82.9	82.5	82.3	81.9	81.8	82.0	82.2	83.4	83.5	83.8	85.0	85.1	84.4	86.3	87.4	86.2	84.9	84.6	83.8	83.7	83.0	83.0	82.7	82.8	83.7
22	82.8	82.5	82.1	82.1	82.2	82.3	82.5	81.8	83.3	84.0	84.2	83.5	84.0	84.9	84.7	84.7	85.0	84.7	84.2	83.9	83.3	83.2	82.7	83.0	83.4
23	83.0	82.8	82.7	82.1	81.9	83.1	83.1	84.7	84.8	85.8	86.2	87.1	85.8	84.8	84.5	84.6	84.8	84.2	83.6	83.4	83.4	83.3	83.2	83.1	84.0
24	83.0	83.0	83.0	83.0	82.6	83.0	82.7	83.0	82.7	83.2	84.6	85.1	85.7	85.9	85.8	85.8	85.9	85.7	85.1	84.3	83.7	83.3	82.9	83.0	84.0
25	82.9	82.8	82.7	82.8	83.0	83.2	83.9	84.4	85.1	84.6	84.8	85.6	86.4	86.7	88.7	89.2	89.1	87.7	86.5	84.1	81.2	80.3	80.2	80.4	84.5
26	80.4	80.5	80.9	82.0	83.0	84.1	85.2	85.9	85.9	85.5	85.4	86.0	86.1	87.2	87.4	89.7	89.7	88.4	88.0	86.7	86.3	86.0	86.0	85.8	85.4
27	85.5	85.2	85.3	84.8	85.0	85.1	85.7	85.9	86.8	87.8	89.0	89.0	89.0	88.2	87.6	88.6	87.9	88.0	86.7	85.9	85.8	85.7	85.5	85.5	86.7
28	85.1	85.1	84.9	84.8	84.9	85.0	85.8	86.5	86.4	88.6	87.8	89.3	89.8	89.2	87.9	87.2	86.5	86.4	85.9	85.6	85.3	85.3	85.2	85.2	86.4
29	85.2	85.1	85.1	85.1	85.0	85.0	85.7	86.0	86.7	86.9	87.8	87.1	88.0	88.0	89.0	89.0	87.6	85.4	86.2	84.9	84.8	84.8	85.0	84.9	86.3
30	84.7	84.7	83.9	84.1	84.6	84.9	85.4	85.1	87.1	88.2	87.9	86.9	86.5	86.9	88.9	89.4	88.4	87.9	87.1	85.2	84.5	84.6	84.7	84.3	86.1
31	82.0	82.0	81.9	81.0	81.3	83.9	84.1	84.3	85.0	85.7	87.7	86.7	86.9	87.3	87.4	87.5	86.8	85.9	86.1	84.7	83.6	82.1	80.8	80.9	84.5
Mean ...	83.9	83.7	83.5	83.8	83.6	84.3	85.3	85.9	86.5	86.9	87.3	87.5	87.9	88.1	88.2	88.1	87.7	87.1	86.5	85.6	84.8	84.2	83.9	83.8	85.7

189. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

August, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	81.5	81.8	81.8	81.8	82.0	83.1	84.1	85.3	86.7	87.5	89.0	88.9	88.0	87.8	87.1	86.1	85.6	86.0	85.3	85.1	84.8	84.4	84.4	84.3	85.0
2	85.0	86.0	85.5	85.5	85.6	85.6	85.8	86.4	87.9	88.6	88.6	90.4	89.9	89.2	88.9	88.6	89.1	87.8	87.0	86.7	86.5	86.5	85.7	85.1	87.1
3	84.8	84.6	84.2	84.0	83.8	83.8	84.3	85.0	86.3	86.8	88.0	89.3	89.7	89.9	89.9	89.7	88.9	87.9	87.3	83.7	83.7	79.9	81.1	82.9	85.9
4	83.8	84.0	84.0	84.0	84.2	84.4	84.8	85.0	84.2	84.7	84.9	85.2	85.6	85.5	85.1	84.7	84.1	84.0	83.7	83.5	83.0	82.8	82.7	82.7	84.2
5	82.0	81.5	82.0	81.8	81.5	81.7	82.8	84.1	85.2	85.6	86.9	87.4	86.1	85.6	85.2	85.9	85.9	86.0	85.0	84.3	83.2	81.7	80.7	81.3	83.9
6	81.0	81.0	80.8	81.4	82.1	83.5	84.1	84.9	86.9	87.8	87.8	86.9	89.3	88.5	86.2	89.1	88.0	86.8	86.0	85.4	84.3	83.1	82.9	83.2	85.0
7	83.3	82.6	81.7	80.7	80.2	80.3	81.3	83.5	87.0	87.5	88.8	88.1	89.6	89.8	87.4	88.1	87.2	86.8	86.3	84.9	84.1	83.2	82.4	82.6	84.9
8	82.2	82.0	82.2	81.2	83.3	83.8	83.8	85.7	86.4	86.9	86.7	88.9	89.9	90.0	89.6	87.0	86.2	85.7	85.7	84.7	84.3	85.0	85.0	85.0	85.5
9	85.0	85.0	85.0	85.0	85.0	85.5	86.0	86.5	87.7	88.5	88.7	89.8	89.5	89.9	89.1	88.8	89.0	88.8	87.8	87.3	86.7	86.3	86.0	85.8	87.2
10	85.6	85.0	84.9	84.9	84.5	84.1	84.2	84.7	85.0	85.1	86.2	86.7	87.0	87.4	87.7	87.8	88.1	88.2	88.5	88.3	87.7	85.8	86.0	85.5	86.2
11	84.9	83.0	83.2	83.6	83.6	84.0	84.2	85.5	87.0	87.7	89.0	87.9	87.7	87.1	88.6	88.1	87.1	86.8	86.						

Readings in degrees absolute at exact hours, Greenwich Mean Time.

190. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulb above ground) = 0.9 metres.

September, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	77.0	76.7	76.3	77.2	78.8	78.9	80.4	84.8	85.5	86.9	87.8	88.0	88.4	88.8	88.7	88.7	87.1	85.2	83.9	83.1	82.1	80.1	79.3	77.6	83.0
2	78.0	77.6	77.7	77.1	76.9	77.1	79.5	83.4	85.7	87.0	87.3	87.8	89.2	89.9	89.3	89.5	89.2	88.7	86.7	84.0	81.4	80.0	79.3	78.9	83.4
3	78.6	78.2	77.8	78.0	77.7	77.6	81.3	85.1	87.4	88.9	89.8	90.3	91.3	91.9	92.1	92.2	92.0	90.8	87.4	87.2	86.1	85.7	85.0	84.6	86.6
4	83.1	83.3	82.5	82.0	82.3	82.1	83.8	85.5	87.9	88.5	88.9	90.0	89.8	88.7	87.8	87.8	87.9	86.9	86.2	85.5	83.9	84.1	85.5	85.9	85.8
5	86.1	86.3	86.1	86.0	85.9	86.0	86.2	85.9	85.9	86.5	87.1	88.7	90.5	90.2	90.2	89.0	88.4	87.7	86.7	85.8	85.9	86.0	85.7	85.9	87.0
6	86.0	85.9	85.3	84.9	85.8	85.9	86.0	86.3	86.6	87.5	87.9	89.5	88.6	86.7	86.5	86.1	85.7	85.7	85.5	85.4	85.7	84.8	84.8	84.4	86.2
7	83.1	83.2	83.4	83.1	83.2	83.2	84.3	85.2	85.9	86.0	86.2	85.7	85.9	86.1	86.2	86.2	86.2	85.2	82.9	82.9	81.8	81.9	81.9	82.1	84.5
8	82.8	84.0	84.0	83.4	83.0	83.2	83.3	84.1	85.0	85.5	86.0	85.8	86.8	87.5	87.2	87.8	87.5	84.7	82.5	80.2	78.8	77.1	75.9	75.2	83.5
9	74.9	74.9	74.1	74.4	74.6	76.2	79.3	83.1	84.2	85.3	87.3	88.0	87.9	88.3	88.7	88.9	87.6	86.8	86.0	85.4	84.8	84.3	84.3	84.3	82.9
10	84.3	84.4	84.5	84.5	84.4	84.6	84.8	85.0	85.4	87.0	87.1	87.9	88.4	89.5	90.0	90.0	89.1	88.0	86.8	84.3	84.7	85.0	84.3	85.0	86.2
11	85.3	84.9	84.8	85.1	85.1	85.3	85.8	86.1	86.4	86.3	87.2	88.0	88.7	88.2	87.1	86.9	86.8	86.4	86.0	85.3	84.9	85.0	85.0	85.0	86.1
12	84.9	84.7	84.0	84.3	84.4	84.4	84.4	84.4	85.2	85.8	86.2	86.7	86.6	86.7	86.3	86.2	86.0	85.7	85.2	84.9	84.6	84.3	84.0	83.6	85.2
13	83.6	84.1	84.2	84.2	84.1	84.2	84.2	84.6	84.8	84.7	85.2	85.2	85.4	85.4	84.8	84.3	84.0	84.0	83.8	83.7	83.5	83.5	83.5	83.3	84.3
14	83.3	83.3	83.2	82.8	82.7	82.5	83.0	83.2	84.4	86.0	85.8	86.9	85.6	85.9	85.0	86.1	85.6	85.0	82.2	81.6	81.0	80.2	79.1	79.6	83.6
15	80.9	80.3	79.7	80.7	80.6	80.0	81.9	84.5	86.0	86.6	87.1	87.5	87.5	87.9	88.1	87.2	86.9	82.7	82.3	80.1	78.3	77.5	77.1	76.4	82.9
16	75.9	75.7	75.8	77.2	78.7	78.7	80.2	81.5	82.7	83.2	84.0	85.1	86.3	86.4	86.5	86.6	86.3	85.2	83.9	83.8	83.1	82.9	82.6	82.3	82.1
17	82.1	82.1	82.0	82.0	81.3	81.3	81.7	82.0	83.7	84.3	85.2	85.7	86.3	86.7	85.7	84.8	84.2	83.3	82.8	82.3	82.1	82.0	81.7	81.7	83.2
18	81.8	81.8	81.9	82.7	83.7	84.0	84.3	84.0	82.3	80.7	81.6	81.6	81.8	82.1	84.0	84.9	84.2	83.0	81.9	81.3	81.8	81.0	81.5	80.5	82.5
19	79.0	77.5	76.9	77.0	77.3	77.3	77.1	81.8	83.6	84.1	84.1	82.9	82.7	82.9	85.3	85.7	86.0	85.7	83.7	82.9	83.4	83.3	83.4	83.6	81.9
20	83.8	83.7	83.4	83.3	83.2	83.0	83.2	83.8	85.0	85.8	86.9	87.1	87.2	87.8	86.9	86.4	85.6	85.2	84.7	84.5	84.2	84.1	84.5	84.5	84.9
21	84.0	83.6	83.9	84.2	83.3	83.4	83.3	84.1	84.7	85.8	86.6	88.5	89.6	89.5	89.0	88.0	86.7	85.6	84.4	84.1	84.0	84.1	81.2	79.8	85.2
22	78.0	77.3	77.5	78.2	79.1	79.3	80.0	80.7	81.8	84.0	84.1	84.4	84.6	84.8	84.9	85.0	85.0	84.8	84.8	84.9	85.0	85.1	85.1	85.9	82.6
23	86.3	86.6	86.9	87.0	86.9	86.9	86.9	87.1	87.1	87.3	87.5	87.9	84.6	84.8	87.1	87.0	87.0	87.1	86.8	86.8	86.9	86.9	86.9	86.3	87.0
24	86.1	85.9	85.9	85.9	85.7	85.2	84.8	84.7	85.0	84.7	85.0	85.8	86.5	86.6	86.3	86.3	85.4	84.8	84.2	84.3	84.3	84.0	83.7	83.6	85.3
25	83.3	83.3	83.4	83.4	83.4	83.2	83.3	83.7	84.8	84.8	86.0	85.0	85.8	85.8	84.7	83.2	82.8	81.6	81.3	81.8	81.2	80.3	79.9	79.7	83.2
26	79.2	79.0	78.8	79.5	79.3	79.7	79.9	80.8	81.7	82.7	82.9	82.9	82.4	82.2	82.2	82.3	82.0	82.0	82.0	81.3	80.9	80.8	80.7	80.8	81.1
27	80.7	80.3	80.4	80.9	80.6	80.8	80.9	80.6	81.0	81.5	81.9	81.9	81.9	81.6	81.9	81.8	81.5	81.4	81.3	81.3	81.3	81.3	81.3	81.0	81.2
28	80.3	79.6	80.2	80.9	80.9	80.8	80.7	81.0	81.7	83.0	83.2	83.7	84.1	84.2	84.5	83.6	82.6	81.9	81.7	81.4	81.7	81.6	81.0	81.2	81.9
29	81.0	80.9	81.0	80.9	80.8	80.9	81.0	81.6	83.8	82.1	83.1	83.4	83.6	83.4	83.4	83.8	82.7	82.1	81.7	81.4	81.1	81.1	81.1	81.2	82.0
30	81.3	80.9	81.0	80.6	80.6	80.5	81.1	82.0	83.0	83.6	83.8	83.7	85.0	83.8	83.0	83.1	82.7	82.2	82.0	82.0	82.0	82.0	82.0	81.2	82.2
Mean ...	81.8	81.7	81.6	81.7	81.8	81.9	82.6	83.7	84.6	85.2	85.7	86.2	86.5	86.6	86.5	86.3	85.8	85.0	84.1	83.5	83.1	82.7	82.4	82.2	83.9

191. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

October, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	81.2	81.0	80.7	80.5	80.5	80.4	80.3	80.6	81.0	81.3	81.3	81.8	81.8	82.0	81.7	81.3	81.0	80.8	80.2	80.1	80.0	79.8	79.3	79.4	80.8
2	79.2	79.5	79.3	79.2	79.2	79.2	79.4	79.8	80.2	80.7	80.9	81.7	81.9	81.9	82.1	82.0	81.8	81.4	81.0	80.9	80.8	80.9	79.9	79.3	80.1
3	80.1	80.2	80.5	80.5	80.6	80.3	80.7	81.4	82.4	83.2	83.7	84.2	85.6	86.4	86.4	85.9	85.6	84.9	84.0	82.4	83.1	82.5	82.8	82.9	82.9
4	83.0	82.7	82.5	82.4	82.3	82.2	82.2	82.8	83.2	83.3	83.8	84.3	84.5	84.3	84.9	84.6	84.4	84.7	84.8	84.1	84.6	84.9	85.1	84.9	83.7
5	84.0	83.9	83.0	82.0	81.3	81.0	80.9	81.4	82.1	83.7	85.1	84.8	83.9	83.3	83.0	82.2	79.9	80.2	80.2	79.4	80.2	79.1	78.4	78.9	81.9
6	78.9	78.9	78.3	77.7	78.0	78.0	78.5	79.7	80.4	81.3	81.1	81.0	80.7	83.6	83.3	82.0	81.0	80.1	79.9	80.0	80.0	80.1	79.8	80.0	80.1
7	80.3	80.8	80.9	80.7	80.8	81.0	81.1	81.3	82.1	84.0	84.0	84.1	85.3	84.2	84.1	82.9	82.6	80.7	78.9	79.2	79.5	80.2	80.7	80.7	81.6
8	80.1	80.1	80.3	81.7	82.0	81.9	81.4	81.1	80.7	81.0	81.8	81.7	81.1	80.1	80.2	80.1	80.1	79.9	79.0	79.0	78.0	77.4	76.8	76.9	80.2
9	76.2	76.0	76.0	75.0	74.8	74.8	75.0	78.0	79.1	80.5	80.0	82.2	82.3	82.0	82.4	81.0	79.7	79.7	79.1	78.8	79.1	78.9	78.5	78.8	78.6
10	78.7	79.0	78.8	79.3	79.3	79.5	80.0	80.8	81.0	82.3	82.3	82.8	83.1	83.0	82.9	82.3	82.0	82.0	82.0	82.0	82.1	82.3	82.1	82.2	81.3
11	82.1	82.1	82.1	82.0	82.0	81.9	81.9	82.3	82.7	82.2	82.2	81.5	81.8	81.2	82.0	81.5	80.8	81.3	80.2	81.2	81.3	81.1	80.6	80.4	81.6
12	79.5	79.7	79.0	79.1	79.0	79.0	79.5	79.0	80.1	80.4	80.2	81.3	81.3	81.1	81.9	81.6	80.8	80.3	80						

Readings in degrees absolute at exact hours, Greenwich Mean Time.

192. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulb above ground) = 0.9 metres.

November, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	°A																									
1	75.3	75.7	75.3	75.3	75.2	75.2	75.4	75.7	76.7	76.8	77.1	77.4	77.6	77.9	78.1	77.9	77.9	77.8	77.7	77.5	77.3	77.3	77.3	77.2	76.7	76.7
2	77.1	77.1	77.2	76.9	76.9	77.3	77.3	77.3	76.9	77.1	77.7	79.0	80.0	81.1	80.4	79.1	77.5	78.0	77.9	78.0	77.7	78.1	78.8	77.8	77.8	78.0
3	78.4	78.4	78.3	78.7	78.2	77.9	77.6	78.0	78.4	78.3	78.0	76.2	75.9	76.7	77.0	76.8	76.3	74.9	74.5	74.5	73.3	73.0	72.2	73.3	73.3	76.5
4	73.4	73.3	73.2	73.3	73.7	73.5	73.0	73.8	74.7	75.7	77.2	77.2	77.8	77.7	77.4	77.0	74.3	72.0	71.4	70.6	69.3	69.1	68.1	66.9	66.9	73.6
5	66.7	67.0	67.4	66.2	66.0	65.9	66.2	67.2	70.2	74.0	77.2	77.4	77.8	77.7	77.0	75.0	72.8	72.3	71.3	69.5	69.3	69.1	69.2	69.2	70.2	70.9
6	69.3	68.3	67.9	67.9	67.5	66.2	66.3	67.2	69.0	70.6	72.9	77.2	78.5	78.1	77.1	74.2	72.8	74.2	74.7	73.5	73.4	76.3	76.6	76.4	72.2	72.2
7	76.9	76.7	76.3	75.1	74.4	73.1	72.2	73.7	75.7	77.1	78.9	79.2	79.4	79.8	80.0	79.7	79.6	79.7	80.0	80.4	80.9	81.3	81.6	81.7	81.7	77.9
8	82.8	82.5	81.3	80.4	80.8	79.0	78.6	77.8	79.1	80.3	79.9	81.6	81.4	82.2	81.0	80.3	79.8	79.9	80.7	81.3	82.0	82.7	82.6	82.3	80.8	80.8
9	82.4	82.5	82.8	83.0	83.1	83.9	85.1	85.0	84.5	84.3	82.9	82.9	83.3	83.0	82.3	82.0	81.8	80.7	80.8	81.1	79.8	79.3	79.0	79.0	82.3	82.3
10	79.0	78.8	78.7	78.3	78.9	83.9	83.9	77.9	78.2	79.7	79.3	79.9	80.1	80.2	78.4	78.6	78.1	77.9	77.4	77.1	77.2	76.7	76.3	76.0	76.0	78.4
11	76.1	76.6	76.0	76.3	76.7	76.2	76.3	76.1	76.7	77.6	78.2	79.3	79.0	79.1	77.9	76.2	76.3	76.0	76.0	75.9	75.7	75.1	75.0	74.0	76.6	76.6
12	75.0	75.0	75.0	74.9	76.7	77.3	77.6	77.6	78.2	78.5	79.0	79.2	79.3	79.4	79.4	79.4	79.5	79.7	79.9	80.1	80.0	80.3	80.5	80.6	78.3	78.3
13	80.7	80.8	80.9	80.9	80.9	80.9	81.0	81.0	81.0	81.1	81.2	81.4	81.6	81.3	81.3	81.3	81.1	81.0	81.0	81.0	80.9	80.9	80.8	80.8	81.0	81.0
14	81.0	80.8	80.8	80.7	80.6	80.3	80.0	80.2	80.4	80.7	81.0	81.2	81.3	81.5	81.4	81.2	81.3	81.3	81.7	81.9	81.9	81.9	82.1	82.1	81.1	81.1
15	82.3	82.6	82.9	83.1	83.3	81.7	80.9	78.6	77.8	76.5	76.0	77.0	77.8	78.5	76.9	76.1	74.8	74.6	74.2	74.1	72.5	73.1	72.9	72.9	73.1	77.7
16	72.7	72.4	71.9	71.0	70.0	70.7	70.3	70.0	72.2	74.1	75.2	75.6	75.9	75.7	74.4	71.5	70.4	68.7	68.3	67.7	66.8	67.1	65.9	65.7	71.2	71.2
17	66.3	65.9	66.0	65.9	66.0	66.2	65.9	66.1	67.1	68.3	70.0	73.7	73.9	73.3	72.9	72.0	71.5	71.2	71.0	70.7	70.2	70.0	69.2	70.1	69.2	69.2
18	70.1	69.9	70.1	70.3	70.8	71.0	71.0	71.2	71.7	72.8	73.3	73.7	73.9	74.1	74.1	74.0	75.1	73.8	73.7	73.7	73.8	73.8	74.0	74.1	72.6	72.6
19	74.0	73.9	73.9	73.9	74.0	74.3	74.9	75.7	76.3	76.5	76.7	76.8	77.0	77.1	76.9	76.7	74.9	74.8	74.7	74.8	75.4	75.3	75.2	74.6	74.6	75.3
20	74.4	74.5	75.0	76.1	76.1	76.2	76.4	76.6	76.6	76.7	76.8	76.9	77.2	77.7	78.1	78.8	79.1	79.0	82.7	82.7	82.7	82.7	82.7	82.7	82.2	78.0
21	81.9	81.9	82.0	82.6	82.2	82.0	81.8	81.4	81.0	81.3	81.4	82.2	82.1	82.0	81.9	81.7	81.8	81.2	80.7	80.2	80.2	79.8	79.3	79.3	81.5	81.5
22	79.5	80.9	81.0	81.1	81.1	81.2	81.1	80.9	81.0	81.3	81.3	81.0	80.8	80.7	74.2	73.1	73.1	73.2	74.0	74.0	73.8	72.9	73.1	73.7	77.9	77.9
23	74.3	74.9	75.2	75.4	75.5	75.5	76.0	75.9	75.9	75.9	76.2	77.7	78.3	77.9	77.4	75.3	75.9	75.4	75.0	74.2	73.8	74.1	73.9	74.1	75.6	75.6
24	74.3	75.3	75.6	75.6	76.0	76.2	76.8	76.7	77.0	77.0	76.2	77.0	78.3	79.1	81.0	80.8	81.0	80.7	80.7	80.3	80.0	80.1	79.7	79.4	78.0	78.0
25	79.3	79.6	79.4	79.4	79.0	79.1	79.0	78.9	79.0	79.1	79.5	80.0	80.1	79.8	79.3	79.3	79.2	79.0	77.8	78.8	78.5	78.8	78.0	77.4	77.4	79.1
26	77.4	78.0	77.8	78.1	77.9	77.9	77.8	77.4	77.2	77.0	77.6	77.5	78.1	78.3	78.2	78.1	77.6	77.0	76.9	76.7	75.7	75.3	75.1	74.9	77.3	77.3
27	75.0	76.3	76.6	76.1	75.5	76.1	75.1	74.9	75.1	76.1	78.2	78.0	78.1	78.2	78.2	76.8	74.6	73.5	72.5	71.7	70.3	70.0	69.2	69.0	74.9	74.9
28	69.0	68.6	68.2	67.7	68.4	67.4	67.5	67.6	67.6	68.9	69.3	71.5	72.9	73.8	74.7	73.9	73.8	73.7	74.1	74.8	74.9	74.8	74.7	74.5	71.2	71.2
29	74.8	74.9	75.0	75.8	75.5	75.3	75.6	75.9	76.1	77.2	77.7	77.7	78.1	77.8	76.8	76.3	76.8	77.4	77.4	77.4	77.2	76.6	75.0	74.3	76.3	76.3
30	72.8	71.6	71.0	71.0	70.9	70.0	70.8	71.0	72.0	72.8	74.1	75.9	76.0	76.0	76.7	76.0	75.9	76.0	76.2	76.3	76.6	76.6	76.6	76.8	74.1	74.1
Mean ...	75.7	75.8	75.8	75.7	75.7	75.5	75.5	75.6	76.1	76.7	77.3	78.0	78.4	78.5	78.0	77.3	76.8	76.5	76.5	76.3	76.0	76.1	75.8	75.7	76.5	76.5

193. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

December, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
1	77.0	77.1	77.0	77.2	77.2	77.4	77.9	77.5	77.8	78.1	78.0	78.0	78.2	78.2	78.3	78.0	77.7	77.6	77.3	77.3	77.1	77.2	77.1	77.1	77.5	77.5
2	77.7	77.8	77.9	78.0	77.9	77.7	77.6	77.5	77.8	78.0	78.1	78.0	78.7	78.8	78.7	78.7	78.7	78.8	78.8	78.9	78.8	78.8	77.0	76.7	78.2	78.2
3	77.8	77.8	77.9	78.2	77.8	77.6	77.6	77.6	77.3	77.0	77.8	78.6	78.7	78.0	77.8	77.6	74.1	73.0	73.8	73.8	73.7	73.2	72.1	72.0	76.3	76.3
4	70.9	69.9	69.8	69.8	69.0	69.3	69.3	69.7	70.1	70.9	71.8	72.8	73.9	75.0	74.8	73.9	73.5	72.9	72.8	72.2	71.9	71.3	72.2	73.1	71.7	71.7
5	73.6	73.8	74.0	76.1	76.0	75.1	75.3	75.2	75.9	76.0	76.8	77.0	77.5	77.3	75.7	74.7	74.3	74.4	74.7	74.8	74.9	74.9	75.0	75.0	75.3	75.3
6	75.0	75.1	75.2	75.2	75.2	75.2	75.4	75.6	75.8	76.1	76.5	76.9	77.0	77.1	77.4	77.1	76.9	76.8	76.8	76.7	76.7	76.3	76.5	76.5	76.2	76.2
7	76.5	76.2	76.1	76.1	75.9	75.5	75.6	75.4	75.3	75.6	75.9	76.2	76.5	76.5	76.4	76.4	76.2	76.1	75.9	75.9	75.9	76.0	75.7	74.7	76.0	76.0
8	73.4	72.0	70.9	70.0	71.6	70.0	71.0	72.0	73.6	74.3	74.1	73.8	74.1	75.0	75.8	75.8	74.8	74.2	74.3	74.0	73.8	73.4	73.3	73.4	73.3	73.3
9	72.5	72.6	71.0	70.3	70.0	69.5	69.0	67.8	67.8	68.7	70.0	70.8	71.4	71.5	70.4	68.8	67.6	66.4	66.1	65.4	65.6	65.4	64.7	64.6	68.8	68.8
10	64.5	64.3	65.7	66.4	65.3	64.7	65.7	66.5	67.8	68.9	70.0	71.1	71.8	71.8	71.8	71.0	71.0	71.2	71.3	71.8	72.6	72.9	72.9	73.0	69.2	69.2
11	73.3	73.5	74.0	74.2																						

From readings in degrees absolute at exact hours, Greenwich Mean Time.

194. Eskdalemuir: Louvred Hut:  $h_t = 0.9$  metres.

1930.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
78.33	78.20	78.13	78.04	78.13	78.36	78.90	79.55	80.29	80.84	81.57	82.00	82.37	82.46	82.32	82.01	81.51	80.90	80.34	79.74	79.39	78.93	78.65	78.49	79.98

TEMPERATURE: MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

195. Eskdalemuir: Louvred Hut:  $h_t = 0.9$  metres.

1930.

Month	Mean	Hour 1.	G.M.T. 2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	275.89	-0.20	-0.18	-0.37	-0.43	-0.48	-0.63	-0.65	-0.60	-0.47	-0.21	+0.21	+0.54	+0.90	+0.90	+0.76	+0.57	+0.24	+0.13	-0.05	+0.01	+0.13	+0.12	-0.11	-0.13
Feb.	272.97	-1.63	-1.75	-1.65	-1.71	-1.67	-1.76	-1.46	-1.21	-0.31	+0.71	+1.80	+2.55	+3.04	+3.10	+3.03	+2.58	+1.41	+0.60	-0.14	-0.49	-0.92	-1.22	-1.38	-1.52
Mar.	275.50	-1.58	-1.64	-1.65	-1.67	-1.77	-1.71	-1.29	-0.54	+0.37	+0.95	+1.65	+2.03	+2.49	+2.48	+2.45	+2.13	+1.54	+0.63	+0.06	-0.48	-0.70	-1.06	-1.29	-1.40
April	279.03	-1.85	-1.84	-2.08	-2.19	-2.10	-1.92	-1.25	-0.25	+0.51	+1.27	+1.89	+2.37	+2.67	+2.67	+2.61	+2.23	+1.91	+1.20	+0.27	-0.59	-0.95	-1.32	-1.58	-1.69
May	281.53	-3.20	-3.51	-3.71	-3.98	-3.65	-2.58	-1.25	+0.06	+1.19	+1.92	+2.84	+3.33	+3.76	+3.74	+3.81	+3.24	+2.96	+2.15	+1.20	-0.13	-1.24	-1.79	-2.33	-2.82
June	285.45	-3.86	-4.29	-4.28	-4.18	-3.59	-2.58	-1.10	+0.22	+1.27	+2.04	+2.75	+3.20	+3.69	+4.08	+3.85	+4.03	+3.52	+2.55	+1.64	+0.27	-0.99	-2.11	-2.78	-3.35
July	285.74	-1.95	-2.15	-2.33	-2.49	-2.24	-1.50	-0.53	+0.07	+0.69	+1.17	+1.53	+1.79	+2.19	+2.38	+2.50	+2.43	+2.02	+1.41	+0.87	-0.07	-0.86	-1.43	-1.74	-1.77
Aug.	285.96	-1.67	-1.88	-1.98	-2.26	-2.29	-2.01	-1.37	-0.56	+0.51	+1.32	+1.99	+2.34	+2.56	+2.65	+2.39	+2.24	+1.90	+1.17	+0.43	-0.37	-0.85	-1.26	-1.43	-1.56
Sept.	283.87	-2.00	-2.16	-2.28	-2.12	-2.03	-1.97	-1.30	-0.15	+0.75	+1.34	+1.87	+2.32	+2.65	+2.67	+2.58	+2.45	+1.93	+1.11	+0.22	-0.46	-0.86	-1.25	-1.56	-1.75
Oct.	280.88	-0.99	-0.99	-0.91	-1.13	-1.28	-1.30	-1.29	-0.70	-0.03	+0.82	+1.29	+1.47	+1.80	+1.98	+1.84	+1.32	+0.62	+0.39	-0.02	-0.28	-0.37	-0.62	-0.79	-0.79
Nov.	276.48	-0.71	-0.63	-0.70	-0.76	-0.73	-0.94	-0.94	-0.91	-0.37	+0.26	+0.80	+1.56	+1.90	+2.04	+1.53	+0.81	+0.33	+0.01	+0.02	-0.18	-0.47	-0.43	-0.71	-0.79
Dec.	275.90	-0.34	-0.49	-0.37	-0.42	-0.42	-0.58	-0.63	-0.72	-0.45	-0.03	+0.49	+0.88	+1.18	+1.25	+0.93	+0.51	+0.08	-0.17	-0.07	-0.02	-0.06	-0.15	-0.19	-0.21
Year	279.98	-1.66	-1.79	-1.86	-1.94	-1.85	-1.62	-1.08	-0.44	+0.31	+0.87	+1.59	+2.02	+2.39	+2.48	+2.35	+2.04	+1.53	+0.93	+0.37	-0.23	-0.58	-1.04	-1.32	-1.48

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

Maximum and minimum for the interval 0h. to 24h., Greenwich Mean Time.

196. Eskdalemuir: Louvred Hut:  $h_t = 0.9$  metres.

1930.

Month	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
	Day.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	82.8	73.8	86.0	73.7	82.9	72.8	84.2	78.9	90.2	72.8	86.1	79.6	93.3	86.0	90.2	80.9	89.2	76.1	82.2	79.3	78.1	74.9	78.3	76.9
2	80.2	76.1	75.9	73.9	77.5	71.3	82.7	79.3	89.7	73.3	86.0	77.9	93.3	80.9	91.1	84.4	90.1	76.3	82.1	79.1	81.1	76.8	78.9	76.0
3	81.7	73.2	76.4	73.8	79.2	72.3	85.5	75.5	88.8	73.5	93.2	76.8	92.2	85.9	90.3	79.7	92.7	77.2	86.8	79.5	78.7	72.0	78.2	72.0
4	79.1	72.2	76.9	73.2	81.8	75.9	76.0	73.2	85.9	77.4	92.9	78.0	90.1	84.8	85.7	82.6	90.7	81.9	85.2	82.1	77.8	66.9	75.2	69.0
5	77.8	75.0	76.1	73.1	80.1	76.8	78.5	72.0	84.7	78.1	95.9	79.4	90.9	83.5	87.1	80.6	91.0	85.6	85.3	78.2	78.0	65.3	77.8	73.1
6	80.3	75.1	75.5	71.9	79.8	76.2	80.1	73.7	83.7	76.2	95.5	79.3	90.2	82.9	90.0	80.7	89.8	84.4	84.0	77.7	78.5	66.0	77.4	74.9
7	82.1	78.3	74.8	68.7	81.4	74.8	80.9	77.0	84.7	72.9	89.7	76.8	88.3	80.1	91.1	80.0	87.2	81.5	86.0	78.6	81.7	72.3	76.6	74.7
8	78.6	74.0	75.3	67.8	80.1	77.9	80.1	76.8	83.0	72.0	90.4	75.0	89.2	79.1	90.8	81.0	88.7	74.9	82.3	76.5	82.9	77.6	76.0	69.8
9	76.2	73.7	76.3	67.7	80.1	74.4	84.1	78.5	82.8	71.8	84.3	81.0	90.4	79.9	91.1	84.8	89.3	74.0	83.0	73.5	85.5	78.7	73.4	64.6
10	79.1	73.4	76.1	65.8	77.9	69.8	84.9	73.3	82.6	68.5	86.9	80.2	87.3	78.5	88.6	84.0	90.2	83.9	83.7	78.6	80.9	75.9	73.0	63.8
11	76.7	71.8	79.5	66.7	77.8	68.9	83.2	69.8	83.0	74.9	88.2	79.1	89.5	78.8	89.5	82.5	88.9	84.5	82.5	80.2	80.0	74.0	75.4	73.0
12	75.9	72.3	76.9	66.1	78.9	69.4	81.6	75.8	86.2	75.6	90.4	75.5	93.9	78.5	89.2	82.1	87.0	83.6	82.0	78.7	80.6	73.7	78.5	73.7
13	77.0	73.7	74.6	65.9	76.3	67.5	81.3	74.8	86.3	77.1	92.6	78.7	88.8	80.8	87.4	83.0	85.5	83.3	84.1	80.2	81.6	80.6	79.5	74.8
14	77.2	73.6	77.8	72.7	75.6	70.2	84.8	74.3	88.2	76.8	93.8	81.9	88.8	83.2	87.5	82.6	87.5	78.9	87.2	84.0	82.3	80.0	76.8	73.0
15	75.7	70.3	76.1	71.1	75.1	70.6	82.9	73.9	87.2	75.6	95.6	82.5	89.9	81.8	88.7	80.3	88.3	76.2	87.3	85.6	83.4	72.0	76.9	71.9
16	77.6	69.9	75.9	66.2	74.9	72.1	86.3	74.9	86.0	76.9	94.1	81.7	87.2	84.5	90.0	80.7	87.2	75.0	86.2	82.9	76.0	65.6	75.1	73.9
17	81.0	76.9	77.8	65.5	74.5	72.5	82.0	74.9	86.2	80.7	89.0	83.5	86.3	84.0	88.6	84.0	86.9	81.2	87.2	79.7	74.1	65.2	78.3	73.9
18	81.6	79.5	77.2	66.0	75.3	70.0	82.6	74.8	84.1	77.9	96.0	85.2	87.7	82.8	90.4	84.8	85.0	80.0	84.3	79.8	75.2	69.9	82.8	78.3
19	82.2	74.8	75.9	65.3	72.2	62.2	79.3	74.0	83.7	79.1	92.4	80.2	90.9	82.3	86.0	80.0	86.3	76.1	84.7	79.0	77.3	73.8	82.5	80.8
20	77.7	71.7	76.9	64.5	76.0	62.0	79.8	74.6	87.1	80.8	91.1	80.2	89.0	83.3	87.1	82.2	87.9	83.0	83.0	76.2	82.8	73.9	76.1	76.1
21	77.6	71.7	77.2	64.2	75.9	66.9	81.1	74.0	88.9	76.9	92.1	81.6	87.4	81.7	89.0	83.0	89.9	79.5	81.6	77.5	82.6	79.3	80.0	74.5
22	78.9	76.5	75.0	70.9	78.0	67.9	82.6	72.5	87.8	80.0	89.9	83.1	85.3	81.5	87.7	82.7	85.9	76.8	84.7	76.9	81.7	72.7	78.2	74.0
23	79.3	75.5	75.6	73.0	77.5	67.0	86.2	77.1	88.2	79.1	87.3	80.1	87.2	81.7	88.3	80.5	88.0	85.9	82.8	74.6	78.3	73.4	79.3	75.3
24	81.0	75.0	74.2	73.0	80.1	73.9	86.0	82.0	88.0	80.6	86.4	79.8	86.6	82.3	88.0	81.0	87.0	83.7	79.1	73.5	81.1	74.0	78.9	75.5
25	76.9	72.8	74.9	69.0	81.5	74.8	87.1	80.7	87.3	81.1	89.0	78.9	89.4	88.0	89.1	80.0	86.5	79.7	82.2	75.0	80.3	77.8	77.8	74.8
26	75.6	72.7	75.9	71.1	83.7	76.0	87.4	79.5	92.2	79.8	89.7	74.8	90.0	80.2	90.8	85.9	83.6	78.5	81.8	71.7	78.4	74.9	77.2	73.0
27	75.1	69.0	78.7	71.0	82.9	77.9	82.3	79.7	90.2	78.6	89.2	78.8	90.0	84.7	91.1	83.3	82.0	80.3	78.2	69.3	78.6	69.0	81.0	75.7
28	74.0	68.1	84.1	71.0	79.9	78.0	85.1	76.0	86.9	74.0	87.8	77.7	90.3	84.7	98.8	87.2	85.1	79.6	84.4	77.9	75.1	66.7	80.4	75.8
29	76.1	72.3	—	—	80.3	75.2	81.1	76.3	90.5	71.6	87.8	81.9	90.9	84.7	95.3	87.5	83.9	80.7	85.2	78.0	78.1	74.3	80.5	74.7
30	76.5	69.5	—	—	80.4	75.1	88.9	74.9	90.9	80.3	95.2	84.9	90.4	83.6	87.6	84.7	85.2	80.3	85.3	74.8	76.8	69.5	74.8	72.0
31	75.9	68.8	—	—	82.7	77.9	—	—	88.6	79.5	—	—	88.1	80.1	88.0	77.4	—	—	80.5	72.0	—	—	75.8	65.9
Mean	78.3	73.2	76.6	69.6	78.7	72.2	83.0	75.8	86.9	76.6	90.6	79.8	89.4	82.4	89.8	82.4	87.5	80.1	83.7	77.8	79.6	72.9	77.9	73.4

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is written 75.0.

Percentages at exact hours, Greenwich Mean Time.

197. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres.

January, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	94	91	91	94	93	96	94	89	98	98	96	94	93	92	92	92	93	94	92	89	78	79	79	74	90.9	8.0	
2	84	71	73	83	65	68	67	69	72	70	69	69	65	67	72	81	83	82	82	86	87	93	94	98	76.6	7.0	
3	93	99	98	96	93	88	86	89	87	87	86	80	74	72	78	86	84	84	83	87	88	84	89	85	86.8	7.5	
4	90	94	97	97	92	90	85	84	86	84	91	93	98	90	87	93	90	92	84	94	91	91	90	92	90.9	6.5	
5	92	92	92	98	93	100	91	85	78	78	77	91	93	92	89	87	89	84	87	90	87	91	87	82	88.7	7.3	
6	73	77	77	80	82	82	84	87	84	85	87	92	87	87	87	96	92	82	92	98	96	93	100	96	87.0	7.1	
7	99	99	99	100	100	100	98	100	99	100	96	92	93	96	99	98	98	98	93	90	90	90	96	94	96.6	10.2	
8	94	93	87	97	90	84	75	77	83	87	82	75	62	67	74	70	74	82	80	85	82	85	84	84	81.6	6.1	
9	87	89	79	82	84	85	96	84	87	85	86	85	85	81	85	93	78	88	91	94	94	96	94	93	88.1	6.3	
10	100	94	91	84	91	90	89	90	92	89	91	82	85	85	88	91	91	93	89	94	95	95	100	73	90.5	6.4	
11	80	83	81	73	74	79	80	79	82	83	79	87	82	72	73	74	77	82	80	79	82	81	82	79	79.2	4.8	
12	87	85	89	89	92	78	75	78	82	82	80	84	98	94	92	94	89	92	90	89	92	92	94	89	87.5	5.7	
13	82	100	91	84	84	84	85	98	85	80	89	85	85	91	91	98	96	98	97	97	93	90	90	90	90.1	6.5	
14	98	98	88	95	94	98	93	93	94	91	91	91	91	93	93	94	96	90	90	92	90	92	90	90	90	92.7	6.5
15	92	89	89	90	87	90	90	89	91	93	94	93	87	90	93	88	92	91	91	94	94	96	96	94	91.3	5.9	
16	91	93	91	92	88	92	92	92	93	92	89	78	67	69	67	71	84	89	87	88	84	87	93	90	85.9	5.8	
17	87	84	81	81	87	90	94	96	94	89	96	97	96	94	94	93	94	99	98	96	94	92	98	94	92.3	8.6	
18	93	96	100	100	100	100	99	100	100	100	100	99	98	96	96	94	94	94	98	96	90	90	92	93	96.6	9.7	
19	93	91	91	98	100	96	96	95	96	98	96	93	93	98	93	90	93	89	93	89	84	85	89	91	93.0	9.3	
20	87	85	85	83	83	85	85	90	85	83	82	82	77	79	75	77	83	85	89	89	92	91	88	92	84.7	6.2	
21	95	96	97	96	94	91	93	94	95	89	88	86	87	84	82	82	84	84	84	85	87	84	87	85	88.9	6.3	
22	85	85	90	92	92	95	97	100	96	98	96	96	97	97	97	97	94	96	96	97	94	96	96	94	94.5	8.1	
23	91	93	94	91	93	94	94	94	93	97	94	90	88	86	85	91	96	96	94	92	86	92	90	87	91.9	8.2	
24	86	79	79	84	92	90	94	93	88	90	91	88	82	88	91	94	96	88	92	100	100	100	100	97	90.7	7.8	
25	100	98	96	96	96	90	94	98	92	98	91	91	92	81	91	91	93	94	89	90	93	93	95	96	93.3	6.4	
26	95	95	95	95	95	95	93	93	93	93	87	89	85	82	84	92	90	90	91	87	89	94	91	91	91.1	5.9	
27	93	96	96	96	96	94	96	96	94	96	92	91	89	87	87	87	87	89	89	93	86	82	82	84	90.9	5.8	
28	85	84	85	86	86	87	87	87	87	93	93	82	76	80	82	86	88	89	92	92	92	92	95	96	87.3	4.4	
29	92	93	93	96	96	96	89	98	94	89	91	91	93	88	87	70	89	91	90	84	84	86	89	89	90.3	5.9	
30	90	92	94	94	94	96	96	94	96	94	88	91	93	82	85	87	92	88	93	93	93	93	93	94	91.7	5.8	
31	94	95	95	93	91	95	94	90	84	84	91	91	85	84	84	84	84	84	82	74	77	82	84	84	86.8	5.4	
Mean ...	90.4	90.6	89.8	90.8	90.2	90.3	89.7	90.3	89.7	90.0	88.9	88.0	86.3	85.8	86.2	87.8	89.3	89.7	89.6	90.3	89.3	90.0	91.2	89.4	89.3	†6.8	
Vapour Pressure* ...	mb. 6.7	mb. 6.7	mb. 6.6	mb. 6.6	mb. 6.6	mb. 6.5	mb. 6.4	mb. 6.5	mb. 6.5	mb. 6.7	mb. 6.8	mb. 6.9	mb. 6.9	mb. 6.8	mb. 6.9	mb. 6.9	mb. 6.8	mb. 6.8	mb. 6.7	mb. 6.8	mb. 6.8	mb. 6.8	mb. 6.8	mb. 6.7	mb. 6.7	†6.7	

198. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

February, 1930.

1	85	82	86	91	94	94	86	86	87	94	89	93	93	91	93	92	94	92	94	94	98	98	94	91.2	6.4	
2	94	94	94	94	96	94	91	93	96	93	98	96	89	89	89	94	91	88	88	91	94	96	94	94	92.9	6.4
3	94	94	94	94	92	96	96	98	96	98	98	94	89	96	96	93	96	91	98	100	98	100	98	100	95.7	6.5
4	100	100	96	98	100	98	94	100	94	94	96	93	88	90	93	93	94	95	95	93	93	96	96	96	95.2	6.6
5	96	91	90	91	96	90	90	92	89	88	80	82	80	84	75	80	82	75	74	75	77	80	80	80	84.4	5.7
6	82	84	80	80	80	77	80	80	80	71	67	70	66	69	83	82	81	87	94	92	96	95	93	93	81.5	5.2
7	89	84	76	69	74	67	68	68	67	66	63	63	63	63	61	63	65	71	68	66	65	69	69	73	89.2	4.1
8	76	77	76	78	82	80	76	73	75	74	80	77	78	69	85	83	89	90	89	89	91	93	93	95	81.5	4.7
9	89	89	87	87	84	81	80	80	80	77	71	58	50	55	54	68	64	67	71	73	76	81	82	83	73.7	4.5
10	86	89	86	86	88	88	89	89	92	83	73	64	63	60	60	64	70	73	76	84	86	87	88	91	79.6	3.9
11	91	92	92	95	95	94	96	96	94	91	84	69	55	58	59	57	68	74	84	87	89	92	94	92	83.8	4.7
12	89	89	91	93	94	94	94	94	94	95	95	87	69	67	67	80	77	86	93	94	96	95	94	97	88.4	4.4
13	98	97	96	96	97	98	100	100	100	99	98	98	96	92	76	72	74	76	76	84	86	91	91	90	91.0	4.8
14	91	93	94	95	96	98	92	98	92	89	87	84	72	65	74	72	83	83	88	85	92	90	93	79	87.3	6.2
15	80	80	78	78	87	80	78	80	74	78	68	62	64	59	58	61	64	61	65	66	64	64	64	65	70.2	4.5
16	68	69	68	65	68	69	72	73	73	67	71	80	85	62	62	55	61	67	70	74	80	83	85	88	71.0	3.9
17	91	94	94	93	95	92	91	89	92	86	69	48	42	47	49	54	53	62	71	73	80	83	84	85	75.8	3.9
18	87	88	92	94	94	95	94	95	92	8																

Percentages at exact hours, Greenwich Mean Time.

199. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres.

March, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	94	94	94	95	95	94	93	85	87	87	88	81	72	67	62	73	77	84	86	98	92	93	90	90	86.3	6.8	
2	92	85	93	98	100	98	96	95	93	98	95	85	85	85	87	88	83	85	85	85	87	89	87	90	90.2	6.1	
3	91	91	93	93	94	93	92	92	89	84	85	79	77	79	81	83	82	85	86	93	89	87	90	91	87.4	6.4	
4	96	93	92	93	100	100	98	98	99	100	99	97	93	89	77	82	85	91	95	96	98	97	98	98	94.2	8.3	
5	98	100	100	98	98	98	97	96	98	100	88	88	86	88	94	97	100	97	94	96	94	94	92	91	95.3	8.5	
6	95	92	92	90	92	92	87	85	90	92	95	97	94	91	91	97	94	97	97	97	94	97	100	97	93.4	8.1	
7	98	93	94	98	94	96	92	97	88	73	73	71	70	68	70	74	81	74	72	78	72	79	76	74	81.9	7.3	
8	73	74	80	80	85	86	86	84	86	85	84	84	81	86	88	90	94	96	96	97	97	97	97	98	87.2	8.0	
9	99	100	100	100	97	97	97	96	96	97	85	82	77	81	76	74	73	76	79	78	83	80	84	87	87.5	7.7	
10	82	82	83	78	78	78	78	76	70	68	64	56	55	52	59	54	61	61	71	78	84	84	96	95	72.5	4.8	
11	95	94	93	94	95	95	95	94	93	91	80	83	78	71	74	88	79	80	84	88	90	93	93	94	88.1	5.5	
12	95	95	95	96	96	96	95	94	87	85	87	73	67	83	76	71	79	83	83	83	77	78	75	76	84.7	5.4	
13	77	69	63	62	63	64	68	67	60	56	58	55	48	48	46	41	42	51	55	58	74	80	82	83	61.1	3.5	
14	93	93	93	91	90	91	93	93	90	90	85	91	78	64	66	66	67	73	74	74	73	74	74	76	81.5	4.9	
15	79	83	88	90	92	91	91	89	77	73	73	70	71	69	73	90	92	87	89	91	94	96	95	93	84.5	5.1	
16	95	93	93	96	96	96	95	96	97	97	91	81	78	84	91	98	100	98	100	98	96	96	96	98	94.0	5.9	
17	97	98	98	97	97	96	96	95	95	92	90	96	94	93	92	96	87	90	93	93	94	93	93	91	94.2	5.9	
18	90	90	88	93	86	83	80	78	77	74	73	73	70	66	73	80	82	93	80	77	74	77	79	79	80.2	4.8	
19	77	76	64	63	66	66	67	63	59	58	59	58	54	44	48	51	57	57	59	61	67	71	73	76	62.3	2.6	
20	78	78	80	81	81	87	85	88	93	97	90	90	85	75	69	70	69	64	71	74	71	75	72	76	79.1	4.2	
21	78	78	82	85	89	93	95	96	88	88	84	77	72	91	78	67	63	64	70	74	78	80	87	88	80.8	4.5	
22	91	94	83	84	88	76	81	74	69	73	70	66	60	74	55	60	66	64	65	77	79	82	83	83	75.0	4.8	
23	85	88	90	85	93	86	82	81	79	76	61	60	67	69	74	69	76	80	82	80	78	77	85	87	79.1	5.0	
24	83	88	86	83	82	83	84	75	71	80	70	63	64	60	48	57	60	71	82	82	77	75	85	85	74.8	5.7	
25	74	83	88	95	95	95	93	97	94	95	91	71	75	75	79	72	70	73	74	75	77	74	73	74	82.0	7.3	
26	78	73	78	72	79	78	70	66	58	71	70	54	56	59	61	67	71	74	75	82	87	91	92	92	72.7	7.0	
27	94	95	97	97	97	97	97	97	96	99	92	92	93	94	94	93	94	90	93	93	96	97	94	94	94.7	9.2	
28	96	96	96	98	98	96	90	97	97	93	88	91	89	91	85	82	83	82	81	78	83	91	91	96	90.3	8.3	
29	91	96	89	82	85	85	85	87	83	92	89	90	83	79	76	82	85	87	87	87	86	86	80	82	86.1	7.3	
30	87	89	85	86	86	87	91	88	84	78	84	80	81	76	81	75	74	87	82	86	86	80	80	84	83.2	7.4	
31	89	93	89	86	80	82	76	74	74	75	74	66	86	89	85	81	76	78	85	89	88	98	100	100	83.5	8.5	
Mean ...	88.4	88.6	88.3	88.7	89.3	88.9	87.9	86.9	84.4	84.5	81.2	77.4	75.5	75.5	74.5	76.4	77.5	79.7	81.5	83.7	84.4	85.8	87.0	87.7	83.5	†6.3	
Vapour Pressure* ...	mb. 5.7	mb. 5.9	mb. 6.1	mb. 6.3	mb. 6.6	mb. 6.7	mb. 6.5	mb. 6.6	mb. 6.6	mb. 6.5	mb. 6.5	mb. 6.3	mb. 6.1	mb. 6.0	mb. 5.9	mb. 5.9	mb. 5.8	†6.1									

200. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

April, 1930.

1	99	94	94	87	84	84	88	83	81	80	84	86	87	90	90	87	84	89	94	94	91	93	91	91	88.7	9.9
2	91	93	93	95	99	98	98	99	92	80	94	99	93	89	88	84	86	86	86	87	88	90	85	87	90.9	10.0
3	91	88	91	88	85	90	87	81	75	70	70	70	59	86	91	90	82	85	80	83	85	84	84	84	82.7	7.9
4	85	82	82	75	71	73	71	69	69	73	75	79	69	75	69	70	82	82	84	84	86	85	87	91	77.7	5.4
5	90	91	86	86	88	88	90	73	82	80	70	72	66	64	68	68	70	78	80	78	88	88	85	81	79.8	5.7
6	82	74	68	70	69	66	63	66	66	62	69	70	70	81	75	81	82	81	82	82	87	89	85	78	75.0	6.1
7	82	84	87	85	82	82	84	84	81	82	90	77	77	79	73	80	81	80	87	88	87	86	86	87	82.7	7.5
8	84	85	84	87	92	90	88	85	84	76	66	69	84	89	94	96	96	96	94	94	93	93	93	93	87.7	7.9
9	94	91	93	93	97	99	96	94	96	96	93	86	76	67	62	61	65	64	77	85	87	85	86	86	84.7	8.8
10	87	83	83	83	81	80	80	77	74	67	63	65	69	67	65	70	76	79	85	87	84	87	92	93	78.1	8.1
11	93	94	92	90	92	92	91	65	67	66	73	74	76	67	76	81	82	91	96	89	90	93	93	93	84.0	6.9
12	98	89	89	82	83	81	80	77	79	74	73	61	76	79	61	57	74	74	76	76	79	87	83	87	78.2	6.8
13	85	85	88	87	87	89	90	87	78	85	78	79	73	69	81	70	75	74	80	78	83	84	84	84	81.5	6.8
14	85	85	85	87	85	82	74	74	73	69	67	58	46	58	52	78	71	67	74	82	85	82	83	80	74.3	6.4
15	81	71	84	69	77	66	70	66	58	56	47	44	48	48	47	49	49	58	67	68	65	70	71	71	62.7	5.6
16	73	78	73	78	75	69	73	64	59	49	42	47	41	51	56	57	57	60	62	68	61	69	66	65	62.3	6.3
17	74	69	68	68	63	63	57	55	55	45	51	57	77	55	85	60	60	64	63	65	68	66	73	71	63.7	5.7
18	76	73	85	83	82	66	59	55	54	53																

Percentages at exact hours, Greenwich Mean Time.

201. Eskdalemuir : Louvred Hut : h, (height of thermometer bulbs above ground) = 0.9 metres.

May, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	76	82	84	87	87	73	76	56	58	47	43	41	40	35	29	39	44	48	54	69	69	68	70	70	60.2	6.8	
2	76	80	80	81	80	61	60	52	46	44	46	47	49	47	50	53	55	57	71	82	81	81	89	96	64.6	7.3	
3	83	88	82	83	82	79	74	69	63	63	54	49	41	45	51	52	52	59	72	78	87	85	88	89	69.7	7.8	
4	89	89	90	92	93	84	89	88	87	85	73	70	67	66	62	80	80	79	88	89	91	91	96	96	83.8	8.7	
5	96	90	91	91	96	96	96	86	89	89	80	87	75	75	72	71	76	79	83	88	87	91	93	95	86.3	8.9	
6	92	96	94	98	97	96	96	94	88	91	94	85	83	77	62	62	66	70	75	81	87	87	87	86	85.4	8.0	
7	87	85	87	87	83	82	78	68	65	67	67	72	50	59	81	86	87	88	83	85	85	81	76	84	77.7	6.9	
8	83	81	78	79	79	78	74	66	52	57	59	42	37	44	40	65	85	84	84	84	86	79	81	89	70.1	5.7	
9	91	87	89	92	94	75	78	70	68	71	76	74	60	59	53	60	61	74	74	87	89	89	92	91	77.2	6.3	
10	92	92	95	95	96	95	78	71	62	70	66	62	55	80	81	77	74	74	80	82	85	87	96	84	80.5	6.4	
11	93	91	85	87	88	85	85	83	77	70	70	70	65	70	66	68	63	80	74	74	77	74	76	67	77.0	7.1	
12	72	72	70	78	73	70	63	57	58	60	50	44	38	45	52	81	66	73	71	82	86	85	88	89	67.2	7.0	
13	88	89	90	92	90	93	96	94	93	94	94	100	100	99	91	76	66	63	70	81	83	87	86	95	87.8	9.2	
14	93	93	97	90	91	93	85	77	72	75	87	74	54	52	47	51	54	73	75	87	94	94	94	98	79.1	9.2	
15	94	94	96	95	92	87	91	73	69	66	57	58	82	92	95	96	95	92	85	84	87	90	89	87	85.5	9.4	
16	96	97	93	92	90	91	89	78	74	68	68	64	63	62	62	66	68	65	72	74	87	87	89	89	78.5	8.9	
17	89	89	89	89	89	89	88	83	72	70	64	63	59	64	79	91	92	94	93	95	95	96	90	90	83.8	9.9	
18	87	84	85	85	86	83	84	78	73	64	62	64	52	50	56	71	72	75	83	83	82	84	84	84	75.6	7.8	
19	83	78	77	77	77	88	91	83	93	89	89	88	92	91	91	81	79	83	79	86	88	86	86	84	85.0	9.3	
20	84	82	82	81	81	78	77	71	64	68	58	67	70	65	67	69	68	72	76	79	78	87	86	88	74.8	9.4	
21	89	86	89	85	86	83	75	80	72	83	78	73	71	65	63	64	65	69	77	76	79	82	76	73	77.0	9.9	
22	74	78	79	83	84	75	65	70	62	60	58	58	58	53	57	59	64	74	79	83	78	79	76	77	70.0	8.5	
23	77	81	77	78	77	74	72	67	66	63	58	58	64	58	60	51	57	58	62	72	78	77	79	75	68.3	8.6	
24	76	81	86	82	83	85	84	87	79	81	79	80	77	73	74	69	72	77	79	83	92	93	91	94	81.2	10.3	
25	88	81	87	88	86	83	80	78	75	78	80	78	76	78	80	80	83	80	83	87	89	86	84	87	82.4	10.7	
26	83	86	86	87	88	75	60	51	49	52	50	45	74	78	61	67	72	62	66	77	85	90	89	89	71.8	10.8	
27	93	91	91	90	92	95	98	98	89	80	65	62	56	55	54	70	71	85	85	89	85	73	79	78	80.4	10.9	
28	86	79	73	75	72	71	60	59	61	65	60	46	40	48	45	40	48	43	52	66	71	80	70	83	62.1	7.3	
29	87	89	92	93	94	82	71	62	52	59	54	58	46	43	41	46	48	48	65	60	71	71	67	67	65.3	7.9	
30	69	67	69	68	68	70	61	63	64	66	51	55	51	54	56	59	68	73	69	69	71	71	71	73	64.7	8.8	
31	80	82	79	85	82	82	83	76	69	61	55	53	58	56	58	60	62	66	75	80	85	82	83	83	72.1	9.0	
Mean ...	85.3	85.2	85.2	86.0	85.7	82.3	79.3	73.8	69.7	69.5	66.0	63.9	61.4	62.5	62.5	66.5	68.2	71.5	75.3	80.4	83.2	83.7	83.9	84.8	75.6	†8.5	
Vapour Pressure* ...	mb. 7.6	mb. 7.4	mb. 7.3	mb. 7.2	mb. 7.4	mb. 7.6	mb. 8.1	mb. 8.2	mb. 8.4	mb. 8.8	mb. 8.9	mb. 8.9	mb. 8.8	mb. 8.9	mb. 9.0	mb. 9.2	mb. 9.3	mb. 9.2	mb. 9.1	mb. 8.9	mb. 8.5	mb. 8.3	mb. 8.0	mb. 7.8	mb. †8.4		

202. Eskdalemuir : Louvred Hut : h, = 0.9 metres.

June, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
1	83	83	86	85	83	77	76	77	69	71	65	63	67	61	61	65	66	69	72	77	83	85	86	85	85	74.7	8.9
2	88	91	91	96	99	94	93	87	77	77	75	74	68	67	69	67	70	71	79	85	87	88	86	86	81.0	9.6	
3	90	85	85	88	83	78	73	68	65	57	49	52	52	49	55	52	57	68	74	76	88	89	87	89	71.1	10.4	
4	90	97	90	94	91	90	92	90	82	82	69	62	59	57	59	63	65	67	74	74	79	87	88	89	78.7	11.8	
5	88	86	91	94	88	92	80	63	60	51	50	51	47	43	43	45	46	48	52	77	80	86	87	82	68.0	11.9	
6	87	88	85	81	81	76	81	64	57	55	52	50	56	65	62	50	58	74	64	62	64	68	63	76	67.6	10.9	
7	80	84	80	73	67	64	59	50	48	52	46	45	41	36	40	44	46	53	62	65	67	67	88	59.1	7.9		
8	78	82	79	77	69	71	57	44	49	66	66	62	63	56	55	60	59	61	67	76	79	84	91	87	67.9	9.1	
9	83	87	87	87	86	87	86	87	89	84	89	91	92	92	95	97	94	94	93	94	90	92	86	87	89.6	11.1	
10	83	90	90	92	92	88	82	67	73	71	54	57	57	81	75	57	64	59	76	79	82	83	86	81	75.9	9.6	
11	71	71	75	81	70	73	75	73	68	67	49	47	47	42	54	61	52	58	63	77	80	80	80	84	66.5	8.7	
12	87	93	87	85	91	94	89	84	58	60	61	51	48	50	48	49	47	58	57	68	80	76	84	79	70.3	9.2	
13	76	83	81	81	84	75	72	57	58	62	58	49	55	53	59	57	61	64	68	69	68	75	77	74	67.4	10.4	
14	75	74	75	79	73	72	69	61	56	58	57	55	50	52	51	50	47	50	53	60	62	75	75	62	62.4	10.4	
15	62	62	57	58	55	59	60	57	59	54	43	36	41	47	46	46	54	52	62	69	74	82	74	79	57.5	10.1	
16	82	83	80	76	70	75	57	57	56	55	57	57	56	56	52	50	46	51	58	69	75	75	77	89	64.7	11.3	
17	85	87	89	89	90	91	93	88	89	90	93	87	89	88													

Percentages at exact hours, Greenwich Mean Time.

203. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres.

July, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	90	88	85	87	86	87	79	75	81	79	80	80	73	73	71	65	69	75	76	79	91	91	93	94	81.1	15.9	
2	91	89	95	100	96	93	95	76	80	65	66	68	62	62	58	61	56	53	67	78	78	80	77	77	75.9	13.1	
3	78	85	88	90	92	83	76	77	71	76	66	61	64	56	71	67	68	85	91	90	93	95	91	94	79.5	13.8	
4	95	94	93	93	91	88	89	95	86	86	90	95	83	86	79	79	85	88	88	93	94	98	98	97	90.1	14.4	
5	95	93	92	94	91	88	80	73	74	66	72	62	65	64	69	70	65	71	82	87	89	88	86	87	79.5	12.9	
6	88	91	96	97	96	96	97	94	94	84	76	59	54	56	56	58	56	61	69	68	68	75	77	78	77.0	11.9	
7	73	80	77	77	86	81	74	75	81	68	66	56	62	66	65	63	65	59	67	73	79	76	87	89	72.5	10.0	
8	86	96	90	89	92	87	78	78	85	78	85	81	77	90	85	84	90	94	87	86	87	89	88	90	85.9	12.6	
9	90	89	95	90	84	76	60	63	61	61	63	60	56	56	55	52	56	57	65	69	72	81	85	79	70.0	11.0	
10	83	88	90	87	82	75	70	65	64	65	76	77	76	76	76	72	72	75	72	80	81	87	85	79	77.2	9.7	
11	86	87	85	85	78	71	61	58	57	52	48	51	47	48	57	50	51	60	61	61	81	81	83	70	65.6	8.7	
12	69	73	77	84	73	67	57	54	53	54	52	46	46	43	41	44	54	58	60	70	76	81	82	87	62.2	9.8	
13	87	88	86	88	89	88	81	76	73	77	73	73	80	77	72	80	88	90	94	94	95	94	97	98	84.7	12.0	
14	96	96	98	97	96	96	98	94	88	83	85	92	88	91	90	90	87	88	88	89	94	93	92	93	91.8	13.5	
15	91	95	96	93	95	85	83	81	78	69	64	64	72	70	68	87	77	84	86	81	83	89	91	89	82.2	12.2	
16	90	94	93	93	90	89	90	83	90	88	89	91	90	93	91	88	90	90	88	88	89	89	92	91	89.9	13.4	
17	93	93	93	94	94	91	93	90	91	91	91	93	95	94	95	94	95	95	94	96	96	95	97	97	93.6	13.5	
18	98	98	97	96	95	96	97	97	94	95	95	90	80	80	86	89	89	86	88	89	91	94	91	91	91.9	12.8	
19	91	92	92	95	96	92	94	86	81	83	77	77	69	68	68	75	77	82	88	91	91	97	97	94	85.5	12.6	
20	95	94	94	95	95	96	91	86	74	71	75	81	85	75	74	80	90	89	88	87	87	90	89	89	86.4	12.8	
21	89	83	84	88	81	80	84	73	73	75	66	64	71	63	54	57	65	67	69	68	75	72	74	69	73.1	9.4	
22	65	67	72	71	70	70	67	78	69	64	63	74	75	75	72	79	76	79	77	79	86	86	88	82	74.1	9.3	
23	76	76	75	80	78	75	75	67	67	68	65	66	70	78	82	80	86	84	85	87	87	88	89	86	77.6	10.2	
24	86	86	86	86	95	91	87	91	87	91	88	84	77	75	76	77	77	79	83	89	85	88	87	87	84.7	11.1	
25	88	89	91	89	88	89	89	83	78	88	91	86	83	78	64	59	56	58	64	74	83	83	87	91	80.3	10.9	
26	91	93	90	91	88	84	78	78	80	91	95	89	97	88	95	82	77	84	86	93	94	96	93	93	88.5	12.7	
27	94	96	95	95	94	93	91	90	81	73	61	71	70	76	81	73	70	72	87	94	94	94	94	94	84.7	13.3	
28	91	94	93	91	94	95	91	86	82	69	64	59	56	60	69	76	83	85	90	93	93	97	97	98	83.5	12.8	
29	98	97	96	94	94	93	90	89	85	85	81	87	76	77	70	54	83	87	87	91	91	91	90	90	86.7	13.3	
30	88	89	90	86	91	89	86	76	75	66	69	68	75	77	63	59	73	70	88	96	88	85	84	84	79.9	12.0	
31	88	88	88	86	84	76	74	73	66	66	60	59	61	57	58	61	68	77	77	83	90	95	89	88	75.4	10.2	
Mean ...	87.7	89.1	89.4	89.7	88.8	85.8	82.4	79.3	77.2	75.1	73.9	73.0	72.1	71.9	71.3	71.2	73.8	76.8	80.3	83.5	86.6	88.2	88.7	87.9	81.0	†12.0	
Vapour Pressure* ...	mb. 11.5	mb. 11.5	mb. 11.4	mb. 11.8	mb. 11.3	mb. 11.5	mb. 11.8	mb. 11.8	mb. 11.9	mb. 12.0	mb. 12.1	mb. 12.1	mb. 12.2	mb. 12.3	mb. 12.3	mb. 12.2	mb. 12.3	mb. 12.4	mb. 12.2	mb. 12.0	mb. 11.7	mb. 11.5	mb. 11.4	mb. 11.9	mb. 12.6		

204. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

August, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*
1	% 93	% 92	% 92	% 93	% 96	% 91	% 87	% 85	% 72	% 61	% 58	% 58	% 66	% 70	% 85	% 93	% 90	% 87	% 89	% 85	% 87	% 92	% 93	% 94	% 83.6	mb. 11.7
2	93	87	93	89	93	93	91	91	82	80	82	82	80	85	80	91	87	91	90	92	94	93	94	95	88.6	14.3
3	91	91	92	89	90	90	87	86	78	62	59	57	54	53	58	52	54	59	61	76	90	83	82	86	74.3	11.1
4	90	90	93	94	94	93	93	93	94	93	97	95	93	90	91	89	87	87	90	92	88	91	92	91	91.6	12.2
5	92	93	87	89	93	91	89	84	80	80	72	73	69	81	78	80	76	76	83	87	89	93	94	96	84.3	11.0
6	98	98	100	94	98	95	98	90	77	71	73	77	72	74	87	68	71	82	88	93	88	91	92	95	86.3	12.1
7	95	92	89	91	96	96	94	87	73	72	67	67	56	62	74	67	76	85	82	84	89	95	89	89	82.1	11.4
8	96	91	92	93	86	87	90	83	85	80	87	71	62	61	64	78	78	87	85	89	85	88	89	91	83.2	12.1
9	93	91	93	93	94	94	94	93	85	77	72	69	67	71	70	71	69	72	85	90	93	91	93	93	83.8	13.6
10	93	97	94	94	95	97	98	95	97	100	98	96	68	98	96	96	92	96	93	93	93	89	93	86	94.7	14.4
11	90	94	90	90	92	92	95	91	88	80	69	83	83	85	81	76	79	77	77	84	81	84	91	89	85.0	12.5
12	86	87	86	91	94	93	89	92	97	87	79	89	85	74	88	84	76	87	87	95	85	85	85	87	87.0	12.3
13	86	93	90	87	86	84	86	81	80	76	77	75	73	70	73	84	90	89	91	92	94	92	93	90	84.6	11.8
14	86	81	75	74	75	74	72	72	75	64	65	63	60	63	66	59	65	71	74	73	76	74	74	76	71.8	9.8
15	75	78	75	76	75	76	72	74	75	75	69	66	72	58	60	66	66	63	63	84	70	84	88	82	72.1	9.5
16	99	92	89	96	96	83	69	66	65	59	58	58	57	58	59	53	59	58	78	84	84	88	88	93	74.3	10.6
17	90	93	95																							

Percentages at exact hours, Greenwich Mean Time.

205. Eskdalemuir : Louvred Hut : h, (height of thermometer bulbs above ground) = 0.9 metres.

September, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	88	88	93	87	88	87	94	78	63	59	56	58	56	57	61	60	66	78	81	82	86	87	93	92	76.5	9.4	
2	97	92	94	98	97	97	93	84	76	65	67	64	59	60	58	58	64	72	79	87	88	85	93	87	79.9	10.1	
3	91	95	92	95	92	94	89	85	73	70	65	67	62	56	54	52	54	64	80	88	91	92	94	94	78.6	12.2	
4	98	96	95	96	96	96	92	94	80	74	72	70	69	68	81	82	81	87	90	94	93	97	94	94	87.0	12.9	
5	94	95	97	98	98	96	96	99	99	96	99	90	83	77	69	74	73	81	91	89	90	91	94	95	90.1	14.4	
6	91	93	97	99	98	98	97	96	93	83	80	74	73	81	93	93	94	94	96	97	95	90	94	97	91.5	13.9	
7	99	97	96	89	98	95	92	88	83	85	86	91	90	90	85	87	94	94	89	88	91	95	93	98	91.4	12.7	
8	95	94	85	84	86	89	94	89	84	81	69	68	68	65	59	58	61	78	82	87	91	97	93	94	81.0	10.3	
9	96	96	98	93	89	95	96	88	85	82	75	68	68	65	64	59	71	79	88	89	91	97	97	97	84.3	10.3	
10	97	96	95	95	96	95	95	96	95	90	90	83	85	75	73	75	83	89	88	97	96	94	97	98	90.5	13.7	
11	97	94	94	97	98	96	94	94	95	95	91	87	81	85	87	88	85	87	87	87	89	89	89	89	89	90.8	13.7
12	89	89	90	91	92	91	93	93	90	90	88	83	85	83	86	86	88	90	90	90	92	96	90	93	89.4	12.7	
13	93	89	88	88	89	88	88	87	88	93	89	98	95	94	93	96	92	89	90	92	93	93	93	92	91.3	12.2	
14	89	88	86	88	88	88	83	84	79	72	70	67	70	70	79	75	74	74	83	86	88	94	87	90	81.4	10.4	
15	83	83	83	88	85	88	86	70	61	58	56	58	58	54	54	60	62	71	78	84	90	89	90	91	91	74.1	9.0
16	95	94	97	97	96	95	95	94	92	84	79	73	64	64	65	69	73	75	89	90	94	91	91	92	85.3	9.9	
17	93	92	92	93	96	96	93	93	84	84	78	76	66	68	73	78	81	83	84	83	88	88	91	92	85.2	10.6	
18	91	93	95	95	96	98	97	95	86	91	86	87	87	84	69	67	73	70	78	84	84	88	87	93	86.4	10.3	
19	93	92	93	98	97	98	88	89	91	90	75	88	82	99	94	92	93	92	92	91	85	90	87	91	91.1	10.4	
20	87	87	88	88	89	91	93	90	85	82	78	76	76	70	76	75	82	82	84	86	86	87	87	85	83.9	11.7	
21	80	81	77	77	83	81	81	75	78	78	71	68	67	67	69	70	78	82	82	78	75	74	87	91	77.0	10.9	
22	95	97	94	95	97	99	99	100	96	92	97	97	95	95	97	98	98	98	97	98	99	99	99	99	99	96.9	11.6
23	98	98	99	98	99	100	100	99	100	99	97	97	98	98	98	98	98	98	100	95	97	98	97	97	97	98.2	15.7
24	99	99	99	98	91	90	90	87	84	86	86	72	72	72	75	75	74	81	88	87	87	87	91	91	85.8	12.2	
25	94	94	93	85	84	84	83	82	78	76	69	69	61	57	66	72	68	78	77	68	70	70	70	66	76.1	9.5	
26	67	69	70	64	68	66	69	65	65	71	74	87	84	86	84	82	77	73	67	69	72	73	75	75	72.8	7.9	
27	76	82	82	76	86	81	83	90	90	87	88	86	87	91	88	88	88	89	88	87	87	87	86	88	85.6	9.3	
28	88	87	86	91	93	91	84	80	75	75	73	68	68	71	63	67	67	74	77	81	84	86	83	85	79.1	9.0	
29	86	86	86	88	89	88	88	91	76	96	86	85	85	91	87	84	91	92	91	92	93	96	96	94	88.9	10.2	
30	96	94	93	94	99	98	96	93	86	75	79	83	73	81	83	78	82	88	91	89	95	89	93	93	88.2	10.3	
Mean ...	91.2	91.0	90.8	90.7	91.8	91.6	90.7	88.3	83.7	81.6	79.0	77.9	75.7	75.7	76.1	76.5	78.8	82.7	85.9	87.2	88.7	89.6	90.4	91.1	85.3	† 11.2	
Vapour Pressure* ...	mb. 10.3	mb. 10.2	mb. 10.1	mb. 10.2	mb. 10.4	mb. 10.4	mb. 10.8	mb. 11.4	mb. 11.4	mb. 11.6	mb. 11.6	mb. 11.8	mb. 11.7	mb. 11.8	mb. 11.7	mb. 11.7	mb. 11.6	mb. 11.6	mb. 11.4	mb. 11.0	mb. 10.9	mb. 10.8	mb. 10.6	mb. 10.6	mb. 11.1		

206. Eskdalemuir : Louvred Hut : h, = 0.9 metres.

October, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
1	% 92	% 90	% 91	% 90	% 90	% 83	% 83	% 81	% 82	% 82	% 82	% 78	% 78	% 80	% 88	% 89	% 86	% 86	% 90	% 90	% 87	% 90	% 96	% 94	% 86.9	mb. 9.2	
2	96	91	94	96	97	90	96	90	87	90	88	77	76	78	79	81	78	82	86	88	88	88	91	88	88	87.7	9.1
3	91	90	89	89	89	86	89	87	84	89	85	85	80	74	74	80	80	79	84	86	86	91	88	88	85.2	10.4	
4	87	91	94	95	96	98	98	99	97	99	99	97	93	96	90	94	96	95	94	99	96	96	96	87	95.1	12.2	
5	84	81	83	77	71	72	75	78	72	69	55	66	79	67	74	76	87	84	87	93	87	86	82	83	77.9	8.9	
6	86	84	92	94	94	97	88	90	88	82	88	79	86	71	74	74	76	83	83	82	84	84	81	81	81	84.3	8.5
7	82	78	83	86	86	85	86	84	79	74	73	73	64	69	72	75	80	86	88	88	91	87	81	82	81	81.1	9.1
8	86	87	93	89	87	87	91	89	90	89	91	88	88	83	82	77	76	77	82	81	81	77	78	72	72	84.4	8.6
9	78	79	79	85	85	84	75	73	60	61	57	57	56	48	52	65	72	73	79	84	81	83	89	87	72.3	6.6	
10	90	85	88	87	93	91	87	82	85	79	83	78	74	76	75	82	87	87	89	91	91	89	95	91	85.5	9.4	
11	95	95	93	93	94	95	94	92	95	91	86	81	92	98	96	93	94	96	98	96	94	87	91	84	92.7	10.4	
12	87	84	88	87	88	86	87	86	86	88	75	75	67	65	63	58	66	70	74	73	76	80	82	82	78.1	7.9	
13	83	83	89	89	88	87	89	92	92	92	96	93	92	92	93	93	92	92	94	96	95	97	96	96	91.4	11.1	
14	97	95	94	91	86	85	83	81	87	91	91	90	94	95	95	94	95	97	94	95	93	93	94	95	91.9	13.2	
15	92	94	99	99	98	97	95	94	94	90	95	95	96	95	97	97	96	97	96	95	97	91	96	95	95.5	15.2	
16	98	97	97	93	93	95	92	84	85	86	80	81	78	77	80	76	84	85	84	84	87	89	90	94	87.0	12.0	
17	91	89	88	89	94	98	98	95	94	90	90	81	79	86	87	88	89	88	88	90	89	91	80	79	89.5		

Percentages at exact hours, Greenwich Mean Time.

207. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres.

November, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour		
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	89	87	94	94	96	96	94	96	93	93	97	96	96	96	95	96	92	92	90	94	96	96	96	97	97	94.1	7.5	
2	98	100	98	100	98	96	93	93	95	95	94	85	85	77	80	86	90	92	89	84	74	72	73	87	87	89.1	7.8	
3	83	83	85	83	83	82	81	80	78	83	88	88	88	88	84	78	83	84	76	76	77	78	77	73	90	81.7	6.4	
4	72	71	70	68	64	66	68	66	66	55	61	54	55	57	54	53	67	73	77	80	84	85	87	90	93	68.1	4.3	
5	91	93	93	91	92	92	92	91	91	87	57	54	55	56	56	60	67	71	74	80	81	83	88	88	88	78.5	4.1	
6	91	91	94	95	95	95	95	96	95	95	94	67	50	54	66	80	84	83	84	88	91	92	90	95	85.7	4.9		
7	88	80	82	91	89	87	89	90	84	82	86	82	87	88	77	91	91	91	91	94	95	96	93	98	88.7	7.7		
8	87	80	87	82	78	72	73	74	71	66	60	59	62	60	68	73	78	83	82	86	89	89	92	98	92	77.0	8.2	
9	98	98	99	99	99	98	96	96	92	85	86	76	71	68	67	63	78	73	75	74	81	81	78	79	79	84.2	9.9	
10	84	87	80	83	83	83	82	81	84	76	79	74	71	69	85	88	83	75	79	80	74	82	78	78	78	79.9	7.2	
11	71	70	71	78	70	68	66	76	72	71	68	63	67	69	70	80	78	78	66	79	75	80	80	96	73.0	5.8		
12	82	93	98	90	90	96	90	90	86	91	88	86	84	83	86	90	90	88	87	88	93	93	90	90	90	89.4	8.0	
13	90	89	88	88	88	88	88	88	88	88	88	87	88	88	87	86	86	86	86	88	88	88	89	89	85	87.8	9.4	
14	83	86	83	80	80	85	87	86	86	80	83	82	82	79	82	85	86	87	87	87	89	93	96	98	98	85.3	9.2	
15	96	92	94	95	95	89	86	91	90	97	96	92	87	83	75	79	82	75	73	74	78	80	80	80	80	86.2	7.4	
16	79	78	79	80	82	81	76	75	72	62	58	59	53	52	58	70	76	80	81	84	85	86	87	88	88	74.0	4.0	
17	89	89	89	89	90	90	90	90	91	91	91	68	60	57	64	69	73	76	78	78	80	80	83	84	84	80.9	3.7	
18	84	86	85	84	80	80	80	80	79	74	70	68	64	62	62	71	73	92	94	94	90	89	94	94	94	80.0	4.7	
19	96	96	98	98	98	94	91	87	95	98	95	92	92	92	88	90	88	90	91	91	93	94	94	94	94	93.1	6.7	
20	93	93	89	81	83	85	83	82	85	88	87	88	93	92	95	97	97	100	92	98	92	91	95	93	93	90.5	7.9	
21	92	92	95	88	91	88	93	94	94	87	91	88	89	91	91	95	95	96	96	90	96	94	90	83	91.8	10.2		
22	91	92	90	96	92	92	93	94	96	94	93	90	90	91	94	95	92	90	83	73	68	74	77	77	77	88.3	7.6	
23	76	75	77	79	79	82	79	80	80	82	81	78	76	75	73	87	85	91	85	94	96	96	94	94	94	82.7	6.1	
24	94	87	80	80	74	80	82	87	87	85	97	98	85	96	96	90	86	91	90	91	87	86	90	93	93	88.0	7.7	
25	96	91	93	93	91	91	91	90	90	91	93	96	91	88	91	91	93	96	90	93	97	93	95	93	93	92.4	8.7	
26	92	87	89	94	90	90	89	93	92	85	90	94	89	91	92	94	90	88	87	88	91	94	96	91	91	90.7	7.5	
27	96	93	88	87	91	87	94	95	96	100	97	95	95	95	92	87	91	94	89	90	92	93	93	93	93	92.6	6.5	
28	94	94	94	92	95	92	94	94	94	96	97	98	98	96	94	93	93	91	92	84	84	84	84	89	89	92.4	4.9	
29	85	84	85	88	89	91	87	87	86	81	82	78	83	82	85	92	85	82	85	84	85	88	84	84	84	85.4	6.6	
30	87	89	91	92	93	93	95	96	97	98	93	85	88	91	88	98	100	98	97	97	93	93	97	92	92	93.4	6.2	
Mean ...	88.2	87.5	87.9	87.9	87.3	87.0	86.6	87.3	86.9	85.0	84.5	80.7	79.1	78.9	80.2	83.6	85.1	86.2	84.9	86.0	86.5	87.5	87.8	89.4	85.5	85.5	†6.9	
Vapour Pressure* ...	mb. 6.6	mb. 6.5	mb. 6.5	mb. 6.5	mb. 6.5	mb. 6.4	mb. 6.4	mb. 6.4	mb. 6.6	mb. 6.8	mb. 7.0	mb. 7.0	mb. 7.1	mb. 7.1	mb. 7.0	mb. 6.9	mb. 6.8	mb. 6.8	mb. 6.7	mb. 6.7	mb. 6.6	mb. 6.7	mb. 6.6	mb. 6.6	mb. 6.6	mb. 6.7	mb. 6.7	†6.7

208. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

December, 1930.

1	97	93	90	89	87	89	86	90	87	90	92	92	94	94	92	94	90	92	92	92	97	93	95	95	91.7	mb. 7.7	
2	89	87	87	86	87	89	90	92	87	92	95	89	90	88	90	91	91	91	91	91	93	94	97	90	90.4	8.0	
3	90	92	93	87	92	90	90	90	90	97	86	84	86	89	89	88	98	98	94	98	100	97	96	96	92.0	7.1	
4	95	95	95	95	95	95	95	95	95	96	96	96	95	95	96	100	100	95	95	96	96	96	96	95	95.8	5.3	
5	94	94	100	98	98	100	98	96	94	96	87	87	89	92	98	100	96	94	93	96	100	98	98	98	95.5	6.9	
6	100	98	98	98	98	98	98	94	98	100	100	100	100	100	98	98	100	100	95	95	98	98	98	98	98.3	7.6	
7	98	98	100	98	100	98	96	98	100	95	95	95	95	95	95	95	95	95	98	98	94	96	87	90	96.2	7.3	
8	91	92	94	96	97	95	96	96	96	96	98	98	100	100	100	94	96	96	94	96	94	96	96	96	96	95.8	6.0
9	97	97	95	95	100	100	99	98	96	93	93	93	93	93	92	94	91	89	87	87	87	87	87	87	93.5	4.0	
10	87	89	93	96	94	93	93	96	97	98	98	97	96	95	94	94	94	94	95	94	93	92	92	91	93.9	4.2	
11	92	95	89	96	91	96	94	94	91	90	90	87	87	87	88	88	93	96	96	97	97	96	92	98	92.3	6.2	
12	98	98	96	94	91	90	95	95	90	86	92	92	93	96	97	97	96	96	96	96	96	96	96	96	96	94.5	7.6
13	96	92	91	94	93	94	93	91	94	97	97	97	97	97	94	95	96	95	94	94	95	97	98	96	94.9	8.0	
14	91	95	98	96	93	90	91	95	94	94	97	98	88	88	87	89	85	91	89	86	90	88	86	91	90.1	6.5	
15	85	87	84	87	80	82	85	89	89	90	82	86	85	85	92	92	95	97	98	99	99	99	98	94	90.0	5.9	
16	95	96	94	93	93	94	96	96	96	93	95	96	94	94	96	96	96	93	90	98	94	96	96	96	96	94.8	6.5
17	100	98	96	98	98	96	98	100	96	94	100	94	93	93	93	88	91	98	97	93	97	96	96	97	97	95.8	7.0
18	97	100	98																								

For exact hours, Greenwich Mean Time.

209. Eskdale muir : (Louvred Hut)  $h_t = 0.9$  metres.

1930.

Hour G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Relative Humidity ..	% 88.8	% 88.8	% 88.6	% 89.0	% 88.9	% 88.0	% 86.6	% 84.8	% 82.5	% 80.8	% 78.7	% 76.7	% 75.0	% 74.8	% 75.2	% 76.5	% 78.2	% 80.8	% 83.1	% 85.3	% 86.6	% 87.7	% 88.4	% 88.5	% 83.4
Vapour Pressure (in Millibars)* ...	mb. 7.9	mb. 7.9	mb. 7.8	mb. 7.8	mb. 7.8	mb. 7.9	mb. 8.0	mb. 8.2	mb. 8.3	mb. 8.6	mb. 8.8	mb. 8.8	mb. 8.8	mb. 8.9	mb. 8.9	mb. 8.8	mb. 8.7	mb. 8.6	mb. 8.5	mb. 8.4	mb. 8.3	mb. 8.2	mb. 8.1	mb. 8.0	mb. 8.3

\* Computed from the mean temperature and the mean relative humidity.

RELATIVE HUMIDITY : MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

210. Eskdalemuir : (Louvred Hut)  $h_t = 0.9$  metres.

1930.

Month.	Mean.	Hour 1.	GMT. 2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	% 89.3	+ 1.0	+ 1.3	+ 0.5	+ 1.5	+ 0.9	+ 0.9	+ 0.4	+ 1.0	+ 0.4	+ 0.7	- 0.4	- 1.3	- 3.0	- 4.0	- 3.1	- 1.5	+ 0.1	+ 0.4	+ 0.3	+ 1.0	+ 0.0	+ 0.8	+ 1.9	+ 1.9
Feb.	% 84.2	+ 5.5	+ 5.3	+ 5.1	+ 5.1	+ 6.4	+ 5.7	+ 4.9	+ 4.9	+ 4.4	+ 1.8	- 2.6	- 6.6	- 11.1	- 12.0	- 12.2	- 9.7	- 7.2	- 4.4	- 1.0	+ 1.0	+ 2.5	+ 4.4	+ 4.9	+ 5.1
Mar.	% 83.5	+ 5.0	+ 5.2	+ 5.0	+ 5.3	+ 5.9	+ 5.5	+ 4.5	+ 3.4	+ 1.0	+ 1.1	- 2.3	- 6.1	- 8.0	- 8.0	- 9.0	- 7.1	- 6.1	- 3.8	- 2.1	+ 0.2	+ 0.8	+ 2.3	+ 3.4	+ 4.1
April	% 78.6	+ 7.5	+ 5.9	+ 5.7	+ 5.1	+ 4.8	+ 3.9	+ 3.1	+ 0.1	- 2.4	- 6.3	- 5.3	- 8.8	- 10.1	- 8.4	- 9.1	- 7.3	- 6.1	- 2.5	+ 1.7	+ 4.2	+ 5.5	+ 5.7	+ 6.7	+ 6.4
May	% 75.6	+ 9.9	+ 9.7	+ 9.8	+ 10.5	+ 10.2	+ 6.8	+ 3.7	- 1.8	- 5.9	- 6.1	- 9.7	- 11.7	- 14.3	- 13.2	- 13.3	- 9.3	- 7.6	- 4.2	- 0.5	+ 4.6	+ 7.3	+ 7.8	+ 8.1	+ 9.0
June	% 74.9	+ 10.9	+ 12.5	+ 11.6	+ 12.3	+ 10.3	+ 8.8	+ 5.0	- 0.8	- 4.3	- 5.9	- 9.1	- 10.8	- 12.9	- 14.8	- 12.6	- 14.2	- 13.0	- 7.7	- 3.5	+ 1.9	+ 5.9	+ 9.1	+ 10.2	+ 11.3
July	% 81.0	+ 6.7	+ 8.0	+ 8.4	+ 8.7	+ 7.8	+ 4.8	+ 1.4	- 1.7	- 3.8	- 5.9	- 7.1	- 8.0	- 8.9	- 9.1	- 9.7	- 9.8	- 7.2	- 4.2	- 0.7	+ 2.5	+ 5.7	+ 7.3	+ 7.8	+ 7.0
Aug.	% 84.8	+ 6.8	+ 6.2	+ 6.2	+ 6.4	+ 7.2	+ 6.3	+ 5.0	+ 2.7	- 1.5	- 6.0	- 9.3	- 9.5	- 10.4	- 9.9	- 8.4	- 7.9	- 7.5	- 2.7	+ 0.5	+ 3.5	+ 4.5	+ 5.5	+ 5.9	+ 6.4
Sept.	% 85.3	+ 5.9	+ 5.8	+ 5.6	+ 5.5	+ 6.5	+ 6.4	+ 5.5	+ 3.0	- 1.6	- 3.6	- 6.3	- 7.3	- 9.6	- 9.6	- 9.2	- 8.8	- 6.5	- 2.6	+ 0.6	+ 1.9	+ 3.3	+ 4.3	+ 5.1	+ 5.8
Oct.	% 86.1	+ 2.8	+ 2.1	+ 2.7	+ 3.3	+ 3.7	+ 4.0	+ 3.0	+ 1.4	+ 0.2	- 1.2	- 4.5	- 4.8	- 5.5	- 7.2	- 6.3	- 4.3	- 1.1	- 0.4	+ 1.0	+ 1.6	+ 1.2	+ 2.3	+ 3.4	+ 2.7
Nov.	% 85.5	+ 2.8	+ 2.1	+ 2.5	+ 2.5	+ 1.8	+ 1.5	+ 1.1	- 1.8	+ 1.4	- 0.5	- 1.0	- 4.8	- 6.4	- 6.6	- 5.3	- 1.9	- 0.4	+ 0.7	- 0.7	+ 0.5	+ 0.9	+ 2.0	+ 2.3	+ 3.9
Dec.	% 92.8	+ 0.1	+ 0.4	- 0.4	+ 0.5	+ 0.5	+ 0.7	+ 0.9	+ 2.0	+ 1.5	+ 0.9	+ 0.7	- 0.7	- 1.0	- 1.1	- 0.9	- 1.4	- 0.9	- 0.5	- 0.4	+ 0.4	+ 0.4	- 0.0	- 0.4	- 0.4
Year	% 83.4	+ 5.4	+ 5.3	+ 5.2	+ 5.5	+ 5.5	+ 4.6	+ 3.2	+ 1.3	- 0.9	- 2.6	- 4.7	- 6.7	- 8.4	- 8.6	- 8.2	- 6.9	- 5.3	- 2.6	- 0.4	+ 1.9	+ 3.2	+ 4.3	+ 4.9	+ 5.1

RAINFALL : ANNUAL TOTALS OF HOURLY VALUES.

† Amounts, in millimetres ; durations, in hours, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

211. Eskdalemuir :  $H_t = 242.0$  metres + 0.4 metres.

1930.

Hour G.M.T.	0 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	21 to 22.	22 to 23.	23 to 24.	0 to 24.
Amount ...	mm. 64.8	mm. 66.3	mm. 64.5	mm. 58.6	mm. 57.1	mm. 60.4	mm. 59.7	mm. 65.5	mm. 77.8	mm. 68.6	mm. 50.5	mm. 80.0	mm. 63.2	mm. 42.0	mm. 52.0	mm. 68.5	mm. 83.2	mm. 93.5	mm. 95.2	mm. 108.3	mm. 80.5	mm. 98.2	mm. 109.5	mm. 62.9	mm. 1730.8
Duration...	hr. 49.2	hr. 47.0	hr. 57.5	hr. 55.2	hr. 57.8	hr. 51.1	hr. 51.0	hr. 48.8	hr. 48.1	hr. 48.2	hr. 36.6	hr. 47.7	hr. 47.9	hr. 37.1	hr. 40.4	hr. 41.2	hr. 49.0	hr. 58.0	hr. 50.4	hr. 54.4	hr. 49.9	hr. 52.8	hr. 57.8	hr. 54.9	hr. 1192.0

† The totals and durations for individual months are printed in the tables on the following pages.

NOTES ON RAINFALL.

212. Eskdalemuir.

1930.

**Rainfall Duration.**—There were 120 days on which no duration of rainfall was registered. There were 53 days on which the duration of rainfall was registered as 0.1 hour to 1.0 hour, 34 days with 1.1 to 2.0 hours, 85 days with 2.1 to 6.0 hours, 53 days with 6.1 to 12.0 hours, and 20 days with more than 12 hours. The day with the greatest duration was July 17th, when the duration was 21.4 hours, the amount falling being 40.8 mm.

**Notable Falls of the Year.**

- (a) The greatest amount in a 60-minute period was 16.3 mm., which was recorded between 0h and 1h, August 19th. On the following days 5 mm. of rain fell in 6 minutes : July 4th, August 21st, August 29th. Falls of 5 mm. in less than one hour occurred on 24 days.
- (b) Details of the greatest continuous falls on as follows :—

Date.	Amount.	Duration.
	mm.	hrs.
April 2nd .. .. .	26	23.0
May 17th .. .. .	28	8.8
December 28th .. .. .	29	12.5

**Wet Periods.**

- (a) There was one "rain spell" (i.e., a period of fifteen or more consecutive days on each of which 0.2 mm. or more of rain fell), viz., October 2nd to 24th.
- (b) There was one "wet spell" (i.e., periods of fifteen or more consecutive days on each of which 1.0 mm. or more of rain fell), viz., October 10th to 24th.

**Dry Periods.**

- (a) There were no periods of "absolute drought" (i.e., fifteen or more consecutive days on which less than 0.2 mm. of rain fell) or of "partial drought" (i.e., twenty-nine or more consecutive days, the mean rainfall of which did not exceed 0.2 mm. per day.)
- (b) Two relatively dry periods were February 7th to 23rd, and May 20th to June 8th. These failed to classify as "absolute droughts" in having 4.7 mm. on February 14th, and 3.0 mm. on May 26th.

RAINFALL.

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

213. Eskdalemuir : H<sub>r</sub> (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h<sub>r</sub> (height of receiving surface above ground) = 242.0 metres + 0.4 metres. **January, 1930.**

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.	
1	...	...	...	1	2	1.0	2.1	2.2	.6	.6	.7	1.0	.6	.9	2.1	1.3	.5	.8	2.2	.9	1.8	.2	.9	.1	20.8	18.8	
2	.7	1.8	.1	.4	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.2	.1	1.2	2.8	2.7	10.2	6.2	
3	.4	.5	3.3	2.6	2.3	1.8	.1	...	...	...	.3	...	...	...	.5	...	...	...	...	...	...	...	...	...	11.8	5.7	
4	.5	.5	1.7	1.0	1.0	.5	...	...	...	...	...	...	...	...	...	...	1.3	2.5	1.2	.2	2.1	...	2.8	...	15.3	10.2	
5	.1	...	...	...	...	...	...	...	...	...	.1	.9	2.1	.2	.7	.1	1.1	.3	.2	.3	2.1	1.4	2.5	.1	12.2	8.8	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.3	.3	3.1	1.0	.8	.2	.8	6.5	5.2	
7	1.0	.3	.2	.2	.2	.1	.7	.3	.3	.1	...	...	...	...	.8	3.1	3.3	6.0	2.3	.4	1.1	.6	.8	21.8	18.2		
8	.8	1.7	2.3	3.3	1.5	.6	...	...	...	...	...	...	...	...	.3	...	...	...	.2	.2	...	.9	1.6	13.4	8.3		
9	.3	.6	...	...	...	...	4.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.5	3.8	
10	1.0	...	...	...	...	.1	...	...	...	...	...	...	...	...	.9	1.2	1.6	2.6	2.1	2.6	3.4	2.6	1.6	19.7	9.0		
11	...	...	...	...	...	...	...	...	...	...	...	.3	.3	...	...	...	...	...	...	...	...	...	...	...	0.6	0.7	
12	...	...	...	...	...	...	.2	...	...	...	...	...	.1	.4	.7	.6	.9	.9	.2	.1	...	...	...	2.0	6.1	8.4	
13	.5	.5	3.4	.5	.2	1.0	...	...	...	...	...	...	...	...	.1	3.4	.6	...	...	...	...	...	...	...	10.2	5.7	
14	...	...	1.0	...	.3	1.5	.5	.4	.2	...	.2	.2	...	...	...	...	...	...	...	...	...	...	...	...	4.3	5.3	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	1.0	2.6	2.3	3.7	2.3	1.7	3.4	2.3	1.3	1.3	.1	.2	.3	1.9	3.9	1.1	.3	3.4	2.3	35.8	17.5	
18	.3	3.1	.7	.7	.4	.6	...	(.1)	(fe)	(.1)	(fe)	(.1)	(fe)	(.1)	.6	1.5	.5	.1	...	...	...	...	...	...	9.1	8.8	
19	...	...	...	...	.4	1.5	2.7	2.2	.6	.7	...	.1	.9	.4	.6	1.3	.7	.5	.8	.9	.2	...	...	...	14.7	13.6	
20	...	...	...	...	...	...	...	1.2	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	1.2	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	0.1	0.1	
22	...	...	.4	2.2	1.9	.9	1.7	2.0	1.9	1.4	.9	1.1	2.2	1.7	1.1	.9	1.5	.8	.2	.9	...	...	...	...	23.7	17.5	
23	...	...	...	...	...	...	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.7	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	.3	1.0	2.1	4.8	1.6	2.0	...	...	...	...	...	11.8	5.5	
25	...	.2	.7	...	...	.1	3.0	.6	.2	.4	.2	...	...	...	...	...	...	.2	.1	...	.1	...	...	...	5.8	3.6	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	1.0	2.3	2.2	1.1	.4	.9	.8	.3	.1	.1	.1	.1	...	...	...	...	...	...	...	...	...	...	9.4	11.7	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	0.9	
29	.1	.1	.2	1.1	1.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2	2.8	
30	...	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.5	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.5	
Sum.	5.7	9.3	15.2	14.7	12.6	11.8	18.7	12.3	8.3	6.0	4.2	7.2	8.6	5.4	8.2	13.8	15.2	12.0	19.0	16.1	9.8	10.5	14.5	16.3	275.4	199.2	
Total Duration.	hr. 7.3	hr. 6.5	hr. 9.6	hr. 10.4	hr. 11.0	hr. 11.4	hr. 8.8	hr. 8.7	hr. 7.5	hr. 6.4	hr. 5.1	hr. 5.5	hr. 5.7	hr. 7.5	hr. 6.6	hr. 10.2	hr. 10.6	hr. 9.7	hr. 10.4	hr. 10.3	hr. 7.2	hr. 7.0	hr. 6.9	hr. 8.9	hr. 199.2		

214. Eskdalemuir : H<sub>r</sub> = 242.0 metres + 0.4 metres.

February, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.	
1	...	...	...	1.3	...	...	...	...	...	...	...	...	...	...	.5	...	.5	.4	.4	.6	.3	.1	.3	...	4.4	7.4	
2	...	...	...	...	...	...	.4	...	.3	.5	.7	.3	...	...	...	...	...	...	(.1)	(*)	...	...	...	...	2.3	4.2	
3	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	0.1	0.5	
4	...	...	...	...	...	...	...	...	...	.2	...	...	...	...	.2	...	...	...	.9	...	...	...	...	...	1.3	0.7	
5	...	.2	...	...	.6	...	...	.1	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	...	1.0	0.9	
6	...	...	...	...	...	...	...	...	(*)	...	...	...	(*)	(*)	(.1)	(*)	...	(*)	.6	.7	...	...	...	...	1.4	1.3	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.2	1.2	1.5	1.0	.8	...	4.7	4.1	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(.1)	(*)	...	...	...	...	...	0.1	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...
24	...	...	...	...	...	...	...	...	...	...	...	.2	.2	.1	...	...	...	...	(*)	(.1)	(*)	(*)	(*)	(.1)	0.6	2.2	
25	...	...	...	...	...	(*)	(*)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	.3	.9	.8	...	...	...	...	...	...	...	...	...	.2	.4	.2	.6	.2	.3	...	...	...	...	...	3.9	4.8	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	...	0.5	0.9	2.1	0.6	...	0.4	0.1	0.3	0.7	0.7	0.5	0.3	0.3	1.2	0.3	1.1	0.6	2.6	2.6	1.8	1.1	1.1	0.1	19.9	26.1	
Total Duration.	hr. ...	hr. 1.2	hr. 1.0	hr. 1.4	hr. 0.2	...	hr. 1.0	hr. 0.1	hr. 0.5	hr. 1.2	hr. 1.0	hr. 1.7	hr. 1.2	hr. 0.6	hr. 1.0	hr. 0.4	hr. 1.7	hr. 1.5	hr. 2.5	hr. 2.8	hr. 1.7	hr. 1.5	hr. 1.9	...	hr. 26.1		
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24		

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

215. Eskdalemuir : H<sub>r</sub> (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h<sub>r</sub> (height of receiving surface above ground) = 242.0 metres + 0.4 metres. March, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24	
Day.	mm.	mm.	hr.																								
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	3	6	...	2.3	2	8	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4.5	7.3	
5	...	...	...	1	1	1	...	1	...	...	...	...	...	2	2	8	9	8	6	4	4	1	...	...	4.8	12.2	
6	...	...	...	...	...	...	...	...	...	6	2	4	2	2	5	1.0	6	1	1	5	...	...	...	...	4.4	9.5	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	2	2	4	9	1.6	3.1	3.6	4.0	6	4	...	...	...	...	...	...	...	...	...	...	...	...	...	15.0	9.5	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1.0	1.3	1.5	
11	9	4	6	3	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.4	5.0	
12	...	...	...	6	3	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	4.0	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	0.2	1.0	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	2	3	...	5	1.2	1.3	1.2	1	1	1	2	4	1.2	1.2	1.5	1.3	1.7	1.7	9	4	4	15.9	19.0	
17	3	1.3	2	1	4	3	2	3	2	1	...	...	...	...	...	1	1	1	1	1	1	2	1	...	4.2	14.3	
18	...	...	1	3	2	...	...	...	...	...	...	...	...	...	...	...	1	1.0	...	...	...	...	...	...	1.7	3.7	
19	...	...	...	...	...	...	...	...	...	6	1.8	3.5	5	...	...	...	...	...	...	...	...	...	...	...	6.4	3.2	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	2	6	2.2	6	4	...	3	...	...	...	...	...	...	...	...	...	...	...	...	4.3	3.8	
22	...	...	...	1	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.4	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	2	6	1.6	7	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.6	5.7	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	4	5	...	...	...	...	3	...	1.5	2.5	
28	...	...	...	...	...	...	...	4	8	7	...	...	...	...	...	...	...	...	...	...	...	1.1	3.1	1.3	7.4	4.4	
29	1.1	...	...	...	...	...	...	...	...	...	1	2.7	2.2	...	6	...	6.0	4.2	...	9	...	...	...	...	17.8	3.5	
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	0.2	1.5	
31	3	8	8	...	...	...	...	...	...	...	...	...	4	5	2	...	...	...	...	...	...	...	1	...	3.1	4.4	
Sum.	2.9	3.3	2.0	4.4	3.2	3.9	6.4	8.6	7.2	4.4	2.6	7.1	3.5	1.1	1.9	3.2	9.8	8.2	2.1	3.6	2.3	2.2	4.3	2.9	100.6	116.4	
Total Dura- tion.	hr. 3.8	hr. 5.0	hr. 4.5	hr. 7.1	hr. 8.7	hr. 6.5	hr. 6.5	hr. 7.2	hr. 5.5	hr. 7.4	hr. 4.2	hr. 4.2	hr. 3.3	hr. 3.1	hr. 3.3	hr. 3.8	hr. 5.3	hr. 5.9	hr. 3.3	hr. 3.2	hr. 3.0	hr. 3.4	hr. 4.5	hr. 3.7	hr. 116.4		

216. Eskdalemuir : H<sub>r</sub> = 242.0 metres + 0.4 metres.

April, 1930.

	mm.	mm.	hr.																								
1	...	...	6	2	1	1	1	3	1	...	...	3	3	3	1.4	5	7	3.6	1.1	4	2	2	1	10.9	16.5		
2	2	1.2	2.1	1.5	1.7	2.1	1.8	9	1.5	8	2.7	4	...	...	...	...	...	...	...	...	...	...	...	...	17.0	12.5	
3	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.7	
4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.8	
5	...	...	...	...	1	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.7	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	8	6	2	4	2	2	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.9	7.5	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	4	1	...	...	...	...	...	...	...	8	3	...	...	1.4	...	...	...	...	...	...	6	...	...	4.6	4.8		
13	...	...	...	...	...	1	1	...	...	1.2	3	...	...	...	3	...	...	...	...	...	...	...	...	3.6	2.3		
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	1.6	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	0.4	1.0	
18	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.5	
19	...	...	...	...	...	...	...	...	...	...	3	...	...	2	...	...	...	3	3	...	1	1	...	...	1.5	1.2	
20	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	2	2	0.7	1.6	
21	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	4	2	1.0	1.0	
24	...	...	...	...	...	...	...	...	2	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	0.7	1.7	
25	...	...	4	2.7	1.4	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	...	...	6.6	3.0		
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	2.3	1.9	3.3	4.9	3.5	3.0	2.3	1.5	2.1	3.0	3.8	1.0	0.8	1.7	0.8	1.6	1.0	1.7	4.3	2.8	3.7	5.2	2.2	1.2	59.6	64.8	
Total Dura- tion.	hr. 4.2	hr. 2.2	hr. 3.3	hr. 4.5	hr. 3.6	hr. 3.7	hr. 2.5	hr. 2.6	hr. 2.5	hr. 2.2	hr. 2.2	hr. 2.2	hr. 1.5	hr. 0.9	hr. 1.4	hr. 1.3	hr. 1.8	hr. 2.2	hr. 1.8	hr. 2.9	hr. 3.3	hr. 4.4	hr. 3.8	hr. 3.8	hr. 64.8		
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24		

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

217. Eskdalemuir : H, (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h, (height of receiving surface above ground) = 242.0 metres + 0.4 metres. May, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1	...	...	...	...	1.7	...	...	...	...	4.1
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	4	3	...	...	...	...	...	...	...	2.8
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	1.5	1.4	3.9	1.4	1	2	4	...	7.3
9	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3
11	...	...	...	2	4	3	1	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	0.7
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	...	...	...	...	...	...	...	...	...	1.4
13	...	...	...	2	2	7	1.6	1.5	5	1.2	3	4	6	...	1.0	6	...	...	...	...	...	...	...	...	...	8.8
14	...	...	...	...	...	...	...	...	...	...	6	5	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0
15	...	...	...	...	...	...	...	...	...	...	...	...	...	7	1.1	1	...	...	...	...	...	...	...	...	...	1.0
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	2.4	3.0	3.7	4.1	2.9	2	1	...	...	1.0
18	2.1	...	4	...	3	...	...	...	...	...	...	...	4	...	...	6	...	1	1.1	1.5	2	5	5	1.8	8.6	
19	3	1	...	...	3	...	2	2	1	3	3	1.6	8	1	7	...	...	...	...	...	...	...	...	...	8.7	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	1.2	1.8	...	...	...	...	...	...	...	...	...	...	...	1.1
27	...	...	...	...	(d.)	(.1)	(d.)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	2.5	0.1	0.4	0.4	0.9	1.2	2.1	1.7	0.6	1.5	1.2	2.5	3.0	2.7	4.0	7.7	3.7	5.1	6.6	12.1	4.7	5.4	4.7	4.3	79.1	57.5
Total Duration.	hr. 1.9	hr. 1.0	hr. 0.4	hr. 1.0	hr. 1.6	hr. 1.9	hr. 3.5	hr. 1.5	hr. 1.3	hr. 1.7	hr. 1.1	hr. 2.4	hr. 2.4	hr. 2.5	hr. 3.3	hr. 3.3	hr. 2.9	hr. 3.4	hr. 3.2	hr. 4.8	hr. 3.1	hr. 3.4	hr. 3.4	hr. 3.0	hr. 57.5	

218. Eskdalemuir : H, = 242.0 metres + 0.4 metres.

June, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration.
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	5	7	...	...	...	...	...	4	4	...	...	...	...	...	...	...	...	...	...	...	2.0
19	...	1.4	1.3	9	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2.8	3.5	2.6	3	...	...	...	...	...	...	3.8
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	5	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	5	7	3.2	2.8	3.3	1.3	2.9	2.1	...	7.6
23	2.1	...	2	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2
24	...	9	1	...	...	2.8	1.7	2.7	8	4	1.5	2.4	2	5	1	...	...	...	...	...	...	...	...	...	...	1.3
25	...	...	...	...	...	...	...	...	7	...	...	...	...	...	5	2	...	...	...	6	1.6	...	...	...	...	4.6
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	1.0	1.3	2.5	1.6	...	...	...	...	...	...	...	...	...	...	...	...	3.9
28	...	...	...	...	...	...	...	...	...	...	1.2	...	...	5	...	...	...	...	...	...	...	...	...	...	...	0.8
29	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	0.6
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	...	1.0	9	8.9	...	...	...	2.0
Sum.	2.6	2.9	1.7	0.9	0.8	3.3	2.4	2.8	1.5	1.4	2.9	7.0	3.4	2.1	1.6	4.8	7.6	8.3	7.3	9.7	6.7	11.3	10.7	2.4	106.1	42.6
Total Duration.	hr. 0.9	hr. 1.4	hr. 1.3	hr. 1.0	hr. 1.1	hr. 1.1	hr. 1.4	hr. 0.4	hr. 0.2	hr. 1.2	hr. 1.4	hr. 2.8	hr. 3.3	hr. 2.1	hr. 1.1	hr. 2.1	hr. 2.6	hr. 3.5	hr. 2.5	hr. 2.5	hr. 2.7	hr. 2.6	hr. 2.0	hr. 1.4	hr. 42.6	

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

219. Eskdalemuir : H, (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h, (height of receiving surface above ground) = 242.0 metres + 0.4 metres. July, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
Day.	mm.	mm.	hr.																									
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	...	...	...	1.5	0.2	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.6	1.7	...	...	...	...	...	...	6.6	2.3	
4	...	3.1	.2	...	...	...	...	...	4	...	1.3	14.0	.2	1.2	.2	...	...	...	...	...	(.1)	9	...	...	20.7	2.4		
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	4	...	.1	.9	.2	...	.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.2	2.3	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...	0.6	0.7	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	5	...	...	...	...	...	...	1.8	3.0	
14	.8	.6	.2	1.2	2.0	2.4	1.6	.8	.4	...	...	...	...	2	1.2	.2	...	...	...	...	...	...	...	...	...	11.4	10.2	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	0.6	1.0	
16	...	...	...	...	...	...	...	...	...	...	3	.3	...	.3	...	...	...	...	...	...	...	1	1	2.0	1.6	4.7	4.5	
17	.7	.2	2.4	1.0	.8	1.5	1.2	.1	2.8	.8	3.5	3.6	2.8	.6	1.8	1.8	1.0	1.6	2.8	3.4	3.1	2.3	.8	.2	40.8	21.4		
18	.2	.3	.4	...	1.3	.5	.3	.6	.1	1.2	.6	.1	...	...	.4	.4	...	...	...	1	...	...	...	...	...	7.2	10.5	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2
20	...	...	1	3.0	...	...	...	...	...	...	...	...	...	...	...	4	1.6	.5	.2	...	...	...	...	1	1	7.4	5.1	
21	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.6	
22	...	...	...	...	...	...	...	4	.1	...	...	3	.2	...	...	...	...	2	...	...	2	1	...	...	...	1.5	2.8	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	2	1.1	.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	1.4	
25	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2	
26	...	...	...	...	...	...	...	...	...	...	7	.2	1	.5	...	...	...	...	...	...	...	...	4	...	...	1.9	2.2	
27	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	2	2	1	.9	1	...	1.9	2.0	
28	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1.4	5.4	.9	...	8.1	3.2	
29	...	4.7	1.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.1	3.7	
30	...	...	4.7	.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	...	...	...	...	...	...	7.3	2.3	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	1.9	9.1	9.8	5.9	4.2	5.3	3.3	2.5	5.5	2.7	6.4	19.5	4.1	3.0	3.8	2.5	1.9	10.8	7.4	8.0	6.1	5.0	10.6	3.3	142.6	82.2		
Total Duration.	hr. 3.0	hr. 3.8	hr. 6.0	hr. 3.6	hr. 3.2	hr. 3.7	hr. 3.3	hr. 3.7	hr. 3.5	hr. 2.6	hr. 3.4	hr. 4.6	hr. 2.6	hr. 1.7	hr. 2.1	hr. 2.0	hr. 2.3	hr. 4.3	hr. 3.0	hr. 2.9	hr. 3.5	hr. 3.8	hr. 5.1	hr. 4.5	hr. 82.2			

220. Eskdalemuir : H<sub>r</sub> = 242.0 metres + 0.4 metres.

August, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
1	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.		
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2.1	4.3	...	1	...	2	...	...	...	...	8.2	4.9	
2	.5	...	.4	.4	.6	.2	.2	...	...	...	...	...	...	2	1.5	5.6	3.0	.6	...	...	...	...	...	...	...	15.2	9.3	
3	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	1.2	
4	1.8	.8	.4	.1	.4	.4	...	...	8	1.7	.2	.2	1.0	.9	.2	.3	1.1	.7	.4	1.2	.4	1	.4	1	...	13.6	19.0	
5	...	...	...	1	...	...	...	...	...	...	...	6	...	.9	1.7	.2	...	...	...	...	...	...	...	...	...	3.7	2.7	
6	...	...	...	...	...	...	...	...	...	...	...	...	3	...	.9	1	...	...	...	...	...	...	...	...	...	1.3	1.4	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	7	.5	...	...	...	...	...	...	1.4	1.1	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	0.7	
9	...	2	...	1	.5	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	2.0	
10	...	...	...	1.2	2.3	.9	.3	...	...	...	...	1.0	.2	1.6	.3	.3	.7	...	...	...	...	...	...	...	...	8.8	7.0	
11	...	...	...	...	...	...	1	1	...	...	...	...	8	1.4	1.2	...	6	...	...	...	...	...	...	...	2	4.4	1.9	
12	...	...	...	...	1	...	...	6	2.8	1.0	2.4	.3	2.3	...	2.0	...	...	1.0	1.6	...	...	...	...	...	...	14.1	4.4	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	6	1.0	.5	1.4	1.2	1.0	1.0	1.0	4	...	7.7	8.0	
14	.4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	1.7	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	3	1	.3	...	...	...	...	...	...	...	...	...	...	1	1	...	2	4	1.5	4.6	
18	.6	.1	.1	.2	3.2	1	...	...	5	...	...	...	...	...	...	...	...	...	1.0	1.0	.4	.6	...	...	...	7.8	7.7	
19	16.3	1.2	...	...	...	8	1.2	3.6	5.6	4.0	.6	...	4	.2	.2	...	...	8	...	...	3	...	...	4	...	35.6	9.2	
20	.2	...	...	...	...	...	...	...	...	...	2.6	1.8	1.0	.7	...	...	...	...	4	1.6	.2	...	...	2	...	8.7	5.2	
21	1.6	1.6	2.6	1.6	2.4	3.0	2.3	2.0	4.2	1.0	1.0	.2	7.4	.5	...	...	...	2	...	2.7	1.9	.2	.2	1.5	38.1	16.3		
22	...	...	1	...	...	...	...	...	...	...	...	...	...	4	1.8	...	...	...	...	...	2	3.7	8.4	4	...	15.0	3.0	
23	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	6	.4	...	...	...	...	...	...	2.9	...	...	4.9	2.3	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1.0	0.9
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	.8	.5	...	...	...	...	...	...	...	...	1.6	2.5	
26	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.2	
27	...	...	...	...	...	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	1.0	
28	...	...	...	(Fe)	(.1)	(Fe)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	5	4.6	5.0	8.4	2.2	...	20.8	4.5	
30	.4	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2.3	1.2	3.9	2.4	...	...	10.5	5.1	
31	...	...	...	...	2	1.4	.2	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1	1.8	
Sum.	22.1	4.0	3.7	3.7	9.9	6.9	5.2	6.7	14.3	8.0	5.5	5.8	14.8	6.9	9.9	9.9	10.6	7.3	5.1	11.8	10.7	14.8	24.5	8.5	230.6	129.6		
Total Duration.	hr. 6.1	hr. 4.6	hr. 3.9	hr. 4.4	hr. 6.3	hr. 4.8																						

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

221. Eskdalemuir : H, (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h, (height of receiving surface above ground) = 242.0 metres + 0.4 metres. September, 1930.

Hour G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
Day.	mm.	mm.	hr.																									
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.2	
5	...	...	1	3	4	...	1	...	4	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.2	2.6	
6	...	...	...	...	2	2	...	...	...	...	...	...	...	2	6	1.2	1.3	2.4	1.8	2.0	...	4	...	...	...	10.3	7.7	
7	...	...	...	...	...	...	...	...	...	...	...	2.3	3	...	...	...	1	...	...	...	...	...	...	...	...	2.7	1.4	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2.0	6	2	3.1	2.8	
10	...	...	...	1	1.9	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1	1.9	
11	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	0.4	0.4	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	0.2	0.1	
13	...	...	...	...	...	...	...	...	...	...	...	1	2	6	1.5	7	4	1	...	...	...	...	...	...	2	3.8	5.9	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	1.1	2.8	4.1	4.3	2.9	5	1.0	8	1	1.6	6	5	1	...	...	...	...	...	...	...	...	3	4	1.9	2.6	2.3		
19	...	...	...	...	...	...	...	...	...	...	...	...	1.5	3.9	9	...	...	...	1.0	...	...	...	1	1.8	4	10.4	10.4	
20	...	...	...	4	3	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	1.1	1.3	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	2	2	1	3	...	1	...	...	...	2	...	1	3	2	9	8	3.4	7.7		
23	5	1.1	2.3	3.4	1.1	1	2	3	3	1.9	3.4	7	2	3	9	2	1.6	3.5	3.9	7	1.5	4.3	3.1	2.2	87.7	20.7		
24	...	2	1	4	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	2.7	
25	1.4	1.9	4	...	...	...	...	1	...	...	...	...	...	...	...	...	...	6	2	6	...	...	...	...	...	3.8	3.1	
26	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	0.3	0.3	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	...	...	...	...	...	...	...	...	...	0.4	1.0	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1.0	
Sum.	3.0	6.0	7.0	8.9	6.9	0.9	1.4	1.4	1.1	4.6	4.1	4.7	2.3	5.4	4.3	2.4	3.8	6.8	6.9	3.4	2.1	7.5	6.8	5.7	107.4	79.8		
Total Duration.	hr. 2.7	hr. 3.2	hr. 4.4	hr. 3.9	hr. 4.7	hr. 2.8	hr. 1.8	hr. 2.5	hr. 1.9	hr. 2.3	hr. 2.0	hr. 4.8	hr. 4.5	hr. 4.8	hr. 4.1	hr. 3.1	hr. 3.1	hr. 3.4	hr. 2.5	hr. 3.0	hr. 1.7	hr. 3.2	hr. 5.0	hr. 4.4	hr. 79.8			

222. Eskdalemuir : H, = 242.0 metres + 0.4 metres.

October, 1930.

Hour G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1	
2	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.8	
3	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.3	
4	...	...	1.1	6	3	1	1	...	...	...	...	...	...	...	...	9	3.8	2.8	3.4	4.4	4.6	2.7	4	...	25.2	12.1		
5	...	...	1	1	...	...	...	...	...	...	...	1	3	...	...	1.3	1	...	...	...	...	...	...	...	...	2.4	3.7	
6	...	...	...	...	...	...	...	3	2	...	1.0	2.1	2	1	1	...	...	...	...	...	...	...	...	...	...	4.0	2.1	
7	...	...	...	1	2	...	...	...	...	...	...	...	...	...	5	3	...	...	...	...	...	...	...	...	...	1.1	1.6	
8	1.5	2.8	1.6	1.6	...	7	1.6	2.2	5.9	6.0	9	4	2	6	...	...	...	...	...	...	...	...	...	...	...	26.0	10.4	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	0.3	1.0	
10	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	9	1.1	8	8	6	...	2	1	...	4.8	5.5		
11	4	6	1.8	2	1.2	4.1	1.4	1.2	1.0	4.2	1.4	1.2	8	3.8	2.6	6.6	4.8	1.3	...	2.1	2	2.8	8	...	44.5	16.8		
12	...	...	...	...	...	...	...	...	...	4	3	6	...	2	...	1	...	1	...	...	...	...	...	...	...	1.7	1.2	
13	...	...	...	...	...	...	...	...	1	1.6	3.1	2	2	1.4	2.6	2.4	1.2	...	...	...	...	...	3	2.4	...	15.5	8.4	
14	...	3	1	6	...	...	...	...	...	4	6	2.1	9	2.0	5	...	1.2	1.1	4	...	...	1.3	1.1	...	12.6	8.5		
15	2	6	1.5	6	1	...	1.0	2.1	3.8	1.6	2.1	3.2	1.9	4	6	1	...	8	2.8	8.3	3.4	2.6	1.0	3	39.0	19.6		
16	8	2.8	7	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	1.8	10.5	2.2	...	19.3	6.7	
17	1.6	2.4	...	...	...	...	...	...	...	...	...	...	...	4	2	...	...	...	1	6	5.5	1.8	...	...	...	12.6	4.0	
18	...	...	7	5	...	...	1	1.6	2	...	3	1.8	2.8	1.0	...	...	6	1	...	...	...	...	...	...	...	9.7	4.0	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	4.1	2.5	1.1	...	8.7	3.7	
20	3	...	...	...	...	...	...	...	1	...	5	8	1	...	1	...	...	...	...	...	1	1.7	7	2.9	...	7.3	4.1	
21	2	...	...	...	...	2	4	1.2	1.8	7	2.0	1.0	1.5	6	2	1.2	4.2	3.3	7	2	8	2	...	...	...	20.4	10.6	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	...	6	8	1.6	...	3.5	3.5	
23	3	2	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	3	...	...	...	...	1.3	2.8	
24	...	...	...	...	2.6	1.4	...	...	...	...	...	3	1.0	...	3	...	2	2	1	3	2	...	1	...	...	6.7	3.7	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	0.4	2.5	
28	...	...	1	4	4	5	1	1	1	1	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	2.2	8.3	
29	...	...	...	1	2	...	...	...	5	8	7	3	2	1	3	2	3	9	...	...	2	4.2	5	3	...	9.8	12.7	
30	3.1	1	...	...	3	3.5	...	4	...	...	5	1.4	2.1	...	...	4	7	...	...	...	...	...	...	...	...	12.5	5.4	
31	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1	
Sum.	8.5	9.8	7.8	4.8	5.3	10.8	4.8	8.9	13.8	15.6	11.7	13.4	16.5	9.7	8.9	12.2	14.7	12.8	9.7	16.4	17.0	25.0	21.6	12.5	292.2	165.1		
Total Duration.	hr. 7.9	hr. 5.9	hr. 9.0	hr. 6.5	hr. 6.2	hr. 5.7	hr. 5.1	hr. 5.5	hr. 6.5	hr. 6.8	hr. 5.4	hr. 8.9	hr. 10.9	hr. 7.1	hr. 5.8	hr. 4.8	hr. 6.0	hr. 6.9	hr. 5.7	hr. 5.1	hr. 7.0	hr. 8.5	hr. 9.5	hr. 8.4	hr. 165.1			
Hour G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24			

Amounts in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

223. Eskdalemuir :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 242.0 metres + 0.4 metres. **November, 1930.**

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	hr.																						
1	...	1	3	8	1.3	1.9	6	2.3	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	7.6	7.4	
2	4	1	1	...	1.1	2.2	3.4	8	3.2	2	3	...	...	...	...	...	2	5	8	...	...	...	...	4	13.7	9.9	
3	2	...	1	1	...	...	...	...	...	...	...	...	1.8	...	...	...	...	...	...	...	...	...	...	...	2.7	2.7	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	1.4	0.7	
7	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	7	2.9	2.3	3.4	2.2	3.5	1.4	1.0	0.4	18.0	8.8	
8	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	1.2	
9	...	...	1	2	9	2.2	6	5	8	4	1	...	...	...	...	...	...	3	...	...	...	...	...	...	6.1	6.9	
10	...	1.0	8	...	...	4	...	2	...	1	...	...	...	...	3	3	3	...	...	...	...	...	2	...	3.6	3.2	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(d <sub>o</sub> )	(.1)	(d <sub>o</sub> )	0.1	...	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	1	0.5	1.9	
15	4	8	5	6	1.1	2.0	6	8	1.8	1.2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	10.1	9.5	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1.6	2.2	7	2	1	...	5.1	4.6	
19	1.9	2.9	2.3	1.2	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	8.7	4.8	
20	...	...	...	...	...	...	...	...	2	2	...	...	1.1	4	5	3.2	2.6	3.0	1.2	8	2.3	9	2	6	17.2	11.6	
21	1.8	1.0	8	6	4	...	...	...	1	1	...	...	...	...	...	...	...	1.1	8	6.2	4.3	2.6	1.2	1.0	22.0	12.6	
22	4	8	1	4	1	...	4	...	8	3	...	...	...	1.2	2.2	2.2	2.2	2.1	2	1	...	...	...	...	13.5	9.6	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
24	...	...	...	...	...	...	...	6	1.9	1.8	1.3	4.7	1	8	1.9	2	...	...	...	...	...	...	...	2	15.8	7.0	
25	1.3	...	2	6	1	1	...	...	...	...	...	5	...	...	3	1.8	3	2	5.6	1.3	8	9	1	1	14.2	11.4	
26	4	1	2	3	1	...	2.0	2.5	4.3	4.4	1.8	3.1	2	...	...	...	...	...	...	...	...	...	...	...	19.4	8.6	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	0.1	0.1
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.3
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Sum.	7.0	7.0	5.5	5.6	5.3	8.8	7.6	7.7	13.3	8.7	3.8	8.8	3.5	2.4	5.3	8.4	8.5	11.3	14.4	12.8	11.6	6.3	3.0	4.2	180.8	122.8	
Total Duration.	hr. 6.5	hr. 6.1	hr. 7.9	hr. 7.1	hr. 5.9	hr. 4.9	hr. 4.9	hr. 5.7	hr. 7.3	hr. 5.6	hr. 3.2	hr. 2.3	hr. 3.0	hr. 1.9	hr. 3.4	hr. 4.0	hr. 4.3	hr. 6.2	hr. 7.0	hr. 4.7	hr. 4.8	hr. 5.0	hr. 5.4	hr. 5.7	hr. 122.8		

224. Eskdalemuir :  $H_r = 242.0$  metres + 0.4 metres.

**December, 1930.**

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	1	...	...	...	...	1	...	...	...	3	3	4	1	...	...	...	...	...	...	...	...	...	...	1.3	2.9	
7	...	2	...	...	1	4	7	3	2	...	3	1	5	4	3	1	...	...	...	...	...	...	...	...	3.3	9.7	
8	...	...	...	...	...	...	1	...	...	...	8	8	...	...	...	2	8	2.2	8	4	...	...	...	...	6.1	5.0	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
11	...	...	(.1)	(d <sub>o</sub> )	...	(.1)	(d <sub>o</sub> )	...	...	3	...	3	3	...	...	...	...	1.2	2.4	1.9	1.2	1	...	...	7.9	5.4	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	3.3	...	...	7.0	2.8
13	2.5	8.5	3.6	1.0	3	4	1	...	...	...	...	...	1	5	7	...	...	2	...	...	...	...	...	...	17.9	6.4	
14	...	...	1	3	1	...	...	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	2.1
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	2	1.2	7	9	1.2	1.5	1.7	1.1	7	3	7	1	...	...	2	4	4	2	5	4	4	3	2	13.3	18.9	
17	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	1.8
18	2	...	2	...	5	...	...	...	...	...	...	3	2	...	...	...	...	...	...	...	...	...	...	...	...	1.5	3.6
19	3	5	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	1.9
20	...	...	...	...	...	...	6	1.3	1.6	1.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.6	3.8
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
23	...	...	...	1	...	4	1.3	2.8	1.9	2.0	1.3	8	6	...	2	...	...	...	2	2	...	...	...	...	1	11.9	9.9
24	2	...	2	...	1	...	...	...	(.1)	(d <sub>o</sub> )	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	1.6
25	...	...	...	...	...	...	2	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	0.8
26	...	...	3	1	8	4	3	1.8	2.7	2.7	6	...	...	...	5	2	2	1	2	1	...	...	...	...	...	11.9	8.0
27	...	...	...	...	1.1	1.6	2	2.3	1.9	4.4	3	...	...	2	...	...	...	...	...	(.1)	(pr <sub>o</sub> )	...	...	...	...		





For periods of sixty minutes, between the exact hours of Local Apparent Time.

229. Eskdalemuir : h, (height of recorder above ground) = 1.5 metres.

May, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.				
																					Time G.M.T.	Inten-sity.	p/p <sub>0</sub> sec. Z.	Sky.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	h. m.	mw/cm <sup>2</sup>								
1	—	...	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	—	13.1	86	...	...	...	...	
2	—	...	3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	...	...	12.3	81	...	...	...	...	
3	—	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	...	7.6	50	...	...	...	...	
4	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	10	...	...	...	...	
5	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	11	...	...	...	...	
6	—	...	...	...	...	...	...	...	...	...	...	5	6	1	1	...	...	...	1.3	8	...	...	...	...	
7	—	...	...	...	...	...	...	3	3	3	3	...	...	...	...	...	...	...	1.5	10	...	...	...	...	
8	—	...	...	7	1.0	1.0	1.0	4	5	6	9	...	...	...	...	...	...	...	6.2	40	...	...	...	...	
9	—	...	1	8	1	...	...	1	5	9	7	9	...	1	...	...	...	...	4.2	27	...	...	...	...	
10	—	...	3	1	7	8	3	4	2	2	...	...	1	1	...	...	...	...	3.2	20	...	...	...	...	
11	—	...	...	...	4	6	...	...	...	3	5	9	...	3	1	...	...	...	3.1	20	...	...	...	...	
12	—	1	9	1.0	1.0	1.0	1.0	6	4	8	...	...	...	1	1.0	...	...	...	6.9	43	...	...	...	...	
13	—	...	...	...	...	...	...	...	...	...	...	...	6	1.0	1.0	7	...	...	3.3	21	...	...	...	...	
14	—	...	...	...	4	3	6	6	7	1.0	1.0	1.0	1.0	3	1	...	...	...	7.0	44	...	...	...	...	
15	—	...	...	...	5	...	5	...	...	...	...	...	...	...	...	...	...	...	1.0	6	...	...	...	...	
16	...	...	...	1	3	2	3	2	1	6	...	3	8	5	2	...	...	...	3.6	22	...	...	...	...	
17	...	...	...	...	...	...	5	1	...	1	...	...	...	...	...	...	...	...	0.7	4	...	...	...	...	
18	...	...	...	1	2	8	9	9	8	8	...	4	2	3	...	...	...	...	6.2	38	...	...	...	...	
19	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1	...	...	...	...	
20	...	...	...	...	...	2	1.0	1.0	8	...	...	...	2	9	1	...	...	...	4.2	26	...	...	...	...	
21	...	...	...	...	...	4	4	3	2	3	3	1	2	4	1.0	2	...	...	3.8	23	...	...	...	...	
22	...	...	...	6	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	...	...	12.2	74	...	...	...	...	
23	...	...	...	8	1.0	1.0	1.0	6	3	1	...	...	6	1.0	1.0	2	...	...	5.7	34	...	...	...	...	
24	...	...	...	...	2	1.0	1.0	1	1	2	1.0	1.0	1.0	6	6	5	...	...	6.3	38	...	...	...	...	
25	...	...	...	...	3	7	2	...	...	...	...	...	...	...	...	...	...	...	1.2	7	...	...	...	...	
26	...	...	4	1.0	1.0	1.0	1.0	1.0	8	...	1	5	2	6	4	2	...	...	8.2	49	...	...	...	...	
27	...	...	...	...	...	...	2	9	1.0	1.0	1.0	1.0	7	4	2	...	...	...	7.4	44	...	...	...	...	
28	...	3	4	6	4	4	4	3	8	1.0	1.0	1.0	1.0	1.0	1.0	6	...	...	11.2	67	...	...	...	...	
29	...	...	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	6	1.0	2	...	...	12.2	73	...	...	...	...	
30	...	...	2	9	1	...	...	...	5	6	...	...	...	...	...	...	...	...	2.3	14	...	...	...	...	
31	...	...	...	...	...	...	7	8	1.0	4	...	...	...	...	...	...	...	...	2.9	17	...	...	...	...	
Sum.	...	0.4	4.6	10.7	12.5	13.6	15.2	13.9	14.3	14.9	12.2	13.1	11.4	10.3	9.4	5.0	0.7	...	162.2	...	—	—	—	—	
Mean.	...	.01	.15	.35	.40	.44	.49	.45	.46	.48	.39	.42	.37	.33	.30	.16	.02	...	5.23	32	—	—	—	—	

230. Eskdalemuir : h, = 1.5 metres.

June, 1930.

hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	h. m.	mw/cm <sup>2</sup>		
1	...	...	...	...	...	...	...	8	9	...	7	1.0	8	1.0	1.0	7	...	...	...	6.9	41	...	...	...	...
2	...	...	...	...	...	...	...	3	1	1	3	...	1	...	7	9	4	...	...	2.8	16	...	...	...	...
3	...	6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	1.0	6	...	...	...	...	12.1	71	...	...	...	...	...
4	...	...	...	...	...	...	...	1	2	9	8	3	1	...	...	...	...	...	2.4	14	...	...	...	...	...
5	...	...	4	7	1.0	1.0	1.0	1.0	8	1.0	8	8	5	...	...	...	...	...	9.0	53	...	...	...	...	...
6	...	...	...	3	...	6	1	4	9	9	6	9	1.0	1.0	5	5	2	...	7.9	46	...	...	...	...	...
7	...	9	1.0	1.0	1.0	1.0	9	1.0	1.0	1.0	1.0	9	1.0	9	6	1.0	5	...	14.7	86	...	...	...	...	...
8	...	7	1.0	1.0	1.0	1.0	5	4	5	1	8	6	4	1.0	9	5	...	...	10.4	61	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	7	8	6	1.0	8	7	3	2	7	...	...	...	...	...	5.8	34	...	...	...	...	...
11	...	2	...	...	2	...	7	1.0	1.0	1.0	1.0	9	9	1.0	4	4	...	...	8.7	50	...	...	...	...	...
12	...	1	6	1.0	9	5	9	1.0	5	6	1.0	8	...	...	...	...	...	...	7.9	46	...	...	...	...	...
13	...	...	4	1.0	1.0	1.0	9	1.0	1.0	7	1.0	8	6	3	4	...	...	...	10.1	58	...	...	...	...	...
14	...	...	...	...	3	1.0	4	9	6	5	6	7	9	1.0	1.0	9	...	...	8.8	51	...	...	...	...	...
15	...	...	...	...	1	3	1.0	1.0	1.0	1.0	1.0	9	8	1.0	1	...	...	...	8.2	47	...	...	...	...	...
16	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	...	15.0	87	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	2*	1.0*	1.0	1.0	1.0	7	5	...	...	...	...	...	...	5.4	31	12 01	62	1.16	Clear	...
19	...	...	...	...	1*	2*	1*	...	1	9	1.0	1.0	1.0	1.0	1.0	4	2	...	7.0	40	...	...	...	...	...
20	...	...	...	...	2	3	9	3	7	4	...	...	...	...	...	...	...	...	2.8	16	...	...	...	...	...
21	...	...	...	...	4	7	9	6	...	5	8	...	...	...	...	...	...	...	3.9	22	...	...	...	...	...
22	...	...	1	2	9	7	1.0	6	5	8	1.0	1.0	1.0	1.0	1.0	1.0	...	...	10.8	62	...	...	...	...	...
23	...	2	1	6	1.0	9	8	6	...	1.0	1.0	1.0	1.0	9	...	5	...	...	9.6	55	...	...	...	...	...
24	...	...	...	...	1	5	2	6	...	2	1	7	1.0	6	8	1	...	...	4.9	28	...	...	...	...	...
25	...	4	4	...	7	8	1.0	1.0	6	3	5	3	2	3	...	...	...	...	6.5	37	...	...	...	...	...
26	...	...	...	3	8	7	5	1	9	9	4	2	9	1.0	6	1.0	7	...	9.0	52	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	1	4	9	8	6	...	5	...	3.3	19	...	...	...	...	...
28	...	...	...	2	1	4	2	5	3	2	5	3	5	6	3	...	...	...	4.1	24	...	...	...	...	...
29	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	0.2	1	...	...	...	...	...
30	...	1	...	...	2	1.0	1.0	7	8	8	1	3	5	2	...	1	...	...	5.8	34	...	...	...	...	...
Sum.	...	3.7	6.0	8.4	12.7	15.3	15.9	17.8	17.2	17.4	17.6	16.3	16.8	15.0	11.8	8.6	3.5	...	204.0	...	—	—	—	—	—
Mean.	...	.12	.20	.28	.42	.51	.53	.59	.57	.58	.59	.54	.56	.50	.39	.29	.12	...	6.80	39	—	—	—	—	—
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.				
																					Time G.M.T.	Inten-sity.	p/p <sub>0</sub> sec. Z.	Sky.	

\* Sunshine sphere found on ground—values estimated from eye observations.

For periods of sixty minutes, between the exact hours of Local Apparent Time.

231. Eskdalemuir : h, (height of recorder above ground) = 1.5 metres.

July, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	h. m.	Intensity. mw/cm <sup>2</sup>						
1	...	...	1	7	7	5	...	1	3	3	1	4	8	6	1	5	...	...	5.2	30	...	...	...	...
2	...	...	...	2	1.0	1.0	7	8	4	1.0	9	9	1.0	1.0	9	1.0	2	...	11.0	64	...	...	...	...
3	...	...	...	...	3*	3*	2*	6	7	4	9	4	4	4	2	...	...	...	4.8	28	...	...	...	...
4	...	...	...	...	...	...	...	1	2	1	2	1	6	9	1	3	2	...	3.2	19	...	...	...	...
5	...	...	...	6	1.0	4	4	...	6	8	1.0	7	8	9	1	1	...	...	7.4	43	...	...	...	...
6	...	...	...	...	...	...	...	3	9	1.0	1.0	1.0	3	1	3	1	...	...	5.0	29	...	...	...	...
7	...	...	1	9	...	5	5	6	8	6	...	1	1	...	3	6	...	...	5.1	30	...	...	...	...
8	...	...	...	...	4	8	2	...	...	1.0	...	...	...	...	...	...	...	...	1.4	8	...	...	...	...
9	...	...	4	1.0	1.0	1.0	9	1.0	1.0	1.0	1.0	1.0	1.0	9	9	...	...	...	12.1	71	...	...	...	...
10	...	...	4	5	...	...	...	...	...	...	...	...	1	3	...	5	...	...	1.8	11	...	...	...	...
11	...	7	8	1.0	8	5	8	4	5	6	7	9	1.0	1.0	6	4	2	...	10.9	64	...	...	...	...
12	...	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3	...	15.0	89	...	...	...	...
13	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	0.3	2	...	...	...	...
14	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...	...
15	...	...	5	...	...	1	2	2	...	...	...	1	1	3	...	...	...	...	1.5	9	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	0.2	1	...	...	...	...
19	...	...	...	...	...	...	...	...	1	3	1.0	6	1	...	...	...	...	...	2.1	13	...	...	...	...
20	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1	...	...	...	...
21	...	...	...	...	...	1	...	...	...	...	4	2	...	...	...	...	...	...	0.7	4	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	2	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	3	...	...	...	...
24	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	4	1.0	1.0	5	1	...	...	3.0	18	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	7	1.0	7	3	...	...	...	2.7	17	...	...	...	...
27	...	...	...	1	...	2	2	7	2	3	...	2	8	5	5	...	...	...	3.7	23	...	...	...	...
28	...	...	...	1	1	1	7	2	1.0	1.0	8	3	2	1	2	2	...	...	5.0	31	...	...	...	...
29	...	...	...	...	...	...	...	1	5	2	3	1.0	9	...	...	...	...	...	3.0	19	...	...	...	...
30	...	...	...	...	2	3	1.0	1.0	6	1	2	3	4	...	...	...	...	...	4.1	26	...	...	...	...
31	—	2	8	2	...	1	5	7	1	2	2	...	...	...	...	...	...	...	3.0	19	...	...	...	...
Sum.	...	1.6	4.3	6.4	6.9	7.3	7.6	7.9	8.7	9.6	9.6	10.1	11.6	9.2	6.4	5.2	0.7	...	113.1	...	—	—	—	—
Mean.	...	.05	.14	.21	.22	.24	.25	.25	.28	.31	.31	.33	.37	.30	.21	.17	.02	...	3.65	22	—	—	—	—

232. Eskdalemuir : h, = 1.5 metres.

August, 1930

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	h. m.	Intensity. mw/cm <sup>2</sup>						
1	—	...	...	1	...	...	1	4	...	...	...	...	...	...	...	...	...	...	0.6	4	...	...	...	...
2	—	...	...	...	...	3	...	6	...	...	1	...	...	...	...	...	...	...	1.0	6	...	...	...	...
3	—	...	...	...	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3	...	...	10.8	68	...	...	...	...
4	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	—	...	...	...	...	...	...	6	2	2	...	1	...	5	1	...	...	...	1.7	11	...	...	...	...
6	—	...	...	...	...	7	1.0	6	...	5	2	2	8	...	...	...	...	...	4.0	26	...	...	...	...
7	—	...	...	...	5	5	4	9	1.0	1.0	6	...	...	...	1	1	...	...	5.1	33	...	...	...	...
8	—	...	...	...	2	...	2	2	4	7	6	...	...	...	...	...	...	...	2.3	15	...	...	...	...
9	—	...	...	...	...	2	5	3	4	5	7	...	...	...	...	...	...	...	2.6	17	...	...	...	...
10	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	—	...	...	...	1	8	1.0	1.0	5	3	...	5	5	...	...	...	...	...	4.7	31	...	...	...	...
12	—	...	...	...	...	...	...	...	1	...	...	6	7	8	...	...	...	...	2.2	14	...	...	...	...
13	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	—	...	...	1	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	1	...	...	...	...	9.7	64	...	...	...	...
15	—	...	...	...	...	5	2	...	...	7	1.0	1.0	1.0	1.0	9	1	...	...	6.4	43	...	...	...	...
16	—	...	1.0	1.0	1.0	8	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3	...	...	...	18.0	87	...	...	...	...
17	—	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	0.2	1	...	...	...	...
18	—	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	0.3	2	...	...	...	...
19	—	...	...	...	...	...	...	...	...	...	2	4	7	2	...	...	...	...	1.5	10	...	...	...	...
20	—	...	1	4	...	5	7	3	...	...	...	2	9	...	...	...	...	...	3.1	21	...	...	...	...
21	—	...	...	...	...	...	...	...	...	...	2	1	2	3	...	...	...	...	0.8	5	...	...	...	...
22	—	...	...	...	...	...	...	8	5	9	2	8	1	1	...	...	...	...	3.4	23	...	...	...	...
23	—	...	...	...	7	5	...	...	...	...	4	1	...	...	...	...	...	...	1.7	12	...	...	...	...
24	—	...	...	3	3	8	0	6	9	8	8	4	5	3	2	...	...	...	6.9	48	...	...	...	...
25	—	...	...	...	2	6	7	5	4	...	...	...	...	...	...	...	...	...	2.4	17	...	...	...	...
26	—	...	...	...	...	...	...	...	...	...	...	...	5	1	...	...	...	...	0.6	4	...	...	...	...
27	—	...	...	...	4	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	...	...	...	...	10.0	71	...	...	...	...
28	—	...	...	...	1.0	1.0	1.0	1.0	1.0	0	1.0	1.0	2	...	...	...	...	...	7.2	51	11 25	62	1.45	Clear
29	—	...	...	...	...	1	...	2	5	...	...	...	...	...	...	...	...	...	0.8	6	...	...	...	...
30	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	—	...	...	...	...	...	...	...	1	3	...	...	...	...	...	...	...	...	0.6	4	...	...	...	...
Su	—	...	1.1	1.9	4.2	9.8	10.5	11.5	10.6	10.6	10.0	10.0	9.7	6.9	4.9	1.6	0.3	...	103.6	...	—	—	—	—
Mean.	—	—	.04	0.6	.14	.32	.34	.37	.34	.34	.32	.32	.31	.22	.16	.05	0.1	...	3.34	22	—	—	—	—

\* Sunshine sphere found on ground—values estimated from eye observations.





Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°). Speed in metres per second.

## 237. Eskdalemuir :

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	190	3.5	240	6.7	230	5.5	240	7.5	230	6.9	200	5.0	210	7.6	200	6.2	190	4.0	210	4.8	220	4.6	240	6.2
2	260	15.5	260	14.5	270	18.3	280	16.5	300	25.7	300	23.7	300	21.4	300	19.0	300	20.8	280	17.3	280	13.3	230	5.7
3	200	9.3	200	11.5	210	12.1	210	10.5	220	13.7	250	11.5	230	10.5	220	10.0	220	9.6	230	8.0	250	9.0	250	7.4
4	—	1.0	210	3.5	200	5.0	200	4.5	240	5.7	240	6.4	240	8.4	240	7.5	210	5.4	210	5.0	200	4.0	180	1.6
5	190	7.1	190	7.5	190	6.3	190	7.5	190	7.5	190	8.3	190	8.3	180	8.0	180	9.0	180	11.8	190	14.9	200	14.1
6	280	10.7	270	11.2	270	11.0	270	10.2	260	7.2	260	6.0	270	6.0	270	7.0	270	6.3	240	5.7	240	6.0	220	6.5
7	240	17.3	240	17.2	230	12.8	230	13.0	240	14.5	220	13.7	220	15.0	210	16.1	210	14.5	210	15.5	220	17.1	220	18.2
8	200	9.7	200	10.9	220	9.5	210	8.6	260	5.0	300	11.0	300	6.8	260	4.3	220	6.3	210	5.4	210	6.8	230	9.9
9	220	10.5	220	9.0	230	10.0	230	9.3	220	8.2	190	8.8	210	9.0	220	7.1	240	8.8	250	8.8	230	8.6	230	9.5
10	260	6.0	250	7.7	250	7.0	250	7.0	240	8.0	240	7.6	240	7.0	210	4.8	210	4.6	240	6.0	220	5.4	210	4.5
11	250	12.3	240	10.5	240	9.8	240	10.9	230	10.0	240	11.6	240	9.0	250	9.6	240	8.0	220	6.0	240	8.5	230	8.0
12	230	10.8	230	12.2	220	13.9	230	18.5	230	17.0	230	16.3	230	15.2	220	12.5	230	11.0	220	10.5	220	12.2	220	11.6
13	250	11.1	250	10.0	260	7.9	240	7.6	250	9.6	230	7.3	230	7.5	230	8.5	230	8.4	220	5.7	200	4.8	—	1.4
14	210	4.4	220	2.7	240	3.5	—	0.4	—	0.1	—	1.5	20	2.5	20	2.5	30	2.3	20	3.5	20	2.0	—	1.5
15	—	0.7	—	0.3	—	0.0	—	0.2	—	0.3	—	0.9	—	0.6	—	0.2	—	0.6	240	2.1	190	3.4	180	3.1
16	240	4.0	—	1.5	—	0.7	—	0.2	—	0.4	—	0.2	—	0.3	—	0.3	—	0.5	—	0.0	—	0.2	—	0.6
17	170	5.4	170	9.0	170	8.8	180	10.0	190	7.3	190	9.3	190	9.8	190	9.1	190	8.3	200	6.2	210	8.0	200	9.0
18	210	11.5	220	10.9	210	10.2	220	9.9	210	7.0	210	6.3	210	6.4	210	6.6	210	7.3	210	6.6	200	7.8	210	8.0
19	200	13.9	210	15.2	210	14.3	210	15.7	210	16.0	220	17.1	210	17.0	210	15.7	210	15.7	200	16.1	190	15.3	200	15.8
20	230	6.5	230	6.6	220	7.4	230	8.7	220	5.5	200	2.8	200	5.0	220	7.3	220	7.8	230	10.0	240	8.8	230	8.4
21	—	0.0	—	0.2	—	0.2	—	0.0	200	3.0	—	1.3	—	0.1	—	1.3	210	2.5	220	3.7	200	2.4	180	5.0
22	170	7.2	180	6.8	190	7.1	190	6.3	180	7.0	180	7.3	180	6.3	170	4.5	170	5.9	170	4.0	170	4.6	170	6.6
23	210	8.7	210	7.7	200	6.5	210	7.9	200	5.9	200	6.5	200	7.5	190	8.9	200	9.0	200	10.0	200	10.2	210	10.6
24	180	3.2	190	2.3	180	3.4	160	5.8	150	5.6	160	5.8	150	8.6	160	7.0	160	7.9	150	7.7	170	9.5	170	8.6
25	190	2.8	190	4.0	200	3.5	220	1.7	—	1.1	230	4.0	210	4.0	210	3.2	200	4.5	200	3.5	190	3.5	190	6.5
26	—	0.0	—	0.1	—	0.0	—	0.0	—	0.3	—	1.0	—	0.2	—	1.3	—	1.0	—	1.2	—	0.6	—	1.2
27	50	3.0	30	6.3	30	5.9	40	4.8	50	4.3	20	5.2	20	6.4	20	6.7	20	7.5	10	7.0	10	5.5	10	5.9
28	—	0.2	—	0.4	—	0.5	—	0.2	—	0.2	—	0.3	—	0.5	—	0.7	—	0.9	—	0.5	—	0.7	—	0.4
29	—	1.0	—	0.8	180	2.4	—	1.5	180	2.6	180	3.0	200	1.6	240	3.5	230	3.6	230	3.4	—	1.2	190	1.6
30	190	4.8	—	0.5	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.8	—	0.8	—	0.2	190	2.0	180	1.6
31	—	1.3	—	1.3	360	2.0	360	2.4	360	2.7	—	1.4	—	0.9	100	3.4	110	5.0	90	5.6	90	7.4	90	6.0
Mean ...	—	6.6	—	6.7	—	6.6	—	6.7	—	6.7	—	6.8	—	6.7	—	6.6	—	6.7	—	6.5	—	6.7	—	6.6

238. Eskdalemuir : H<sub>a</sub> = 235 metres + 15 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	110	14.2	110	13.7	110	12.8	110	11.1	120	10.5	120	9.3	110	8.5	110	8.1	100	8.5	90	8.7	90	9.5	80	7.8
2	40	8.6	40	7.8	40	7.0	30	7.2	30	7.5	40	7.4	30	7.3	40	7.0	40	5.4	40	6.1	40	6.5	50	6.4
3	60	4.0	60	4.0	60	3.5	60	3.8	70	3.0	70	3.2	70	4.9	70	4.2	70	3.5	60	4.1	60	3.1	60	3.5
4	60	3.3	50	3.9	40	4.3	40	3.9	30	4.3	30	4.4	40	4.6	40	3.5	30	3.6	40	4.0	50	5.0	60	3.5
5	20	6.8	30	6.6	30	6.6	30	6.8	20	8.3	20	8.7	20	6.3	20	6.4	30	6.4	30	6.6	30	6.8	30	6.9
6	20	6.5	20	6.6	20	5.8	10	7.0	10	7.5	20	6.5	20	7.9	20	8.0	20	8.3	20	9.8	20	11.3	30	11.5
7	30	6.4	30	7.0	30	7.3	30	8.2	30	8.3	30	8.0	30	7.4	30	5.4	30	5.7	30	5.8	40	5.8	50	6.3
8	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	1.0	—	1.5	—	0.7	—	1.0	30	2.5	50	3.3
9	50	2.0	50	1.8	50	2.1	40	1.6	40	1.7	20	1.7	30	1.6	40	1.7	60	2.0	60	2.8	60	2.5	60	2.2
10	—	0.9	—	0.5	—	0.5	—	0.4	—	0.2	—	0.2	—	0.0	—	0.0	—	0.7	—	0.6	—	0.3	—	1.3
11	—	0.5	—	0.3	—	0.3	—	0.1	—	0.2	—	0.0	—	0.2	—	0.6	—	0.5	—	0.0	—	0.0	—	1.3
12	—	0.9	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	1.1
13	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	—	0.2
14	210	2.0	190	2.4	210	3.4	230	4.2	220	4.8	230	5.6	210	5.3	200	4.2	220	4.8	220	6.3	220	6.3	220	6.8
15	290	3.9	280	4.3	280	5.5	280	7.0	290	8.5	290	10.4	300	12.3	320	11.5	330	11.8	360	7.8	360	7.0	360	7.1
16	320	6.4	320	6.4	330	6.2	340	5.2	350	5.1	350	5.5	340	2.9	—	1.4	360	3.3	350	5.1	350	6.5	340	5.8
17	—	0.2	—	0.5	—	0.4	—	0.5	—	0.9	—	0.3	—	0.6	—	0.5	—	0.3	—	0.1	—	0.2	—	0.7
18	—	1.3	350	2.0	360	1.6	—	1.5	350	1.7	340	2.4	350	3.1	360	2.5	—	1.4	—	0.9	50	2.3	80	3.4
19	—	0.7	—	0.2	—	0.2	—	0.3	—	0.2	—	0.1	—	0.5	—	1.1	—	1.4	140	4.0	140	4.5	120	5.1
20	350	2.0	—	1.1	—	1.3	—	1.3	—	1.0	—	0.8	—	1.1	—	1.2	—	0.6	—	0.2	—	1.1	160	2.6
21	—	0.2	—	0.0	—	0.2	—	0.3	—	0.5	—	0.4	—	0.6	10	3.0	—	1.5	20	2.2	20	2.9	70	3.0
22	—	1.1	—	1.0	50	1.7	50	2.0	50	2.1	60	2.3	50	1.7	30	2.2	50	2.7	60	3.1	60	3.5	70	3.0
23	50	3.8	60	4.2	60	4.2	50	2.9	50	3.4	50	3.5	50	2.8	30	3.0	40	2.7	50	4.2	60	4.0	70	3.7
24	110	7.1	100	4.2	80	4.0	90	5.2	80	3.2	60	3.9	80	3.5	70	3.2	100	4.0	100	3.9	110	4.0	100	5.0
25	80	4.2	120	4.2	100	3.2	80	4.9	70	4.5	70	3.8	60	2.9	70	4.5	90	5.2	110	6.3	130	7.0	130	6.5
26	360	2.4	360	2.0	360	2.6	360	4.1	350	4.1	350	3.9	360	3.7	350	3.6	20	2.5	10	2.6	360	2.9		



Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 260°). Speed in metres per second.

239. Eskdalemuir :

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.6	—	0.5	—	0.2	—	0.7	—	0.7	—	1.4	—	1.5	—	1.1	—	1.2	360	2.0	360	1.6	60	4.8
2	40	2.7	20	2.7	—	1.2	50	5.0	40	5.7	40	4.9	40	4.1	50	4.4	30	5.2	50	5.4	60	6.0	60	4.6
3	10	5.4	10	5.5	10	5.9	10	5.2	10	6.0	20	7.2	360	7.1	30	5.0	30	4.0	20	3.7	20	4.0	20	3.7
4	—	0.6	—	0.5	—	0.4	280	2.6	210	5.8	200	3.8	230	5.0	240	5.5	240	5.7	250	4.8	260	4.2	250	4.2
5	—	0.2	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	1.1	50	2.4	60	4.1	110	4.5	140	6.2
6	190	2.6	200	2.3	—	1.0	220	1.7	320	1.7	—	1.3	—	1.5	10	2.5	20	2.2	50	3.6	60	4.4	60	3.4
7	—	1.5	—	0.5	—	0.3	—	0.3	—	0.2	—	0.5	—	0.5	—	0.8	—	1.0	300	4.5	290	5.1	270	4.9
8	250	8.8	240	7.0	210	4.5	210	5.7	210	8.0	220	7.8	210	6.7	210	6.3	220	7.0	230	8.2	220	9.0	210	7.0
9	200	11.3	200	10.4	200	12.5	200	13.5	200	14.1	210	14.0	210	12.6	200	11.8	210	10.2	210	8.6	240	8.2	260	7.1
10	360	3.0	10	4.0	360	3.0	—	1.0	—	1.5	—	0.4	—	0.1	—	0.9	310	5.6	320	6.6	310	7.6	300	8.0
11	200	1.7	210	2.0	—	0.6	—	0.0	—	0.0	—	0.2	—	0.0	—	0.0	—	0.2	20	2.0	60	3.2	100	2.0
12	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	150	2.5	170	3.5	190	3.8	—	1.5	—	1.3	270	2.6	280	3.8
13	—	1.2	310	5.1	330	3.2	350	2.4	360	2.7	340	2.0	—	0.8	140	1.7	150	3.0	170	4.5	170	4.5	180	4.6
14	40	5.0	40	3.5	30	4.2	30	4.8	30	4.7	30	1.6	30	4.1	40	4.6	50	6.0	50	8.0	70	9.4	60	7.2
15	30	6.0	30	7.3	30	7.6	30	8.8	30	8.8	40	7.6	40	8.6	40	8.5	40	8.0	50	8.7	60	9.4	70	9.9
16	50	6.9	40	6.1	40	6.6	40	7.2	40	7.6	40	7.9	40	7.9	40	7.2	40	7.2	30	8.2	40	8.8	40	7.2
17	—	0.9	—	1.3	—	1.4	—	1.5	—	1.0	—	0.2	—	0.3	—	0.1	—	0.0	70	2.9	70	4.4	70	4.2
18	30	5.5	30	5.7	30	5.1	40	6.5	30	6.3	30	6.5	20	8.8	30	8.0	10	7.3	20	8.9	20	8.0	10	7.4
19	10	5.1	20	5.2	10	6.7	10	6.1	10	6.1	—	1.1	—	1.1	—	0.8	40	2.1	10	4.6	10	4.9	360	5.8
20	—	0.5	—	1.2	—	0.5	—	0.1	—	0.0	190	6.5	250	14.3	240	18.5	230	14.5	220	13.2	230	15.0	250	13.9
21	270	4.8	—	1.4	170	1.7	—	0.6	—	0.2	—	0.1	—	0.5	250	5.1	220	11.5	210	10.5	230	12.5	230	14.2
22	230	6.6	260	9.4	280	8.3	260	7.3	260	8.3	280	9.2	290	10.1	300	15.0	310	13.5	300	13.3	300	12.4	300	10.5
23	—	0.3	—	0.1	—	1.2	10	1.6	10	2.6	20	3.0	20	2.7	10	2.6	360	2.3	60	4.3	70	5.0	50	4.9
24	350	2.1	350	3.5	360	3.8	360	2.5	10	2.3	—	1.5	20	2.2	10	1.7	60	2.3	60	2.5	70	2.3	60	2.6
25	210	7.2	220	9.8	220	9.6	200	7.9	210	7.3	210	10.7	200	9.0	230	9.9	240	11.9	210	11.0	210	11.4	250	14.5
26	10	3.9	290	5.9	290	6.9	290	7.2	280	5.8	290	10.1	290	6.0	310	5.7	360	1.8	280	7.5	260	5.8	230	4.8
27	240	3.8	220	2.5	240	2.7	190	2.0	—	1.5	170	1.8	200	4.2	210	5.1	210	4.2	200	5.0	200	5.6	180	6.0
28	180	7.3	180	7.4	180	7.8	180	7.7	180	9.8	170	7.7	180	7.9	180	11.8	180	11.7	180	13.3	190	13.0	190	13.4
29	190	13.6	190	12.0	190	12.1	230	11.0	210	9.2	220	10.9	210	11.6	200	10.6	200	11.0	210	13.0	220	13.0	240	10.1
30	230	10.8	230	10.7	220	9.8	210	8.1	210	8.1	220	8.5	210	7.7	200	6.0	200	7.7	210	10.4	200	10.0	190	12.0
31	180	4.6	170	4.6	170	4.5	160	4.0	150	3.4	150	4.9	160	7.0	170	5.9	150	4.6	150	5.4	150	4.8	150	5.9
Mean...	—	4.3	—	4.5	—	4.3	—	4.3	—	4.3	—	4.7	—	5.1	—	5.5	—	5.7	—	6.7	—	7.1	—	7.1

240. Eskdalemuir : H<sub>a</sub> = 235 metres + 15 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	190	8.1	180	6.9	160	4.3	160	3.4	150	5.2	150	5.0	150	6.5	160	7.5	140	9.0	140	8.5	150	9.9	150	8.4
2	170	4.5	160	3.3	150	2.1	160	2.1	190	2.0	170	1.7	160	5.3	180	6.1	200	6.3	200	7.0	190	8.4	190	10.1
3	150	3.7	160	3.9	180	1.7	—	1.4	—	1.2	—	0.5	—	1.1	30	3.4	40	4.8	100	7.4	100	8.6	100	9.2
4	70	12.7	70	13.9	70	13.0	70	13.3	60	12.5	60	10.7	70	12.3	60	11.3	60	11.7	70	11.8	70	11.1	60	11.4
5	30	6.9	20	5.9	20	6.7	20	6.8	20	6.5	20	5.4	20	5.4	10	5.7	20	6.0	30	6.5	20	5.5	20	5.1
6	360	3.2	360	3.8	360	4.2	360	3.5	20	4.0	360	4.7	360	4.0	350	6.2	350	8.4	350	8.7	350	9.0	340	8.7
7	10	6.0	10	5.1	10	4.9	10	4.8	10	4.1	10	4.4	10	4.2	20	4.0	30	5.0	40	4.0	50	4.0	40	3.0
8	190	1.6	190	2.4	190	2.6	—	1.5	180	2.2	190	2.2	—	1.2	170	4.3	170	5.7	200	8.1	200	8.6	210	9.4
9	190	4.2	200	4.4	200	4.6	200	5.5	200	3.8	190	3.3	190	3.8	200	4.0	190	3.9	190	3.6	170	2.4	170	3.5
10	—	1.2	—	0.8	—	0.1	—	0.2	360	1.7	10	2.3	360	2.5	360	2.8	20	2.9	20	2.2	20	2.2	30	2.0
11	—	0.1	—	0.4	—	0.0	—	0.1	—	0.0	—	0.1	—	0.0	110	1.7	190	5.4	220	6.0	210	7.1	200	8.3
12	220	5.5	250	5.0	260	3.6	270	3.5	270	4.0	260	3.7	260	4.1	250	5.7	240	7.1	250	7.1	260	7.0	260	7.5
13	230	6.3	220	5.4	210	5.5	220	5.6	200	4.3	200	4.8	210	4.5	230	5.3	230	6.5	250	6.7	260	6.4	260	6.8
14	300	4.3	330	2.0	350	3.2	330	3.2	340	1.9	330	2.9	350	6.0	350	6.3	360	5.7	360	5.3	350	4.5	360	4.0
15	—	0.8	—	1.0	—	1.1	350	2.0	40	2.1	330	3.5	340	5.0	350	5.0	350	6.3	360	6.8	350	7.9	350	7.2
16	350	3.2	350	3.3	330	5.0	340	3.9	330	4.5	340	2.5	340	1.6	250	2.2	*	—	(320)	(4.9)	240	4.7	320	4.6
17	—	1.5	360	3.9	340	4.0	340	5.5	350	8.5	350	9.1	340	9.0	350	10.5	350	11.4	360	12.7	350	11.6	360	11.0
18	20	9.5	20	8.5	20	6.8	20	6.5	30	7.7	20	10.7	20	8.9	20	10.8	20	8.0	10	9.2	10	8.4	360	8.2
19	360	12.4	360	12.0	360	12.4	10	13.0	10	13.4	20	14.8	20	14.9	20	15.6	30	17.2	30	16.1	30	16.0	30	18.0
20	30	7.8	40	7.4	40	8.8	30	8.7	30	6.6	30	7.2	40	6.1	40	7.5	30	8.4	40	8.6	30	8.9	40	9.1
21	360	5.5	20	7.7	20	4.5	20	4.0	10	5.6	20	4.6	30	6.0	30	8.0	30	6.8	30	7.5	40	6.0	40	5.1
22	—	1.5	210	3.8	240	4.0	190	3.1	240	6.1	240	7.0	250	6.5	240	7.3	230	8.6	250	9.8	240	8.5	230	9.1
23	200	3.6	220	3.1	—	1.5	—	0.7	—	0.0	—	0.1	—	0.2	—	0.3	160	3.3	170	5.1	160	5.0	180	4.6
24	180	3.6	170	3.7	170	2.8	180	3.9	170	4.5	170	4.5	160	3.4	170	5.1	170	5.8	170	5.5	210	5.1	220	3.2
25	60	6.9	110	4.5	50	3.5	60	5.8	50	3.2	60	4.5	70	6.1	70	5.7	60	6.1	60	4.5	90	3.5	80	3.1
26	—	1.4	70	3.0	20	4.0	20	4.1	10	5.5														

Averages for periods of sixty minutes, centred at the exact hours, Greenwich Mean Time.

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 235 metres + 15 metres.

March, 1930.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
60	4.9	60	4.8	70	4.5	60	3.9	—	1.3	360	2.4	10	1.6	30	2.0	20	4.3	20	3.3	20	3.5	20	3.0	2.3	1
80	3.9	60	4.9	60	5.0	80	6.5	50	4.2	60	5.5	60	4.2	60	5.5	40	5.6	40	4.7	30	4.8	20	5.5	4.6	2
20	3.5	30	3.5	20	3.2	10	3.4	360	3.7	360	3.5	360	3.8	360	3.6	350	2.1	360	2.0	350	2.0	—	1.3	4.2	3
250	4.3	270	4.5	280	3.5	260	4.0	240	4.0	240	4.1	310	2.2	150	2.0	—	1.5	—	1.5	180	1.7	—	0.9	3.2	4
150	6.9	150	6.0	160	5.2	160	5.0	160	4.8	170	4.8	170	3.3	170	4.1	170	3.2	—	1.3	190	2.1	210	1.8	2.8	5
—	1.2	150	2.6	170	4.8	160	5.2	170	3.7	170	3.0	160	4.2	160	2.7	—	0.9	—	1.1	—	0.5	—	0.5	2.5	6
250	5.9	260	5.5	260	6.0	270	7.0	270	6.6	270	7.3	260	6.3	250	5.4	250	6.8	260	6.3	250	8.0	250	8.2	4.0	7
210	8.1	210	8.3	200	6.7	200	8.0	210	9.1	210	10.2	210	9.4	210	11.4	200	10.7	200	9.0	200	9.6	200	10.5	8.2	8
270	5.6	280	4.4	280	3.3	300	5.1	310	4.6	330	3.6	10	2.8	20	5.0	30	5.1	20	4.4	30	5.5	20	4.0	8.0	9
300	9.3	290	7.0	290	5.5	270	6.0	270	4.8	230	4.2	230	4.3	190	3.8	190	4.0	180	5.0	170	5.1	180	4.5	4.4	10
180	2.0	180	3.0	200	4.6	220	4.5	210	3.0	—	1.2	—	0.5	—	0.7	—	0.7	—	0.2	—	0.2	—	0.0	1.5	11
310	4.5	350	4.2	50	4.0	20	2.0	340	2.3	20	1.9	—	0.5	350	1.9	10	3.6	—	1.4	310	1.6	—	0.9	2.0	12
200	4.0	200	4.0	210	3.1	190	1.6	—	1.2	—	0.0	—	1.5	50	2.1	50	2.5	40	1.8	40	2.6	40	3.0	2.4	13
70	9.0	60	10.1	60	8.8	60	8.0	50	7.7	40	6.3	40	6.6	40	6.4	50	6.1	30	6.4	30	7.5	50	6.0	6.3	14
50	9.7	70	7.7	70	8.0	60	8.0	60	7.4	60	7.0	60	6.1	60	6.8	60	6.0	60	6.2	60	5.9	50	6.4	7.7	15
30	4.5	30	4.3	30	4.3	20	3.9	20	4.0	20	3.4	20	3.5	30	3.4	20	2.6	—	1.0	—	0.5	—	0.3	5.3	16
60	4.5	60	4.5	60	4.5	60	4.0	60	5.1	50	4.1	50	5.0	40	4.8	40	5.2	40	5.3	40	5.3	40	5.5	3.1	17
10	5.2	360	4.5	360	4.0	10	5.2	20	6.0	30	7.3	30	6.2	30	6.4	20	5.9	30	5.7	20	6.0	10	6.3	6.3	18
360	4.5	360	4.2	350	3.0	330	2.9	310	2.7	—	0.3	—	0.1	—	0.3	—	0.2	—	0.1	—	0.0	—	0.1	2.8	19
270	11.0	280	8.8	290	7.2	290	7.1	290	7.5	290	6.6	290	5.5	290	5.5	280	4.7	280	4.3	280	5.1	280	4.9	7.3	20
240	18.1	260	13.0	280	10.4	300	10.5	300	10.2	300	8.3	280	5.8	270	2.5	—	1.3	200	2.5	180	2.9	210	2.6	6.3	21
310	10.4	310	9.0	310	7.4	320	5.6	310	3.8	300	2.3	—	0.7	—	1.4	—	1.0	—	0.0	—	0.7	—	0.4	7.0	22
40	4.3	60	4.3	40	4.5	60	5.6	60	4.9	80	6.7	80	4.8	—	1.5	350	2.4	20	2.6	360	2.1	30	2.0	3.1	23
100	2.8	—	1.3	190	4.3	200	4.2	210	3.9	240	4.4	210	2.9	200	2.3	190	1.9	200	2.0	190	1.8	200	2.9	2.6	24
250	11.6	250	8.2	250	7.4	250	7.3	260	7.4	250	5.7	260	6.4	260	7.9	270	13.1	270	13.1	260	7.1	250	2.2	9.1	25
220	5.2	240	6.3	250	5.3	250	4.5	260	3.8	260	3.7	220	1.9	210	1.6	200	3.0	190	4.1	180	2.5	190	3.0	4.8	26
180	7.0	180	7.3	190	8.0	190	5.4	180	5.4	190	7.1	180	6.0	180	5.0	180	5.4	180	6.8	190	8.5	180	7.0	5.1	27
190	10.6	200	12.6	200	11.8	200	10.3	190	11.8	180	12.0	180	11.5	180	12.7	170	8.7	160	9.3	170	9.2	170	13.2	10.4	28
240	8.9	230	7.7	200	11.4	210	10.0	240	7.5	220	8.6	220	11.5	240	8.5	230	9.2	230	9.5	220	9.5	240	10.5	10.5	29
190	12.3	190	12.8	190	12.5	190	13.5	180	12.3	180	12.4	180	11.5	190	12.5	190	11.3	190	11.5	190	9.7	180	6.1	10.4	30
170	6.3	150	2.4	150	3.7	140	3.7	130	4.0	140	3.8	140	5.0	140	2.7	150	3.3	180	5.7	190	6.4	190	8.3	4.7	31
—	6.8	—	6.2	—	6.0	—	5.9	—	5.4	—	5.2	—	4.7	—	4.6	—	4.6	—	4.5	—	4.5	—	4.8	5.3	

April, 1930.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
150	7.8	150	9.4	150	8.7	160	10.0	160	9.8	170	10.1	190	11.6	180	8.6	180	8.1	180	7.0	170	5.4	170	5.3	7.7	1
190	11.7	190	11.3	190	11.8	190	11.5	190	9.5	190	7.8	180	6.7	180	5.7	180	7.0	170	4.7	160	5.6	160	4.8	6.5	2
90	8.5	50	10.7	50	11.3	60	11.4	70	13.0	70	13.6	70	11.2	80	14.1	70	13.1	70	14.3	70	14.6	80	15.3	8.0	3
50	11.3	60	10.8	70	10.6	60	10.0	50	9.1	50	8.8	50	7.4	40	7.1	30	7.5	30	7.0	30	6.1	40	5.8	10.5	4
50	5.0	50	5.1	30	5.0	10	4.7	10	4.9	30	4.2	20	4.1	340	3.3	340	3.4	340	4.5	350	3.9	340	3.8	5.2	5
350	8.5	360	7.6	360	7.8	360	6.6	360	7.2	360	6.7	10	6.1	10	6.4	10	5.6	10	5.5	360	5.8	10	6.2	6.1	6
50	4.5	50	3.7	60	2.7	60	4.0	60	3.9	70	4.6	60	4.0	70	2.7	—	0.7	—	0.5	—	1.0	—	1.5	3.7	7
220	7.8	210	6.5	200	6.3	200	6.5	200	6.8	200	8.3	200	7.7	190	7.9	190	8.0	200	8.7	190	7.5	190	6.5	5.7	8
180	3.6	190	4.4	190	5.8	190	5.0	190	4.2	210	3.8	—	1.0	—	0.2	—	0.2	—	0.0	—	0.0	—	0.0	3.3	9
80	3.0	150	2.0	170	2.5	210	3.7	200	2.8	160	3.0	240	1.9	—	1.0	—	0.5	—	0.4	—	0.2	—	0.1	1.7	10
190	9.4	190	10.2	210	11.0	210	10.1	210	8.0	190	6.4	190	7.9	200	9.2	220	9.8	210	5.4	200	7.2	190	5.3	5.3	11
250	10.1	260	7.5	250	7.5	260	8.0	260	7.8	260	7.6	230	5.6	230	6.3	220	7.0	220	6.5	230	6.5	230	6.7	6.3	12
270	6.5	270	6.0	270	7.8	290	6.8	290	6.5	280	5.3	300	5.0	310	3.3	270	2.1	270	2.0	310	6.3	310	3.8	5.5	13
340	5.5	330	6.0	330	7.8	360	7.0	360	6.5	360	6.5	360	3.6	360	3.6	350	2.7	340	2.6	350	2.3	10	2.4	4.4	14
350	7.6	350	6.7	360	6.4	360	5.7	10	5.4	20	4.8	30	1.9	320	3.2	320	3.5	350	3.2	300	2.7	360	2.7	4.3	15
350	3.5	330	6.3	320	5.7	330	5.8	330	7.2	330	7.2	330	7.9	340	6.6	350	7.1	340	6.0	350	4.8	320	3.6	—	16
10	9.7	20	11.7	20	11.5	20	11.5	20	11.7	20	10.8	20	11.1	20	10.8	20	10.9	30	12.0	20	10.5	20	9.9	9.5	17
10	8.9	10	9.0	10	9.0	10	9.6	10	9.8	20	9.2	20	7.6	10	7.0	10	7.8	360	9.0	360	8.5	360	10.2	8.7	18
30	17.8	30	16.5	30	16.8	30	17.1	30	16.4	40	12.6	30	11.8	30	11.8	30	13.4	30	12.2	30	10.0	30	9.5	14.8	19
40	8.7	30	8.7	30	9.5	30	8.4	30	8.2	30	6.3	20	4.4	10	2.7	360	2.2	—	1.1	—	0.3	220	1.7	6.7	20
40	5.0	30	4.2	40	3.5	40	2.2	—	1.0	90	1.6	—	0.0	—	0.1	230	2.2	240	4.5	—	1.3	—	0.2	4.1	21
240	9.2	220	10.5	230	11.4	250	11.0	230	9.1	240	7.6	220	7.0	240	6.3	230	6.6	240	5.2	220	4.8	210	3.7	6.9	22

Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°). Speed in metres per second.

241. Eskdalemuir :

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	1.3	—	1.5	—	1.5	—	1.5	360	2.0	—	0.7	—	0.0	—	1.2	—	1.3	—	1.5	180	2.7	180	3.1
2	—	0.8	—	1.1	—	1.0	—	1.4	10	3.0	30	1.9	20	2.7	40	3.2	60	5.4	60	5.7	70	6.2	70	6.1
3	—	1.5	360	2.2	10	3.1	360	3.4	10	3.5	10	2.5	—	0.7	—	1.0	70	3.3	70	4.1	70	4.3	70	3.6
4	40	3.0	30	1.9	40	1.6	40	1.7	40	2.7	20	1.8	40	1.7	70	3.2	50	3.3	60	2.6	110	1.6	—	1.5
5	50	3.7	50	3.5	30	2.6	40	2.1	40	2.9	60	4.5	60	5.4	60	6.3	70	6.4	60	5.0	70	4.9	60	5.6
6	40	5.5	40	5.5	40	5.1	40	6.1	40	4.9	50	3.7	40	3.9	40	4.2	50	4.3	60	4.5	60	4.6	60	4.5
7	20	3.4	20	3.5	10	3.0	10	3.7	360	3.5	30	2.0	20	3.0	10	2.7	360	2.5	10	2.8	200	1.8	310	4.2
8	350	7.3	350	6.6	360	6.4	100	2.2	300	3.8	330	4.7	320	5.1	320	8.0	330	8.4	330	6.3	330	6.8	320	6.3
9	—	0.2	—	0.5	—	0.1	—	0.2	—	0.1	—	0.2	—	0.1	—	1.7	280	3.6	280	4.5	310	5.8	320	4.3
10	—	0.3	—	0.2	—	0.5	—	0.2	—	0.7	70	1.7	80	3.4	270	3.8	240	3.4	210	5.0	240	6.0	250	5.2
11	50	2.1	60	3.6	50	2.3	40	3.7	40	4.6	40	5.1	40	5.0	30	5.2	40	5.0	30	4.6	20	3.8	10	5.1
12	—	1.4	—	1.4	310	1.6	360	2.2	—	0.7	320	3.5	320	4.5	320	3.9	310	4.2	310	5.0	310	5.2	300	4.4
13	20	1.6	20	1.8	10	2.0	—	1.2	—	0.8	200	1.8	180	3.5	170	4.8	160	5.2	160	5.6	160	6.0	180	4.8
14	—	0.8	—	0.8	—	1.0	270	2.2	180	1.8	—	1.5	230	3.5	260	4.1	250	6.0	250	6.3	270	5.4	290	5.3
15	—	0.7	—	0.5	—	0.6	—	0.6	—	0.6	—	0.7	—	0.7	200	1.9	190	5.0	180	6.3	200	9.3	220	9.4
16	—	0.9	—	1.0	—	1.3	—	0.6	250	1.6	200	2.6	210	4.3	240	6.7	240	7.3	230	8.6	240	8.2	240	8.7
17	170	1.6	200	2.5	200	3.3	210	3.5	210	4.3	200	5.1	170	3.3	200	5.0	200	5.6	190	6.5	200	7.2	210	9.6
18	260	10.0	250	8.4	240	9.7	240	9.0	250	11.0	240	10.1	240	11.2	240	10.8	240	12.2	250	13.5	250	13.4	260	12.0
19	290	7.5	280	6.5	250	5.2	270	7.1	270	6.6	250	7.5	250	8.4	260	8.5	250	9.0	230	8.5	230	8.5	240	8.2
20	200	2.6	180	2.2	300	3.5	310	5.7	320	9.3	10	6.8	350	6.5	360	5.2	340	7.6	340	9.0	340	8.9	320	6.7
21	10	2.4	40	1.6	—	1.3	10	1.7	10	1.7	10	1.7	—	1.4	70	3.4	90	3.6	90	2.8	90	2.5	90	3.6
22	40	4.2	60	4.8	60	4.2	70	4.2	60	4.8	50	5.8	70	7.7	70	7.6	60	7.8	80	7.1	80	7.3	80	6.9
23	60	4.8	60	6.5	50	3.4	40	4.3	50	5.1	50	4.6	50	4.8	50	4.5	80	3.9	80	4.0	90	5.1	90	5.0
24	50	8.0	50	7.5	50	6.1	50	8.5	50	8.4	50	10.5	60	9.0	60	6.6	60	5.1	60	6.9	70	6.5	80	6.7
25	20	2.7	40	4.3	40	4.5	50	5.0	50	4.3	50	5.5	60	5.3	70	7.3	60	6.0	60	7.9	50	5.2	40	4.8
26	—	1.4	—	0.8	—	1.4	—	0.4	—	0.9	—	0.6	—	1.5	90	3.0	(80)	(2.1)	*	*	*	*	*	*
27	—	0.5	—	0.5	—	0.0	—	0.1	—	0.2	—	0.9	190	3.6	200	3.9	210	4.4	(200)	(6.1)	210	7.9	210	8.3
28	260	5.2	260	4.1	260	1.9	230	2.5	240	4.4	230	5.6	250	6.3	250	7.1	230	7.0	240	8.4	240	8.0	250	8.1
29	—	0.6	—	0.6	—	0.6	—	0.5	—	0.5	—	0.0	—	0.7	140	1.8	170	2.2	160	2.2	170	1.8	170	2.6
30	360	3.4	360	4.0	10	2.1	360	2.5	360	2.7	10	2.8	40	3.0	50	4.8	50	4.5	50	4.3	100	4.2	110	3.9
31	320	2.5	350	3.6	20	3.7	10	3.1	360	4.4	360	4.0	20	4.5	40	5.4	40	5.0	50	5.4	50	5.9	50	6.3
† Mean...	—	3.1	—	3.1	—	2.8	—	3.1	—	3.6	—	3.7	—	4.1	—	4.9	—	5.3	—	5.7	—	5.9	—	5.9

242. Eskdalemuir : H = 235 metres + 15 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
1	360	4.5	350	4.1	10	4.9	30	4.6	10	3.6	30	4.8	30	4.4	30	4.7	30	5.0	40	5.1	40	5.2	50	5.3	
2	360	4.0	10	3.9	360	4.0	10	3.9	30	5.0	30	5.6	30	6.2	40	5.7	30	5.4	30	5.0	50	6.4	50	5.7	
3	—	1.5	350	2.1	360	3.3	10	2.1	10	2.8	40	2.3	50	3.2	60	3.5	70	3.9	60	4.0	50	2.5	60	1.7	
4	—	0.2	—	0.1	—	0.1	—	0.1	—	0.1	—	0.3	230	3.0	210	4.8	230	5.3	210	4.0	200	3.9	220	4.4	
5	—	0.3	—	0.1	—	0.2	—	0.2	—	0.1	—	0.2	—	0.2	140	2.4	170	4.8	180	5.8	200	5.7	200	6.3	
6	—	0.0	—	0.9	—	0.2	—	0.1	—	0.2	—	0.0	—	0.8	140	1.7	190	3.5	230	5.5	230	6.3	220	6.5	
7	140	1.7	280	3.5	320	5.0	330	3.9	360	3.2	340	5.2	330	6.1	340	7.5	320	6.4	310	5.3	310	5.2	330	4.7	
8	—	1.3	—	1.3	—	0.9	—	0.4	—	0.3	—	0.4	—	1.2	330	2.2	100	1.7	250	2.6	260	4.2	240	4.4	
9	210	4.6	200	2.5	180	2.8	200	5.5	200	8.8	190	8.1	200	8.9	190	10.1	200	10.4	190	9.2	200	11.4	190	11.6	
10	240	1.6	180	2.7	170	3.0	190	4.0	190	4.8	210	5.6	220	6.3	220	9.0	220	8.9	220	9.9	220	12.4	230	12.5	
11	230	5.7	220	5.3	200	4.2	200	6.3	200	8.0	210	8.2	210	8.3	210	8.9	220	7.6	210	9.2	210	10.4	220	11.0	
12	—	0.8	—	0.7	—	0.8	—	1.3	—	1.1	—	0.7	—	0.5	190	3.1	190	4.9	190	5.0	240	4.0	250	4.3	
13	—	0.6	—	1.0	—	0.5	—	0.9	—	0.2	—	0.1	—	0.1	—	0.6	—	1.3	120	1.8	130	1.7	150	3.3	
14	360	2.5	360	1.6	350	2.7	360	2.1	360	2.4	360	3.0	360	1.7	340	1.8	60	1.7	80	2.3	140	3.6	140	4.0	
15	10	1.8	10	2.9	360	3.0	360	3.0	360	3.5	360	3.2	360	3.5	20	3.3	20	3.6	50	4.5	70	4.0	130	3.5	
16	360	3.4	360	2.5	350	3.0	360	2.2	350	2.3	360	1.7	20	2.5	60	3.2	60	3.7	60	4.1	70	4.0	70	4.8	
17	10	3.4	350	4.0	10	3.5	10	3.5	360	2.6	360	2.6	10	3.2	30	3.8	30	3.1	40	3.5	10	2.6	40	3.7	
18	—	1.5	—	1.5	—	1.5	—	1.3	—	1.8	—	1.4	—	3.0	2.4	40	2.3	—	0.3	—	1.4	—	1.5	130	1.8
19	—	1.0	200	4.5	210	3.5	200	3.5	200	4.5	200	4.8	210	4.8	200	6.0	190	6.7	200	6.3	200	6.7	200	6.0	
20	—	0.6	—	0.5	—	1.4	150	4.9	170	5.1	200	6.7	210	6.3	190	7.0	210	7.6	210	8.5	200	9.8	190	9.6	
21	—	0.7	—	0.5	170	1.6	—	1.2	—	1.1	—	1.3	160	2.9	180	3.3	180	4.5	190	3.6	190	4.2	200	7.2	
22	200	10.0	220	9.1	230	7.1	220	5.9	220	7.0	210	6.6	220	7.5	210	8.3	210	7.7	200	8.8	210	8.7	200	8.8	
23	200	7.8	210	5.3	210	5.1	210	4.2	220	4.3	230	4.6	210	5.7	220	8.3	220	7.6	210	8.1	210	7.5	200	9.2	
24	190	2.3	170	3.5	180	2.5	—	0.6	180	2.5	160	6.1	160	5.9	180	8.6	180	10.3	190	11.2	190	12.5	200	10.3	
25	220	4.7	220	3.7	220	2.7	210	2.7	240	4.0	230	2.8	220	3.6	240	5.6	240	6.2	230	7.7	220	8.0	220	7.6	
26	—	1.4	200	1.7	—	1.4	—	1.0	—	1.0	—	1.0	—	1.0	160	1.9	190	5.2	210	5.7	230	3.8	210	6.6	
27	—																								



Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°). Speed in metres per second.

243. Eskdalemuir :

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
1	110	1.8	120	4.7	120	3.9	130	3.2	140	3.0	130	5.0	140	6.3	160	6.4	200	5.5	200	6.5	200	7.0	190	6.6	
2	230	1.8	240	2.3	—	0.4	—	0.3	—	0.3	—	0.1	—	0.4	210	3.5	200	4.5	190	3.0	190	3.2	210	3.5	
3	—	0.8	—	0.7	—	0.8	260	1.7	190	2.6	170	2.3	170	2.8	150	4.9	160	4.1	210	5.7	210	6.0	200	5.3	
4	—	1.1	—	1.3	—	1.0	—	1.3	—	0.8	160	2.1	150	3.1	160	3.2	160	4.0	170	5.6	200	5.8	180	1.9	
5	240	2.4	260	1.8	—	1.3	200	1.6	230	3.3	260	3.8	270	4.3	260	5.2	240	4.9	250	5.3	240	6.1	230	8.2	
6	220	4.9	230	6.8	220	7.5	220	5.6	220	6.0	220	6.6	230	6.5	230	6.3	250	6.0	280	5.4	280	5.4	290	8.6	
7	270	4.7	240	4.2	280	4.2	260	3.3	280	3.5	280	3.3	260	4.1	290	6.0	280	6.9	270	6.7	270	6.3	270	7.2	
8	—	0.6	—	0.6	—	0.9	—	0.9	—	0.9	—	1.2	210	2.9	240	3.8	240	5.2	260	4.8	260	5.3	270	5.2	
9	260	4.2	260	2.8	290	3.6	290	5.0	300	7.8	300	5.6	—	1.5	290	1.9	280	3.5	280	4.9	280	5.2	300	5.1	
10	—	1.5	—	1.0	—	0.9	—	1.5	360	1.9	310	5.1	340	3.1	310	4.6	310	4.0	10	2.4	290	5.0	290	4.9	
11	—	1.4	330	1.7	320	2.5	330	1.9	—	1.3	—	1.3	10	3.3	350	3.8	330	4.1	350	4.8	10	4.8	350	5.5	
12	—	1.2	—	1.1	—	0.9	—	1.2	—	0.6	—	0.7	—	1.0	10	2.2	30	1.8	10	1.7	10	2.5	350	3.9	
13	—	0.3	340	1.6	—	0.5	—	0.0	—	0.0	—	0.0	190	2.4	210	3.7	210	4.2	200	4.5	210	4.3	210	4.8	
14	—	1.5	—	1.1	60	1.8	40	2.6	30	2.2	50	3.0	60	3.5	60	3.2	60	2.5	50	2.9	30	3.3	30	3.3	
15	—	1.4	—	0.5	—	0.6	—	0.3	—	0.3	—	0.8	—	1.0	—	0.5	—	0.5	—	1.2	—	1.2	—	1.2	—
16	50	3.6	60	5.3	70	5.1	70	4.6	60	3.9	70	5.2	70	5.4	80	7.2	80	8.2	70	8.0	80	7.1	70	7.2	
17	50	2.0	80	2.3	—	1.4	220	2.6	220	2.8	220	3.7	220	3.1	230	2.7	230	3.1	250	3.7	260	2.5	220	5.0	
18	190	4.8	180	4.6	170	3.2	170	2.4	—	1.3	—	1.0	—	0.5	—	0.0	—	0.8	110	2.3	150	3.0	160	2.0	
19	—	1.0	—	0.4	—	0.1	—	0.2	—	0.2	—	0.2	—	0.3	—	0.1	—	1.5	—	1.0	—	1.0	—	1.5	—
20	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.7	70	3.3	70	5.6	90	3.3	80	4.3	
21	20	7.7	20	8.0	20	7.4	20	7.2	20	7.5	20	7.1	20	6.5	20	6.8	10	5.5	10	4.9	10	5.4	360	5.5	
22	320	8.0	320	8.6	320	10.0	320	7.5	330	8.4	330	9.9	320	8.8	320	9.2	330	9.0	350	7.8	350	7.6	340	6.4	
23	20	4.2	20	3.9	20	2.4	—	1.5	—	0.3	20	1.7	10	3.1	10	3.8	10	4.2	20	4.7	20	5.4	20	5.2	
24	10	3.0	10	2.5	10	2.4	20	2.6	10	3.4	20	3.8	10	4.5	10	4.5	10	5.2	20	4.7	10	5.2	20	5.4	
25	—	1.1	—	1.0	—	0.6	—	0.4	—	0.5	—	0.6	—	0.3	—	0.0	—	1.5	—	0.3	160	2.0	170	2.8	
26	—	0.6	—	0.6	—	0.6	—	0.2	—	0.8	160	2.6	150	4.9	160	5.5	160	5.1	160	3.7	150	4.0	160	3.8	
27	200	3.5	210	4.2	200	3.1	180	3.0	200	4.2	210	5.6	210	5.1	210	6.2	210	7.5	220	7.7	220	8.5	200	7.8	
28	210	7.0	220	5.5	220	5.0	210	4.2	190	3.4	190	3.7	190	5.5	200	7.7	210	7.0	200	7.6	220	7.0	200	8.3	
29	180	4.1	200	5.0	210	5.4	210	4.9	200	4.6	200	4.6	210	4.1	210	3.9	180	3.4	170	3.3	180	3.5	180	3.9	
30	10	2.8	10	4.2	10	4.6	360	3.3	10	2.6	10	3.0	10	5.1	10	6.8	10	6.5	10	5.6	20	4.4	10	3.7	
31	300	2.1	290	4.4	290	5.3	330	3.4	330	3.3	360	2.9	270	2.0	290	2.7	270	3.0	290	3.5	270	4.5	270	4.3	
Mean...	—	2.7	—	3.0	—	2.8	—	2.5	—	2.6	—	3.1	—	3.4	—	4.1	—	4.4	—	4.5	—	4.7	—	4.9	

244. Eskdalemuir : H<sub>a</sub> = 235 metres + 15metres.

Hour G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	1.3	—	1.3	—	1.3	—	1.3	—	0.0	—	0.1	—	0.6	—	1.4	—	1.3	140	4.2	130	4.0	150	4.0
2	80	3.9	90	5.2	100	4.5	70	4.1	60	5.0	60	5.6	50	5.4	50	6.0	70	6.9	90	7.0	100	6.8	100	8.6
3	180	5.4	170	5.4	170	5.0	170	5.4	170	3.4	160	3.3	160	5.1	170	5.3	190	6.6	200	6.0	200	6.0	210	6.0
4	—	0.7	150	1.6	150	3.3	150	2.7	—	1.4	—	1.0	—	1.0	—	1.1	140	1.6	—	0.1	—	0.2	—	0.2
5	260	2.0	280	2.0	—	1.5	270	2.0	—	0.7	—	1.1	220	1.8	260	2.6	230	3.7	250	4.1	240	5.3	270	3.9
6	—	0.4	—	0.5	—	0.6	—	0.4	—	1.1	200	2.6	200	4.4	210	3.9	220	4.8	210	4.6	230	5.0	210	4.1
7	—	0.5	290	2.3	—	1.5	—	0.5	—	0.6	—	0.5	—	0.6	—	0.0	210	2.6	270	4.1	270	5.0	260	4.7
8	—	0.5	—	0.6	—	0.5	240	2.5	230	2.8	230	3.6	230	2.6	290	2.8	280	5.1	260	5.2	290	4.8	290	4.7
9	210	2.8	210	3.2	220	3.8	220	3.2	200	2.2	190	1.8	200	2.0	220	2.8	260	3.5	290	4.4	290	4.1	290	5.0
10	200	1.9	200	2.9	210	2.0	190	2.9	170	2.7	170	4.1	180	3.8	170	3.4	180	3.5	180	4.0	200	5.9	200	5.9
11	270	1.7	230	2.3	230	2.4	—	1.4	—	1.2	240	2.1	220	2.6	240	5.0	250	6.7	250	7.9	250	7.3	250	6.9
12	250	3.2	240	2.7	220	3.2	210	3.2	220	3.0	220	5.5	230	4.8	230	5.5	230	5.2	260	5.1	280	6.0	290	7.3
13	300	5.2	—	1.5	310	3.9	290	6.2	300	4.1	290	4.0	290	4.8	290	4.5	290	5.5	280	5.4	270	5.4	270	5.2
14	280	10.5	290	14.4	290	14.1	290	12.8	290	9.2	290	10.5	290	12.6	290	13.5	290	14.1	290	16.9	290	17.0	290	17.2
15	270	7.6	290	7.3	270	5.0	280	5.5	290	5.0	210	3.0	260	3.3	270	3.9	270	7.5	270	6.7	270	7.7	280	7.2
16	50	2.6	310	3.0	360	3.0	320	3.3	340	7.3	360	6.5	330	4.5	300	7.0	300	5.8	280	5.0	280	5.6	270	5.8
17	230	2.9	230	3.3	230	4.8	230	3.8	220	2.6	220	3.6	200	4.0	210	4.5	210	4.8	210	5.5	220	5.6	220	7.0
18	—	1.0	—	0.7	—	0.1	—	1.4	170	1.6	170	3.1	170	2.6	170	3.1	170	2.5	170	2.4	170	2.3	160	4.2
19	250	3.5	30	2.3	—	1.4	10	2.3	30	2.3	20	4.5	290	17.6	290	14.7	270	12.0	270	11.4	280	9.1	280	6.7
20	240	9.0	230	8.0	220	6.1	220	7.0	230	6.5	220	6.0	210	5.5	210	6.0	230	7.7	210	10.2	200	9.5	190	8.6
21	130	6.5	130	8.7	130	10.2	130	10.6	140	9.6	140	9.4	140	8.1	140	7.1	140	7.5	150	7.0	160	6.3	160	6.3
22	290	10.0	270	9.4	270	9.5	270	9.1	270	9.0	260	9.5	240	9.4	240	8.3	250	9.4	250	4.6	250	6.0	250	6.0
23	190	4.4	190	1.7	—	1.2	—	0.8	—	1.4	—	1.1	—	0.5	90	2.9	120	5.1	130	5.2	140	5.0	130	4.7
24	260	1.6	260	3.4	260	3.5	250	2.5	250	3.7	240	3.8	220	3.5	230	3.1	240	6.5	230	6.4	240	6.5	230	9.0
25	—	1.2	210	1.7	—	0.7	—	0.9	—	0.2	—	0.0	—	0.1	—	1.5	210	5.0	220	5.0	220	5.0	210	5.0
26	200	4.1	200	4.5	190	2.2	—	1.0	—	0.7	—	1.5	210											



Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°). Speed in metres per second.

245. Eskdalemuir :

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.4	—	0.7	—	0.7	—	0.7	—	0.8	—	1.0	150	1.6	280	4.0	310	5.0	300	3.2	300	2.8	300	3.0
2	—	0.4	—	0.5	—	0.3	—	0.1	—	0.4	—	0.4	—	0.4	270	2.6	300	1.6	300	2.4	280	2.5	290	3.2
3	—	0.8	—	0.9	—	0.9	—	1.1	—	1.0	—	0.7	—	0.4	—	0.7	—	0.9	170	1.7	170	1.8	140	1.7
4	—	1.3	—	1.4	—	1.1	—	0.6	—	1.0	—	1.5	360	1.7	—	1.4	—	1.5	160	3.1	170	3.0	160	3.5
5	—	0.8	—	1.0	—	1.5	—	1.1	—	1.1	—	1.1	—	1.1	180	2.9	—	1.3	190	2.8	200	5.0	210	5.2
6	230	4.6	210	3.0	210	2.7	220	2.9	200	2.5	190	4.7	200	4.2	180	5.4	180	6.0	200	6.5	220	6.0	190	4.5
7	—	0.5	—	0.4	—	0.5	—	0.8	310	1.6	—	1.2	290	2.7	290	2.8	290	3.0	280	2.8	290	4.1	290	4.7
8	170	1.6	—	1.2	320	3.9	300	4.6	280	3.0	240	2.3	190	2.8	240	3.2	260	3.4	290	3.4	270	4.5	270	4.0
9	—	0.8	—	0.7	—	0.6	—	0.4	—	0.3	—	0.5	—	0.7	—	0.9	40	1.8	40	1.8	50	2.0	60	2.0
10	—	1.1	—	1.1	—	1.5	50	1.6	—	1.1	—	0.5	—	1.0	—	1.1	—	1.0	—	1.3	—	0.1	—	1.0
11	30	1.6	30	2.4	10	2.9	20	2.1	40	1.9	30	1.7	50	3.4	50	3.7	60	4.1	60	3.4	80	3.4	120	3.6
12	50	2.7	50	2.6	40	2.9	40	3.5	50	3.9	40	3.6	40	3.4	50	3.3	50	2.8	60	4.5	70	4.8	70	5.2
13	20	2.3	40	4.0	40	4.7	50	3.5	60	5.0	60	5.8	60	5.7	50	7.1	50	6.8	50	6.0	60	5.2	60	5.0
14	20	5.7	20	6.5	10	5.8	360	6.5	360	7.0	10	5.9	10	6.3	360	7.2	360	8.3	360	9.6	10	9.0	360	7.9
15	—	1.5	20	1.6	310	2.5	350	2.0	360	2.2	360	2.7	360	3.5	360	4.7	360	4.8	10	4.2	20	3.7	350	3.0
16	—	0.6	—	0.9	—	0.9	—	0.8	—	0.2	—	0.1	—	0.1	—	0.0	—	0.1	—	0.0	—	0.2	—	0.7
17	360	2.5	20	2.2	30	1.8	—	1.3	20	1.8	—	0.8	—	0.5	—	1.5	50	2.2	60	2.0	90	2.5	110	2.7
18	50	9.0	50	10.3	50	10.5	40	7.4	40	6.4	30	4.8	360	4.1	310	7.5	300	10.8	300	16.2	300	16.7	300	12.9
19	200	1.7	—	0.2	—	0.1	—	0.6	—	1.3	—	0.6	—	0.7	—	1.2	60	4.0	100	6.4	110	6.8	110	8.1
20	110	4.5	100	5.2	100	6.6	110	5.9	90	5.2	70	4.0	50	4.2	40	3.8	30	4.0	30	4.3	20	3.5	360	3.0
21	320	6.2	320	5.0	320	5.6	320	7.1	310	6.9	310	8.3	310	9.4	310	8.3	300	7.4	290	7.6	310	8.0	320	7.6
22	—	0.9	—	0.5	—	1.0	—	0.7	—	0.7	—	0.4	—	0.4	—	0.5	—	1.2	210	4.2	190	3.6	180	3.5
23	180	4.5	180	4.0	200	8.3	210	9.0	210	9.5	210	10.0	210	10.0	210	9.8	200	8.7	210	10.5	210	12.4	210	13.9
24	210	13.1	210	14.0	210	13.8	220	13.5	220	12.2	230	12.0	230	11.3	230	11.8	230	11.8	230	11.8	230	12.2	230	11.8
25	240	9.0	240	7.5	250	7.3	260	6.9	260	6.0	250	5.8	270	8.5	280	8.3	290	10.4	310	11.5	310	10.2	310	8.0
26	340	10.0	350	8.9	350	9.5	360	10.0	360	13.0	350	11.3	350	11.5	350	12.5	350	11.8	360	12.4	360	9.9	10	9.5
27	20	9.0	20	9.5	20	9.1	20	8.7	20	8.8	20	8.7	20	9.5	20	10.8	20	10.7	20	11.0	30	9.2	30	9.3
28	40	5.0	20	2.7	360	3.0	20	4.8	20	2.0	30	3.5	20	4.8	30	5.2	30	4.9	40	5.5	40	6.4	40	5.2
29	30	3.7	30	4.0	30	2.8	30	3.7	20	2.7	20	3.5	30	3.8	30	5.0	30	5.4	30	5.7	30	5.4	30	6.3
30	30	5.5	30	5.0	30	4.7	30	6.1	30	5.0	30	3.9	40	3.7	40	3.8	50	4.9	50	5.0	70	4.4	60	5.3
Mean...	—	3.7	—	3.6	—	3.9	—	3.9	—	3.9	—	3.7	—	4.1	—	4.7	—	5.0	—	5.7	—	5.7	—	5.5

246. Eskdalemuir : H<sub>a</sub> = 235 metres + 15 metres.

Hour	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	30	4.8	40	3.8	40	4.4	40	3.6	40	4.0	40	3.8	40	3.7	50	2.8	60	3.7	60	4.6	70	4.5	70	5.1
2	50	2.0	80	2.9	—	1.2	50	1.7	60	1.8	—	1.4	60	2.9	60	2.5	50	3.2	80	2.9	90	3.0	100	2.6
3	—	1.5	350	1.7	10	1.8	—	1.5	360	2.1	—	1.3	—	2.7	—	1.3	—	0.7	—	0.4	—	0.3	—	0.6
4	—	0.6	—	0.3	—	0.3	—	0.2	—	0.0	—	0.0	—	0.6	—	1.3	230	3.7	210	3.6	230	3.5	230	6.0
5	290	8.5	290	11.1	290	14.2	290	15.4	290	10.5	280	5.8	280	6.0	270	6.0	250	3.5	290	5.1	270	7.0	270	7.1
6	280	3.2	270	3.4	220	4.3	210	4.8	220	4.3	190	3.8	210	4.0	260	4.5	270	4.9	270	4.9	280	4.8	290	4.8
7	280	9.9	290	11.0	290	10.0	290	9.3	290	7.5	290	6.6	280	5.0	280	7.0	300	4.8	300	5.2	300	3.6	280	4.0
8	110	6.1	110	5.6	140	2.9	210	4.5	220	9.9	210	7.7	200	7.8	200	4.4	240	4.5	220	3.7	250	1.9	350	3.6
9	330	6.3	320	6.2	—	1.2	20	1.6	280	2.0	—	1.5	—	1.2	240	1.9	280	4.8	280	6.0	290	7.4	290	7.5
10	220	6.3	230	7.0	230	7.0	210	7.7	210	6.4	230	7.0	240	9.0	230	8.0	230	6.3	220	8.2	210	9.0	220	10.2
11	200	8.4	200	7.5	220	9.4	220	8.4	210	7.4	200	6.9	200	7.5	200	8.0	200	9.3	210	7.4	220	6.0	220	6.2
12	210	6.3	230	8.2	230	8.7	220	9.9	230	10.1	230	11.5	230	11.9	230	11.5	230	10.7	240	9.8	250	9.7	250	8.5
13	240	11.0	230	9.0	220	7.8	220	8.0	220	8.0	210	7.6	200	7.2	200	8.4	200	8.1	200	8.2	200	9.0	200	10.0
14	190	10.9	190	11.2	190	11.3	190	10.5	190	9.0	190	8.0	190	6.7	180	5.9	180	5.0	180	5.8	170	4.5	160	4.6
15	180	8.3	180	7.4	170	4.9	170	5.0	150	4.5	150	5.9	150	6.4	160	8.0	160	7.8	170	8.2	160	6.5	160	7.1
16	170	3.8	180	5.0	200	9.9	200	11.6	180	9.0	180	10.1	190	10.0	220	9.7	220	9.5	220	9.0	210	8.2	200	8.5
17	230	7.6	220	7.5	220	5.7	230	5.3	200	3.5	220	3.4	—	1.5	—	0.3	—	0.3	140	2.2	—	1.5	70	4.2
18	190	16.8	200	12.9	220	13.8	220	13.3	220	9.8	200	8.5	200	9.7	200	9.5	200	11.3	210	12.3	210	11.6	230	12.0
19	200	4.5	180	4.0	170	3.4	180	3.7	170	5.5	170	6.4	170	4.5	160	7.2	150	7.2	170	10.0	170	10.3	170	9.7
20	190	5.6	210	5.5	200	3.9	190	3.0	—	1.5	170	1.7	200	2.6	180	2.5	190	5.5	210	8.1	200	7.7	210	9.0
21	160	3.0	180	3.0	170	4.5	170	6.0	170	7.1	170	6.3	160	6.0	160	6.6	160	6.2	160	6.2	180	8.3	190	8.3
22	—	1.0	330	3.5	300	4.1	300	4.4	310	4.0	—	1.5	—	0.9	—	1.5	290	5.1	290	7.5	290	5.7	280	5.0
23	—	0.0	—	1.5	280	3.1	290	5.9	280	4.5	280	4.9	280	4.5	270	2.3	270	3.5	280	3.1	260	3.3	250	3.0
24	250	2.1	240	3.1	220	4.4	200	3.9	190	4.0	230	8.5	230	6.5	240	5.3	140	2.7	210	4.0	250	6.0	250	5.2
25	290	4.5	290	9.2	290	11.0	300	13.7	290	10.9	290	9.3	290	10.5	290	12.3	300	10.6	300	7.7	300	10.5	300	13.5
26	290	8.4	290	5.5	280	6.7	290	7.0	300	2.5	—	0.5	310	2.8	70	2.3	30	2.3	300	6.4	310	7.8	300	5.6
27	—	1.1	—	1.1	—	1.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.5	—	1.1
28	—	0.5																						



Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°). Speed in metres per second.

## 247. Eskdalemuir :

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
Day.																								
1	360	2.1	10	2.0	40	2.9	30	3.3	20	4.5	30	4.9	30	3.5	30	4.6	50	4.8	20	2.5	360	2.3	10	2.6
2	—	0.6	180	2.2	180	1.6	—	1.5	160	2.5	140	4.3	140	5.2	100	3.3	50	3.7	20	3.0	10	2.7	—	1.2
3	340	9.2	350	8.5	350	7.7	360	7.2	350	5.3	340	4.5	350	4.0	340	6.8	340	6.7	350	7.8	360	6.0	360	7.5
4	360	3.8	340	6.3	350	5.7	340	7.0	340	8.6	330	7.5	340	6.8	330	6.3	300	5.3	300	6.4	310	7.5	320	5.7
5	—	0.7	—	0.2	—	0.5	—	0.5	—	0.3	—	0.2	—	0.5	—	0.6	—	0.4	—	0.6	120	2.5	120	3.5
6	—	1.2	—	0.6	—	0.2	—	0.7	—	0.2	—	0.1	—	0.0	—	0.2	—	0.1	—	0.3	—	1.5	240	3.9
7	260	4.5	290	5.2	290	3.3	—	1.4	—	1.0	—	0.9	—	0.8	—	0.9	200	2.7	230	5.5	220	7.5	220	8.3
8	300	9.6	300	10.9	290	10.2	290	5.8	280	4.0	50	4.8	260	2.8	290	5.8	290	7.3	290	4.4	290	7.5	280	5.0
9	240	17.8	240	18.0	240	17.2	230	13.0	210	7.5	220	7.6	240	10.1	250	10.1	260	9.0	260	10.2	270	11.1	270	11.2
10	260	10.5	250	8.5	260	10.8	260	11.0	260	10.1	260	10.7	270	10.1	280	8.1	280	8.5	280	10.4	290	9.8	280	8.5
11	300	12.5	300	13.1	310	12.2	300	13.0	310	13.7	320	12.8	320	11.8	330	10.7	330	10.5	330	10.0	310	8.8	310	5.1
12	230	2.3	—	1.5	—	1.0	210	3.5	230	4.7	230	6.3	230	6.8	230	6.7	230	9.2	230	9.8	230	10.0	230	9.5
13	220	10.5	230	9.5	220	9.2	220	9.5	220	9.2	210	6.7	220	6.5	220	7.3	230	8.2	230	9.7	230	10.0	250	11.7
14	250	11.5	240	9.5	240	9.5	230	10.2	230	11.7	250	12.9	250	12.2	250	12.3	240	12.0	230	10.9	230	11.3	240	12.0
15	250	14.2	250	15.0	260	15.2	250	12.1	260	8.3	310	4.9	340	3.1	40	3.5	50	3.5	—	1.5	—	1.5	—	1.0
16	—	1.0	—	0.4	—	0.3	—	0.2	—	0.0	—	0.3	—	0.1	—	0.3	—	0.2	—	0.8	350	3.1	310	4.3
17	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.1	—	0.1	80	1.7
18	—	0.2	—	0.5	—	0.2	—	0.5	—	0.5	—	0.5	—	0.5	—	0.3	—	0.7	—	1.0	170	4.2	160	3.3
19	100	4.3	70	4.8	60	4.2	40	5.0	30	5.5	20	5.6	10	5.2	20	4.8	30	6.5	30	7.3	30	6.5	30	5.5
20	—	1.0	—	0.7	—	0.8	130	2.2	130	2.7	120	4.9	120	5.4	100	3.7	100	4.8	130	8.1	130	10.0	140	8.6
21	230	11.6	240	10.8	250	9.3	270	7.5	260	7.7	250	6.0	230	6.6	250	8.1	240	9.7	240	10.8	240	9.0	230	6.0
22	230	4.2	230	7.8	230	7.7	230	9.0	230	10.9	230	11.7	220	10.8	210	8.4	210	8.5	210	7.2	220	7.3	220	6.4
23	310	11.0	300	12.7	300	10.2	290	7.6	290	9.0	280	7.4	290	5.4	300	7.3	290	9.8	290	7.9	240	3.8	250	4.1
24	—	0.5	180	3.5	180	4.2	170	5.0	160	4.9	150	3.6	150	4.5	130	6.0	120	8.0	130	10.3	140	12.5	130	15.0
25	230	8.1	230	9.3	230	8.3	240	7.0	230	7.5	220	8.9	220	7.6	230	7.8	230	6.6	210	5.5	200	4.7	190	6.0
26	240	12.5	240	12.3	230	13.7	230	12.3	230	12.0	230	11.3	230	9.4	230	10.0	240	9.5	240	7.1	230	8.5	230	7.2
27	—	1.4	270	5.0	270	4.6	260	4.7	270	4.8	260	4.3	—	1.4	190	1.7	—	1.5	—	1.5	230	3.1	240	4.3
28	—	0.5	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	0.2	—	0.3
29	10	4.3	10	4.7	10	4.5	20	6.0	30	6.1	20	5.6	10	6.4	20	5.7	20	6.3	20	5.7	20	6.9	30	9.0
30	—	0.3	—	0.1	—	0.3	—	0.5	—	0.2	—	0.0	—	0.4	—	0.0	—	0.0	—	0.5	—	1.4	190	2.7
Mean...	—	5.7	—	6.1	—	5.9	—	5.6	—	5.5	—	5.3	—	4.9	—	5.0	—	5.5	—	5.6	—	6.0	—	6.0

248. Eskdalemuir : H<sub>a</sub> = 235 metres + 15 metres.

	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	170	2.1	170	2.3	180	1.8	180	2.2	190	4.2	200	5.7	210	5.2	210	7.5	210	5.6	210	6.6	200	6.0	200	4.6
2	—	0.2	—	0.4	—	0.2	—	0.1	—	0.7	—	1.0	70	3.2	70	3.5	60	3.2	80	2.2	60	2.6	60	3.9
3	50	1.9	—	1.3	—	1.1	50	1.8	—	1.5	—	0.7	—	0.4	—	0.8	—	0.2	—	0.9	—	0.4	—	0.5
4	—	0.5	—	0.2	—	0.1	—	0.0	—	0.1	—	0.2	—	0.0	—	0.2	—	0.2	—	0.0	—	0.0	—	0.0
5	170	2.3	170	1.6	190	2.1	230	4.8	240	5.5	230	3.8	230	3.5	210	3.5	240	3.0	190	2.3	250	3.1	240	2.2
6	—	0.1	—	0.0	—	0.3	—	0.4	—	0.0	—	0.2	—	0.0	—	0.4	—	0.0	—	0.0	—	0.0	—	1.1
7	220	2.2	230	3.3	250	2.7	250	2.4	240	2.0	230	2.9	240	1.8	—	1.2	—	1.2	—	0.3	—	0.2	—	0.2
8	250	2.2	230	2.0	—	0.3	—	0.5	—	0.8	—	0.9	—	0.5	—	0.6	200	3.0	170	5.6	170	5.3	180	4.7
9	230	3.0	—	0.7	—	0.8	—	0.6	—	0.4	—	0.3	—	0.3	—	0.1	—	0.3	—	0.3	—	0.1	—	0.3
10	—	0.0	—	0.0	—	0.2	—	0.5	—	0.4	—	0.4	—	0.0	—	0.2	—	0.2	—	0.1	—	0.2	—	0.5
11	180	3.0	170	4.5	170	6.5	170	6.6	160	9.8	150	9.5	150	7.4	130	6.3	130	8.5	130	9.6	130	9.9	130	9.4
12	200	3.3	240	3.6	280	2.5	200	1.6	220	1.8	310	2.0	210	2.0	200	2.6	—	1.5	320	2.5	220	2.5	240	2.8
13	170	8.1	230	10.0	230	5.4	230	7.4	230	6.4	230	6.4	230	6.5	230	7.5	200	4.0	200	3.4	200	4.9	210	7.9
14	240	6.0	190	3.0	200	3.0	240	5.3	—	1.4	240	4.0	230	2.5	250	2.6	240	1.6	250	5.4	260	4.0	280	3.0
15	—	1.0	—	1.2	20	1.9	350	2.0	—	1.4	—	1.0	—	0.3	—	1.2	—	0.8	—	0.5	—	0.5	—	0.5
16	180	4.2	180	3.9	170	3.5	170	2.8	170	3.5	170	3.9	170	3.6	180	3.0	180	3.5	180	3.7	170	3.7	170	3.7
17	—	0.2	—	0.1	—	0.2	—	0.3	—	0.1	—	0.0	—	0.1	—	0.9	—	0.2	—	0.0	—	0.5	—	1.3
18	210	5.1	220	7.7	230	7.2	230	8.5	240	8.8	240	7.4	220	5.9	230	7.2	230	6.1	200	5.0	230	6.8	220	5.7
19	210	6.8	220	6.0	230	8.6	240	10.0	230	7.9	220	7.1	230	8.5	230	6.2	240	5.8	250	6.4	230	3.7	270	11.1
20	240	7.8	230	7.0	240	7.8	240	10.9	240	9.8	230	9.5	220	8.5	230	7.1	230	5.5	240	4.6	250	3.3	280	4.4
21	260	2.2	280	2.6	270	5.0	250	5.4	270	4.0	260	2.5	260	4.0	250	4.6	250	5.5	260	6.0	260	5.0	270	6.2
22	—	0.5	300	2.2	260	1.7	180	1.7	—	0.5	—	0.6	—	0.5	—	0.3	—	0.3	—	0.0	190	2.9	230	4.3
23	230	5.2	220	6.0	210	6.1	210	6.7	210	6.5	220	9.5	230	10.3	220	10.0	220	9.8	240	7.6	240	7.9	250	8.6
24	240	3.9	240	2.0	260	3.4	240	3.2	290	4.0	300	4.5	—	0.4	—	1.4	240	4.2	270	2.7	—	1.3	—	1.4
25	10	1.7	20	2.9	20	2.1	60	3.1	—	1.3	—	1.2	40	1.8	30	2.4	20	2.2	—	1.3	—	1.1	60	1.7
26	170	6.2	170	6.8	170	7.7	170	8.2	170	10.4	170	10.7	170	11.6	170	8.8	160	11.0	170	11.7	170	10.1	180	7.1
27	220	4.6	220	5.7	210	5.7	180	6.4	180	7.3	180	7.0	180	8.4	170	8.4	180	10.5	200	11.1	210	12.3	220	

Averages for periods of sixty minutes, centred at the exact hours, Greenwich Mean Time.

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 235 metres + 15 metres.

November, 1930.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day.
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
10	2.3	10	2.2	20	2.3	20	2.1	10	2.1	360	2.6	10	2.3	20	2.4	—	1.4	—	1.3	—	0.8	—	0.3	m/s.	1
250	3.0	290	3.5	330	4.1	360	4.5	360	4.5	10	5.2	20	7.5	360	10.0	350	10.5	350	10.0	340	10.6	330	9.9	4.6	2
360	6.5	10	5.8	10	5.7	10	3.7	20	1.6	—	1.3	10	3.3	340	6.0	—	1.5	350	1.8	—	1.5	340	4.8	5.3	3
310	6.5	300	7.3	300	4.7	290	3.6	280	2.4	—	1.5	—	0.7	—	1.0	—	0.9	—	1.0	—	1.0	—	0.8	4.6	4
110	2.7	90	2.7	90	3.3	70	2.4	10	1.8	—	1.5	360	2.1	350	2.2	360	2.3	340	1.9	350	2.0	350	1.6	1.5	5
240	4.8	240	5.0	230	4.3	220	3.5	—	1.5	250	5.0	220	4.8	210	3.9	190	3.7	240	9.8	230	7.2	230	5.2	2.7	6
210	8.4	210	8.2	220	11.2	230	12.7	230	13.0	220	13.0	210	13.2	220	13.8	220	13.2	220	10.8	230	8.5	240	5.1	7.2	7
270	5.9	260	7.4	220	5.1	200	4.5	190	4.8	210	6.6	210	7.0	210	8.1	230	10.7	230	13.2	240	15.3	240	17.3	7.4	8
270	10.0	270	9.9	260	10.8	260	10.1	260	9.8	270	10.5	260	10.6	260	11.0	270	11.5	270	11.0	260	10.6	260	11.0	11.4	9
270	9.5	270	12.8	260	11.8	260	10.0	280	8.7	290	9.3	290	9.5	290	10.6	290	8.0	300	10.1	290	10.8	300	11.6	10.0	10
300	4.0	310	7.5	310	5.9	—	1.4	240	2.3	270	2.5	270	2.0	360	2.3	90	1.7	—	1.5	190	2.7	—	1.5	7.3	11
220	9.7	220	9.5	230	9.6	240	11.8	230	9.0	230	7.2	250	12.4	250	11.8	230	9.0	230	7.4	220	7.5	220	9.3	7.6	12
250	12.4	250	12.2	250	11.4	220	6.0	200	3.8	190	4.7	220	4.6	230	5.2	230	7.2	220	5.8	240	7.5	230	9.9	8.3	13
250	13.2	250	12.3	240	11.0	250	10.9	240	10.3	250	9.2	250	10.0	250	16.0	250	14.9	230	10.3	240	10.1	240	12.0	11.5	14
—	0.8	290	5.2	310	8.4	310	6.7	60	2.0	330	3.8	—	1.5	10	1.7	300	2.7	300	7.0	310	8.0	310	4.2	5.8	15
340	4.0	350	3.5	320	2.7	—	1.3	330	1.8	—	0.7	—	0.1	—	0.2	—	0.2	—	0.0	—	0.0	—	0.0	1.1	16
50	2.7	40	3.0	—	1.5	—	0.3	—	0.8	—	0.7	—	0.6	360	2.0	360	1.6	—	0.8	—	1.0	—	0.7	0.7	17
170	3.4	160	2.5	—	1.1	—	1.2	150	5.2	130	4.5	130	5.5	130	6.4	130	6.4	120	7.4	120	7.3	110	6.3	2.8	18
30	4.0	20	3.7	30	3.5	10	2.0	—	0.5	—	0.1	—	0.0	—	0.1	—	0.5	—	1.0	—	0.8	—	1.0	3.5	19
160	6.0	180	2.0	180	2.4	170	3.5	180	3.5	240	3.5	230	10.1	220	9.5	240	13.3	230	15.0	230	13.1	230	11.8	5.9	20
230	5.7	230	5.4	220	5.9	210	4.3	200	3.3	200	4.0	220	4.2	350	3.2	—	0.6	220	6.0	260	10.7	260	5.6	6.9	21
220	5.0	300	6.0	20	8.3	20	11.0	20	12.0	10	11.0	360	13.5	350	11.6	340	10.0	310	7.7	310	10.2	310	10.5	8.9	22
290	5.7	280	5.9	270	4.5	210	2.0	210	2.3	—	1.3	220	2.4	—	1.5	—	0.6	—	0.7	—	0.1	—	0.4	5.4	23
140	14.5	150	13.5	190	12.8	210	12.5	210	11.0	210	11.5	210	11.5	210	10.5	210	10.1	220	9.5	220	9.1	240	9.5	8.7	24
180	6.4	160	5.6	150	7.0	160	7.0	160	7.3	160	6.3	200	3.0	200	5.1	190	5.7	210	9.4	230	9.5	230	9.1	7.0	25
230	7.7	240	6.6	230	6.3	230	5.3	240	4.8	250	4.8	260	4.8	260	4.0	200	2.1	—	0.8	—	1.1	—	0.1	7.4	26
250	4.0	250	2.5	—	1.3	280	1.6	—	1.5	—	0.2	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	2.1	27
—	0.7	—	1.0	—	1.0	—	1.2	—	0.8	10	1.6	360	3.1	360	2.9	10	3.1	10	2.3	20	5.0	20	4.7	1.1	28
30	8.6	20	7.6	30	6.3	30	7.2	20	5.9	20	4.8	10	4.6	360	5.2	10	3.5	360	3.8	360	3.0	20	1.7	5.6	29
190	2.4	220	2.0	200	2.4	180	2.5	190	2.5	180	1.6	180	2.6	180	3.3	180	2.3	160	2.8	160	2.1	190	2.1	1.4	30
—	6.0	—	6.1	—	5.9	—	5.2	—	4.7	—	4.7	—	5.3	—	5.7	—	5.3	—	5.7	—	5.9	—	5.6	5.5	

December and Year, 1930.

200	2.6	190	2.0	190	2.6	200	2.9	190	2.2	—	0.8	—	0.0	—	0.6	—	0.8	—	0.7	—	0.7	—	0.0	m/s.	2.9	1
60	3.3	50	3.5	40	3.6	40	4.2	40	3.5	50	2.6	40	3.8	50	3.7	50	3.4	40	3.0	50	2.0	40	2.1	2.5	2	
—	0.6	—	0.9	—	0.2	—	0.7	—	1.0	—	0.7	—	0.9	—	0.6	—	0.8	—	0.8	320	1.6	—	0.3	0.9	3	
—	0.0	—	0.0	—	0.1	—	0.6	—	0.3	—	0.8	—	0.6	—	0.8	—	0.8	—	0.8	—	0.8	170	2.7	0.8	4	
250	2.2	240	2.5	—	1.0	—	1.0	—	0.4	—	0.8	—	0.2	—	0.1	—	0.0	—	0.1	—	0.0	—	0.0	2.0	5	
—	1.1	160	2.0	190	2.4	220	2.8	240	2.5	190	2.0	230	1.8	—	0.5	—	0.0	—	0.9	—	1.5	250	3.1	0.9	6	
—	0.1	—	0.0	—	0.0	—	0.0	—	0.1	—	0.8	—	0.4	—	0.4	—	1.1	240	1.8	240	1.8	260	2.2	1.3	7	
180	3.5	200	4.2	220	5.1	220	6.3	240	6.5	270	5.0	260	3.9	240	4.9	240	4.9	240	3.9	—	1.4	240	1.8	3.3	8	
—	0.0	—	0.3	—	0.5	—	0.3	—	0.5	—	0.3	—	0.2	—	0.1	—	0.0	—	0.2	—	0.1	—	0.0	0.4	9	
—	0.2	—	0.2	—	0.4	—	0.8	—	1.4	—	0.1	—	0.5	—	0.3	200	1.6	—	1.5	180	2.8	170	3.3	0.6	10	
130	9.8	140	9.4	130	8.2	130	7.3	120	3.4	—	0.4	—	0.0	—	0.1	—	0.8	—	1.1	160	2.6	170	3.7	5.7	11	
180	2.0	—	1.0	250	2.0	200	4.3	200	3.4	180	3.5	180	4.3	170	5.6	170	6.7	170	6.7	170	6.4	170	7.0	3.3	12	
210	6.9	200	4.5	230	6.0	230	5.3	220	4.9	230	7.4	250	6.0	210	2.9	170	2.2	180	2.8	190	3.9	250	5.1	5.7	13	
280	3.5	290	3.5	300	2.0	310	3.1	—	0.8	—	1.5	—	1.0	—	1.1	40	1.6	20	2.9	10	3.9	—	1.5	2.9	14	
—	0.4	—	1.0	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	210	1.8	180	3.5	0.8	15	
180	4.0	180	3.5	180	2.5	180	1.9	170	1.9	190	2.2	—	0.2	—	0.2	—	0.2	—	0.1	—	0.0	—	1.0	2.6	16	
230	2.6	210	2.6	—	1.2	220	2.5	200	3.7	210	5.1	220	6.7	220	5.1	210	6.2	210	8.3	210	6.7	220	8.0	2.5	17	
230	5.8	250	8.7	250	4.4	240	5.3	240	6.1	230	5.6	240	7.0	220	6.6	230	6.4	220	6.6	210	6.2	220	8.1	6.6	18	
260	11.1	260	12.0	260	10.5	260	9.5	260	7.9	240	7.0	240	8.0	240	6.7	240	7.0	240	7.6	240	8.4	240	8.1	8.0	19	
270	3.9	270	4.9	270	5.1	270	4.8	260	3.1	260	3.7	250	4.7	250	5.5	260	5.3	290	3.8	260	2.0	270	2.0	5.7	20	
270	5.8	260	6.0	250	3.5	230	4.5	240	2.7	240	3.9	260	3.5	230	2.2	240	3.0	290	2.5	190	2.5	350	2.1	4.0	21	
230	4.5	220	4.2	220	4.5	230	4.3	220	4.9	230	4.5	250	6.0	240	5.0	220	4.1	240	8.0	230	7.7	250	8.3	3.3	22	
260	9.0	250	8.5	250	8.5	260	7.5	260	8.0	260	5.9	240	4.1	230	4.6	230	3.6	220	3.2	240	4.6	250	4.5	7.0	23	
270	2.0	270	2.7	—	1.0	—	0.9	—	0.4	—	0.5	—	0.3	—	1.0	—	0.8	10	1.7	—	0.9	—	0.5	2.0	24	
60	2.7	50	2.2	60	2.0	30	2.0	50	1.8	70	1.7	—	0.9	120	4.7	140	4.4	150	5.6	160	6.4	170	6.5	2.5	25	
180	5.9	220	3.2	360	1.6	—	1.2	—	0.0	—	0.0	—	0.0	200	2.3	220	4.4	200	3.9	220	6.0	230	7.5	6		

Day.	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.
1	m/s. 28	h. m. 23 40	m/s. 23	h. m. 2 0	m/s. 7	h. m. 12 15	m/s. 17	h. m. 18 40	m/s. 9	h. m. 16 10	m/s. 10	h. m. 13 0	m/s. 11	h. m. 14 35	m/s. 8	h. m. 23 10	m/s. 9	h. m. 8 35	m/s. 8	h. m. 5 55	m/s. 8	h. m. 5 35	m/s. 10	h. m. 7 55
2	38	5 0	13	0 10	10	16 35	17	15 50	11	15 15	10	11 15	8	14 40	13	12 15	7	13 20	7	12 35	16	21 10	6	17 20
3	22	5 35	9	19 35	10	6 50	28	21 40	7	18 45	7	9 15	12	15 5	10	15 30	5	20 50	4	6 35	14	0 45	3	0 50
4	19	19 25	9	18 35	9	13 45	23	0 25	6	20 45	9	14 50	12	11 5	8	14 30	6	13 0	17	19 15	13	11 0	4	23 50
5	21	12 45	13	5 40	10	12 35	12	0 30	9	15 30	11	12 50	13	13 55	10	18 25	11	14 0	24	3 35	5	12 5	10	3 55
6	25	22 30	18	11 50	9	15 45	13	10 25	10	1 55	12	16 50	15	14 5	10	11 0	9	9 55	15	23 15	14	22 5	5	23 45
7	26	16 35	13	5 35	12	16 15	10	0 20	12	13 10	13	7 55	13	15 35	8	13 55	7	8 20	18	1 35	23	16 35	6	24 0
8	21	14 50	6	12 10	15	20 25	13	11 40	14	15 5	10	16 0	10	20 20	12	13 55	9	4 0	15	4 35	23	23 40	11	16 45
9	17	0 40	5	10 30	20	5 55	9	0 5	11	10 35	17	11 10	12	5 25	10	12 50	5	15 5	15	16 20	24	0 10	7	0 35
10	29	21 45	4	15 10	14	12 40	5	12 45	12	15 25	18	12 15	11	15 55	13	15 5	5	15 55	19	13 20	21	19 0	5	23 30
11	19	0 50	5	12 35	7	14 0	16	15 20	9	17 40	16	11 40	12	14 35	12	16 0	8	13 35	17	21 45	22	4 35	16	6 10
12	24	3 35	4	14 5	9	14 5	17	12 40	11	15 35	8	9 0	7	17 10	16	14 35	9	12 45	19	21 40	18	19 20	11	21 35
13	18	0 35	7	18 55	10	2 15	18	14 32	11	15 05	8	13 10	9	16 5	13	17 55	11	8 10	20	23 50	19	12 40	19	1 50
14	8	0 1	19	19 5	14	11 5	16	15 25	15	11 10	9	16 0	7	17 25	26	11 25	15	10 0	24	16 30	22	20 25	10	0 45
15	7	11 5	18	8 45	14	11 15	12	10 45	14	11 40	8	17 10	7	15 45	16	0 15	8	9 15	13	10 15	21	2 15	6	23 50
16	10	21 45	11	2 25	13	10 25	11	14 5	15	14 15	11	22 10	14	9 25	14	0 15	4	17 45	18	6 5	7	12 10	7	5 50
17	19	15 35	4	15 5	9	16 30	19	15 20	24	22 0	7	1 55	10	13 20	10	12 5	14	24 0	26	20 45	5	13 25	13	22 20
18	21	22 45	7	12 50	13	10 0	16	6 0	25	11 30	12	16 30	7	16 20	8	15 31	25	10 45	25	0 40	13	24 0	14	13 50
19	24	12 5	8	13 10	11	3 15	28	12 10	14	4 25	13	13 25	7	15 15	26	7 40	22	14 35	17	20 15	10	9 45	17	12 25
20	15	7 35	4	11 40	24	8 15	14	11 15	16	7 15	20	18 10	10	23 45	15	9 55	11	3 35	15	12 20	20	22 5	16	4 20
21	12	16 40	6	15 10	27	13 10	13	8 35	7	22 35	17	23 30	12	2 30	17	2 50	15	7 15	14	10 45	17	0 10	13	14 25
22	12	23 45	7	15 50	22	8 20	15	15 15	12	14 20	18	0 5	15	2 55	19	1 20	6	9 30	11	9 25	22	18 40	13	23 55
23	16	13 30	9	21 5	9	18 10	12	14 40	19	23 25	14	11 35	9	10 30	9	13 35	24	16 35	13	15 25	20	2 35	18	7 25
24	14	12 40	11	4 10	6	14 55	9	9 45	15	5 35	17	10 55	9	12 25	15	17 15	21	3 50	13	15 5	23	11 55	9	5 30
25	13	5 50	10	11 0	25	12 30	10	20 25	11	10 5	12	11 0	9	16 20	9	11 30	17	9 15	20	4 10	16	2 10	10	22 50
26	9	22 5	8	18 35	15	5 55	11	9 20	10	12 30	11	14 55	13	13 45	10	12 30	19	4 40	14	0 55	19	3 10	19	6 50
27	12	2 45	9	9 0	12	23 10	14	21 50	15	13 20	12	9 36	12	10 55	12	15 40	16	10 25	4	13 5	8	1 50	25	12 55
29	5	21 15	5	3 20	19	17 20	18	12 50	16	12 30	15	13 0	13	13 50	6	17 10	10	10 40	13	12 20	8	23 15	25	20 50
28	9	23 10	—	—	21	0 40	15	10 25	8	18 25	13	13 30	8	2 0	8	13 15	12	15 55	17	19 45	14	12 15	19	2 0
30	7	0 55	—	—	20	18 40	9	16 35	9	12 50	15	17 25	11	8 10	8	17 40	10	3 35	20	12 25	6	23 55	11	21 45
31	23	23 58	—	—	12	12 0	—	—	10	11 55	—	—	9	10 55	7	9 40	—	—	7	12 20	—	—	11	3 15

DISTRIBUTION OF WIND SPEED : EXTREME VELOCITIES AS RECORDED BY THE DINES TUBE ANEMOGRAPH.

Month.	DISTRIBUTION OF WIND SPEED.								EXTREME VELOCITIES.				
	More than 17·1 m/s.		10·8 to 17·1 m/s.		5·5 to 10·7 m/s.	1·6 to 5·4 m/s.	Less than 1·6 m/s.	No Record.	Highest Hourly Wind.			Highest Gust.	
	Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Date.
Jan. ...	2nd, 6th, 7th, 12th	hr. 18	17	hr. 114	hr. 303	hr. 182	hr. 127	—	300	m/s. 26	day. 2 hour. 5	m/s. 36	day. 2 h. 5 m. 0
Feb. ...	—	—	4	16	143	315	198	—	110	14	1 1	23	1 2 0
Mar. ...	20th, 21st	2	9	64	249	303	126	—	240	19	20 8	27	21 13 10
April ...	19th	3	10	66	307	275	58	11	30	18	19 12	26	3 21 40 } 19 12 10 }
May ...	17th	1	4	24	215	378	121	5	210	17	17 21	25	18 11 30
June ...	—	—	6	21	220	363	116	—	190	14	20 18	20	20 18 10
July ...	—	—	—	—	193	404	147	—	300 } 320 }	10	6 15 } 22 3 }	15	22 2 55
Aug. ...	14th, 19th	2	2	18	200	399	125	—	290	18	19 7	26	19 7 40
Sept. ...	—	—	6	58	169	315	178	—	300	17	18 11	25	18 10 45
Oct. ...	—	—	13	69	313	244	118	—	190	17	18 1	26	17 20 45
Nov. ...	8th, 9th	4	15	51	240	218	167	—	240	18	9 2	24	9 0 10
Dec. ...	28th	1	5	34	183	277	249	—	210	18	28 21	25	27 12 55 } 28 20 50 }
Year ...	13 days	31	91	575	2735	3673	1730	16	300	26	Jan. 2 5	36	Jan. 2 5 0

251. Eskdalemuir.

Readings, in degrees absolute, at 9h Greenwich Mean Time.

1930.

Day.	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm
1	76.8	79.6	75.8	78.8	74.7	77.5	77.6	77.4	80.8	79.0	84.1	80.8	86.3	83.1	86.8	84.2	87.2	84.6	84.1	84.3	81.2	82.9	77.6	80.8
2	77.1	79.6	75.8	78.7	74.7	77.4	78.1	77.4	81.4	79.1	84.1	80.9	86.8	83.2	86.8	84.2	86.8	84.6	83.9	84.2	80.9	82.7	77.8	80.8
3	77.5	79.6	75.8	78.6	74.7	77.4	78.5	77.6	81.5	79.1	84.1	81.1	87.3	83.3	86.7	84.2	86.5	84.7	83.6	84.1	80.8	82.7	77.8	80.7
4	77.6	79.6	75.9	78.6	74.7	77.4	78.6	77.6	81.7	79.2	84.6	81.2	87.4	83.4	86.8	84.2	86.6	84.7	83.9	84.1	80.5	82.6	78.1	80.6
5	77.4	79.6	75.9	78.6	74.7	77.4	77.9	77.7	81.8	79.3	85.1	81.3	87.4	83.4	86.7	84.3	86.8	84.7	84.0	84.1	80.0	82.6	77.8	80.6
6	77.9	79.5	75.9	78.6	75.1	77.4	77.7	77.8	81.7	79.3	85.7	81.3	87.4	83.6	86.4	84.4	86.4	84.7	83.8	84.1	79.5	82.5	77.7	80.5
7	77.5	79.4	75.8	78.6	75.4	77.4	77.8	77.9	81.3	79.3	85.7	81.3	87.3	83.6	86.4	84.4	86.8	84.7	83.6	84.1	79.2	82.4	77.8	80.4
8	77.9	79.4	75.8	78.6	75.9	77.3	78.0	78.0	80.8	79.6	85.7	81.4	87.0	83.6	86.4	84.4	86.4	84.8	83.5	84.0	79.0	82.4	77.9	80.3
9	77.7	79.4	75.7	78.5	76.4	77.3	78.1	78.0	80.7	79.7	85.6	81.6	87.0	83.6	86.6	84.5	86.0	84.8	83.1	84.0	79.4	82.2	77.6	80.3
10	77.5	79.4	75.5	78.4	76.7	77.4	78.7	78.1	80.3	79.7	85.1	81.8	87.2	83.7	86.8	84.5	86.0	84.8	82.9	83.9	79.9	82.1	77.2	80.3
11	77.4	79.4	75.4	78.4	76.5	77.3	78.9	78.1	80.2	79.7	84.7	81.8	86.8	83.8	86.8	84.5	86.1	84.8	82.8	83.9	79.8	82.0	77.0	80.2
12	77.4	79.4	75.3	78.4	76.4	77.4	79.0	78.1	80.4	79.7	84.8	81.9	86.5	83.7	86.8	84.5	86.2	84.8	82.8	83.8	79.6	81.9	76.8	80.2
13	77.0	79.3	75.3	78.3	76.2	77.4	79.1	78.1	80.8	79.7	85.2	82.1	86.9	83.9	86.5	84.5	86.1	84.8	82.5	83.7	79.5	81.9	76.6	80.1
14	76.6	79.3	75.3	78.4	76.0	77.4	79.1	78.1	80.8	79.7	85.7	82.1	86.9	83.9	86.3	84.6	85.9	84.8	82.7	83.6	79.7	81.8	76.8	80.1
15	76.4	79.2	75.3	78.4	75.8	77.4	79.0	78.1	81.3	79.8	85.8	82.1	86.9	84.0	85.9	84.6	85.7	84.8	83.0	83.6	80.1	81.8	76.8	80.1
16	76.4	79.1	75.2	78.2	75.7	77.5	79.1	78.2	81.3	79.7	86.3	82.2	87.3	84.1	85.8	84.7	85.4	84.7	83.6	83.6	80.5	81.8	76.7	79.8
17	76.4	79.1	75.2	78.1	75.6	77.5	79.1	78.4	81.6	79.7	86.5	82.4	86.8	84.1	85.8	84.6	85.3	84.7	83.7	83.6	79.3	81.7	76.7	79.8
18	76.8	79.1	75.3	78.0	75.6	77.5	79.1	78.4	81.9	79.8	86.4	82.4	86.6	84.1	86.1	84.6	85.2	84.7	83.6	83.4	78.7	81.6	76.9	79.8
19	77.4	79.1	75.2	78.0	75.5	77.4	78.8	78.4	82.1	79.9	87.1	82.4	86.4	84.1	86.2	84.6	84.9	84.7	83.4	83.4	78.3	81.5	77.6	79.7
20	77.9	79.1	75.2	78.0	75.5	77.5	78.6	78.4	82.2	79.9	86.9	82.4	86.8	84.1	85.8	84.6	84.7	84.7	83.5	83.2	78.2	81.4	78.3	79.7
21	77.9	79.0	75.2	78.0	75.4	77.5	78.6	78.5	82.2	80.1	86.8	82.6	86.8	84.1	85.7	84.6	84.8	84.7	82.9	83.4	78.1	81.4	78.2	79.7
22	77.3	78.9	75.3	77.9	75.3	77.4	78.8	78.6	82.4	80.2	86.8	82.7	86.8	84.1	85.7	84.6	84.9	84.7	82.6	83.4	78.9	81.3	78.1	79.7
23	77.4	78.9	74.9	77.8	75.2	77.5	79.1	78.6	82.9	80.2	86.8	82.8	86.3	84.1	85.7	84.6	84.9	84.6	82.4	83.4	79.0	81.2	78.0	79.7
24	77.5	79.0	74.8	77.8	75.1	77.4	79.5	78.6	83.0	80.2	86.4	82.9	85.8	84.1	85.5	84.6	85.2	84.6	82.3	83.4	78.9	81.3	78.1	79.7
25	77.5	78.9	74.8	77.7	76.2	77.3	80.1	78.6	83.3	80.3	86.2	83.0	85.8	84.1	85.5	84.6	85.2	84.6	81.9	83.3	78.7	81.2	78.1	79.7
26	77.3	78.9	74.7	77.6	76.1	77.4	80.3	78.6	83.5	80.3	85.8	83.0	85.8	84.1	85.8	84.5	84.8	84.5	81.8	83.4	79.0	81.2	78.1	79.7
27	77.1	79.0	74.7	77.6	77.4	77.3	80.8	78.6	84.0	80.3	85.8	83.1	85.9	84.1	85.9	84.6	84.4	84.4	81.2	83.1	78.9	81.1	77.5	79.6
28	76.8	78.9	74.7	77.6	77.4	77.3	80.7	78.7	84.2	80.4	85.6	83.1	86.1	84.1	86.6	84.4	84.1	84.3	80.8	83.1	78.6	80.9	77.6	79.5
29	76.4	78.9	—	—	77.5	77.3	80.4	78.8	83.8	80.6	85.6	83.1	86.4	84.1	87.3	84.4	84.1	84.3	80.8	83.0	78.1	80.8	77.8	79.6
30	75.9	78.9	—	—	77.4	77.4	80.3	79.0	84.1	80.7	85.7	83.2	86.9	84.1	87.8	84.4	84.1	84.2	81.3	83.0	77.9	80.9	77.6	79.6
31	76.0	78.9	—	—	77.5	77.4	—	—	84.1	80.8	—	—	86.9	84.1	87.5	84.6	—	—	81.4	83.0	—	—	77.3	79.6
Mean	77.2	79.2	75.3	78.2	75.9	77.4	79.0	78.2	82.0	79.8	85.7	82.1	86.7	83.9	86.4	84.5	85.6	84.7	82.8	83.6	79.3	81.8	77.6	80.0
The initial 2 or 3 of the readings is omitted ; i.e. 275.0 degrees absolute is written 75.0.																					Year	81.2	81.2	

MINIMUM TEMPERATURE "ON THE GRASS" DURING THE INTERVAL 18H. TO 7H. G.M.T.

252. Eskdalemuir.

Readings, in degrees absolute.

1930.

Month.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	70.8	74.0	69.9	78.0	69.4	78.0	87.0	77.5	73.2	78.0	71.0	73.6
2	72.8	73.0	69.0	80.3	70.1	79.3	78.7	83.7	75.1	78.0	76.3	76.0
3	76.1	72.6	71.0	74.4	71.8	73.9	82.1	83.0	73.0	77.2	75.0	72.2
4	71.8	71.3	72.8	73.9	77.6	76.6	84.7	76.5	79.0	81.7	66.1	66.1
5	72.9	72.6	75.0	71.4	78.8	76.7	80.1	80.2	81.1	76.9	59.4	69.9
6	73.1	70.9	74.8	70.2	77.3	75.9	84.9	76.0	81.0	75.9	60.1	73.3
7	76.6	68.9	72.7	76.2	73.0	73.2	81.0	75.9	78.9	76.9	68.4	75.1
8	73.2	64.8	77.1	75.8	68.2	71.2	74.8	77.9	78.0	78.1	74.2	65.8
9	70.6	70.4	77.9	78.9	71.0	78.4	81.9	82.0	71.8	69.3	78.5	66.5
10	72.0	63.3	66.7	76.9	65.8	78.1	71.8	83.8	83.7	76.9	75.5	61.0
11	72.0	64.4	70.5	66.9	72.8	79.0	71.8	80.6	83.0	80.7	72.8	70.3
12	70.9	64.5	66.9	74.5	72.3	72.6	71.8	78.0	82.1	76.4	70.0	72.8
13	72.8	63.9	64.6	74.3	76.8	75.6	78.8	78.5	80.5	76.9	79.7	75.0
14	73.5	71.1	67.3	71.4	73.9	79.7	84.2	81.0	81.0	82.9	78.7	71.8
15	67.0	69.9	68.1	70.2	74.0	78.3	79.9	80.0	74.6	85.6	79.6	68.2
16	67.8	67.8	70.3	72.0	74.6	77.9	83.9	76.1	72.0	83.5	63.6	69.5
17	73.3	62.8	72.7	70.8	79.3	80.8	84.8	81.6	79.4	75.5	60.8	73.8
18	79.5	64.5	71.1	73.6	77.0	86.3	83.5	—	80.8	78.3	66.9	75.1
19	79.1	61.8	59.6	72.7	77.9	83.8	79.3	79.8	72.8	76.0	73.0	80.0
20	72.3	60.8	59.8	73.0	79.5	77.3	82.8	78.5	77.4	73.6	71.5	79.2
21	68.2	61.0	64.7	71.8	73.8	79.1	80.7	82.0	80.9	72.3	78.5	71.0
22	75.8	66.3	66.7	69.8	78.1	83.0	80.0	80.5	74.8	71.8	77.9	71.5
23	77.3	72.5	65.6	76.1	76.9	81.0	80.1	77.9	84.2	76.9	70.2	74.2

253. Eskdalemuir.

Day.	Cloud Forms.			Cloud Amount (All Forms).					Visibility.					Precipitation.					Remarks on the Weather of the Day.			
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>		15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>
1	Nb.	Nb.	Nb.	10	10	10	10	10	10	h	h	h	h	h	h	★ <sup>0</sup>	d <sub>0</sub>	● <sup>0</sup>	● <sup>0</sup>	● <sup>0</sup>	● <sup>0</sup>	c★ <sup>0</sup> , od <sub>0</sub> , o● <sup>0</sup> m <sub>0</sub> a : o● <sup>0</sup> ● <sup>0</sup> m <sub>0</sub> p : o● <sup>0</sup> ● <sup>0</sup> m <sub>0</sub> n.
2	St-Cu.	Cu : Ci.	St-Cu : Ci-St.	3	7	8	9	9	10	h	k	k	k	k	h	...	...	...	...	...	...	o● <sup>0</sup> , bc, ca : cp● <sup>0</sup> p : o● <sup>0</sup> , od <sub>0</sub> m <sub>0</sub> n.
3	Nb : A-St.	St-Cu : Ci-St : Ci.	St-Cu : Ci.	10	10	8	9	5	1	h	j	k	k	j	j	...	...	...	...	...	...	c● <sup>0</sup> , c● <sup>0</sup> a : cp● <sup>0</sup> , p● <sup>0</sup> △p : bc, b┐n.
4	St : Ci-St.	St : Ci-St.	Nb.	8	2	10	10	10	10	j	j	h	G	G	G	...	...	...	...	...	...	b┐, o★ <sup>0</sup> a : cm <sub>0</sub> , o★ <sup>0</sup> ● <sup>0</sup> m <sub>0</sub> p : o● <sup>0</sup> ● <sup>0</sup> m <sub>0</sub> n.
5	St-Cu : Ci.	Nb.	Nb : A-St.	3	9	10	10	10	10	j	j	h	h	h	h	...	...	...	...	...	...	o● <sup>0</sup> , b, cp● <sup>0</sup> △, o★ <sup>0</sup> a : c★ <sup>0</sup> , ci● <sup>0</sup> p : ci● <sup>0</sup> , ★n.
6	Fr-Cu : St-Cu.	Cu : St-Cu : Ci.	Nb.	4	2	6	10	10	10	l	j	k	j	j	...	...	...	...	...	...	...	bc, b, bc a : bc, c, ci● <sup>0</sup> p : c●n.
7	St.	St.	Nb.	10	10	10	10	10	10	h	h	h	h	h	...	...	...	...	...	...	...	c●, ci● <sup>0</sup> , c★ <sup>0</sup> a : ci● <sup>0</sup> p : c●n.
8	St-Cu.	Fr-Cu : Ci.	St-Cu.	8	7	3	9	9	9	k	l	k	k	j	...	...	...	...	...	...	...	c●, ● <sup>0</sup> , bc a : cp★ <sup>0</sup> , c★ <sup>0</sup> p : cp★ <sup>0</sup> n.
9	Nb.	St-Cu : A-St.	A-St.	10	9	9	9	10	6	i	l	k	j	j	...	...	...	...	...	...	...	cp★ <sup>0</sup> , c★ <sup>0</sup> , ca : c★ <sup>0</sup> p : c, bc n.
10	St-Cu.	St-Cu : Ci.	Nb.	9	9	7	10	10	10	k	k	k	l	h	...	...	...	...	...	...	...	cp● <sup>0</sup> ▲, bc a : o●, o★ <sup>0</sup> m <sub>0</sub> p : o★ <sup>0</sup> ★ <sup>0</sup> m <sub>0</sub> n.
11	St-Cu.	St-Cu.	St-Cu.	9	8	9	7	8	9	j	k	k	l	l	...	...	...	...	...	...	...	o★ <sup>0</sup> , cp△ <sup>0</sup> , cp★ <sup>0</sup> △ a : bcp★ <sup>0</sup> ( ), c★ <sup>0</sup> p : c n.
12	St-Cu.	Nb.	Nb.	9	10	10	10	10	9	j	i	h	G	f	...	...	...	...	...	...	...	cp●, c★ <sup>0</sup> m <sub>0</sub> a : c★ <sup>0</sup> m <sub>0</sub> p : o★ <sup>0</sup> m <sub>0</sub> n.
13	St-Cu.	St.	St.	9	3	10	10	10	9	j	j	l	l	D	...	...	...	...	...	...	...	o★ <sup>0</sup> , c, bc, om <sub>0</sub> a : o★ <sup>0</sup> ★ <sup>0</sup> m <sub>0</sub> p : of, cm <sub>0</sub> n.
14	Nb.	St-Cu : A-St.	St-Cu.	10	10	10	9	9	10	h	j	k	k	k	...	...	...	...	...	...	...	o★ <sup>0</sup> m <sub>0</sub> , o● <sup>0</sup> , c, a : c★ <sup>0</sup> p : c, on.
15	St-Cu.	St-Cu.	St-Cu.	1	3	8	8	8	9	j	k	j	j	j	...	...	...	...	...	...	...	o, b┐, bc┐, ca : c★ <sup>0</sup> p : c, cm <sub>0</sub> n.
16	St-Cu.	A-St : Ci-St.	A-St.	1	7	8	10	10	10	k	k	k	j	I	...	...	...	...	...	...	...	c, b┐, ca : c★ <sup>0</sup> p : cm <sub>0</sub> n.
17	Nb.	Nb.	Nb.	10	10	10	10	10	10	h	h	h	h	h	...	...	...	...	...	...	...	c, o●m <sub>0</sub> a : o●, odm <sub>0</sub> p : odm <sub>0</sub> n.
18	St.	St.	St.	10	10	10	10	10	10	C	D	D	F	F	...	...	...	...	...	...	...	o●m <sub>0</sub> , oFe a : oie, od <sub>0</sub> m <sub>0</sub> p : oid <sub>0</sub> m <sub>0</sub> n.
19	Nb.	Nb.	Nb.	10	10	10	10	10	10	h	h	h	h	h	...	...	...	...	...	...	...	o●m <sub>0</sub> , odm <sub>0</sub> a : oid <sub>0</sub> , od <sub>0</sub> m <sub>0</sub> p : od <sub>0</sub> m <sub>0</sub> n.
20	St-Cu.	Fr-Cu.	St-Cu.	9	9	7	3	3	0	j	j	k	k	k	...	...	...	...	...	...	...	od <sub>0</sub> m <sub>0</sub> early, cp●, p● <sup>0</sup> a : bcp● <sup>0</sup> p : bc, b┐n.
21	St-Cu.	St-Cu : A-St.	St-Cu.	9	10	10	9	10	10	j	j	I	h	h	...	...	...	...	...	...	...	c┐, cp● <sup>0</sup> , cm <sub>0</sub> a : cm <sub>0</sub> , cp● <sup>0</sup> p : ci● <sup>0</sup> m <sub>0</sub> n.
22	Nb.	Nb.	Nb.	10	10	10	10	10	10	i	i	h	h	g	...	...	...	...	...	...	...	c●m <sub>0</sub> , odm <sub>0</sub> a : od, o●m <sub>0</sub> p : odm <sub>0</sub> n.
23	Nb.	St-Cu.	St-Cu.	10	10	9	5	10	8	i	j	j	j	j	...	...	...	...	...	...	...	ci● <sup>0</sup> m <sub>0</sub> , ca : c, bc★ <sup>0</sup> p : c n.
24	Cu : St-Cu : Ci.	St-Cu.	Nb.	4	6	10	10	10	10	j	j	j	h	h	...	...	...	...	...	...	...	bc┐, ci● <sup>0</sup> a : (c● <sup>0</sup> , o● <sup>0</sup> p : o●, om <sub>0</sub> n.
25	Nb.	St-Cu.	Nb.	10	7	9	5	9	6	l	m	l	l	l	...	...	...	...	...	...	...	c●, ▲q, bc ( ), cp● <sup>0</sup> ▲ a : c ( ), c● <sup>0</sup> p : c● <sup>0</sup> , bc┐ [n.
26	St-Cu : A-St.	Cu : A-Cu : Ci.	St-Cu.	10	10	9	10	10	10	k	j	j	k	k	...	...	...	...	...	...	...	c● <sup>0</sup> , bc┐, p★ <sup>0</sup> , ca : c★ <sup>0</sup> p : c n.
27	Nb.	Nb : A-St.	St : Ci.	10	10	9	4	0	0	G	h	h	h	h	...	...	...	...	...	...	...	o★ <sup>0</sup> , ★ <sup>0</sup> m <sub>0</sub> a : o★ <sup>0</sup> m <sub>0</sub> , cm <sub>0</sub> p : b┐m <sub>0</sub> n.
28	Ci.	Ci-Cu : Ci-St.	A-St.	2	9	8	9	10	10	h	k	k	l	l	...	...	...	...	...	...	...	b┐, c┐▲ a : c┐▲, o★ <sup>0</sup> p : o★ <sup>0</sup> ┐n.
29	St.	St.	Ci-St : Ci.	10	8	9	2	6	1	h	F	i	i	h	...	...	...	...	...	...	...	o★ <sup>0</sup> m <sub>0</sub> , bcm <sub>0</sub> a : cm <sub>0</sub> , bm <sub>0</sub> p : bcm <sub>0</sub> , b┐n.
30	St.	Cu : St-Cu.	Ci.	10	9	9	7	1	0	h	G	i	j	j	...	...	...	...	...	...	...	bc, c★ <sup>0</sup> , cd <sub>0</sub> m <sub>0</sub> a : cm <sub>0</sub> , b┐p : b┐n.
31	St-Cu.	St-Cu : A-St.	St-Cu.	9	9	10	10	10	10	h	g	h	I	h	...	...	...	...	...	...	...	c┐m <sub>0</sub> , c★ <sup>0</sup> , cm <sub>0</sub> a : cm <sub>0</sub> p : cm <sub>0</sub> n.
Mean Cloud Am't.				8.0	8.0	8.9	8.7	8.7	8.0													

254. Eskdalemuir.

Day.	Cloud Forms.			Cloud Amount (All Forms).					Visibility.					Precipitation.					Remarks on the Weather of the Day.			
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>		15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>
1	Nb : A-St.	Nb : A-St.	Nb.	10	10	10	10	10	10	h	I	h	h	h	h	...	...	...	...	...	...	c★ <sup>0</sup> , ci● <sup>0</sup> , c★ <sup>0</sup> m <sub>0</sub> a : c★ <sup>0</sup> , c★ <sup>0</sup> m <sub>0</sub> p : c★ <sup>0</sup> m <sub>0</sub> n.
2	St.	St-Cu : A-St.	St-Cu.	10	10	10	9	10	10	h	G	j	k	j	j	...	...	...	...	...	...	c★ <sup>0</sup> m <sub>0</sub> , cm <sub>0</sub> a : cm <sub>0</sub> , ci★ <sup>0</sup> p : c★ <sup>0</sup> , cm <sub>0</sub> n.
3	St-Cu : A-St.	St : St-Cu.	St-Cu.	10	10	10	9	7	9	I	I	j	j	j	...	...	...	...	...	...	...	cm <sub>0</sub> , id <sub>0</sub> m <sub>0</sub> a : cd <sub>0</sub> , cm <sub>0</sub> p : bc, c n.
4	St-Cu.	St-Cu.	St-Cu.	9	10	7	7	5	5	j	j	j	j	j	...	...	...	...	...	...	...	c, cp★ <sup>0</sup> m <sub>0</sub> a : cp★ <sup>0</sup> p : cp● <sup>0</sup> △, bc n.
5	St : St-Cu.	St-Cu : Ci-St.	—	7	6	7	8	0	3	j	j	k	j	k	...	...	...	...	...	...	...	ci★ <sup>0</sup> , bcp● <sup>0</sup> , a : bcp★ <sup>0</sup> , bcp△ <sup>0</sup> p : b, bc n.
6	St-Cu.	Cu : St-Cu.	St : St-Cu.	7	5	6	7	8	9	k	j	j	j	I	...	...	...	...	...	...	...	bc┐, bcp★ <sup>0</sup> a : bcp★ <sup>0</sup> , ci★ <sup>0</sup> p : ci★ <sup>0</sup> , bc n.
7	St-Cu.	St-Cu.	St-Cu.	5	6	6	6	8	2	k	k	k	m	k	...	...	...	...	...	...	...	ci★ <sup>0</sup> , bc a : bc, c★ <sup>0</sup> p : c, bc, b n.
8	St-Cu.	St-Cu.	Cu : St-Cu.	8	9	9	9	10	10	k	k	j	k	k	...	...	...	...	...	...	...	c┐, cjp a : cp★ <sup>0</sup> , c★ <sup>0</sup> p : c n.
9	St-Cu.	St-Cu.	St-Cu.	10	9	8	7	8	0	k	l	l	l	l	...	...	...	...	...	...	...	cp★ <sup>0</sup> , cy a : cy, c★ <sup>0</sup> p : c, b┐n.
10	—	—	Ci.	0	0	0	1	2	0	j	j	j	k	j	...	...	...	...	...	...	...	b┐, b a : b, b┐p : b┐n.
11	St-Cu.	Ci.	A-Cu : Ci.	9	1	1	2	5	6	I	j	k	k	j	...	...	...	...	...	...	...	b┐ early, cm <sub>0</sub> ┐, by a : by, p : b┐, 20 <sup>h</sup> n.
12	Ci.	Fr-Cu : Ci.	Ci.	2	1	2	2	7	10	j	j	j	j	h	...	...	...	...	...	...	...	bc┐, b┐ a : ┐m <sub>0</sub> p : bc┐m <sub>0</sub> n.
13	St-Cu.	St-Cu.	St-Cu.	10	10	10	9	10	10	E	I	j	j	F	...	...	...	...	...	...	...	c┐m <sub>0</sub> , ca : c★ <sup>0</sup> p : c, cm n.
14	St.	St-Cu : Ci.	St-Cu : A-St.	10	10	4	7	10	10	E	E	h	j	I	...	...	...	...	...	...	...	om, of, od <sub>0</sub> f, bcm <sub>0</sub> a : cm <sub>0</sub> p : cm <sub>0</sub> , o★ <sup>0</sup> m n.
15	St-Cu.	Fr-Cu : A-Cu : Ci.	St-Cu.	4	2	2	7	2	0	k	k	k	l	k	...	...	...	...	...	...	...	o★ <sup>0</sup> , bcp★ <sup>0</sup> , bc┐, p★ <sup>0</sup> , b a : b┐p : b┐n.
16	St-Cu.	Cu.	St-Cu.	1	1	3	1	1	0	l	l	k	k	k	...	...	...	...	...	...	...	b┐, bey a : by, b p : b, b┐n.
17	—	Cu.	—	0	0	1	1	0	0	l	l	m	m	l	...	...	...	...	...	...	...	b┐, by a : by ( ) p : by, b┐n.
18	St-Cu.	Cu : St-Cu.	St-Cu : Ci-St.	5	5	5	5	3	0	j	k	k	I	I	...	...	...	...	...	...	...	b┐, bey a : bcp★ <sup>0</sup> y, bcz <sub>0</sub> p : bcz <sub>0</sub> , bm <sub>0</sub> ┐n.
19	St-Cu.	St-Cu.	—	10	10	9	3	0	0	k	k	j	j	I	...	...	...	...	...	...	...	bm <sub>0</sub> ┐, ca : c, bcz <sub>0</sub> , bm <sub>0</sub> p : bm <sub>0</sub> ┐n.
20	—	—	—	0	0	0	0	0	0	j	j	j	k	j	...	...	...	...	...	...	...	bm┐, b a : b, by p : b┐n.
21	Ci.	Ci : Ci-St.	A-St.	1	1	3	9	9	1	j	j	h	h	I	...	...	...	...	...	...	...	b┐ bcyz <sub>0</sub> , a bcyz <sub>0</sub> , cm <sub>0</sub> p : cm <sub>0</sub> b┐n.
22	St-Cu.	St : St-Cu.	St : St-Cu.	10	10	10	10	10	10	j	j	j	j	I	...	...	...	...	...	...	...	b┐ c, cp★ <sup>0</sup> m <sub>0</sub> a : cm <sub>0</sub> , cp★ <sup>0</sup> p : cp★ <sup>0</sup> , om <sub>0</sub> n.
23	St-Cu.	St : St-Cu.	St-Cu.	10																		

255. Eskdalemuir.

March, 1930.

Table for March 1930 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

256. Eskdalemuir.

April, 1930.

Table for April 1930 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

257. Eskdalemuir.

Table for May 1930 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

258. Eskdalemuir.

Table for June 1930 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

259. Eskdalemuir.

July, 1930.

Table for July 1930 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

260. Eskdalemuir.

August, 1930.

Table for August 1930 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.



263. Eskdalemuir.

November, 1930.

Table for 263. Eskdalemuir, November 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

264. Eskdalemuir.

December, 1930.

Table for 264. Eskdalemuir, December 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes Mean Cloud Am't. and Mean Annual Cloud Am't. rows at the bottom.

POTENTIAL GRADIENT (reduced to level surface) : VOLTS PER METRE.  
 Mean Values for periods of sixty minutes, centred at the exact hours, Greenwich Mean Time.

265. Eskdalemuir.

1930.

Month.	January. Factor 6·18.				February. Factor 6·27.				March. Factor 6·38.			
Hour. G.M.T.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
Day.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.
1	220	z-	-790	-155	-265	85	-35	-75	465	545	275	775
2	80	115	195	145	20	40	80	190	890	60	210	320
3	-175	70	115	380	135	165	150	95	220	310	185	365
4	z±	200	105	z-	110	80	45	320	z±	270	220	680
5	90	110	z-	z-	60	70	-	-	225	415	725	z-
6	20	105	255	40	-	-	405	z+	160	-325	-745	55
7	85	135	-270	z-	70	170	145	315	125	430	110	120
8	z-	185	120	(25)	210	165	205	280	175	155	100	125
9	-	-	400	475	200	125	80	150	75	z-	135	-55
10	40	230	85	z-	305	335	155	215	130	120	165	180
11	60	120	150	170	620	265	170	350	245	90	235	360
12	60	75	380	470	220	170	240	470	440	215	-	190
13	z±	145	-400	270	260	245	225	295	415	145	210	295
14	275	-20	135	150	250	250	165	-210	245	165	150	255
15	355	665	595	745	135	205	280	275	165	170	105	255
16	345	230	345	290	350	350	190	320	180	z±	z-	z+
17	330	z-	110	-130	345	230	120	450	220	280	260	520
18	-40	120	230	140	250	345	115	400	z±	440	220	230
19	125	35	z-	z-	275	175	325	560	115	715	350	525
20	145	65	135	355	460	480	205	485	535	685	425	335
21	330	510	415	295	330	295	490	675	300	145	500	495
22	-80	-620	175	465	310	255	345	450	255	410	265	425
23	305	295	185	(405)	185	110	190	190	225	135	200	225
24	215	170	-200	95	115	80	220	220	60	185	200	235
25	z-	z±	280	245	95	310	135	245	-30	115	135	145
26	365	245	(195)	-	55	525	-110	365	185	130	265	180
27	-	-	355	685	190	270	350	550	255	170	445	375
28	265	255	585	495	325	310	130	500	210	180	125	z-
29	430	670	430	365	-	-	-	-	85	90	365	120
30	60	405	(675)	560	-	-	-	-	135	150	245	195
31	515	505	425	160	-	-	-	-	-80	185	65	220
(a)	214	236	283	323	226	226	206	349	250	254	246	304
(b)	176	207	290	318	214	232	177	311	229	219	197	296
Mean ...	(a) 264 (b) 248				(a) 252 (b) 233				(a) 263 (b) 235			

Month.	April. Factor 6·43.				May. Factor $\begin{cases} 6·43. \\ 5·86. \\ 5·48. \end{cases}$				June. Factor 5·46.			
Hour. G.M.T.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
Day.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.
1	80	175	35	15	160	135	165	450	205	125	180	160
2	-150	z-	225	325	330	175	150	135	85	75	95	240
3	385	545	325	110	220	170	120	165	155	190	125	290
4	-35	120	80	210	115	125	z±	180	325	440	240	335
5	145	145	110	435	225	235	125	40	330	255	205	435
6	150	215	15	65	130	195	155	280	290	185	150	250
7	60	100	120	175	170	140	z±	260	210	245	195	175
8	195	225	265	-235	180	165	155	z-	130	95	125	160
9	180	355	165	215	220	150	175	430	55	5	5	10
10	35	265	210	270	265	200	-40	190	25	130	105	z+
11	135	175	170	z-	60	45	115	145	190	105	160	305
12	95	130	200	165	180	90	80	130	370	165	120	75
13	125	95	z-	355	100	z-	z-	155	90	170	160	325
14	210	220	z+	250	215	125	130	255	310	160	180	295
15	320	270	230	390	190	(195)	270	205	240	120	145	240
16	180	210	310	450	560	110	120	-180	115	120	220	215
17	490	200	z-	150	190	190	50	z-	-	-	100	110
17	z-	215	200	195	z-	95	z-	-45	270	300	195	120
19	115	140	165	240	75	-5	75	85	310	55	90	210
20	110	155	-	215	40	85	100	140	95	235	150	215
21	120	125	175	160	110	115	85	95	430	225	125	-335
22	365	235	250	310	60	115	130	165	205	175	195	250
23	240	120	40	-370	115	165	140	165	210	230	235	285
24	170	110	150	250	-30	145	140	295	240	z+	110	220
25	z-	295	220	z+	130	110	30	175	310	z-	z-	250
26	300	410	215	850	135	110	45	205	155	245	115	120
27	275	235	345	245	460	325	160	105	175	95	230	215
28	255	215	255	410	135	90	115	325	110	125	50	170
29	250	205	280	180	80	120	120	160	95	205	125	195
30	240	230	175	230	95	140	240	325	265	345	110	z-
31	-	-	-	-	150	160	240	230	-	-	-	-
(a)	201	212	190	264	176	146	132	203	207	179	146	217
(b)	187	217	187	217	172	140	127	189	206	174	153	198
Mean ...	(a) 217 (b) 202				(a) 164 (b) 157				(a) 187 (b) 183			

NOTE.—The Potential Gradient is reckoned as positive if the potential increases upwards. For indeterminate potential gradient the following notation is used : z+, Indeterminate, positive value ; z-, Indeterminate, negative value ; z±, Indeterminate in magnitude and sign.  
 (a) Mean of all positive readings. (b) Mean from all complete days using both positive and negative readings.

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1930.

Month.		July. Factor 5.38				August. Factor 5.32				September. Factor 5.32.								
Hour. G.M.T.		3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.					
Day.		v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.					
1		205	205	95	z+	230	155	-80	90	405	200	185	225					
2		130	170	65	225	z-	795	z±	110	210	145	170	205					
3		65	195	-30	105	80	185	145	260	350	165	250	460					
4		110	z+	150	145	310	200	-95	z-	400	345	165	495					
5		325	115	135	210	175	225	z-	280	20	(80)	245	210					
6		90	240	145	160	270	205	z-	365	175	270	125	330					
7		65	70	115	185	365	185	-10	500	290	230	170	160					
8		25	170	20	70	270	180	145	440	180	185	225	210					
9		30	155	160	315	235	270	95	400	270	160	195	145					
10		90	40	60	255	15	105	180	140	190	235	155	330					
11		175	230	65	330	180	155	z-	170	355	155	190	270					
12		190	255	175	75	130	z-	z±	z+	120	125	80	170					
13		95	175	110	90	310	145	50	z-	125	(80)	-370	150					
14		215	330	z+	105	100	125	180	185	90	175	115	420					
15		130	115	z±	80	150	195	190	290	500	165	135	290					
16		210	-165	65	-35	175	160	180	260	275	180	125	430					
17		20	20	-335	z-	355	240	100	280	185	190	130	10					
18		55	125	z-	290	35	225	120	95	z-	z-	45	225					
19		205	230	260	140	95	z±	130	295	640	200	-	-					
20		125	235	30	240	115	z-	120	140	-	-	-	80					
21		50	110	115	110	-	-	80	-15	195	160	190	170					
22		100	225	90	260	25	z-	235	-110	60	35	125	405					
23		190	325	110	160	300	295	135	70	-460	350	100	-595					
24		65	15	90	20	135	95	90	115	-	-	120	85					
25		85	65	190	305	80	155	160	315	80	130	90	505					
26		215	220	200	315	305	260	160	175	245	215	65	135					
27		275	175	125	210	155	175	100	-	25	60	70	35					
28		280	225	130	165	-	-	-	z±	65	75	155	205					
29		105	335	95	z-	195	405	165	z-	100	190	165	190					
30		z-	160	z+	170	35	110	135	-40	105	200	115	265					
31		125	155	145	580	50	115	155	130	-	-	-	-					
(a)		135	175	119	197	174	214	139	232	217	174	144	243					
(b)		143	165	109	191	171	180	122	218	175	173	129	224					
Mean ...		(a) 157				(b) 152				(a) 195				(b) 175				
Month.		October. Factor $\left\{ \begin{smallmatrix} 5.92 \\ 5.75. \end{smallmatrix} \right.$				November. Factor 5.75.				December. Factor 5.79.								
Hour. G.M.T.		3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.					
Day.																		
1		155	95	60	105	-100	1080	155	35	-	-	245	410					
2		-	-	245	310	255	z-	85	165	230	315	340	345					
3		90	130	275	330	z-	-105	210	245	165	305	400	580					
4		-65	165	200	z-	195	150	135	260	205	225	565	1060					
5		80	150	95	z-	135	150	115	195	595	505	890	670					
6		105	z-	70	185	165	240	315	425	405	275	390	450					
7		70	110	z-	305	-	-	-320	z-	520	-445	z-	405					
8		z-	z-	95	220	80	115	115	40	675	245	-	195					
9		310	100	190	-55	75	30	70	35	290	260	-	-					
10		195	110	140	130	z-	30	z-	115	-	335	495	425					
11		30	z-	z±	z-	70	75	180	185	-35	130	20	460					
12		55	55	75	120	105	80	50	60	265	180	295	-25					
13		80	20	-405	140	15	-10	55	170	-110	260	80	445					
14		115	205	5	50	75	115	160	60	z-	130	185	450					
15		35	z-	50	z-	80	-275	165	215	325	185	505	635					
16		85	50	-	-	650	175	395	855	z-	z-	-135	35					
17		-	-	160	z±	290	355	285	700	5	265	445	420					
18		-30	(-70)	165	260	170	120	215	40	455	415	260	75					
19		150	210	155	-70	-595	145	170	340	110	200	170	210					
20		30	-	-110	z-	135	25	z-	-50	45	155	145	325					
21		580	z-	25	z-	55	145	235	-405	100	90	135	165					
22		170	175	200	225	70	190	z±	420	185	155	425	270					
23		205	185	80	290	115	95	170	380	40	z-	100	120					
24		100	275	130	-	155	z-	-65	95	120	160	265	150					
25		-	-	200	-	-130	130	z-	z-	325	400	330	230					
26		-	-	-	-	-130	z-	100	335	z-	z±	-55	260					
27		-	-	-	235	145	425	220	690	155	z-	140	55					
28		330	215	150	225	185	325	355	410	50	75	130	-120					
29		55	150	160	-225	z-	145	280	290	105	140	195	260					
30		50	75	15	195	175	260	435	630	125	280	305	645					
31		60	195	120	215	-	-	-	-	-45	235	340	395					
(a)		136	141	127	208	154	200	195	284	239	237	300	362					
(b)		133	123	92	129	104	190	200	266	164	221	302	354					
Mean ...		(a) 153				(b) 119				(a) 284				(b) 260				
										Annual Means				(a)	194	199	186	266
														(b)	173	187	174	243
														(a) 211		(b) 194		

The Potential Gradient is reckoned as positive if the potential increases upwards. For indeterminate potential gradient the following notation is used:  
 z+, Indeterminate, positive value; z-, Indeterminate, negative value; z±, Indeterminate in magnitude and sign.  
 (a) Mean of all positive readings. (b) Mean from all complete days using both positive and negative readings.



Month.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
Day.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.
		hours.		hours.		hours.		hours.		hours.		hours.
1	2c	12.2	2a	9.6	oa	...	2b	5.1	oa	...	1a	0.4
2	1c	2.4	1a	2.5	oa	...	2b	8.6	oa	...	1a	0.5
3	2b	4.3	1a	0.3	1b	0.1	1b	1.1	oa	...	oa	...
4	2c	7.6	1b	0.2	1c	2.2	1a	2.2	2b	4.1	oa	...
5	2c	7.7	1b	(1.1)	2b	8.7	1b	0.3	1a	0.6	oa	...
6	2b	5.0	(1b)	(0.1)	2b	9.3	2a	3.5	1a	0.6	oa	...
7	2c	10.3	oa	...	oa	...	1a	0.1	1b	2.2	oa	...
8	2c	7.5	oa	...	oa	...	1a	1.4	2c	7.7	oa	...
9	2c	4.4	oa	...	2c	8.5	1b	0.6	1b	2.4	2a	5.1
10	2c	9.2	oa	...	1b	0.5	oa	...	1b	1.6	1b	1.4
11	1b	0.3	oa	...	1b	0.1	2b	4.1	2b	5.4	1a	0.1
12	1b	0.6	oa	...	(1b)	1.3	1b	2.9	1b	0.7	oa	...
13	2c	5.3	oa	...	oa	...	2b	3.3	2c	6.3	oa	...
14	2b	5.1	1b	2.7	1b	0.1	1b	0.2	1b	1.7	oa	...
15	oa	...	oa	...	oa	...	oa	...	1b	0.9	oa	...
16	oa	...	oa	...	2c	6.5	oa	...	1b	1.5	(1b)	1.4
17	2c	13.4	oa	...	1b	0.7	1b	1.5	2c	8.3	(1a)	1.1
18	1b	1.5	oa	...	1b	0.7	1b	2.1	2c	6.8	1b	1.1
19	2c	6.9	oa	...	oa	...	1b	0.5	2c	4.3	oa	...
20	1b	1.3	oa	...	1b	1.4	(1a)	1.0	1a	0.3	1a	1.1
21	1b	0.5	oa	...	1b	0.7	1b	0.9	oa	...	2b	4.4
22	2b	8.8	oa	...	1b	0.6	oa	...	1a	0.1	1b	0.1
23	1b	0.2	oa	...	oa	...	2b	6.0	1a	0.1	1c	2.4
24	2b	4.5	oa	...	oa	...	1b	0.4	1a	1.2	2c	5.7
25	1c	2.7	oa	...	1a	2.2	2c	3.5	1a	0.1	1c	0.7
26	(oa)	(...)	2b	5.9	oa	...	oa	...	1c	2.4	(oa)	...
27	(2b)	—	oa	...	oa	...	1a	0.1	1a	0.5	1a	1.3
28	oa	...	oa	...	2b	3.1	oa	...	1a	0.4	1b	2.2
29	1b	0.2	oa	...	2c	4.3	oa	...	oa	...	1b	1.5
30	1a	0.6	oa	...	1a	0.6	oa	...	oa	...	2b	4.1
31	1a	0.5	oa	...	2b	4.3	oa	...	oa	...	oa	...
Total ...	—	123.0	—	22.4	—	55.9	—	49.4	—	60.2	—	34.6
No. of days used	—	30	—	28	—	31	—	30	—	31	—	30
Mean ...	—	4.1	—	0.8	—	1.8	—	1.6	—	1.9	—	1.2

Month.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
Day.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.	Character	Duration of Negative Pot. Grad.
		hours.		hours.		hours.		hours.		hours.		hours.
1	ob	...	2b	4.9	oa	...	oa	...	2b	4.9	oa	...
2	oa	...	2c	8.0	oa	...	oa	...	2c	8.8	oa	...
3	1b	2.0	1a	0.7	oa	...	oa	...	2c	9.3	oa	...
4	1c	2.3	2c	11.8	1b	1.2	2c	8.4	oa	...	oa	...
5	oa	...	2b	4.3	1a	0.9	1b	2.6	oa	...	oa	...
6	1a	0.1	1b	2.7	2b	4.9	1c	2.8	oa	...	1b	2.7
7	oa	...	1b	2.3	1a	2.1	1b	2.4	2c	7.6	2c	11.6
8	1a	1.0	1a	0.1	oa	...	2c	12.5	1a	0.4	2c	—
9	1a	1.2	oa	...	1a	0.8	1b	1.5	1b	1.8	oa	...
10	1a	0.1	1b	2.1	1b	0.2	2c	5.4	2c	3.9	oa	...
11	1a	0.4	1b	1.3	1a	0.1	2c	14.2	oa	...	2c	6.8
12	oa	...	2c	4.9	oa	...	1b	1.8	1a	1.3	1b	2.4
13	1a	0.2	1b	2.2	2b	3.0	2b	4.6	2a	5.5	2c	5.8
14	1b	1.9	1b	0.6	oa	...	2b	4.3	oa	...	1b	2.1
15	1b	0.9	oa	...	oa	...	2c	11.2	2a	5.8	1b	0.7
16	2b	3.8	oa	...	oa	...	(1b)	—	oa	...	2c	16.2
17	2(c)	14.9	1a	0.2	1b	1.3	(2c)	—	oa	...	1a	1.9
18	2b	4.0	1b	1.9	2b	8.1	2c	6.7	2b	3.7	oa	...
19	1a	0.7	2c	6.2	(2c)	—	1b	2.5	2b	5.5	oa	...
20	2b	4.8	1b	2.4	(1b)	—	2c	6.7	2c	9.9	1b	0.5
21	1a	0.6	2(c)	—	oa	...	2c	10.9	2b	7.9	oa	...
22	2a	3.0	2b	3.2	1a	0.9	1b	1.5	2c	4.9	oa	...
23	1a	0.2	1b	1.9	2b	8.0	1b	0.6	1a	0.2	2c	—
24	1a	2.1	1b	0.8	(2b)	—	(2c)	—	2c	8.9	oa	...
25	1a	0.1	1b	0.3	1b	2.0	(oa)	(...)	2c	7.6	1b	0.6
26	1b	0.1	1a	0.1	2b	3.2	(oa)	(...)	2c	11.1	2c	9.4
27	1a	0.9	1b	0.6	1a	2.5	(oa)	(...)	1a	0.1	2b	6.5
28	1b	1.3	(1b)	—	oa	...	oa	...	oa	...	2c	6.4
29	2c	6.1	1c	2.5	oa	...	1b	2.9	1b	0.8	1b	1.5
30	1c	2.1	1b	2.5	1a	0.2	2c	5.2	oa	...	oa	...
31	oa	...	1a	0.9	oa	...	1a	0.5	oa	...	1a	2.7
Total ...	—	54.8	—	69.4	—	39.4	—	109.2	—	109.9	—	77.8
No. of days used	—	31	—	29	—	27	—	28	—	30	—	29
Mean ...	—	1.8	—	2.4	—	1.5	—	3.9	—	3.7	—	2.7

Annual Values.	Character Frequency ...	0	1	2	Duration ...	Total.	No. of Days.	Mean.
		111	153	101					806.0	354	2.28 hours.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 269. Eskdalemuir. (X.)

15,000  $\gamma$  ( $\cdot 15$  C.G.S. unit) +

January, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	1029	1037	1050	1046	1046	1043	1052	1047	1044	1042	1036	1032	1026	1023	1015	1009	1017	1026	1024	1023	1027	1036	1040	1042	1042	1034
2	1042	1041	1042	1036	1038	1043	1046	1043	1046	1040	1031	1027	1029	1031	1023	1013	1030	1037	1038	1032	1032	1027	1040	1042	1042	1036
3 D	1042	1040	1042	1043	1046	1046	1052	1049	1052	1053	1026	1024	1001	1006	996	1013	1013	1026	1032	1011	1009	1021	1041	1039	1037	1030
4 D	1037	1047	1041	1037	1047	1057	1049	1032	1011	997	993	990	989	987	975	1007	1013	998	996	1025	1018	1041	1036	1032	1022	1019
5 D	1022	1059	1017	1017	1012	1035	1030	1012	1018	1012	995	981	971	977	1004	994	986	1007	1017	1015	1011	1015	1017	1006	1022	1008
6 D	1021	1023	1024	1031	1031	1048	1051	1044	1040	1036	1031	1019	980	986	990	1007	1005	1014	1014	1015	1036	1032	1010	1032	1016	1022
7 D	1016	1018	1031	1031	1027	1008	1026	1035	1021	1016	1017	989	1016	1016	1005	1025	1025	1002	1005	1017	1017	1036	1036	1037	1023	1019
8	1023	1024	1006	1019	1034	1041	1037	1027	1034	1023	1016	1002	1008	1019	1031	1025	1025	1026	1037	1037	1036	1051	1036	1043	1034	1029
9	1034	1023	1036	1044	1032	1032	1037	1035	1036	1035	1031	1022	1021	1029	1030	1035	1036	1038	1040	1041	1041	1041	1041	1045	1052	1035
10	1052	1041	1039	1041	1042	1046	1046	1046	1044	1035	1028	1025	1024	1024	1031	1027	1028	1040	1043	1040	1045	1046	1041	1043	1045	1038
11 Q	1045	1045	1042	1041	1042	1046	1046	1049	1047	1045	1041	1037	1028	1027	1034	1035	1038	1041	1041	1045	1047	1047	1046	1042	1044	1042
12 Q	1044	1046	1052	1046	1049	1052	1055	1052	1044	1037	1028	1025	1025	1026	1031	1031	1026	1035	1046	1051	1050	1051	1048	1045	1045	1042
13	1045	1048	1053	1051	1071	1070	1056	1056	1049	1038	1032	1029	1029	1033	1038	1041	1041	1043	1040	1046	1046	1046	1043	1044	1052	1047
14 Q	1052	1046	1046	1046	1051	1055	1061	1058	1050	1035	1031	1028	1027	1032	1035	1039	1042	1045	1050	1051	1051	1049	1048	1043	1044	1044
15	1044	1045	1043	1046	1047	1049	1052	1051	1050	1039	1033	1036	1037	1040	1041	1039	1038	1050	1036	1044	1042	1031	1045	1039	1052	1043
16	1052	1040	1041	1038	1039	1041	1051	1047	1041	1039	1036	1035	1032	1031	1030	1034	1035	1041	1045	1051	1049	1051	1043	1043	1043	1041
17	1043	1042	1040	1042	1048	1046	1049	1050	1048	1041	1031	1028	1030	1035	1041	1036	1031	1031	1040	1025	1030	1025	1020	1031	1029	1037
18	1029	1027	1026	1028	1036	1040	1037	1041	1036	1030	1017	1011	1014	1016	1026	1031	1036	1042	1051	1046	1032	1046	(1044)	(1043)	(1045)	(1033)
19	(1045)	(1038)	(1015)	(1021)	(1002)	(1027)	(1035)	(1044)	1036	1028	1014	1011	1010	1015	1015	1033	1033	1030	1040	1050	1056	1050	1045	1050	1062	(1031)
20	1062	1034	1035	1035	1036	1055	1048	1044	1041	1029	1024	1020	1023	1026	1030	1050	1046	1050	1036	1030	1045	1026	1025	1028	1026	1036
21	1026	1038	1024	1042	1045	1039	1038	1037	1031	1021	1012	1007	1003	1014	1017	1030	1036	1035	1031	1039	1045	1042	1056	1054	1035	1032
22	1035	1041	1053	1037	1040	1040	1055	1046	1041	1028	1015	1018	1020	1010	1033	1039	1034	1040	1035	1044	1035	1043	1050	1036	1047	1036
23	1047	1046	1040	1036	1044	1043	1048	1049	1042	1030	1029	1025	1027	1029	1033	1039	1042	1040	1040	1040	1044	1041	1047	1043	1040	1039
24	1040	1042	1039	1040	1050	1053	1049	1045	1043	1039	1035	1033	1033	1040	1041	1042	1039	1031	1040	1044	1044	1047	1046	1046	1048	1041
25	1048	1047	1043	1043	1053	1047	1042	1054	1045	1045	1036	1035	1034	1032	1036	1040	1038	1043	1046	1046	1045	1049	1050	1048	1045	1043
26 Q	1045	1046	1045	1045	1047	1051	1051	1050	1045	1041	1035	1032	1031	1035	1040	1045	1046	1050	1054	1055	1055	1053	1051	1050	1050	1046
27 Q	1050	1050	1050	1050	1051	1055	1055	1055	1052	1047	1038	1035	1038	1036	1043	1048	1050	1047	1050	1055	1056	1060	1055	1055	1054	1049
28	1054	1050	1047	1051	1055	1059	1061	1060	1050	1035	1029	1027	1027	1039	1054	1053	1052	1050	1043	1034	1035	1047	1054	1051	1054	1048
29	1054	1049	1050	1058	1060	1065	1058	1066	1053	1048	1035	1020	1010	1022	1029	1035	1035	1038	1042	1045	1036	1046	1045	1049	1041	1044
30	1040	1043	1044	1052	1062	1051	1054	1054	1052	1040	1031	1017	1000	992	1016	1017	1033	1039	1043	1044	1044	1043	1057	1041	1044	1038
31	1044	1044	1038	1044	1043	1044	1055	1054	1033	1032	1020	1007	1009	1020	1024	1033	1038	1033	1047	1047	1044	1054	1050	1052	1054	1038
Mean	1041	1040	1039	1040	1042	1046	1048	1046	1042	1035	1027	1021	1018	1021	1025	1030	1032	1035	1037	1038	1039	1042	1043	1042	1042	1036

## TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 270. Eskdalemuir. (-Y.)

4,000  $\gamma$  ( $\cdot 04$  C.G.S. unit) +

January, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	233	249	242	248	257	261	263	266	260	254	259	267	269	283	285	287	273	265	257	251	222	239	254	251	251	259
2	251	251	259	261	259	259	259	257	257	253	257	266	270	279	274	273	263	263	267	259	247	241	249	253	256	260
3 D	256	259	260	262	263	266	265	267	264	273	266	272	281	288	287	273	271	247	281	262	247	246	221	240	252	263
4 D	252	258	259	271	273	268	265	276	267	258	261	257	259	279	284	279	281	281	270	267	232	198	207	217	206	258
5 D	206	194	222	211	251	257	249	257	283	273	277	259	264	275	284	295	265	279	261	241	214	239	214	207	233	250
6 D	233	251	253	259	274	253	261	277	273	262	267	271	281	293	295	277	257	255	257	235	172	166	201	230	256	253
7 D	256	257	252	237	244	264	272	263	270	267	266	253	267	279	273	260	279	255	206	205	241	239	211	230	220	251
8	220	236	253	259	251	258	274	283	268	265	260	263	266	275	271	264	243	263	255	257	257	249	247	249	251	258
9																										

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

271. Eskdalemuir. (Z.)

44,000  $\gamma$  (.44 C.G.S. unit) +

January, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	885	876	858	860	867	873	875	876	878	879	884	884	884	885	893	896	896	897	897	899	898	893	886	882	878	883
2	878	878	876	877	879	880	880	881	881	881	880	881	883	884	888	888	889	889	888	888	888	890	886	883	879	883
3 D	879	879	880	880	879	878	878	878	877	872	875	877	877	878	894	901	908	919	900	910	913	908	899	882	878	888
4 D	878	873	873	873	863	854	858	863	871	877	885	889	894	896	926	925	922	932	941	924	897	914	898	890	885	892
5 D	885	878	863	855	859	859	862	866	861	863	870	884	892	900	910	932	969	952	941	934	924	911	907	906	901	895
6 D	901	891	886	875	849	847	862	867	869	874	879	880	887	892	916	936	954	935	920	930	929	911	896	885	872	894
7 D	872	885	884	859	868	866	870	879	880	882	887	895	897	896	906	912	908	916	928	931	918	909	899	885	879	890
8	879	878	877	877	882	883	878	873	874	877	885	889	890	889	892	900	905	902	899	897	896	894	885	883	885	887
9	885	882	876	881	885	887	888	890	890	887	887	888	887	886	891	893	892	891	891	890	891	891	890	886	883	888
10	883	883	883	884	884	884	884	885	887	887	885	883	883	885	890	893	896	891	889	890	892	890	888	888	887	887
11 Q	887	885	884	883	883	883	883	884	884	883	886	885	884	881	882	885	887	887	887	889	889	887	887	887	886	885
12 Q	886	885	881	882	883	883	882	883	884	884	885	884	884	884	887	889	890	888	885	885	885	885	886	886	886	886
13	886	883	881	881	879	872	869	874	878	880	882	881	881	881	881	881	882	885	888	889	891	893	892	892	889	883
14 Q	889	888	887	884	882	880	878	878	881	883	886	887	884	884	888	888	886	887	887	887	887	886	887	887	887	885
15	887	887	887	887	886	884	882	882	883	886	883	884	884	884	884	884	882	882	886	887	890	900	895	895	894	886
16	894	887	887	886	885	884	880	881	883	881	881	881	883	887	890	895	895	891	890	889	888	888	887	887	887	887
17	887	887	887	888	886	884	883	883	883	883	884	884	883	883	885	888	888	898	924	950	933	930	925	916	906	897
18	906	900	897	895	895	893	891	889	890	886	887	888	887	885	886	889	889	891	890	893	904	898	896	896	900	892
19	900	890	881	875	865	866	874	878	880	881	884	884	886	889	896	901	903	901	901	900	901	895	891	890	878	888
20	878	879	883	882	884	879	879	882	882	881	880	878	878	880	885	888	889	891	904	920	917	932	923	913	901	892
21	901	901	870	878	874	874	878	882	888	889	889	889	889	890	898	897	893	893	898	897	894	894	896	889	889	889
22	889	890	889	887	886	885	884	885	888	889	891	891	888	889	890	889	893	894	894	899	896	896	894	896	893	891
23	893	882	884	885	886	887	886	887	888	889	887	891	890	887	888	890	888	888	890	893	891	893	893	890	891	889
24	891	890	886	879	877	878	879	880	882	881	878	879	879	879	880	880	883	887	888	894	897	895	892	890	888	884
25	888	886	884	880	875	877	878	876	877	875	875	875	878	878	882	885	887	886	886	887	887	886	886	886	886	882
26 Q	886	885	880	881	880	880	880	880	882	880	880	876	876	874	877	879	879	879	880	881	883	883	882	881	881	880
27 Q	881	881	880	880	879	879	879	879	880	881	881	881	880	880	883	883	881	880	881	881	882	882	882	881	881	881
28	881	882	882	881	880	879	877	877	879	879	877	876	875	872	874	875	875	876	881	887	891	891	888	883	879	880
29	879	879	878	873	869	867	866	864	868	872	874	878	880	880	884	887	887	886	884	883	887	886	880	879	880	878
30	880	879	878	876	872	872	870	865	867	872	877	878	884	887	892	906	898	897	891	888	886	886	886	878	874	882
31	874	872	876	876	876	876	873	874	879	879	879	881	881	882	883	884	884	885	884	884	889	883	879	878	876	880
Mean	886	883	879	879	877	877	877	878	880	881	882	883	884	885	890	894	896	896	897	899	897	896	892	889	886	887

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE:

272. Eskdalemuir.

MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

January, 1930.

Day.	Terrestrial Magnetic Elements															Character Figure $\frac{ZR^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + $^{\circ}A.$
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 $\gamma$ +		Minimum 15000 $\gamma$ +		Range.	Maximum 4000 $\gamma$ +		Minimum 4000 $\gamma$ +		Range.	Maximum 44000 $\gamma$ +		Minimum 44000 $\gamma$ +		Range.			
	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$			
1	6 14	1061	1001	15 3	60	14 42	296	195	20 20	101	20 20	899	852	2 4	47	160	1	83.5
2	7 43	1052	1017	14 5	35	12 51	286	235	20 43	51	21 3	891	875	2 10	16	41	1	83.5
3 D	8 33	1069	980	12 8	89	14 1	299	197	16 43	102	16 43	932	870	9 0	62	222	1	83.5
4 D	19 10	1170	924	19 24	246	19 16	365	142	21 21	223	18 53	957	854	4 43	103	1209	2	83.3
5 D	17 48	1086	941	15 40	145	15 14	313	161	19 37	152	15 39	984	851	2 49	133	618	2	83.3
6 D	20 22	1065	959	14 23	106	14 20	341	151	19 49	190	16 11	999	837	4 39	162	736	2	83.3
7 D	21 27	1067	960	10 58	107	16 32	293	178	18 47	115	18 48	936	841	1 48	95	337	1	83.3
8	21 49	1081	986	11 45	95	7 7	292	212	0 1	80	16 4	909	871	7 24	38	169	1	83.3
9	23 44	1053	1007	1 23	46	1 13	286	245	6 9	41	14 22	894	874	1 40	20	42	1	83.3
10	20 26	1065	1011	15 34 } 15 37 }	54	13 39	273	226	20 20	47	16 3	897	881	0 22	16	54	1	83.3
11 Q	7 9	1051	1024	12 41	27	14 10	273	251	8 57	22	20 0	889	880	13 23	9	13	0	83.2
12 Q	2 2	1058	1020	15 50	38	13 40	283	251	9 0	32	15 40	891	880	2 0	11	26	0	83.1
13	5 27	1091	1025	11 52	66	17 11	286	233	9 7	53	21 50	893	866	5 37	27	79	1	83.1
14 Q	0 5	1066	1021	11 17	45	14 10	277	246	0 30	31	14 23	889	878	7 5	11	31	1	83.1
15	23 44	1068	1020	20 50	48	17 33	285	205	23 56	80	21 10	903	881	16 30	22	92	0	83.1
16	0 3	1066	1025	13 40	41	16 52	279	212	0 1	67	15 25	896	879	6 27	17	65	1	83.1
17	18 40	1062	995	19 18	67	18 19	333	237	21 38	96	19 19	963	882	12 40	81	203	1	83.0
18																		

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

273. Eskdalemuir. (X.)

15,000  $\gamma$  (.15 C.G.S. unit) +

February, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	1054	1054	1039	1049	1034	1059	1066	1058	1036	1033	1039	1026	1010	1019	1007	1030	1032	1033	1050	1034	1047	1048	1047	1058	1035	1040
2	1035	1033	1052	1047	1044	1042	1053	1050	1045	1029	1025	1025	1008	1015	1027	1031	1034	1034	1037	1044	1062	1039	1054	1054	1057	1039
3	1057	1039	1037	1035	1045	1048	1053	1042	1045	1041	1024	1002	1002	1010	1021	1035	1042	1028	1076	1042	1059	1063	1042	1046	1045	1039
4	1045	1049	1048	1049	1047	1042	1044	1046	1035	1021	1018	1021	1020	1019	1023	1037	1044	1049	1047	1048	1044	1067	1058	1048	1048	1040
5	1048	1052	1048	1044	1053	1054	1058	1057	1054	1029	1029	1025	1021	1013	1020	1033	1039	1042	1051	1052	1052	1050	1051	1051	1049	1043
6 Q	1049	1048	1050	1049	1053	1054	1058	1054	1049	1044	1032	1022	1021	1023	1027	1034	1031	1037	1049	1061	1052	1055	1055	1056	1055	1044
7	1055	1054	1051	1050	1054	1057	1059	1058	1053	1043	1032	1027	1028	1027	1031	1039	1041	1048	1050	1053	1068	1055	1055	1056	1057	1048
8 Q	1057	1054	1055	1055	1058	1059	1059	1058	1054	1048	1027	1012	1014	1022	1027	1032	1029	1034	1037	1033	1034	1041	1044	1043	1043	1041
9 Q	1043	1044	1044	1044	1049	1053	1056	1057	1053	1040	1028	1021	1020	1032	1039	1049	1053	1054	1055	1058	1059	1058	1056	1055	1055	1047
10 Q	1055	1055	1054	1055	1059	1063	1062	1063	1063	1051	1030	1021	1019	1027	1030	1029	1039	1042	1049	1051	1051	1046	1050	1054	1054	1047
11	1054	1054	1050	1060	1059	1060	1059	1064	1059	1053	1041	1039	1039	1044	1048	1052	1055	1055	1059	1059	1058	1058	1059	1061	1062	1054
12 D	1062	1060	1050	1049	1052	1059	1074	1074	1060	1048	1052	1050	1029	1038	1022	1037	1027	1027	1043	1056	1056	1060	1098	954	958	1045
13 D	958	997	1020	994	1013	1015	1014	1033	1029	984	994	993	972	973	1002	1039	1027	1030	1018	1044	999	1009	1029	1034	1038	1011
14 D	1038	1019	985	1002	1024	1035	1027	1030	1025	1019	1008	1011	1007	1008	1013	998	1016	1014	1064	1023	1039	1023	1015	1032	1019	1019
15 D	1018	1025	1017	1023	1028	1025	1028	1027	1027	1031	1018	996	1013	1010	1034	1026	1025	1027	1024	1049	1052	1028	1042	1038	1043	1027
16 D	1043	1043	1023	1058	1031	1034	1037	1024	1036	998	1000	1009	1009	1020	1027	1028	1033	1029	1056	1047	1028	1077	1046	1041	1028	1032
17	1028	1019	1002	1038	1039	1041	1029	1036	1045	1036	1028	1021	1011	1018	1029	1015	1028	1038	1029	1038	1038	1033	1041	1042	1041	1030
18	1041	1042	1043	1045	1033	1036	1045	1038	1046	1048	1034	1022	1013	1021	1011	1012	1028	1039	1023	1049	1034	1040	1048	1041	1025	1034
19	1025	1044	1042	1038	1054	1051	1035	1042	1046	1043	1032	1024	1014	1016	1023	1036	1027	1029	1032	1034	1053	1056	1042	1043	1045	1037
20	1045	1048	1055	1043	1038	1043	1048	1053	1049	1045	1038	1034	1018	1025	1026	1026	1040	1033	1029	1034	1037	1048	1038	1067	1043	1040
21	1042	1040	1041	1037	1040	1042	1045	1047	1051	1047	1031	1021	1020	1022	1027	1034	1033	1038	1042	1050	1046	1050	1062	1048	1048	1040
22 Q	1048	1044	1044	1051	1053	1052	1046	1050	1056	1053	1042	1027	1022	1026	1030	1033	1042	1046	1049	1053	1050	1047	1053	1052	1050	1045
23	1050	1056	1055	1048	1051	1051	1052	1057	1050	1053	1048	1031	1030	1030	1029	1037	1044	1052	1053	1051	1052	1059	1058	1058	1057	1048
24	1057	1065	1056	1057	1057	1057	1056	1064	1066	1048	1028	1027	1022	1022	1028	1030	1041	1042	1048	1044	1045	1059	1058	1058	1055	1047
25	1055	1054	1053	1050	1066	1041	1046	1053	1032	1046	1007	1007	991	1005	1017	1031	1031	1049	1052	1042	1043	1045	1066	1020	1032	1037
26	1032	1058	1042	1038	1047	1046	1047	1041	1047	1040	1024	1022	1019	1025	1030	1042	1042	1028	1042	1053	1048	1051	1047	1053	1049	1041
27	1048	1054	1055	1049	1037	1056	1065	1056	1049	1041	1031	1023	1021	1031	1041	1042	1037	1040	1052	1045	1047	1051	1061	1063	1047	1046
28	1047	1047	1051	1046	1037	1057	1062	1057	1049	1031	1021	1011	1020	1027	1011	1012	1025	1031	1031	1041	1049	1058	1067	1056	1049	1039
Mean	1043	1045	1041	1043	1045	1048	1049	1050	1047	1037	1027	1020	1015	1020	1025	1031	1036	1037	1045	1046	1047	1049	1051	1046	1042	1039

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

274. Eskdalemuir. (-Y.)

4,000  $\gamma$  (.04 C.G.S. unit) +

February, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	259	255	281	246	248	246	259	260	273	268	258	265	267	276	262	261	264	232	232	260	260	255	250	233	254	257
2	254	240	241	256	248	259	262	260	259	266	271	268	270	266	274	270	268	268	263	235	214	245	246	238	240	256
3	240	254	271	266	261	258	256	268	254	258	255	261	274	275	254	274	267	245	216	252	234	242	241	255	262	256
4	262	265	261	255	253	259	259	255	255	257	261	268	275	277	272	274	271	268	263	255	261	240	240	245	254	260
5	254	263	275	269	258	259	261	255	256	249	255	267	280	288	280	279	272	263	265	263	262	259	255	255	256	264
6 Q	256	261	263	261	261	260	259	255	253	248	245	253	265	272	272	275	261	260	253	248	261	262	261	254	261	259
7	261	261	262	262	264	263	261	257	255	249	255	265	275	275	279	274	268	267	271	270	240	260	263	261	261	263
8 Q	261	262	261	261	261	261	261	255	253	248	250	263	275	283	285	289	277	262	270	267	255	248	245	242	243	262
9 Q	243	246	250	257	255	257	257	256	254	248	247	255	270	281	280	275	267	267	267	266	265	262	261	254	249	260
10 Q	249	257	261	262	265	263	259	255	253	247	250	261	277	282	281	284	275	268	267	263	262	255	257	260	260	263
11	260	261	286	269	253	251	252	255	252	249	250	257	270	273	281	276	274	270	268	267	261	261	261	258	234	263
12 D	234	22																								

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

275. Eskdalemuir. (Z.)

44,000 γ (-44 C.G.S. unit) +

February, 1930.

Hour, G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mean.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	892	888	880	873	864	870	872	874	874	881	894	895	896	901	911	919	917	924	924	911	904	901	901	897	881	894
2	881	871	876	872	878	886	887	889	892	889	889	890	895	900	897	900	902	904	910	935	918	914	904	880	881	894
3	881	879	880	890	895	898	894	898	893	894	896	899	902	906	920	917	910	921	920	908	902	885	888	890	886	899
4	886	886	888	890	892	892	892	894	896	896	896	896	897	897	898	898	901	903	901	899	894	890	881	880	880	893
5	880	880	877	878	883	887	888	890	892	896	896	893	896	900	905	905	906	906	904	902	901	901	901	901	899	895
6 Q	899	899	898	898	899	899	900	900	901	901	901	898	896	895	895	901	908	909	908	905	902	901	900	900	898	901
7	898	896	895	895	895	895	895	897	898	900	899	895	896	897	897	898	901	900	900	900	904	899	898	897	897	898
8 Q	897	896	896	896	895	899	895	896	897	899	900	900	898	898	899	901	907	913	913	915	918	916	912	909	906	908
9 Q	906	903	900	898	898	898	898	899	901	904	902	897	894	893	892	894	896	895	895	895	895	895	896	897	897	896
10 Q	896	895	894	893	892	891	891	892	894	896	898	897	895	897	898	898	899	899	899	896	897	900	900	897	895	896
11	895	893	887	876	880	883	885	886	888	890	890	889	888	887	887	890	890	891	891	891	891	891	891	891	891	888
12 D	893	892	890	889	889	888	882	873	877	881	882	882	884	884	887	890	896	906	905	900	899	902	905	737	788	882
13 D	788	819	831	855	873	888	888	891	891	893	891	891	903	921	940	954	931	926	963	960	954	935	921	917	905	903
14 D	905	860	786	787	862	884	890	892	898	897	896	896	901	907	930	949	954	958	944	928	926	913	914	899	866	898
15 D	866	842	859	863	872	874	877	882	889	888	889	893	899	902	914	934	966	952	941	931	916	910	899	900	905	899
16 D	905	881	858	835	833	858	866	876	876	882	887	893	894	896	908	935	928	921	925	920	920	900	891	887	881	890
17	881	869	871	869	871	871	880	878	882	885	889	890	892	895	897	910	928	922	916	917	912	907	902	898	894	893
18	894	893	893	889	881	876	875	882	885	886	888	888	889	889	895	903	903	907	930	921	909	907	905	897	871	895
19	871	892	886	884	863	859	867	874	885	890	893	892	889	889	890	898	912	923	912	909	910	900	897	894	893	890
20	893	893	884	880	883	887	888	887	888	888	885	882	882	884	888	890	897	907	911	914	924	916	906	900	893	894
21	893	892	892	890	891	890	885	879	880	883	889	887	888	889	891	894	899	899	897	895	896	895	893	892	891	891
22 Q	891	892	891	893	884	884	885	882	885	886	888	886	884	882	885	886	887	889	889	890	891	893	895	897	895	888
23	895	890	884	885	885	885	884	883	880	878	880	880	878	880	883	887	895	898	895	895	899	894	892	893	893	887
24	893	893	890	888	886	884	878	875	876	882	889	888	887	888	892	896	900	898	895	899	906	893	889	888	888	890
25	888	887	886	884	869	863	872	876	882	884	890	894	896	900	903	909	911	909	932	911	901	898	885	858	846	890
26	846	834	854	872	878	879	881	878	882	884	882	881	880	882	886	888	899	913	902	894	892	890	893	890	886	883
27	886	877	876	880	872	871	875	878	881	879	880	880	881	881	883	889	893	892	888	890	892	888	884	876	870	882
28	870	877	877	872	870	873	875	872	874	876	875	880	881	884	896	914	914	918	921	913	902	894	888	883	884	888
Mean	885	880	878	878	880	883	884	885	887	889	891	890	891	894	899	905	909	911	912	909	906	901	898	887	884	893

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

276. Eskdalemuir.

MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

February, 1930.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{ER^2}{100\gamma^2}$ §	Magnetic Character of Day (0-2)	Temperature in Magnet House $200 +$
	North Component.					West Component.					Vertical Component.							
	Maximum $15000 \gamma +$		Minimum $15000 \gamma +$		Range.	Maximum $4000 \gamma +$		Minimum $4000 \gamma +$		Range.	Maximum $44000 \gamma +$		Minimum $44000 \gamma +$		Range.			
1	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	272	I	82.7
2	5 29	1084	993	14 12	91	13 30	306	187	17 27	119	17 23	929	860	4 10	69	271	I	82.7
3	19 30	1085	989	12 24	96	11 50	287	180	19 13	107	(19 —)	(940)	860	0 31	(80)	270	I	82.7
4	19 58	1118	981	13 20	137	13 0	293	173	17 28	120	17 29	932	(870)	(1 —)	(62)	370	I	82.7
5	21 1	1095	1004	9 29	91	12 16	290	224	21 58	66	16 50	905	878	21 47	27	134	I	82.7
6 Q	6 28	1063	1003	12 40	60	13 4	302	245	9 0	57	15 30	908	874	2 18	34	80	I	82.7
7	18 37	1066	1019	11 13	47	14 47	281	233	18 33	48	16 20	910	893	13 14	17	48	0	82.7
8 Q	19 53	1087	1024	12 19	63	12 12	287	224	19 46	63	19 45	906	895	4 4	11	81	I	82.5
9 Q	6 13	1060	1008	11 32	52	14 49	296	240	23 12	56	20 4	918	895	3 35	23	64	0	82.5
10 Q	21 59	1064	1019	11 31	45	12 46	288	241	23 37	47	9 2	904	891	14 10	13	44	0	82.5
11	7 48	1065	1014	11 22	51	14 36	294	246	9 7	48	21 30	900	891	5 0	9	50	0	82.5
12 D	23 17	1071	1035	11 40	36	2 18	304	235	23 43	69	0 1	895	874	2 45	21	65	I	82.5
13 D	21 52	1172	861	23 12	311	13 31	348	—	22 45	349	21 50	951	873	23 10	278	2958	2	82.5
14 D	19 10	1097	924	0 27	173	14 18	348	106	1 42	242	18 22	995	773	0 26	222	1378	2	82.5
15 D	18 3	1151	906	2 21	245	13 32	341	166	19 47	175	17 55	962	728	2 24	234	1454	2	82.3
16 D	14 7	1074	975	16 26	99	14 6	322	185	19 33	137	15 44	975	840	0 39	135	468	2	82.3
17	18 18	1133	976	10 40	157	14 18	310	159	1 12	151	14 50	940	823	3 58	117	611	2	82.3
18	20 9	1058	980	14 59	78	14 7	298	195	0 14	103	16 10	930	857	0 59	73	220	I	82.3
19	18 40	1079	992	11 28	87	14 40	299	154	18 18	145	18 16	943	873	24 0	70	335	I	82.3
20	3 59	1065	982	0 9	83	15 0	294	207	19 51	87	17 5	925	852	4 33	73	198	I	82.1
21	23 6	1099	1007	17 17	92	18 42	289	188	23 33	101	20 10	928	878	2 40	50	212	I	82.1
22 Q	22 3	1103	1015	11 32	88	15 0	287	226	21 53	61	16 30	900	882	6 40	18	118	0	82.1
23	23 0	1072	1019	1														

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.  
Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

277. Eskdalemuir. (X.)

15,000  $\gamma$  ( $\cdot 15$  C.G.S. unit) +

March, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1 D	1047	1054	1049	1043	1058	1052	1052	1027	1041	1033	993	1001	1002	1003	1027	1028	1049	1024	1039	1039	1067	1061	1041	1054	1054	1037
2 D	1054	1039	1036	1036	1050	1042	1037	1034	1022	1013	978	991	999	1016	1026	1038	1047	1038	1066	1035	1039	1079	1038	1044	1043	1033
3	1043	1033	1036	1040	1049	1049	1041	1048	1036	995	1018	1014	1014	1013	1028	1032	1048	1049	1045	1049	1049	1060	1072	1055	1046	1038
4	1045	1035	1046	1043	1042	1035	1039	1055	1050	1042	1027	1019	1014	1016	1026	1035	1040	1042	1043	1052	1053	1052	1053	1053	1052	1040
5 Q	1052	1051	1048	1048	1052	1053	1055	1058	1054	1041	1027	1019	1015	1014	1017	1027	1034	1041	1046	1048	1052	1052	1052	1050	1052	1042
6	1052	1052	1051	1052	1052	1054	1056	1057	1054	1043	1032	1028	1020	1027	1030	1037	1038	1045	1051	1053	1054	1053	1053	1052	1053	1046
7 Q	1053	1053	1054	1054	1053	1055	1056	1058	1056	1048	1036	1024	1019	1019	1027	1034	1041	1045	1050	1053	1054	1054	1053	1053	1054	1046
8 Q	1053	1053	1055	1054	1053	1055	1057	1056	1056	1049	1037	1031	1024	1027	1031	1034	1038	1045	1047	1052	1053	1055	1056	1056	1057	1047
9 Q	1057	1058	1058	1057	1057	1057	1057	1057	1057	1055	1046	1036	1032	1034	1038	1047	1046	1047	1053	1056	1057	1057	1056	1056	1057	1058
10 Q	1058	1057	1056	1056	1058	1061	1061	1061	1056	1044	1035	1028	1026	1028	1038	1048	1056	1057	1058	1058	1059	1052	1050	1048	1050	1050
11	1050	1051	1052	1056	1057	1056	1057	1056	1052	1048	1046	1044	1040	1037	1050	1032	1045	1052	1057	1076	1057	1023	1041	1056	1046	1050
12 D	1046	1044	1050	1017	1031	1012	1031	1019	994	1025	1012	993	941	950	1011	1027	1041	1027	1047	1030	1016	1018	1022	1021	983	1016
13 D	983	1006	1016	1020	1009	1022	1053	1021	1022	1015	1008	1007	999	972	1013	1050	1026	1046	1042	1061	1047	1032	1033	1006	1013	1022
14 D	1013	1021	1026	1018	1017	1018	1032	997	1008	1012	1006	996	995	991	1009	1072	1031	1026	1026	1068	1060	1022	1016	1039	1051	1022
15	1051	1032	1008	1006	998	1024	1033	1000	1012	1021	1002	1000	1012	1017	1032	1063	1034	1040	1038	1022	1031	1039	1042	1051	1055	1025
16	1055	1028	1042	1048	1023	1012	1021	1039	1032	1016	997	1002	981	1004	1016	1027	1024	1040	1046	1093	1077	1030	1026	1042	1035	1030
17	1035	1046	1032	1030	1016	1027	1021	1027	1032	1007	994	1001	1001	1012	1016	1037	1029	1037	1073	1042	1032	1060	1047	1043	1037	1029
18	1037	1047	1043	1046	1045	1042	1040	1044	1038	1032	1022	1018	1022	1018	1031	1033	1043	1027	1086	1074	1033	1058	1053	1029	1050	1040
19	1050	1032	1014	1042	1038	1037	1027	1017	1035	1018	1012	985	982	995	990	1034	1028	1036	1037	1042	1052	1046	1053	1032	1027	1026
20	1027	1041	1051	1048	1052	1059	1052	1047	1037	1027	1017	1012	1006	1014	1019	1037	1026	1042	1039	1067	1055	1046	1042	1062	1036	1039
21	1036	1046	1046	1045	1039	1041	1042	1032	1031	1022	1013	1013	1019	1027	1027	1028	1046	1047	1043	1033	1035	1053	1041	1066	1042	1036
22	1042	1042	1061	1047	1067	1063	1069	1047	1028	1001	1005	1000	996	1002	1021	1025	1042	1020	1037	1037	1041	1062	1052	1038	1042	1035
23	1042	1044	1046	1047	1050	1049	1052	1054	1056	1037	1022	1016	1017	1027	1022	1032	1046	1055	1066	1063	1050	1052	1059	1071	1053	1045
24	1053	1053	1047	1050	1067	1031	1050	1052	962	945	1001	1003	1005	1000	991	1012	1006	1037	1042	1062	1047	(1045)	(1044)	(1044)	(1045)	1027
25	(1045)	(1052)	(1052)	(1045)	(1045)	(1036)	(1053)	(1056)	1044	1035	1026	1019	1014	1017	1036	1017	1032	1041	1047	1052	1053	1054	1048	1058	1057	1041
26	1057	1038	1047	1046	1032	1050	1057	1057	1050	1037	1003	984	1007	1007	1023	1027	1051	1057	1046	1053	1058	1055	1057	1059	1060	1040
27	1060	1062	1059	1057	1057	1052	1057	1055	1009	996	992	996	1001	1011	1013	(1030)	(1028)	1049	1055	1058	1052	1046	1043	1047	1044	1037
28	1044	1056	1043	1052	1043	1047	(1053)	(1032)	1025	1017	1001	982	977	1001	1013	1033	1036	1046	1053	1057	1057	1076	1072	1053	1037	1036
29	1037	1058	1042	1034	1040	1061	1042	1038	1032	1028	1018	981	981	1011	1012	1045	1035	1065	1047	1046	1054	1060	1062	1057	1051	1036
30	1051	1050	1050	1044	1056	1061	1038	1040	1039	1016	1001	991	997	1009	1025	1038	1045	1056	1062	1052	1057	1068	1051	1050	1050	1039
31	1051	1043	1055	1049	1051	1054	1053	1052	1044	1032	1017	998	992	993	1023	1039	1048	1052	1058	1058	1065	1058	1057	1048	1050	1041
Mean	1045	1044	1044	1043	1044	1043	1047	1042	1034	1024	1014	1008	1005	1010	1022	1036	1038	1041	1050	1058	1051	1051	1048	1048	1045	1037

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

278. Eskdalemuir. (-Y.)

4,000  $\gamma$  ( $\cdot 04$  C.G.S. unit) +

March, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1 D	241	263	256	283	276	237	250	258	254	248	251	257	293	279	281	281	246	235	233	252	245	239	239	255	229	256
2 D	229	260	274	269	250	249	260	260	254	249	254	259	275	277	287	294	241	253	190	251	260	262	234	236	243	256
3	243	261	283	249	253	259	265	263	253	244	255	261	267	266	273	265	259	260	254	259	253	247	242	236	234	257
4	234	261	262	240	245	254	259	253	246	241	241	249	266	275	266	273	250	254	254	246	255	255	254	254	254	254
5 Q	254	253	254	254	255	256	255	252	243	240	246	249	265	273	278	272	266	260	256	257	259	259	259	255	254	257
6	254	254	255	255	255	256	255	254	247	239	245	267	272	280	281	275	266	261	261	261	259	255	255	255	255	259
7 Q	255	254	254	255	254	254	254	252	242	235	242	253	267	269	268	265	261	256	256	257	257	259	260	259	259	256
8 Q	259	255	254	253	253	255	255	258	245	241	242	249	261	267	266	261	257	255	255	257	259	259	259	259	257	256</

TERRESTRIAL MAGNETIC FORCE : VERTICAL COMPONENT.  
 Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

279. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

March, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 D	882	870	871	839	831	848	860	866	871	875	878	880	879	895	899	907	920	923	922	907	887	874	875	857	853	879
2 D	854	859	849	852	862	868	871	874	877	880	884	884	883	889	893	908	931	919	919	899	889	879	871	876	873	882
3	873	850	841	862	872	875	875	874	876	880	879	878	881	885	888	892	897	893	893	888	888	885	872	872	875	878
4	875	870	854	868	873	875	876	880	884	886	885	884	880	883	888	893	898	894	889	889	885	883	881	880	880	881
5 Q	880	880	880	880	880	880	880	880	884	882	879	875	871	872	875	877	884	884	884	884	881	880	880	880	880	880
6	880	880	880	880	880	880	879	879	880	881	876	872	875	875	876	880	884	882	880	880	878	878	876	876	876	879
7 Q	876	876	876	876	876	876	876	876	880	877	879	874	871	872	875	881	885	884	881	884	880	879	877	876	876	878
8 Q	876	876	876	876	876	876	876	875	876	876	874	869	867	867	871	876	879	876	879	886	876	876	876	875	875	875
9 Q	876	876	876	876	876	875	874	874	876	873	869	865	864	867	868	873	877	876	873	873	873	874	876	874	873	873
10 Q	873	873	873	873	872	872	872	876	874	874	870	863	859	862	865	869	873	873	872	872	873	877	879	880	877	872
11	877	877	876	874	873	872	872	872	872	872	864	863	861	860	860	868	869	873	872	872	883	933	917	915	898	877
12 D	898	885	879	867	776	758	771	812	817	823	859	860	874	917	914	901	911	938	962	941	931	900	890	870	814	871
13 D	814	784	792	801	816	819	826	834	862	876	881	880	882	893	900	931	928	934	931	917	890	882	854	844	839	868
14 D	839	833	831	823	851	862	868	860	873	874	881	880	879	886	903	940	925	903	908	912	907	897	895	886	828	880
15	829	810	810	824	834	838	855	864	864	865	870	873	874	886	900	935	936	937	940	904	894	890	890	883	860	876
16	860	847	846	855	863	865	864	857	860	863	868	868	873	882	880	886	903	900	896	892	878	878	877	855	843	871
17	843	851	863	873	868	855	865	871	874	873	873	875	877	879	886	894	895	905	912	900	884	878	874	877	873	877
18	873	850	831	843	852	864	874	878	880	880	878	875	877	882	885	895	901	906	917	903	901	907	891	883	859	880
19	860	826	816	849	873	879	879	884	883	883	874	876	882	887	884	892	891	888	891	889	891	892	884	880	860	876
20	860	864	862	855	861	861	861	870	875	879	879	876	874	878	884	898	905	900	897	896	892	891	887	859	864	878
21	864	871	871	861	860	866	874	878	879	878	875	873	872	874	882	887	892	909	922	922	918	909	905	899	891	886
22	892	888	862	823	809	810	817	831	842	854	863	865	865	866	871	880	899	927	924	911	902	892	880	884	884	869
23	884	887	885	884	884	884	884	887	884	884	880	879	876	877	880	884	884	884	887	887	891	896	894	891	881	875
24	875	871	867	852	853	856	861	874	878	870	884	888	887	891	905	915	909	907	908	903	897	895	893	892	874	885
25	874	869	858	870	862	865	875	884	879	876	875	872	870	868	874	887	896	894	892	887	888	890	892	878	865	878
26	865	861	848	861	856	856	865	876	880	877	871	871	871	872	882	887	892	898	901	898	896	889	888	886	884	877
27	884	880	874	874	876	879	880	884	888	889	883	884	884	884	885	897	898	906	905	907	907	898	892	885	862	888
28	862	843	858	868	873	876	874	880	880	881	880	882	882	889	894	898	897	894	889	888	893	884	865	867	866	880
29	866	834	829	832	853	864	870	877	884	884	884	884	888	884	892	905	907	911	900	894	889	887	883	876	876	878
30	876	879	877	858	857	854	867	876	880	882	884	882	880	881	886	888	892	892	897	892	888	888	884	883	878	880
31	879	880	872	876	880	881	881	885	885	882	880	879	878	882	885	888	889	889	889	891	893	889	885	885	879	883
Mean	868	861	858	858	859	861	865	871	874	875	876	875	876	880	885	894	898	900	901	896	891	889	883	878	868	878

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

280. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

March, 1930.

Day.	Terrestrial Magnetic Elements.															Character Figure 100γ <sup>2</sup>	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + °A.
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 44000 γ +		Minimum 44000 γ +		Range.			
	h. m.	γ	γ	h. m.		γ	h. m.	γ	h. m.		γ	h. m.	γ	h. m.					γ
1 D	20 35	1118	965	10 28	153	14 55	309	185	20 30	124	17 11	928	829	3 58	99	486	I	81.9
2 D	21 6	1144	968	9 44	176	14 53	307	145	17 46	162	16 7	938	845	2 1	93	659	I	81.9
3	21 35	1102	983	8 49	119	1 53	302	227	21 45	75	15 53	897	840	2 5	57	230	I	81.9
4	19 21	1068	1000	13 35	68	14 41	280	233	0 1	47	15 55	901	852	2 0	49	92	I	81.9
5 Q	7 2	1062	1012	13 0	50	14 4	282	235	9 3	47	18 3	886	871	12 10	15	49	0	81.9
6	19 53	1060	1013	11 34	47	13 0	282	235	9 14	47	16 2	884	871	11 9	18	46	0	81.9
7 Q	7 6	1058	1012	12 20	46	11 58	275	234	9 30	41	16 0	885	871	12 0	14	40	0	81.7
8 Q	7 13	1057	1022	12 23	35	13 36	271	240	9 19	31	16 40	880	866	12 30	14	24	0	81.7
9 Q	20 32	1062	1031	12 39	31	14 45	273	241	9 3	32	16 15	877	863	11 50	14	22	0	81.7
10 Q	20 16	1065	1026	12 6	39	12 47	287	234	9 12	53	23 0	881	859	12 20	22	48	0	81.7
11	18 42	1082	1001	20 40	81	14 34	301	208	22 59	93	21 6	943	859	13 31	84	223	I	81.7
12 D	18 19	1091	881	12 29	210	12 47	317	114	4 26	203	17 49	988	788	5 42	252	1488	2	81.7
13 D	19 12	1149	962	0 1	187	14 20	322	150	21 10	172	16 42	940	775	1 2	165	918	2	81.7
14 D	15 17	1146	946	7 23	200	14 22	329	161	0 43	168	15 11	955	819	2 44	136	867	2	81.7
15	14 50	1097	977	7 9	120	14 29	322	181	1 23	141	17 19	955	806	1 10	149	565	2	81.7
16	19 8	1130	961	12 8	169	1 40	301	191	20 30	110	16 10	908	838	23 10	70	456	I	81.7
17	17 45	1127	986	10 5	141	13 31	294	181	17 33	113	17 33</							

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 281. Eskdalemuir. (X.)

15,000  $\gamma$  ( $\cdot 15$  C.G.S. unit) +

April, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$																									
1	1050	1033	1056	1054	1062	1046	1054	1055	1043	1015	1012	1002	1003	1004	1024	1045	1040	1039	1050	1052	1060	1056	1045	1047	1038	
2	1047	1047	1043	1044	1047	1049	1051	1048	1040	1025	1012	1012	1006	1010	1030	1045	1043	1054	1059	1056	1064	1075	1049	1054	1042	
3 Q	1054	1051	1051	1055	1061	1049	1049	1049	1050	1033	1010	998	1001	1015	1033	1044	1039	1049	1054	1052	1050	1052	1054	1054	1042	
4 Q	1054	1054	1054	1054	1052	1050	1051	1048	1039	1023	1009	1005	1007	1020	1026	1036	1048	1060	1056	1055	1052	1049	1050	1052	1053	
5 Q	1053	1051	1053	1054	1054	1060	1051	1049	1043	1032	1019	1019	1021	1031	1038	1044	1051	1050	1057	1054	1054	1054	1056	1053	1052	
6	1052	1059	1053	1047	1054	1049	1052	1054	1053	1044	1030	1019	1007	1018	1045	1038	1043	1054	1058	1048	1047	1040	1014	1015	1042	
7 D	1042	1040	1035	1043	1059	1044	1040	1043	1043	1031	1006	994	1009	1018	1016	1043	1069	1061	1080	1083	1034	1050	1051	997	898	
8 D	898	1015	981	1004	1012	1015	1015	990	997	1010	1010	985	950	1000	1008	1028	1029	1031	1047	1050	1075	1088	1050	1051	1065	
9	1065	1041	1034	1038	1027	1029	1037	1035	1010	1001	1001	960	990	988	1005	1030	1042	1066	1041	1055	1054	1041	1045	1026	1000	
10 D	1000	1014	1025	1030	1027	1055	1012	1035	1000	986	942	936	982	1021	1031	1045	1036	1070	1069	1036	1032	1061	1031	1038	991	
11	991	1039	1031	1020	1041	1010	1011	1005	991	966	980	1002	996	1020	1029	1031	1050	1055	1057	1091	1083	1056	1033	1040	1050	
12	1050	1067	1041	1057	1016	1015	1002	1014	1017	1002	971	982	987	1026	1041	1039	1076	1087	1087	1075	1071	1041	1022	1036	1012	
13	1012	992	1056	1021	1028	1031	1008	1019	1014	1003	987	993	1007	1027	1036	1053	1049	1069	1085	1051	1045	1044	1041	1032	1051	
14	1051	1039	993	1007	1044	1042	1026	1031	1022	1003	984	987	1003	1023	1035	1042	1038	1038	1051	1052	1061	1044	1032	1046	1027	
15	1027	1032	1046	1031	1038	1062	1061	1040	1025	1006	989	973	980	1006	1032	1051	1052	1050	1072	1042	1060	1058	1042	1053	1045	
16	1045	1027	1031	1021	1008	1050	1045	1035	1026	1018	1006	1012	1007	995	1013	1021	1040	1046	1051	1051	1054	1052	1064	1106	1034	
17	1034	1027	1040	1028	1021	1017	1044	1044	1022	998	1003	1003	1012	1012	1023	1039	1047	1048	1053	1060	1063	1057	1047	1049	1045	
18	1045	1048	1051	1047	1046	1048	1047	1039	1037	1027	1016	1002	1001	1005	1019	1032	1032	1038	1057	1076	1050	1057	1063	1062	1049	
19	1049	1048	1050	1052	1054	1062	1055	1047	1047	1031	1021	1003	981	967	1012	1037	1046	1064	1091	1096	1054	1057	1067	1057	1057	
20 D	1057	1052	1052	1048	1050	1053	983	1046	987	1015	978	959	977	1003	1003	1028	1047	1092	1047	1049	1050	1041	1045	1057	1041	
21	1041	1053	1019	1017	1008	1038	1047	1025	988	987	983	998	983	994	997	1025	1032	1044	1061	1045	1038	1061	1057	1062	982	
22 D	982	1014	1008	1015	1048	1046	1046	1043	1038	987	971	990	995	1014	1024	1033	1057	1020	1071	1118	1070	1051	1041	1048	1022	
23	1022	1036	1033	1025	1041	1043	1004	1013	1016	1018	1013	997	997	995	1006	1041	1037	1073	1060	1090	1101	1057	1041	1043	1036	
24	1036	1033	1024	1041	1047	1038	1019	1013	1011	990	1003	1017	1019	1008	999	1019	1045	1089	1083	1053	1051	1050	1048	1053	1050	
25	1050	1058	1052	1039	1039	1031	1051	1050	1037	1021	1013	1009	1003	1018	1032	995	1033	1055	1058	1046	1056	1058	1049	1053	1053	
26	1053	1048	1043	1051	1044	1044	1034	998	1004	1035	1029	1019	1019	1013	1019	1019	1033	1049	1057	1056	1069	1055	1049	1052	1048	
27 Q	1048	1046	1045	1044	1048	1053	1055	1051	1039	1004	972	979	1003	1017	1023	1033	1018	1054	1056	1067	1068	1047	1051	1054	1046	
28 Q	1046	1040	1039	1039	1041	1037	1045	1049	1038	1029	1014	1013	1019	1035	1038	1045	1056	1063	1096	1074	1059	1057	1062	1055	1053	
29	1053	1054	1050	1056	1059	1059	1059	1054	1050	1041	1024	1020	1017	1026	1014	1045	1056	1069	1065	1055	1068	1067	1095	1071	1045	
30	1045	1037	1040	1039	1044	1035	1045	1036	1018	1012	1009	1005	1011	1014	1024	1038	1049	1099	1061	1089	1081	1076	1067	1064	1069	
Mean	1035	1040	1038	1037	1041	1042	1038	1035	1025	1013	1001	997	1000	1011	1023	1035	1044	1058	1068	1063	1059	1055	1050	1049	1036	

## TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 282. Eskdalemuir. (-Y.)

4,000  $\gamma$  ( $\cdot 04$  C.G.S. unit) +

April, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$																									
1	264	271	253	243	246	252	246	233	225	228	238	253	277	292	296	274	273	260	246	252	248	243	254	246	246	254
2	246	252	259	246	245	246	249	246	233	226	239	254	280	286	292	286	271	258	259	258	258	227	227	238	247	253
3 Q	247	254	259	252	234	233	240	234	223	221	232	247	266	280	290	284	266	254	256	258	258	254	252	246	252	
4 Q	246	246	246	246	245	245	241	230	219	216	227	239	254	272	272	266	264	265	260	260	264	259	256	250	250	
5 Q	250	241	242	236	246	238	238	233	223	223	233	246	261	273	274	268	266	259	259	258	258	255	253	251	250	
6	250	246	240	247	241	244	245	239	229	221	234	246	266	288	306	296	274	292	298	260	234	221	201	191	213	
7 D	213	212	240	220	213	199	212	207	207	220	249	261	277	292	292	292	265	282	227	220	226	234	227	187	160	
8 D	160	180	121	186	205	220	227	252	242	220	241	246	232	266	266	272	272	250	244	246	239	255	225	214	213	
9	213	193	206	246	221	233	234	228	231	234	234	234	260	282	276	286	286	240	260	229	237	240	231	215	239	
10 D	215	238	240	221	219	220	244	227	220	223	232	251	280	279	299	286	267	252	240	232	226	246	246	267	234	
11	234	226	205	246	226	225	234	220	227	225	246	266	280	272	280	272	247	251	246	233	213	181	233			

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

283. Eskdalemuir. (Z.)

44,000 γ (-44 C.G.S. unit) +

April, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	877	855	848	861	864	861	865	872	871	871	868	869	868	872	886	900	897	904	900	894	895	889	864	866	871	876
2	871	869	861	868	874	877	878	878	879	878	873	869	869	871	874	882	887	891	887	886	886	886	878	873	869	877
3 Q	869	870	869	856	858	860	865	874	877	874	868	865	862	865	870	884	886	887	885	882	882	879	878	878	878	873
4 Q	878	880	880	879	880	881	882	883	882	875	873	870	866	865	871	878	880	881	882	883	883	882	881	882	881	878
5 Q	881	881	880	878	876	872	875	878	878	875	865	858	855	856	864	870	874	877	876	877	878	878	878	878	878	873
6	878	874	872	869	865	868	872	876	877	877	872	866	863	862	870	893	917	919	933	941	931	903	878	784	820	880
7 D	820	861	864	830	835	837	855	867	869	869	869	865	861	864	874	887	914	922	944	921	900	886	852	813	739	868
8 D	739	719	760	751	782	822	843	852	861	878	887	893	927	920	905	902	911	921	930	917	897	865	861	864	862	861
9	862	856	848	847	857	869	876	879	877	877	878	882	883	880	890	892	906	927	913	912	900	891	874	831	810	878
10 D	810	822	836	801	791	818	823	840	856	865	868	873	878	887	886	912	921	921	917	918	900	875	877	869	788	865
11	788	843	840	804	834	842	848	856	865	869	868	872	872	887	885	888	903	912	908	891	876	870	868	869	867	866
12	867	836	811	817	809	827	831	844	852	865	869	869	869	882	890	894	900	904	904	893	885	874	876	852	859	863
13	821	770	787	805	825	844	857	864	872	873	869	869	869	877	890	899	893	904	913	904	901	897	886	861	854	865
14	854	847	826	804	844	864	870	874	876	878	877	874	872	872	881	887	895	892	893	902	903	894	886	868	852	872
15	852	834	834	829	825	820	831	847	859	867	874	877	882	878	886	908	915	917	920	908	893	877	877	864	850	870
16	850	838	830	829	818	834	855	867	869	867	869	867	864	875	883	881	881	885	885	885	883	883	884	868	851	865
17	851	838	832	835	847	841	853	863	867	869	872	870	867	872	877	877	882	889	895	893	895	891	884	881	882	869
18	882	880	874	876	879	881	881	882	881	879	875	873	873	876	880	889	900	902	906	913	905	890	890	880	877	885
19	877	881	882	881	881	881	876	868	869	873	872	866	867	872	871	874	876	880	902	960	929	903	888	877	877	884
20 D	877	880	880	883	884	880	851	823	840	847	862	879	889	886	891	910	958	950	963	949	927	904	897	849	841	889
21	841	848	854	851	846	855	861	871	869	872	884	885	888	886	899	927	910	902	907	912	909	894	875	829	777	877
22 D	777	762	778	798	835	855	867	871	874	872	874	876	879	883	892	893	905	932	925	910	890	896	889	835	798	866
23	798	846	850	849	862	874	878	874	872	870	871	870	868	873	880	894	897	912	909	910	879	866	874	875	874	875
24	874	871	859	863	874	880	879	874	870	871	866	868	867	873	881	887	897	922	915	909	899	896	891	885	882	882
25	882	873	862	872	876	879	882	886	886	883	875	873	874	877	890	905	896	896	899	896	892	891	887	806	882	884
26	882	877	856	847	850	864	869	864	856	860	868	865	866	872	878	881	886	890	898	903	904	890	886	882	881	875
27 Q	881	881	882	882	882	882	882	882	881	882	880	878	877	878	882	889	891	895	899	902	896	890	886	881	875	885
28 Q	875	871	872	872	871	872	874	875	876	877	876	873	870	870	877	884	885	890	892	889	890	887	884	881	880	879
29	880	880	881	881	881	881	880	878	874	872	866	863	858	861	870	883	897	893	893	893	890	892	867	829	856	876
30	856	863	868	871	874	875	875	876	870	867	867	867	870	868	873	880	882	881	902	917	901	889	886	884	883	878
Mean	852	850	849	846	853	860	864	868	870	872	872	871	872	875	882	891	898	903	907	906	897	887	879	863	852	874

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

284. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

April, 1930.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{ER^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + °A.
	North Component.					West Component.					Vertical Component							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 44000 γ +		Minimum 44000 γ +		Range.			
	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ			
1	21 22	1104	985	12 32	119	14 27	306	218	7 47	88	17 12	908	847	1 58	61	256	I	81·7
2	22 12	1084	995	12 7	89	14 11	300	213	20 55	87	17 4	892	860	1 40	32	165	I	81·7
3 Q	4 12	1068	994	11 17	74	13 58	298	219	8 58	79	16 53	887	855	3 0	32	127	I	81·8
4 Q	20 8	1068	1004	11 12	64	13 27	278	213	8 31	65	19 20	883	864	13 0	19	87	O	81·8
5 Q	4 36	1073	1014	11 35	59	13 39	279	219	8 6	60	1 10	882	854	12 30	28	79	O	81·8
6	20 42	1093	940	22 59	153	14 18	318	159	23 6	159	18 40	943	729	22 59	214	945	I	81·8
7 D	18 51	1150	896	23 58	254	14 25	312	99	24 0	218	18 6	955	739	23 46	216	1565	2	81·7
8 D	20 35	1159	756	0 32	408	12 54	292	86	1 56	206	12 5	935	(570)	0 35	365	3381	2	81·7
9	16 48	1099	941	11 1	158	15 44	300	173	23 6	127	16 43	933	808	23 40	125	597	I	81·8
10 D	17 26	1149	916	11 29	233	23 22	332	192	4 20	140	16 20	926	774	3 43	152	970	I	81·9
11	18 29	1122	941	8 39	181	14 5	298	153	0 22	145	16 49	913	778	0 4	135	720	I	81·9
12	18 48	1137	952	10 29	185	18 49	306	187	2 58	119	17 14	905	800	4 9	105	594	I	81·9
13	17 33	1136	902	0 39	234	12 48	298	180	2 50	118	18 3	914	739	0 40	175	993	I	81·9
14	19 32	1085	956	2 18	129	13 20	289	185	23 42	104	19 28	908	795	2 30	113	402	I	81·9
15	20 50	1096	951	11 10	145	13 48	292	185	0 58	107	17 32	929	816	4 58	113	452	I	82·0
16	22 48	1130	972	12 52	158	12 31	278	153	23 7	125	13 50	886	812	3 28	74	461	I	82·0
17	20 21	1077	987	9 31	90	13 24	286	178	0 1	108	20 10	896	829	1 45	67	243	I	82·0
18	22 5	1091	991	13 30	100	14 56	294	170	22 0	124	18 33	916	872</					

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

285. Eskdalemuir. (X.)

15,000  $\gamma$  ( $\cdot 15$  C.G.S. unit) +

May, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day. 1	$\gamma$																										
2 Q	1070	1071	1053	1035	1034	1042	1049	1049	1050	1037	1025	1014	1009	1018	1028	1039	1045	1056	1060	1060	1060	1060	1060	1060	1060	1060	1045
3 Q	1056	1058	1061	1051	1058	1060	1059	1058	1051	1042	1029	1020	1021	1030	1039	1046	1053	1063	1070	1075	1073	1070	1070	1070	1070	1064	1050
4	1064	1058	1055	1055	1055	1056	1061	1058	1051	1038	1025	1017	1020	1030	1036	1038	1036	1057	1065	1064	1062	1061	1060	1066	1072	1050	
5 D	1072	1081	1073	1081	1070	1053	1038	1050	1056	1048	1031	1015	995	999	1000	1026	1041	1051	1060	1080	1074	1065	1073	1068	1056	1050	
6 D	1056	1046	1065	1000	991	962	988	970	980	974	901	926	991	996	1021	1021	1070	1068	1065	1079	1062	1032	1035	1024	1038	1018	
7	1038	1017	1021	1030	941	1011	1022	1011	1016	1013	989	990	974	1016	1013	1053	1078	1073	1065	1050	1054	1047	1084	1061	1025	1028	
8	1025	946	1046	1030	1025	1005	1038	1026	1004	975	1005	1005	1008	1022	1030	1050	1088	1090	1069	1130	1079	1057	1044	1019	1045	1034	
9	1045	1047	1036	1066	1026	999	1023	1024	1014	998	1000	1011	1020	1016	1041	1061	1075	1071	1085	1061	1047	1063	1085	1046	1021	1040	
10	1021	1002	1045	1030	1030	1016	1008	998	1013	1025	1008	1015	1008	1037	1021	1061	1075	1059	1070	1049	1063	1049	1032	1059	1031	1033	
11	1031	1023	1017	1032	1035	1034	1036	1024	1022	1008	996	1012	1022	1033	1048	1041	1051	1054	1059	1060	1061	1077	1046	1045	1048	1036	
12	1048	1055	1045	1045	1040	1045	1040	1035	1025	1019	1005	1008	1018	1028	1039	1038	1041	1051	1055	1053	1054	1057	1065	1069	1096	1042	
13	1096	1031	1013	1000	1025	1025	1036	1023	1006	992	997	997	998	1001	1009	1038	1029	1046	1063	1070	1062	1060	1075	1054	1035	1030	
14	1035	1040	1047	1050	1055	1004	1011	1037	1032	1001	993	1004	1028	1037	1057	1044	1066	1089	1070	1068	1074	1059	1046	1042	1046	1041	
15	1046	1049	1022	1040	1021	1039	1040	1029	1031	1034	1017	1011	1009	1016	1024	1042	1049	1055	1061	1066	1054	1050	1063	1054	1046	1038	
16 D	1046	1046	1043	1049	1052	1051	1035	1031	1015	1003	1005	1006	1018	1016	1020	1021	1041	1059	1075	1081	1075	1056	1061	1081	1047	1041	
17 D	1047	1048	1041	1053	1026	1020	1023	1036	1020	1025	1024	1021	1028	1023	1021	1050	1041	1096	1145	1140	1067	1058	1049	1064	1078	1049	
18	1078	1060	982	996	1029	1004	977	973	1030	1030	1000	959	997	1002	1007	1024	1031	1056	1073	1071	1065	1056	1040	1021	1053	1023	
19	1053	1050	1048	1014	1023	1033	1031	1035	1031	1020	1011	1006	1002	1012	1033	1041	1064	1126	1116	1091	1075	1050	1038	1041	1044	1043	
20	1044	1045	985	1040	1042	1038	1049	1052	1041	1020	994	1011	1023	1031	1038	1050	1049	1056	1086	1090	1059	1067	1050	1054	1055	1042	
21	1055	1041	1040	1044	1021	1010	994	996	1018	1012	1003	1006	1010	1011	1025	1049	1042	1056	1067	1064	1063	1056	1053	1056	1053	1033	
22	1053	1055	1045	1011	1024	1040	1017	1022	1005	1013	1004	1007	1012	1019	1022	1042	1053	1062	1079	1105	1075	1056	1061	1053	1049	1039	
23	1049	1044	1035	1060	1031	1027	1044	1038	1014	958	1003	1001	985	984	1007	1024	1035	1042	1070	1079	1067	1059	1053	1049	1050	1032	
24 Q	1050	1029	1038	1039	1035	1040	1036	1030	1026	1004	1010	1014	1017	1023	1024	1040	1074	1059	1069	1068	1066	1059	1054	1052	1048	1040	
25	1048	1046	1041	1039	1042	1042	1041	1035	1029	1029	1021	1017	1019	1029	1034	1040	1050	1067	1055	1078	1074	1061	1059	1063	1068	1045	
26	1068	1053	1049	1040	1023	1028	1044	1043	1036	1035	1031	1034	1032	1034	1043	1034	1096	1069	1069	1059	1071	1069	1056	1052	1049	1048	
27 Q	1049	1018	1038	1050	1029	1040	1045	1034	1024	1017	1013	1011	1017	1026	1029	1033	1039	1056	1055	1064	1059	1050	1049	1048	1045	1037	
28 Q	1045	1045	1044	1042	1044	1048	1049	1035	1030	1026	1028	1024	1024	1019	1023	1046	1044	1059	1058	1064	1067	1054	1054	1056	1059	1043	
29	1059	1057	1056	1051	1053	1054	1048	1044	1033	1025	1021	1025	1023	1029	1041	1059	1058	1059	1048	1055	1054	1052	1048	1050	1052	1046	
30	1052	1053	1054	1049	1043	1050	1054	1048	1032	1009	1010	1011	1013	1015	1034	1050	1054	1073	1067	1068	1064	1055	1049	1056	1074	1045	
31 D	1074	1069	1055	1058	1044	1041	1043	1035	1016	1018	1019	1011	1013	1017	1024	1024	1061	1078	1102	1119	1079	1089	1070	1021	973	1047	
Mean	1050	1037	1038	1039	1030	1030	1032	1028	1023	1014	1007	1006	1011	1017	1027	1040	1054	1066	1075	1076	1066	1058	1055	1050	1049	1039	

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

286. Eskdalemuir. (-Y.)

4,000  $\gamma$  ( $\cdot 04$  C.G.S. unit) +

May, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
2 Q	246	242	234	254	241	234	218	219	210	213	219	232	249	267	273	271	267	267	265	257	253	248	247	245	241	245
3 Q	241	238	227	229	234	233	228	225	221	219	224	235	256	273	275	275	273	277	275	268	260	254	253	251	247	248
4	247	244	241	240	239	235	232	227	221	220	227	233	245	260	266	263	260	265	259	254	251	249	249	252	251	245
5 D	251	249	248	236	188	212	198	207	206	219	227	245	260	282	285	287	288	273	260	249	248	255	239	214	215	242
6 D	215	194	133	156	191	187	190	246	241	220	215	255	260	287	275	279	253	268	250	254	233	219	190	219	235	227
7	235	260	245	227	239	200	189	208	213	215	220	240	261	274	271	294	253	265	263	263	261	223	212	184	192	237
8	192	186	113	163	184	223	228	233	213	214	237	252	267	273	274	280	278	273	263	253	232	220	221	233	226	230
9	226	215	212	229	231	249	243	231	213	223	241	252	266	269	275	272	267	271	255	249	249	247	241	207	221	243
10	221	231	232	226	227	235	225	227	225	215	219	233	247	261	275	275	260	260	261	225	222	206				

287. Eskdalemuir. (Z.)

44,000  $\gamma$  (.44 C.G.S. unit) +

May, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	$\gamma$																										
1	882	879	878	870	862	863	869	874	874	872	866	865	865	864	865	870	873	874	878	879	879	878	879	878	878	878	872
2 Q	878	878	874	878	878	878	878	878	877	875	873	865	857	853	861	865	866	868	870	873	874	874	873	873	873	873	871
3 Q	873	876	877	877	877	878	878	878	877	877	873	865	861	860	865	877	877	877	882	882	878	878	877	877	874	873	875
4	873	870	863	835	825	821	821	833	846	849	851	848	850	856	872	875	882	889	898	906	910	900	890	865	872	864	
5 D	872	812	794	717	668	722	783	811	829	844	869	880	877	900	932	918	929	923	927	913	904	867	854	853	842	849	
6 D	842	836	824	828	750	750	814	833	838	849	857	861	868	893	882	884	903	907	907	896	887	888	858	811	767	851	
7	767	689	725	753	793	819	841	851	859	861	859	855	855	858	865	879	900	908	904	891	886	853	853	806	791	839	
8	791	822	835	826	837	824	829	844	857	864	870	870	870	871	881	881	900	905	911	905	894	883	870	857	811	864	
9	811	779	816	847	854	844	858	865	866	868	867	869	873	894	894	906	911	900	900	908	895	877	846	821	803	865	
10	803	789	794	796	817	843	862	865	865	864	867	861	857	863	869	877	879	882	882	882	882	883	881	880	878	877	857
11	877	869	866	868	869	872	869	869	869	868	864	863	864	868	870	875	876	876	876	877	877	876	876	873	868	838	870
12	838	811	763	776	807	833	845	839	841	840	849	852	857	864	875	887	885	881	881	884	889	885	867	828	812	849	
13	812	794	834	859	867	855	829	847	861	861	869	864	867	867	876	881	887	893	897	898	884	883	876	876	866	865	
14	866	846	832	840	837	854	863	867	867	865	863	863	862	863	867	873	879	886	890	889	886	884	876	857	863	866	
15	863	866	868	866	869	871	871	866	864	871	870	866	867	871	878	887	888	888	891	896	892	887	883	861	848	875	
16 D	848	856	848	853	843	798	823	835	843	845	849	849	849	850	858	866	891	897	932	961	928	912	887	836	833	864	
17 D	833	845	824	794	819	831	843	844	866	874	879	882	881	886	902	920	921	914	917	916	907	874	846	795	835	867	
18	835	856	852	838	813	841	859	868	874	873	861	861	861	873	882	882	881	909	909	905	896	882	882	878	872	871	
19	872	870	787	823	854	862	869	873	873	868	865	861	864	865	865	875	885	890	889	894	899	894	889	876	868	869	
20	868	864	868	869	864	840	838	849	858	865	864	863	864	869	878	886	889	887	891	888	890	887	883	875	862	871	
21	862	851	851	825	823	850	858	863	863	870	872	872	871	869	872	876	883	889	897	906	898	895	880	875	872	870	
22	872	870	847	845	841	853	859	866	867	872	860	864	863	864	869	875	880	885	886	894	894	890	886	882	879	870	
23	879	872	854	863	867	873	874	879	875	875	870	867	871	871	873	874	878	886	884	887	885	881	880	880	870	875	
24 Q	879	878	876	875	878	879	879	875	871	867	858	857	859	862	865	871	875	878	880	887	892	888	883	876	868	874	
25	868	871	874	875	871	866	870	873	870	865	859	853	853	862	870	879	884	907	911	896	891	889	878	877	868	876	
26	868	848	827	849	844	844	855	865	866	870	865	861	864	869	870	875	878	879	883	881	882	879	878	877	875	866	
27 Q	875	875	875	878	878	878	878	878	878	872	868	859	848	850	859	864	867	872	875	877	877	878	877	875	873	871	
28 Q	873	873	873	876	877	877	876	875	875	873	869	865	865	868	876	889	894	897	899	888	882	878	877	877	877	878	
29	877	877	877	877	872	869	870	871	871	872	868	867	863	865	868	875	880	887	894	901	896	886	882	876	868	877	
30	868	860	863	867	871	868	864	867	867	865	864	862	854	859	865	868	871	880	894	898	906	898	884	807	768	867	
31 D	768	630	674	795	777	755	821	848	862	865	872	875	880	887	894	896	887	889	907	898	890	875	856	773	807	887	
Mean	851	839	836	840	839	842	853	860	863	865	864	863	863	868	875	881	887	890	895	895	891	883	874	856	849	866	

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

288. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

May, 1930.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{2R^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House $200 +$
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 $\gamma +$		Minimum 15000 $\gamma +$		Range.	Maximum 4000 $\gamma +$		Minimum 4000 $\gamma +$		Range.	Maximum 44000 $\gamma +$		Minimum 44000 $\gamma +$		Range.			
	h. m.	$\gamma$	$\gamma$	h. m.		$\gamma$	h. m.	$\gamma$	h. m.		$\gamma$	h. m.	$\gamma$	h. m.					$\gamma$
1	0 1	1079	998	11 43	81	17 50	279	206	7 57	73	0 11	882	860	4 55	22	124	0	82-3
2 Q	19 33	1080	1011	11 48	69	13 2	285	215	8 37	70	0 35	879	852	12 53	27	104	0	82-3
3 Q	23 5	1075	1015	11 26	60	13 43	273	217	8 18	56	18 40	882	859	13 10	23	73	0	82-3
4	22 30	1095	970	14 10	125	13 28	306	179	3 58	127	19 52	911	816	5 39	95	408	1	82-3
5 D	20 34	1139	871	10 23	268	13 12	308	83	2 20	225	13 55	936	655	3 38	281	2014	2	82-3
6 D	22 9	1112	890	4 0	222	14 43	307	172	23 31	135	17 13	911	678	4 17	233	1218	2	82-3
7	18 43	1212	830	1 0	382	15 42	299	86	1 49	213	16 30	913	657	1 11	256	2568	2	82-3
8	18 5	1108	980	4 59	128	13 48	287	156	1 20	131	17 48	913	787	0 1	126	494	1	82-3
9	16 11	1109	975	0 28	134	15 16	293	167	21 12	126	16 6	913	774	1 1	139	532	1	82-5
10	20 41	1106	987	0 22	119	14 5	272	179	0 23	93	20 30	886	787	0 54	99	326	1	82-5
11	24 0	1110	1000	10 9	110	14 30	275	212	7 37	63	19 15	878	837	24 0	41	177	0	82-5
12	22 26	1114	978	1 49	136	14 19	275	147	0 49	128	19 37	889	751	1 50	138	539	1	82-5
13	19 34	1125	962	5 24	163	13 50	301	186	0 25	115	18 28	901	782	1 6	119	540	1	82-5
14	22 9	1091	1004	11 44	87	16 10	281	202	6 37	79	17 33	892	823	2 16	69	186	1	82-5
15	22 48	1099	990	9 22	109	16 14	280	203	22 38	77	18 53	896	844	23 34	52	205	1	82-5
16 D	18 59	1274	990	15 59	284	17 26	352	99	1									

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 289. Eskdalemuir. (X.)

15,000  $\gamma$  (.15 C.G.S. unit) +

June, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1 D	1042	991	961	998	988	975	1006	991	1005	971	973	996	999	1012	1032	1036	1042	1050	1097	1080	1094	1070	1026	1022	1026	1019
2 D	1026	1046	1027	1021	996	1017	1017	1012	972	994	1004	991	985	1008	1005	1046	1046	1072	1086	1115	1106	1057	1042	1016	1031	1030
3	1031	1013	1054	1015	994	1032	1021	994	998	987	971	975	973	1013	1040	1030	1047	1067	1065	1086	1071	1047	1042	1031	1056	1023
4	1056	1044	1031	1036	1029	1016	985	965	988	970	985	984	996	986	1014	1022	1036	1059	1061	1081	1074	1068	1048	1020	1046	1023
5	1046	1029	1024	1030	1035	1037	1031	1027	1030	1030	1030	1033	1017	1025	1025	1036	1033	1051	1056	1055	1056	1060	1050	1041	1043	1037
6	1043	1047	1038	1030	1029	1038	1034	1011	1008	1026	1010	1010	1010	1017	1023	1024	1031	1044	1068	1061	1048	1051	1051	1071	1066	1035
7 D	1066	1045	1049	980	1020	1034	995	995	1014	1020	1007	1006	992	999	985	1021	1054	1054	1051	1061	1067	1048	1051	1018	1056	1026
8	1056	1044	1023	1015	1035	1039	1021	1007	994	1005	1005	1010	1010	1003	1016	1031	1042	1041	1062	1076	1072	1052	1055	1049	1046	1032
9	1046	1042	1043	1040	1013	1035	1029	1020	1018	997	995	995	1012	1021	1026	1053	1060	1053	1081	1047	1052	1064	1049	1048	1035	1035
10	1035	1018	1043	1052	1041	1037	1025	1024	1014	996	1000	1001	1014	1020	1030	1031	1046	1041	1059	1066	1065	1047	1042	1038	1029	1033
11 Q	1039	1041	1041	1042	1045	1031	1032	1029	1030	1025	1019	1013	1016	1023	1024	1034	1037	1046	1050	1061	1059	1055	1054	1061	1049	1038
12 D	1049	1064	1064	1056	1057	1064	1056	1064	1052	1038	1026	1023	1001	1024	992	1052	1034	1082	1065	1078	1061	1057	1092	1095	1016	1051
13	1016	1029	1012	1022	1031	1037	1035	991	950	979	991	986	992	1022	1031	1035	1022	1070	1068	1060	1063	1047	1051	1047	1037	1025
14	1037	1041	1016	1033	1040	1022	1026	1012	987	982	1001	996	1013	1010	1017	1024	1026	1036	1040	1041	1043	1045	1041	1039	1037	1024
15 Q	1037	1037	1038	1037	1037	1040	1039	1033	1025	1013	997	999	999	1015	1026	1028	1037	1039	1051	1053	1066	1065	1063	1066	1061	1035
16 D	1061	1062	1062	1065	1061	1061	1076	1042	929	916	902	901	893	952	1022	1010	996	1012	1023	1062	1045	1031	1019	1027	1023	1009
17	1023	976	1017	1026	996	1006	1004	1013	993	986	956	966	993	1004	1015	1016	1032	1040	1048	1064	1080	1056	1038	1032	1029	1016
18	1029	1020	1024	1041	1011	1015	1019	1017	993	999	1002	1011	1011	1006	1006	1039	1072	1105	1095	1075	1046	1043	1038	1037	1017	1033
19	1017	1023	1015	1028	1027	1024	1023	1021	1013	1000	983	980	993	1005	1021	1027	1040	1058	1047	1055	1052	1052	1051	1052	1051	1026
20	1051	1032	1023	1011	1001	1020	1033	1023	1016	1015	998	987	1000	1006	1001	1037	1033	1063	1069	1088	1060	1053	1043	1040	1056	1029
21	1056	1031	1038	1040	1035	1036	1043	1041	1031	1017	993	1004	1005	1007	1031	1036	1077	1051	1040	1042	1047	1049	1048	1047	1043	1035
22	1043	1037	1027	1036	1043	1038	1027	1022	1016	1017	1012	1008	1010	1013	1017	1022	1028	1036	1048	1058	1059	1052	1051	1047	1048	1032
23 Q	1048	1047	1042	1040	1043	1050	1048	1043	1029	1008	1003	1007	1007	1019	1031	1038	1040	1053	1054	1057	1053	1050	1046	1044	1044	1039
24 Q	1044	1043	1044	1040	1043	1049	1046	1034	1026	1017	1004	1006	1017	1029	1038	1032	1032	1049	1042	1048	1051	1049	1047	1042	1039	1036
25 Q	1039	1040	1037	1042	1043	1042	1043	1043	1039	1028	1018	1025	1028	1037	1048	1048	1045	1053	1059	1063	1064	1061	1058	1059	1062	1045
26	1062	1062	1060	1054	1063	1063	1050	1050	1047	1037	1025	1029	1028	1030	1030	1039	1044	1069	1067	1062	1054	1053	1049	1052	1055	1049
27	1055	1064	1070	1068	1064	1052	1050	1042	1029	1029	1029	1006	1019	1010	1040	1039	1043	1046	1070	1070	1072	1070	1055	1050	1024	1047
28	1024	1029	1058	1030	1030	1039	1049	1039	1000	1003	1023	1023	1016	1022	1044	1060	1019	1060	1073	1110	1078	1058	1063	1045	1041	1042
29	1041	1040	1031	1019	1030	1031	1011	1016	1018	1008	1009	1008	1012	1014	1038	1046	1048	1077	1073	1099	1070	1069	1049	1052	1043	1038
30	1043	1037	1034	1039	1016	1012	1035	1035	1020	1012	1010	1016	1007	1009	1019	1013	1024	1065	1053	1100	1095	1060	1050	1045	1041	1035
Mean	1042	1036	1035	1033	1030	1033	1029	1022	1011	1005	1000	999	1002	1012	1024	1033	1039	1055	1061	1069	1064	1055	1049	1044	1042	1033

## TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

## 290. Eskdalemuir. (-Y.)

4,000  $\gamma$  (.04 C.G.S. unit) +

June, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1 D	200	173	160	192	201	226	230	213	213	217	212	227	247	257	267	272	273	277	273	266	259	219	213	219	246	230
2 D	246	208	185	219	213	236	232	207	199	206	213	221	229	253	260	280	265	269	273	255	258	231	226	220	204	233
3	204	186	246	189	223	238	211	220	214	198	203	226	240	251	266	252	256	267	259	261	259	239	239	247	232	234
4	232	217	217	223	222	215	219	221	208	211	219	227	243	245	252	253	239	243	246	248	234	239	219	246	213	230
5	213	219	233	226	223	213	201	202	209	207	218	231	238	248	246	251	245	249	244	235	240	241	244	229	238	280
6	238	246	235	225	215	218	210	199	218	217	219	226	237	249	256	253	254	252	254	236	239	243	243	235	219	234
7 D	219	226	239	249	233	208	205	279	243	231	216	231	246	267	267	266	267	276	267	251	233	237	246	234	191	243
8	191	181	199	233	226	211	201	206	214	212	220	233	246	259	271	273	273	264	267	225	241	245	246	246	245	234
9	246	235	231	223	241	245	222	201	213	208	229	233	246	259	268	261	268	258	247	249	247	239	239	228	226	239
10	226	246	231	210	213	207	205	207	206	207	218															



Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

293. Eskdalemuir. (X.)

15,000  $\gamma$  (.15 C.G.S. unit) +

July, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	1041	1044	1031	1045	1041	1029	1039	1028	1018	1011	1005	1003	1001	1015	1014	1055	1042	1032	1056	1056	1060	1055	1051	1059	1031	1034
2	1031	1027	1031	1037	1035	1030	1036	1030	1026	1026	1012	1001	999	1021	1024	1011	1031	1062	1070	1099	1072	1053	1049	1034	1051	1036
3	1051	1042	1037	1030	1041	1042	1032	1026	1022	1019	1018	1011	1011	1016	1018	1043	1062	1051	1062	1083	1072	1052	1045	1037	1037	1038
4	1037	1042	1043	1041	1035	1032	1037	1028	990	988	991	1001	1017	1015	1026	1022	1042	1066	1080	1077	1049	1047	1048	1062	1052	1034
5	1052	1037	1029	1035	1027	1040	1031	1032	1013	1011	1023	1017	1007	997	1026	1033	1053	1058	1057	1098	1053	1050	1052	1053	1043	1037
6	1043	1034	1023	1018	1012	1036	1036	1032	1027	1019	1007	1003	1020	1030	1031	1037	1036	1048	1058	1053	1049	1052	1044	1042	1037	1033
7	1037	1038	1037	1025	1044	1048	1046	1035	1024	1024	1019	1017	1023	1023	1029	1040	1044	1053	1055	1065	1068	1048	1044	1040	1039	1039
8 Q	1039	1041	1043	1039	1039	1038	1037	1037	1032	1025	1023	1023	1024	1028	1038	1039	1037	1059	1049	1045	1053	1052	1046	1052	1043	1039
9	1043	1034	1039	1034	1044	1043	1039	1026	1019	1007	997	998	1002	1007	1018	1044	1065	1079	1094	1099	1093	1084	1085	1074	1069	1045
10 D	1069	1074	1084	1008	1040	1049	1036	1021	988	956	957	974	988	999	1016	1032	1044	1050	1100	1060	1051	1050	1035	1025	1034	1029
11 D	1034	1030	1060	945	994	1010	1053	1046	1033	1039	993	979	985	1007	1025	1035	1053	1055	1049	1056	1042	1048	1036	1040	1029	1027
12 D	1029	1039	1036	1039	1051	1015	970	991	1025	1026	990	973	1000	996	1005	1022	1040	1059	1061	1091	1067	1102	1042	1036	1037	1030
13 D	1037	1039	1033	1031	1015	1024	985	1022	1026	1004	985	973	986	1000	1021	1066	1086	1100	1056	1071	1070	1036	1036	1026	1030	1030
14	1030	1031	1035	1041	1037	1018	1016	1027	1009	1003	987	986	977	987	1015	1032	1035	1057	1057	1070	1063	1047	1045	1042	1042	1027
15	1042	1029	1030	1035	1036	1033	1035	1038	1037	1027	1016	1011	1011	1010	1028	1042	1067	1068	1052	1047	1043	1037	1039	1042	1043	1036
16	1043	1044	1038	1043	1043	1048	1042	1007	1022	1001	997	1007	1017	1027	1011	1005	1067	1036	1055	1107	1062	1052	1018	1032	1024	1034
17	1024	1026	1017	1036	1048	1038	1038	997	1023	1022	1003	1003	1012	1007	1024	1045	1043	1058	1073	1053	1044	1051	1043	1042	1044	1033
18	1044	1043	1043	1042	1038	1038	1013	1026	1027	1033	1027	1012	1006	1013	1026	1044	1053	1053	1048	1057	1069	1055	1047	1047	1045	1038
19	1045	1044	1040	1043	1044	1049	1040	1033	1008	995	1004	1013	1015	1008	1017	1024	1039	1045	1040	1059	1050	1054	1045	1041	1043	1033
20 Q	1043	1044	1040	1041	1041	1044	1037	1034	1025	1026	1031	1035	1031	1025	1030	1031	1038	1040	1041	1055	1056	1054	1050	1049	1051	1039
21 Q	1051	1056	1049	1046	1046	1051	1049	1036	1041	1044	1036	1029	1027	1021	1026	1035	1036	1047	1050	1052	1056	1055	1049	1051	1052	1043
22 Q	1052	1055	1052	1050	1049	1056	1047	1042	1040	1032	1025	1021	1021	1023	1024	1032	1035	1045	1046	1066	1066	1056	1044	1041	1040	1042
23 Q	1040	1036	1037	1038	1040	1040	1037	1033	1029	1029	1026	1026	1009	1027	1042	1031	1050	1052	1050	1056	1049	1053	1053	1054	1056	1039
24	1056	1051	1042	1037	1042	1042	1040	1041	1042	1042	1038	1036	1031	1032	1037	1043	1042	1052	1056	1053	1078	1077	1108	1058	1027	1048
25 D	1027	1052	1094	1058	1042	1055	1063	1041	1011	1002	986	981	981	1017	1041	1063	1057	1051	1082	1074	1066	1078	1067	1056	1044	1044
26	1044	1045	1061	1027	1056	1076	1002	1009	1006	1000	991	984	1002	1022	1006	1026	1036	1051	1063	1092	1052	1050	1052	1045	1051	1033
27	1051	1050	1024	1033	1035	1038	1040	1028	1006	1007	1006	1007	1012	1038	1044	1043	1059	1061	1063	1061	1053	1053	1052	1074	1053	1039
28	1053	1042	1037	1049	1052	1047	1043	1033	1024	1018	1012	1002	1002	1002	1021	1056	1053	1054	1062	1059	1070	1068	1053	1058	1051	1040
29	1051	1051	1046	1041	1042	1055	1029	1030	1030	1022	1013	982	964	1003	1023	1043	1029	1050	1074	1085	1061	1050	1071	1063	1034	1037
30	1034	1038	1040	1038	1041	1054	1036	1013	1012	1003	1019	1014	1023	1024	1029	1034	1053	1069	1056	1056	1064	1060	1061	1054	1053	1039
31	1053	1056	1042	1049	1029	1039	1037	1047	1037	1020	1007	1008	1009	1014	1013	1030	1043	1060	1061	1065	1061	1053	1049	1049	1048	1039
Mean	1043	1042	1042	1035	1038	1041	1033	1028	1022	1016	1008	1004	1007	1015	1024	1037	1047	1056	1061	1068	1060	1056	1050	1048	1043	1037

## TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

294. Eskdalemuir. (-Y.)

4,000  $\gamma$  (.04 C.G.S. unit) +

July, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	235	226	223	227	218	232	221	210	208	208	214	228	242	255	260	265	262	254	254	254	244	234	229	225	215	234
2	216	222	221	222	218	228	223	211	215	217	227	235	243	259	270	258	262	272	273	255	247	235	241	243	215	238
3	215	212	217	228	228	215	215	215	222	221	222	229	240	255	263	265	268	257	259	243	235	230	245	221	235	235
4	221	235	235	222	215	211	210	202	217	229	234	247	246	251	247	249	271	272	244	254	254	251	251	238	214	238
5	214	200	222	218	224	205	211	207	203	209	226	235	253	250	262	252	257	252	248	256	234	242	236	241	236	232
6	236	219	223	245	242	219	211	211	213	215	223	241	262	268	264	255	247	244	246	241	237	235	235	233	234	236
7	234	229	233	229	219	210	200	189	192	210	224	233	249	257	255	251	248	248	246	229	222	234	236	235	235	230
8 Q	235	231	242	225	218	221	215	220	222	222	227	235	249	255	256	249	242	248	241	243	247	243	233	228	225	235
9	225	229	228	222	221																					

295. Eskdalemuir. (Z.)

44,000  $\gamma$  (44 C.G.S. unit) +

July, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	858	853	862	866	870	870	873	879	879	879	879	874	872	869	876	883	891	895	895	891	893	891	887	877	874	878
2	874	874	871	873	874	875	877	882	879	880	883	880	879	879	885	887	880	881	893	900	896	898	890	859	867	881
3	867	872	874	875	875	879	882	880	876	874	870	866	862	865	866	879	889	892	896	901	901	895	885	870	856	879
4	856	850	832	841	853	860	866	871	874	874	866	865	863	872	892	901	896	897	905	901	895	892	887	863	859	874
5	859	859	866	874	878	874	876	874	876	874	870	870	863	870	875	884	888	893	899	890	886	889	887	875	867	877
6	867	868	871	857	854	869	879	879	879	880	879	879	876	879	879	883	892	896	893	895	893	891	888	885	884	880
7	884	884	881	867	849	848	858	867	867	867	866	863	863	870	875	875	880	884	886	892	896	891	888	884	884	874
8 Q	884	884	878	880	881	884	884	881	883	881	880	876	872	876	880	884	888	888	893	893	889	888	889	885	881	883
9	881	876	872	876	879	881	884	884	880	872	868	867	868	872	878	880	875	876	880	880	884	889	889	888	880	878
10 D	880	829	842	804	777	844	858	867	864	877	884	888	894	893	893	904	906	914	922	909	904	903	896	872	856	875
11 D	856	833	824	693	699	790	846	876	890	889	888	884	882	884	884	885	889	898	899	916	922	909	889	885	875	863
12 D	875	866	848	861	854	826	816	846	860	867	865	876	877	882	884	898	903	898	893	893	906	899	885	876	861	873
13 D	861	860	873	871	870	854	868	876	882	885	885	881	881	894	898	903	940	942	924	916	908	890	892	873	855	889
14	855	843	857	869	876	880	873	874	880	882	877	872	869	873	878	882	889	894	894	894	891	887	885	884	884	878
15	884	879	875	880	881	880	878	877	877	874	880	881	881	884	888	887	891	912	909	894	890	889	885	885	884	885
16	884	880	882	881	881	877	873	868	859	855	855	855	858	861	876	885	894	902	894	893	894	884	865	869	846	875
17	846	830	815	817	841	862	869	874	877	874	876	878	879	886	896	899	903	905	909	904	898	894	886	886	883	876
18	883	883	883	883	883	882	878	866	866	865	865	865	865	866	873	882	893	896	898	895	891	886	886	883	883	880
19	883	882	882	878	877	879	885	883	882	878	877	874	874	878	886	891	892	886	886	889	894	891	887	882	882	883
20 Q	882	882	883	883	880	880	879	878	877	875	871	866	865	877	882	882	883	882	882	883	886	891	887	886	886	880
21 Q	883	882	878	879	884	887	887	877	874	879	880	879	878	882	887	892	892	896	896	897	901	900	897	892	891	887
22 Q	891	887	887	887	887	887	887	881	879	879	875	867	867	874	881	888	891	891	891	893	899	900	899	895	892	886
23 Q	892	892	892	892	892	892	889	887	887	884	878	874	872	877	883	884	887	891	890	895	891	887	888	887	883	887
24	883	881	883	883	883	884	883	883	879	876	872	872	876	882	886	890	890	893	898	897	896	895	875	875	849	883
25 D	849	830	853	867	855	825	834	846	850	859	861	861	867	874	902	906	901	913	918	911	904	876	862	864	855	870
26	855	832	841	825	824	836	837	838	847	858	866	871	879	887	901	905	900	893	897	900	893	888	885	885	882	869
27	882	871	868	876	876	883	884	884	881	877	876	871	869	875	881	891	889	888	888	892	888	884	884	877	864	880
28	864	867	870	855	862	871	872	875	872	871	870	866	862	866	872	880	891	890	889	888	885	890	882	877	871	875
29	871	872	876	868	846	850	859	859	861	864	867	865	867	868	873	885	894	892	891	892	895	889	878	859	867	872
30	867	875	879	879	873	865	871	871	868	871	876	871	870	870	871	874	871	884	898	892	892	889	879	876	871	876
31	871	852	850	850	857	860	868	871	876	879	876	879	877	876	878	884	884	883	884	889	897	895	888	884	881	876
Mean	872	865	866	861	860	866	870	873	874	874	874	872	872	876	883	888	892	895	896	896	895	892	885	879	873	878

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

296. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

July, 1930.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{E^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + $^{\circ}A.$
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 $\gamma$ +		Minimum 15000 $\gamma$ +		Range.	Maximum 4000 $\gamma$ +		Minimum 4000 $\gamma$ +		Range.	Maximum 44000 $\gamma$ +		Minimum 44000 $\gamma$ +		Range.			
1	22 28	1072	990	11 58	82	14 25	273	200	7 53	73	17 48	898	852	1 10	46	142	I	84.5
2	19 9	1139	976	14 30	163	13 58	278	203	7 28	75	19 4	902	854	23 10	48	345	I	84.5
3	19 19	1110	973	13 16	137	14 37	294	201	5 55	93	19 8	905	853	23 48	52	301	I	84.6
4	18 13	1112	963	9 12	149	22 19	283	183	7 13	100	18 0	909	828	2 3	81	388	I	84.6
5	19 3	1152	968	12 36	184	19 8	276	189	8 0	87	17 52	901	856	0 32	45	435	I	84.6
6	17 42	1068	994	3 40	74	13 21	280	207	6 25	73	16 40	896	852	3 5	44	127	0	84.6
7	19 36	1074	1010	10 56	64	13 40	269	188	6 58	81	19 29	898	845	4 24	53	135	I	84.7
8 Q	16 42	1064	1016	11 24	48	13 43	261	210	6 16	51	18 10	896	870	11 51	26	56	0	84.7
9	18 11	1129	992	10 18	137	18 9	329	202	9 9	127	22 14	893	867	10 42	26	356	I	84.9
10 D	17 43	1160	890	3 7	270	3 20	282	168	1 36	114	17 39	931	760	3 46	171	1151	2	84.9
11 D	2 24	1100	884	2 59	216	13 56	268	122	4 30	146	19 30	927	612	3 27	815	1672	2	84.9
12 D	20 39	1167	910	6 16	257	5 35	280	143	20 33	137	20 33	915	806	5 40	109	967	I	84.9
13 D	17 0	1213	944	5 48	269	15 10	289	175	16 49	114	16 50	958	851	5 10	107	968	I	84.9
14	19 34	1087	966	12 20	121	14 15	268	185	7 30	83	19 20	894	838	0 43	56	247	I	84.9
15	17 12	1113	996	12 32	117	16 1	255	195	8 10	60	15 6	916	873	9 2	43	191	I	84.9
16	18 53	1147	967	9 33	180	15 58	289	191	21 4	98	16 31	903	847	24 0	56	451	I	84.9
17	17 56	1092	977	2 4	115	16 42	261	182	1 58	79	17 40	912	804	2 43	108	311	I	84.9
18	20 0	1078	998	11 37	80	13 32	263	215	9 34	48	17 41	899	865	8 29	34	99	I	85.0
19	20 29	1090																

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

297. Eskdalemuir. (X.)

15,000  $\gamma$  (.15 C.G.S. unit) +

August, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	1047	1038	1039	1053	1038	1047	1047	1046	1029	1028	1027	1017	1014	1008	1014	1024	1028	1039	1044	1055	1054	1057	1064	1049	1055	1038
2 Q	1055	1049	1044	1044	1040	1037	1050	1050	1044	1033	1015	1020	1013	1015	1018	1034	1042	1049	1050	1055	1053	1050	1049	1059	1055	1040
3 Q	1055	1053	1045	1045	1041	1049	1052	1044	1034	1024	1018	1013	1009	1018	1029	1039	1045	1060	1064	1059	1062	1055	1069	1059	1050	1043
4 Q	1050	1051	1054	1054	1044	1041	1043	1042	1035	1030	1019	1009	1009	1017	1034	1042	1050	1055	1054	1059	1055	1052	1053	1071	1054	1043
5	1054	1045	1045	1054	1056	1058	1050	1048	1044	1033	1023	1028	1035	1046	1049	1041	1051	1065	1091	1069	1059	1061	1057	1070	1060	1051
6 D	1060	1060	1038	1065	1071	1020	1020	1050	1035	1001	1010	1011	982	955	1004	1091	1079	1084	1046	1065	1054	1058	1039	1041	1041	1039
7 D	1041	1062	1031	1023	1037	1031	1000	1015	966	970	966	929	995	1000	994	1023	1022	1051	1088	1087	1054	1047	1066	1079	1043	1024
8 D	1043	1037	995	1042	1060	1050	1017	1018	993	995	990	960	1002	1016	1005	1024	1036	1099	1071	1071	1077	1061	1041	1049	1040	1031
9 D	1040	1018	1011	994	1045	1006	964	1018	985	955	958	971	984	993	1019	1037	1042	1029	1076	1055	1066	1060	1039	1041	1047	1017
10	1047	1042	1037	1041	1024	1028	1019	1016	1002	987	1007	1016	1011	1006	1027	1007	1052	1054	1066	1057	1053	1047	1052	1061	1056	1032
11	1056	1031	1022	1035	1025	1044	1051	1015	1011	1008	960	988	1006	1017	1045	1032	1046	1038	1047	1061	1052	1077	1042	1046	1047	1031
12 D	1047	1050	1034	1016	1002	1027	1018	1017	1009	992	995	996	996	991	1019	1032	1057	1100	1083	1122	1063	1045	1073	1048	1030	1034
13	1030	1017	998	1043	1055	1016	1037	1038	1011	1002	992	1005	1001	1027	1039	1042	1043	1046	1065	1062	1059	1049	1049	1051	1038	1033
14	1038	1043	1029	1037	1042	1033	1038	1010	1027	1017	1002	1005	1012	1030	1038	1038	1039	1046	1071	1084	1108	1087	1040	1036	1037	1040
15	1037	1022	1058	1053	1066	1049	1013	1007	990	1033	1013	1005	1005	1013	1026	1021	1043	1038	1040	1044	1049	1043	1043	1042	1042	1031
16	1042	1041	1042	1038	1037	1043	1022	1033	1029	1023	1019	1012	1014	1023	1031	1038	1052	1040	1043	1048	1056	1058	1041	1049	1045	1036
17 Q	1045	1043	1051	1044	1046	1044	1044	1043	1037	1024	1007	1004	1013	1016	1018	1024	1046	1068	1059	1062	1063	1052	1053	1048	1058	1040
18	1058	1048	1044	1042	1047	1045	1044	1040	1037	1024	1020	1016	1016	1029	1033	1038	1050	1058	1069	1059	1060	1048	1043	1044	1047	1042
19	1047	1049	1030	1041	1048	1049	1054	1055	1033	973	934	963	993	1030	1009	1044	1039	1059	1049	1063	1057	1053	1050	1047	1044	1032
20	1044	1043	1050	1044	1047	1044	1034	1037	1038	1028	1019	1018	1029	1033	1034	1044	1034	1053	1054	1064	1062	1075	1043	1049	1053	1043
21	1053	1060	1058	1044	1048	1048	1040	1036	1033	1028	1030	1033	1016	1026	1046	1080	1029	1063	1084	1069	1075	1049	1052	1044	1073	1048
22	1073	1069	1056	978	1036	1050	1048	993	1014	1015	1007	1000	1006	1024	1031	1036	1043	1050	1058	1065	1058	1061	1060	1066	1035	1037
23	1035	1065	1033	1039	1059	1060	1048	1029	1005	1028	1024	1013	1010	1023	1038	1050	1040	1074	1090	1061	1088	1081	1045	1044	1044	1045
24	1044	1050	1056	1037	1038	1040	1038	1034	1027	1017	997	999	1020	1014	1039	1049	1056	1075	1058	1046	1056	1057	1060	1045	1033	1039
25	1033	1049	1038	1032	1027	1041	1044	1033	1024	1019	1014	1012	1010	1015	1027	1028	1043	1049	1058	1061	1053	1064	1055	1054	1054	1037
26	1054	1050	1046	1044	1051	1053	1046	1040	1024	1019	1018	1015	1014	1023	1034	1033	1045	1065	1064	1059	1068	1063	1075	1060	1044	1044
27	1044	1045	1045	1044	1049	1054	1037	1040	1031	1020	1011	1006	1009	1019	1026	1046	1061	1062	1054	1055	1054	1046	1046	1045	1045	1040
28 Q	1045	1043	1042	1045	1043	1044	1041	1032	1025	1018	1006	1001	1006	1016	1036	1043	1061	1066	1060	1065	1051	1055	1046	1052	1066	1040
29	1066	1075	1040	1050	1044	1046	1042	1036	1028	1020	1018	1017	1021	1025	1039	1039	1040	1067	1061	1079	1070	1057	1046	1047	1048	1044
30	1048	1053	1051	1054	1036	1046	1047	1036	1023	1013	1010	1005	1010	1020	1037	1048	1054	1052	1053	1055	1062	1061	1073	1062	1043	1042
31	1043	1031	1047	1067	1021	1043	1057	1046	1039	1028	1020	1015	1020	1030	1040	1041	1050	1049	1061	1070	1062	1070	1050	1051	1055	1044
Mean	1047	1046	1039	1040	1043	1041	1036	1032	1021	1013	1005	1003	1009	1017	1028	1039	1046	1058	1062	1064	1062	1058	1052	1052	1048	1038

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

298. Eskdalemuir. (-Y.)

4,000  $\gamma$  (.04 C.G.S. unit) +

August, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	229	246	229	211	202	216	204	203	199	203	207	219	237	248	250	256	252	250	245	240	240	237	227	231	227	228
2 Q	227	223	223	224	227	237	226	220	214	211	219	237	256	263	264	270	264	259	238	240	237	237	236	236	236	287
3 Q	236	230	229	223	223	222	214	211	211	216	217	224	238	251	259	256	251	252	250	238	242	236	235	216	217	232
4 Q	217	217	222	217	217	223	219	217	211	215	221	231	245	258	262	256	250	243	237	237	234	233	235	224	219	231
5	219	216	217	217	212	205	209	209	210	211	217	230	247	263	269	262	262	257	250	252	224	231	238	223	230	231
6 D	230	216	270	223	221	264	295	256	235	240	249	240	251	256	277	270	267	278	243	257	203	198	211	227	223	245
7 D	223	209	212	203	197	209	237	249	224	236	217	217	236	245	250	242	243	254	257	209	226	231	231	197	187	227
8 D	187	164	183	203	214	223	217	209	217	213	218	216	242	262	258	251	260	244	243	236	252	223	237	2		

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

299. Eskdalemuir. (Z.)

44,000  $\gamma$  (.44 C.G.S. unit) +

August, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day. 1	881	873	859	859	867	870	871	870	871	871	876	875	867	863	864	872	875	879	879	881	883	883	882	876	875	875	873
2 Q	875	876	876	875	873	869	864	868	867	867	867	864	865	870	882	882	882	882	882	888	886	883	880	879	873	870	875
3 Q	870	867	870	872	875	876	876	876	875	874	869	863	864	867	870	872	876	880	883	885	884	884	884	877	870	872	874
4 Q	872	872	872	873	875	872	868	864	864	863	864	864	862	859	860	867	871	874	879	884	884	880	880	880	871	867	870
5	867	870	873	873	873	872	872	872	873	871	864	860	855	855	860	862	866	877	886	897	901	901	892	866	857	849	871
6 D	849	846	816	830	848	819	767	785	822	841	849	857	870	882	901	965	945	953	973	952	919	846	858	874	853	870	
7 D	853	816	803	808	846	854	842	845	859	870	878	892	892	898	910	915	905	890	900	918	906	897	850	828	831	869	
8 D	831	812	789	773	797	798	824	846	858	859	863	875	872	876	898	911	905	915	913	918	888	871	856	870	867	860	
9 D	867	820	816	794	829	841	828	854	862	877	879	886	893	892	896	900	905	906	903	900	895	882	881	850	866	869	
10	866	874	873	874	863	863	868	871	874	875	875	870	872	883	896	900	905	907	919	910	894	895	881	879	862	882	
11	862	839	847	854	864	867	873	878	882	877	878	874	873	877	884	896	904	900	902	902	902	886	883	882	878	879	
12 D	878	876	869	834	803	813	830	848	857	866	868	862	858	869	877	886	898	898	907	902	891	895	887	845	846	848	
13	848	830	782	808	841	843	849	865	873	878	882	876	873	877	884	887	886	892	899	894	883	883	880	866	864	866	
14	864	858	868	868	870	877	875	876	874	874	871	869	873	878	879	886	891	895	892	895	899	869	874	872	869	877	
15	869	844	823	838	844	843	826	839	851	852	861	860	861	873	890	907	931	915	895	889	885	885	884	883	882	869	
16	882	882	882	876	869	868	869	864	867	873	876	873	875	877	882	888	905	925	928	925	909	885	885	881	867	885	
17 Q	867	865	869	876	879	884	887	888	884	880	873	875	871	868	872	881	884	893	899	905	897	890	881	863	862	880	
18	862	864	870	871	877	879	880	880	879	874	871	869	869	867	870	871	874	876	882	885	892	891	878	858	858	874	
19	858	863	865	855	867	872	867	870	870	875	871	862	862	870	877	889	900	904	897	889	892	888	885	884	883	877	
20	883	883	874	859	861	867	870	874	874	873	873	870	869	867	872	882	885	892	891	886	891	887	882	881	879	877	
21	879	869	856	865	872	874	876	874	873	872	864	860	860	858	860	870	884	878	877	902	904	890	883	860	825	872	
22	825	809	821	767	769	822	842	856	864	865	866	862	865	869	874	882	882	881	881	883	890	886	881	866	829	886	
23	829	835	846	837	842	853	859	863	867	863	862	863	863	867	880	906	907	910	903	895	886	867	871	870	863	869	
24	863	833	845	849	849	858	867	873	875	873	871	871	870	872	876	888	901	915	913	895	888	887	879	878	847	874	
25	847	840	849	854	856	863	872	877	879	876	871	867	868	874	879	885	888	916	883	882	886	883	878	877	870	872	
26	870	869	870	871	870	871	875	878	875	870	868	866	865	866	871	883	887	891	885	882	882	877	869	857	865	874	
27	865	869	870	872	865	852	862	864	865	866	862	860	857	862	873	886	890	899	896	886	886	886	882	878	877	873	
28 Q	877	877	877	873	876	878	881	881	878	876	874	872	868	869	870	874	878	882	889	888	885	881	883	876	868	877	
29	868	848	850	856	866	872	876	876	873	873	868	867	863	860	864	875	876	878	884	882	881	877	876	873	873	870	
30	873	865	865	868	862	855	864	868	868	869	870	872	868	867	868	873	876	876	877	876	876	876	877	864	868	870	
31	868	859	833	832	837	837	846	858	859	862	862	857	853	855	863	872	876	887	888	881	880	863	866	872	871	861	
Mean	863	855	851	850	854	857	859	865	868	869	869	868	868	871	877	887	891	895	896	895	891	882	875	869	863	872	

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

300. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

August, 1930.

Day.	Terrestrial Magnetic Force.												Character $\Sigma R^2$ Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House $200 +$ $^{\circ}C$			
	North Component.				West Component.				Vertical Component.									
	Maximum $15000 \gamma +$	Minimum $15000 \gamma +$	Range.		Maximum $4000 \gamma +$	Minimum $4000 \gamma +$	Range.		Maximum $44000 \gamma +$	Minimum $44000 \gamma +$	Range.							
1	h. m. 22 11	$\gamma$ 1092	$\gamma$ 994	h. m. 13 23	$\gamma$ 98	h. m. 15 0	$\gamma$ 263	$\gamma$ 191	h. m. 3 48	$\gamma$ 72	h. m. 21 20	$\gamma$ 884	$\gamma$ 856	h. m. 1 40	$\gamma$ 28	156	I	85.3
2 Q	22 35	1070	999	12 27	71	15 8	282	207	8 38	75	18 30	888	863	5 43	25	113	0	85.4
3 Q	22 24	1079	1002	12 30	77	13 28	263	207	23 10	56	19 16	885	867	1 0	18	94	0	85.4
4 Q	22 54	1075	1008	10 48	67	12 54	262	203	8 3	59	20 12	884	858	12 55	26	86	0	85.4
5	18 22	1110	1004	22 20	106	13 48	284	203	22 33	81	19 56	905	846	23 38	59	213	I	85.4
6 D	14 51	1143	899	12 52	244	14 52	342	94	20 56	248	15 7	1016	764	6 28	252	1845	2	85.4
7 D	0 33	1130	880	11 21	250	18 12	282	143	0 21	139	18 47	921	781	0 19	140	1014	2	85.4
8 D	19 32	1236	925	10 50	311	13 48	277	135	19 30	142	19 30	931	760	2 43	171	1461	2	85.5
9 D	19 48	1105	926	9 0	179	0 43	282	185	21 26	97	16 40	909	782	3 0	127	576	I	85.5
10	17 26	1126	976	14 30	150	16 6	263	157	24 0	106	17 17	932	859	3 58	73	391	I	85.5
11	20 39	1145	945	10 16	200	12 32	262	144	20 28	118	15 34	905	836	0 49	69	587	I	85.6
12 D	18 49	1206	967	12 59	239	12 24	270	169	18 40	101	16 41	912	800	4 0	112	799	I	85.6
13	19 37	1103	980	12 7	123	1 59	278	190	17 33	88	17 37	901	766	2 10	135	411	I	85.6
14	20 12	1212	992	10 40	220	13 54	250	93	20 4	157	20 5	912	854	0 35	58	764	I	85.6
15	16 12	1068	957	7 32	111	0 51	270	192	1 47	78	16 4	936	812	1 30	124	338	I	85.6
16	20 33	1097	1007	12 58	90	16 25	276	178	23 29	98	18 54	930	864	7 10	66	221	I	85.7
17 Q	19 48	1093	997	10 36	96	14 32	268	196	0 43	72	18 59	906	856	23 23	50	169	I	85.7
18	18 18	1089																

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

301. Eskdalemuir. (X.)

15,000  $\gamma$  ( $\cdot 15$  C.G.S. unit) +

September, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	1055	1061	1051	1051	1054	1057	997	1011	1006	1011	981	969	977	976	1036	1021	1037	1067	1037	1036	1041	1049	1037	1039	1036	1027
2	1036	1030	1046	1036	1020	1009	1026	1030	1011	1002	966	986	1014	1021	1026	1046	1047	1046	1042	1051	1061	1062	1061	1057	1061	1031
3 D	1061	1061	1057	1057	1035	1025	1032	1019	1010	1004	1004	1006	985	1020	1011	1095	1062	1051	1051	1047	1067	1022	1010	1007	1034	1034
4	1007	1011	1031	1047	1011	1010	1031	1030	1025	956	952	957	991	1012	1022	1031	1035	1045	1047	1051	1052	1045	1046	1041	1042	1021
5	1042	1039	1036	1022	1038	1047	1049	1036	1021	1020	1006	1001	992	1022	1039	1042	1055	1091	1051	1081	1051	1082	1036	1042	1045	1039
6 D	1045	1031	1036	1032	1047	1054	1048	1021	1035	1020	961	962	962	1015	1028	1056	1057	1032	1062	1044	1041	1043	1047	1045	1041	1030
7	1041	1026	1030	1031	1041	1037	1033	1026	990	1013	995	1001	1007	1016	1030	1062	1054	1052	1046	1051	1054	1044	1031	1046	1045	1032
8	1045	1030	1027	1036	1038	1037	1021	1033	1018	1009	996	1000	1004	1016	1022	1037	1064	1037	1048	1041	1061	1066	1043	1047	1051	1032
9	1051	1047	1048	1047	1046	1050	1046	1030	1025	1015	976	977	982	998	1011	1026	1040	1033	1042	1038	1051	1046	1050	1067	1041	1031
10	1041	1038	1026	1047	1041	1038	1041	1021	1020	1011	1007	1009	1011	1018	1028	1030	1034	1045	1046	1046	1049	1046	1049	1046	1043	1033
11	1043	1046	1046	1046	1046	1049	1051	1051	1037	1020	1006	1005	998	1007	1032	1016	1024	1042	1046	1040	1048	1051	1054	1062	1046	1036
12	1046	1036	1041	1041	1037	1041	1041	1036	1030	1020	1006	1004	1002	1011	1022	1025	1037	1041	1049	1049	1043	1044	1067	1031	1030	1033
13	1030	1040	1044	1051	1050	1044	1048	1046	1036	1022	1011	1006	1005	1011	1022	1036	1039	1042	1045	1047	1052	1044	1043	1043	1042	1036
14 Q	1042	1036	1047	1044	1046	1042	1046	1042	1041	1033	1016	1009	1010	1011	1021	1021	1036	1041	1044	1050	1052	1047	1040	1047	1048	1036
15 Q	1048	1047	1051	1051	1055	1057	1041	1058	1046	1033	1011	1010	1011	1016	1025	1031	1037	1038	1042	1047	1051	1046	1046	1046	1046	1039
16 Q	1046	1041	1046	1046	1046	1049	1051	1047	1037	1020	1011	1001	1000	1005	1021	1033	1042	1052	1052	1047	1049	1051	1051	1051	1051	1037
17	1051	1051	1052	1052	1051	1052	1054	1051	1047	1044	1016	1012	1009	998	998	1006	1021	1034	1050	1052	1054	1056	1056	1055	1055	1039
18 D	1055	1048	1050	1051	1051	1048	1051	1047	1040	1011	885	938	972	972	971	1002	1017	1036	1031	1066	1036	1026	1040	1051	1051	1023
19	1012	1015	966	996	1017	1016	1001	995	996	998	977	956	987	996	1013	1021	1035	1032	1036	1034	1047	1042	1036	1034	1030	1011
20	1030	1036	1020	1030	1035	1032	1032	1031	1026	1013	1016	1012	1006	1008	1011	1026	1036	1037	1037	1041	1046	1041	1047	1046	1042	1029
21	1042	1042	1042	1043	1046	1047	1050	1041	995	950	946	984	1006	1019	1016	1001	1021	1015	1040	1045	1037	1042	1048	1036	1034	1023
22	1034	1063	1031	1036	1038	1039	1037	1031	1022	1020	1026	1025	1024	1022	1024	1028	1029	1041	1041	1046	1046	1046	1044	1040	1043	1035
23	1043	1037	1040	1040	1044	1046	1046	1048	1030	1008	994	1016	1012	1015	1018	1030	1030	1046	1040	1047	1049	1053	1046	1037	1034	1035
24	1037	1071	1041	1052	1051	1046	1041	1043	1032	985	1006	1005	1002	1017	1025	1028	1022	1036	1044	1046	1057	1046	1048	1061	1052	1035
25	1052	1047	1047	1046	1046	1047	1046	1041	1032	1023	1012	1011	1016	1020	1018	1031	1035	1041	1047	1038	1039	1047	1062	1067	1047	1038
26 Q	1047	1045	1044	1047	1047	1051	1046	1046	1044	1030	1017	1006	1005	1012	1016	1032	1049	1049	1051	1051	1056	1052	1051	1051	1052	1039
27 Q	1052	1056	1052	1051	1052	1051	1051	1047	1036	1025	1013	1006	1010	1016	1021	1023	1037	1049	1052	1051	1053	1054	1052	1053	1050	1040
28	1050	1052	1051	1051	1057	1056	1061	1042	1046	1042	1027	1007	981	985	1006	1016	1026	1045	1036	1046	1037	1055	1047	1046	1049	1036
29 D	1049	1051	1055	1045	1021	1036	1004	1037	1001	956	986	999	980	946	971	1005	1020	1035	1047	1066	1045	1031	1047	1030	1042	1019
30 D	1042	1016	1042	1026	965	941	905	931	911	971	971	987	996	996	996	1007	1020	1037	1035	1045	1042	1039	1036	1035	1032	999
Mean	1043	1042	1040	1042	1039	1038	1034	1032	1022	1010	997	994	997	1007	1017	1029	1037	1043	1045	1048	1048	1046	1046	1046	1042	1031

TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

302. Eskdalemuir. (-Y.)

4,000  $\gamma$  ( $\cdot 04$  C.G.S. unit) +

September, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	232	236	210	209	230	257	258	224	223	210	215	222	241	243	255	258	245	223	222	222	230	224	218	216	230	230
2	230	289	230	206	202	210	224	205	207	208	210	229	244	255	255	251	245	242	232	232	235	232	229	228	229	280
3 D	229	225	212	216	217	220	215	215	217	218	230	242	248	263	293	315	250	244	228	223	223	170	183	162	202	227
4	202	214	212	213	204	215	202	190	192	205	216	219	237	248	244	238	223	219	219	216	209	223	217	225	223	217
5	223	224	236	231	223	211	210	203	202	202	215	226	236	249	256	236	240	243	212	217	216	196	204	210	216	222
6 D	216	231	250	238	216	215	216	226	211	217	203	223	257	264	270	240	243	211	205	217	222	222	216	210	216	227
7	216	237	223	224	220	216	210	210	211	216	218	223	243	248	236	224	223	219	212	210	210	210	217	198	191	219
8	191	196	198	190	196	194	203	202	193	205	216	231	244	254	253	242	246	226	230	220	206	212	223	224	224	217
9	224	222	223	223	221	218	220	210	222	214	214	242	247	274	276	244	246	202	200	222	190	209	216	197	217	224
10	217	216	230	193	210	212	210	202	204	210	213	224	242	247	250	238	229	228	228	218	216	222	225	226	226	221
11	226	224	224	223	218	216	213	210	210	229	235	245	250	257	270	249	237	233	224	214	228	230	229	202	203	229
12	203	222	220	215	210	220	209	208	202	210	219															

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

303. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

September, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.		
Day. 1	871	859	864	867	854	819	803	824	842	854	859	864	871	892	914	926	940	945	929	917	902	892	888	878	863	878	878	
2	863	841	806	802	830	837	844	862	871	874	874	870	867	866	867	871	878	874	874	874	874	874	875	875	875	875	860	860
3 D	875	869	866	866	865	853	852	858	861	860	866	862	871	887	906	952	1015	955	949	933	919	860	847	852	833	887	887	
4	833	767	800	798	798	826	856	872	873	873	866	870	870	870	873	880	882	886	887	887	886	882	879	877	873	859	859	
5	873	873	868	861	860	868	872	876	881	880	872	864	864	869	878	890	902	911	931	906	886	864	859	865	866	878	878	
6 D	866	863	849	842	854	868	869	869	864	863	868	877	884	893	902	914	909	919	914	904	892	886	881	881	863	860	880	
7	860	864	869	872	874	878	881	882	884	881	877	879	879	883	888	899	899	899	902	899	888	881	870	856	848	881	881	
8	848	851	855	855	864	867	865	867	871	871	871	867	863	863	873	883	888	897	895	894	891	877	876	876	876	876	873	
9	876	876	876	875	876	875	872	876	876	872	871	871	875	880	897	904	899	923	919	897	890	884	872	859	861	883	883	
10	861	857	832	830	846	853	862	871	872	872	875	876	875	878	887	894	897	889	888	885	884	880	877	876	875	875	872	
11	875	875	875	876	876	875	875	875	872	870	870	866	866	872	878	887	891	892	892	892	884	879	878	876	867	867	878	
12	867	870	874	875	875	871	870	870	867	866	867	866	867	869	875	883	888	888	884	885	889	886	854	858	855	869	873	
13	855	865	870	866	853	862	870	874	872	870	867	866	863	865	869	870	874	876	876	875	875	877	879	871	848	869	869	
14 Q	848	848	845	848	851	859	866	873	871	869	868	863	857	861	871	877	878	878	878	875	875	878	877	875	872	867	867	
15 Q	872	869	866	865	865	866	866	861	866	866	870	866	862	865	869	873	878	883	883	880	878	878	878	875	874	871	871	
16 Q	874	874	873	873	873	873	874	875	877	877	870	866	862	865	869	878	884	894	890	886	884	879	878	875	874	876	876	
17	874	874	874	873	872	870	872	874	874	870	865	857	853	858	866	879	888	885	885	880	878	874	873	872	872	884	884	
18 D	872	872	872	871	870	870	870	870	870	868	863	868	856	880	924	905	916	977	1001	938	877	885	867	804	793	884	884	
19	793	834	796	816	837	834	838	860	869	871	867	865	873	874	885	905	903	908	910	892	885	868	861	873	877	865	865	
20	877	876	871	867	872	873	875	877	877	874	872	873	872	874	878	877	881	882	886	886	885	881	877	877	877	877	877	
21	877	877	877	876	874	873	873	873	873	870	868	865	868	869	880	888	898	914	904	904	894	887	877	877	878	881	881	
22	878	852	848	865	872	872	873	874	874	872	865	864	861	864	868	870	873	875	876	874	874	874	877	877	877	877	870	
23	877	877	877	877	874	873	873	872	870	865	867	864	864	867	868	874	879	878	882	885	880	879	878	877	865	874	874	
24	865	848	855	862	865	864	866	867	867	867	861	856	856	864	872	877	879	889	886	883	877	875	875	872	861	869	869	
25	861	861	868	871	871	869	869	872	872	868	864	861	863	864	867	868	873	874	877	889	885	878	874	869	868	870	870	
26 Q	868	869	872	872	872	871	871	869	868	868	865	864	861	861	865	868	872	874	873	873	872	872	873	874	873	870	870	
27 Q	873	872	870	869	869	869	869	870	871	870	869	868	868	865	869	877	877	876	873	872	872	869	869	868	868	867	867	
28	868	868	868	862	848	856	859	853	855	856	856	858	861	864	864	872	877	877	886	902	890	882	857	864	864	867	867	
29 D	864	848	826	813	813	812	817	827	844	859	864	864	871	894	912	902	905	904	898	864	870	868	835	822	817	857		
30 D	817	723	726	701	672	646	684	735	813	851	863	856	865	868	868	872	875	877	877	877	877	877	877	878	877	817	817	
Mean	863	856	853	852	853	853	857	863	867	868	867	866	866	871	880	887	893	897	897	890	884	877	871	867	863	871	871	

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

304. Eskdalemuir. MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

September, 1930.

Day.	Terrestrial Magnetic Force.										Character Figure $\frac{E R^2}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House 200 + °A.					
	North Component.			West Component.			Vertical Component.											
	Maximum 15000 γ +	Minimum 15000 γ +	Range.	Maximum 4000 γ +	Minimum 4000 γ +	Range.	Maximum 44000 γ +	Minimum 44000 γ +	Range.	h. m.				γ				
1	16 40	1091	936	12 49	155	5 54	294	203	6 39	91	16 33	954	798	6 5	86	566	1	86.0
2	20 40	1073	956	9 55	117	1 10	312	192	3 36	120	16 20	879	793	2 59	86	355	1	86.0
3 D	15 30	1155	955	13 58	200	15 31	349	89	20 57	260	15 43	1061	826	21 28	235	1628	2	86.0
4	3 22	1071	935	9 19	136	13 20	251	176	7 56	75	18 40	887	752	0 48	135	423	1	86.0
5	18 52	1165	976	11 58	189	13 44	275	148	20 30	127	17 59	937	848	21 34	89	598	1	86.0
6 D	15 0	1082	916	11 42	166	13 46	286	176	17 34	110	17 20	924	839	2 50	85	469	1	86.0
7	15 5	1071	980	8 6	91	11 52	264	189	23 38	75	17 50	903	847	23 50	56	170	1	86.0
8	20 29	1097	992	10 21	105	13 31	263	169	20 22	94	17 12	898	848	1 12	50	224	1	86.1
9	22 44	1091	951	10 49	140	13 38	290	150	20 12	140	17 23	931	857	23 0	74	447	1	86.1
10	19 32	1062	1000	9 28	62	14 9	256	180	3 10	76	15 39	897	820	2 33	77	155	1	86.1
11	23 21	1072	991	11 41	81	13 59	277	196	23 00	81	18 55	894	862	11 8	32	141	0	86.1
12	21 40	1124	1000	12 10	124	13 54	264	164	22 42	100	20 2	891	849	22 0	42	271	1	86.1
13	3 22	1067	1001	12 9	66	14 0	244	176	0 2	68	21 5	879	845	24 0	34	101	0	86.1
14 Q	19 45	1057	1005	11 0	52	12 41	258	163	0 50	95	21 3	881	843	0 13	38	132	0	86.1
15 Q	4 42	1064	1006	10 38	58	6 28	249	196	2 59	53	17 40	883	860	6 50	23	67	0	86.1
16 Q	17 12	1067	992	12 23	75	12 53	249	197	16 44	52	17 6	896	861	12 3	35	96	0	86.1
17	6 34	1064	986	13 42	78	14 56	275	195	8 38	80	16 3	888	852	12 0	36	138	0	86.1
18 D	18 57	1128	856	10 51	272	13 28	361	76	18 58	285	17 50	1036	778	23 5	258	2218	2	86.1
19	20 5	1066	936															

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

305. Eskdalemuir. (X.)

15,000  $\gamma$  ( $\cdot 15$  C.G.S. unit) +

October, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	1032	1034	1038	1037	1042	1042	1044	1010	1007	1004	992	991	981	989	1010	996	1025	1027	1057	1035	1036	1038	1047	1057	1032	1024
2	1032	1037	1014	1032	1039	1037	1037	1026	1027	1017	1008	1002	987	1004	1015	1017	1036	1031	1034	1052	1042	1047	1057	1043	1038	1028
3 D	1038	1037	1033	1035	1046	1026	1041	1046	1035	1021	1009	937	996	1025	1016	1027	1006	1033	1057	1027	1052	1022	1026	1041	1066	1027
4 D	1065	1031	1025	1032	1034	1016	1018	1031	1022	994	981	975	971	990	1017	1036	1030	1039	1039	1046	1061	1026	1039	1051	1027	1023
5	1027	1037	1031	1036	1040	1036	1020	1013	1005	1005	995	985	984	1007	1001	1006	1030	1024	1025	1026	1036	1041	1035	1039	1036	1020
6	1036	1011	1042	1045	1030	1037	1041	1029	1030	1005	1003	1005	1014	1010	1019	1032	1036	1035	1036	1037	1057	1034	1036	1032	1036	1029
7	1036	1036	1030	1041	1052	1036	1040	1039	1035	1030	1015	1013	1011	1019	1017	1039	1021	1025	1041	1060	1031	1041	1054	1035	1041	1033
8	1041	1037	1036	1039	1056	1023	1026	1014	1005	985	979	975	973	987	1004	1015	1015	1015	1028	1021	1048	1036	1036	1036	1041	1018
9	1041	1041	1041	1043	1040	1046	1045	1044	1026	1011	1000	995	996	1008	1013	1025	1029	1028	1045	1046	1046	1052	1051	1056	1042	1032
10	1041	1045	1045	1044	1044	1045	1045	1045	1041	1029	1012	1004	1003	1010	1017	1029	1030	1029	1044	1043	1029	1036	1036	1043	1040	1033
11 Q	1040	1045	1041	1042	1035	1047	1050	1045	1031	1010	1009	1007	1010	1006	1015	1022	1030	1033	1034	1027	1035	1044	1044	1045	1044	1031
12	1044	1044	1044	1043	1044	1044	1043	1043	1037	1031	1019	1004	1007	1006	1021	1031	1038	1044	1045	1042	1055	1047	1046	1044	1045	1036
13 Q	1045	1045	1045	1045	1045	1048	1045	1044	1039	1025	1020	1017	1017	1020	1024	1029	1035	1040	1033	1039	1042	1044	1045	1045	1049	1038
14	1049	1044	1040	1050	1046	1075	1085	1089	1075	1066	1051	1029	1022	1004	1024	1049	1037	1027	1050	1050	1029	979	981	1004	1019	1039
15	1019	1018	1025	1019	1020	1024	1025	1025	1024	1019	1009	1004	1003	1000	1005	1015	1027	1030	1035	1036	1039	1039	1038	1036	1035	1023
16 Q	1035	1040	1037	1036	1038	1039	1039	1039	1038	1033	1024	1015	1000	1006	1014	1020	1029	1034	1035	1039	1033	1033	1033	1040	1043	1031
17 D	1042	1044	1048	1049	1049	1053	1033	997	1019	1022	1018	987	957	973	1010	1045	1090	1134	1113	958	968	923	978	999	987	1020
18	987	1003	997	1001	998	1005	1009	1014	1013	1015	1008	1002	988	993	1016	1019	1015	1016	1023	1024	1028	1013	1018	1039	1037	1011
19	1037	1037	1027	1020	1029	1033	1035	1028	1021	987	1006	1006	1006	1011	1018	1023	1023	1029	1033	1034	1028	1038	1038	1031	1021	1024
20	1021	1035	1023	1026	1023	1034	1028	1033	1031	957	978	1008	1006	1009	1013	1013	1019	1034	1020	1074	1026	1034	1054	1054	1034	1023
21	1034	1043	1033	1028	1024	1025	1035	1037	1015	1027	1014	1013	1016	1022	1027	1024	1024	1028	1039	1053	1034	1039	1039	1038	1036	1030
22	1036	1037	1036	1034	1037	1042	1042	1043	1041	1033	1021	1013	1014	1021	1033	1035	1033	1028	1032	1028	1036	1039	1041	1044	1043	1033
23 Q	1042	1035	1038	1037	1035	1042	1044	1045	1040	1034	1023	1026	1024	1031	1034	1037	1042	1038	1034	1042	1039	1049	1045	1038	1038	1037
24 Q	1038	1038	1038	1040	1041	1043	1043	1042	1041	1037	1027	1023	1025	1032	1034	1038	1043	1043	1043	1042	1042	1046	1042	1044	1043	1047
25	1047	1046	1048	1047	1043	1047	1051	1052	1048	1038	1033	1032	1038	1041	1039	1033	1037	1033	1018	1043	1036	1042	1038	1043	1048	1041
26 D	1048	1048	1038	1036	999	1043	1055	1021	998	1012	1018	1023	992	978	997	1028	1027	1003	997	1053	1043	1013	1032	1052	1038	1023
27 D	1038	1008	1020	1036	1012	1007	1020	1029	1012	1008	997	958	965	1012	1009	1022	1020	1037	1027	1047	1058	1053	1001	1025	1026	1017
28	1025	1016	1001	1023	1037	1024	1035	1017	1021	1001	981	1006	1007	987	997	1021	1031	1016	1023	1015	1058	1026	1027	1031	1015	1018
29	1015	1016	1024	1038	1019	1031	1036	1022	1004	982	967	978	1001	996	1011	1012	1030	1033	1041	1057	1026	1038	1046	1033	1031	1019
30	1031	1026	1042	1035	1028	1032	1048	1019	1006	1012	1015	1007	1011	1012	1006	1027	1028	1018	1067	1029	1101	1063	1011	1025	1033	1029
31	1033	1032	1032	1032	1032	1037	1035	1031	1021	1019	1016	982	981	1012	1022	1030	1029	1021	1043	1037	1032	1031	1042	1035	1035	1026
Mean	1035	1034	1033	1035	1034	1036	1039	1033	1026	1016	1008	1001	1000	1007	1016	1026	1031	1032	1039	1037	1040	1032	1034	1038	1036	1028

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

306. Eskdalemuir. (-Y.)

4,000  $\gamma$  ( $\cdot 04$  C.G.S. unit) +

October, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	211	212	210	209	215	218	224	248	233	228	222	228	237	229	238	226	222	217	176	209	219	219	208	209	222	220
2	222	198	210	219	213	214	214	212	202	206	209	224	236	242	249	235	228	222	204	212	216	222	149	196	213	215
3 D	213	219	226	235	230	206	214	216	209	202	220	228	249	260	250	248	232	209	164	179	162	202	203	208	194	216
4 D	194	209	209	212	208	226	222	202	209	203	219	226	230	243	249	228	230	216	209	200	176	202	206	189	212	214
5	212	218	209	209	210	218	234	232	219	208	203	225	231	249	250	240	219	195	208	202	205	224	202	209	208	218
6	208	223	229	208	203	209	215	208	209	202	212	223	245	246	245	241	214	216	221	195	164	204	194	196	209	214
7	209	209	222	216	212	210	213	208	201	202	202	213	230	242	230	232	223	215	202	177	178	182	169	188	203	208
8	203	211	215	239	235	255	261	238	223	215	228	229	234	245	240	241	238	215	190	195	182	199	215	215		

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

307. Eskdalemuir. (Z.)

44,000  $\gamma$  (.44 C.G.S. unit) +

October, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	878	878	874	875	874	870	870	868	866	870	877	880	890	891	890	895	898	904	899	887	883	882	878	864	857	880
2	857	861	863	863	869	873	871	876	875	874	874	873	875	879	879	884	890	887	886	886	879	878	884	873	869	876
3 D	869	871	869	857	854	849	859	866	869	870	869	878	875	878	899	925	939	925	917	904	890	839	868	866	849	879
4 D	849	848	860	862	862	857	855	866	869	874	878	881	887	892	896	908	896	900	896	893	881	879	878	872	866	877
5	866	857	866	873	872	869	869	863	865	864	870	872	878	878	884	895	914	922	904	895	892	853	865	869	860	877
6	860	855	848	857	861	865	861	869	870	872	872	869	868	873	881	882	891	890	883	887	881	870	874	870	870	871
7	870	870	867	867	867	870	871	873	876	875	874	870	867	870	875	883	891	891	890	883	879	877	863	854	857	874
8	857	862	863	852	840	836	832	845	859	866	867	870	879	888	900	910	909	906	905	897	882	878	875	875	875	873
9	875	871	853	847	860	866	867	867	867	867	864	864	866	868	875	878	882	884	885	879	879	877	875	857	864	869
10	864	869	870	870	870	870	870	870	874	874	870	867	863	864	868	875	882	888	887	884	883	879	879	875	874	874
11 Q	874	870	870	870	870	865	866	867	870	869	866	866	866	867	872	879	885	886	884	886	884	879	876	875	874	873
12	874	874	874	873	872	872	872	872	871	871	865	863	862	862	867	872	877	877	876	878	872	870	870	870	871	871
13 Q	871	871	871	871	871	871	871	870	871	871	867	864	861	860	866	872	880	880	880	880	880	877	876	874	871	872
14	871	868	868	862	865	855	842	841	846	848	850	853	854	855	859	862	871	877	872	877	910	889	863	877	878	864
15	878	884	878	879	882	881	881	881	880	877	876	876	876	873	875	877	877	877	877	876	876	876	876	876	876	878
16 Q	876	872	869	869	872	872	873	876	876	877	876	872	872	868	869	875	877	876	876	876	877	880	880	876	873	874
17 D	873	872	872	870	870	869	868	866	864	865	873	882	893	904	926	977	1054	997	998	1028	982	879	903	876	879	917
18	879	883	898	900	895	888	891	892	892	891	889	893	895	891	887	891	892	896	893	896	900	921	917	909	891	895
19	891	887	883	883	876	878	878	879	878	883	882	883	883	881	881	883	887	886	884	884	892	887	883	879	866	882
20	866	831	835	849	863	867	871	872	873	881	885	881	881	880	883	889	914	906	899	887	879	881	879	869	857	876
21	857	854	866	871	868	864	864	869	874	873	872	871	868	868	872	879	885	886	888	881	880	880	877	878	880	873
22	880	880	880	880	877	876	876	876	876	876	875	873	872	873	876	878	885	887	893	889	885	883	882	881	880	880
23 Q	880	880	880	879	877	876	875	876	877	874	873	871	874	874	876	878	881	882	883	881	881	878	879	881	879	878
24 Q	879	878	878	877	877	877	877	875	875	875	871	869	870	873	878	879	879	879	879	879	878	879	878	878	877	877
25	877	878	872	870	871	873	873	873	873	874	870	867	863	866	871	879	879	888	906	915	891	888	888	879	837	878
26 D	837	763	795	802	776	816	834	842	854	859	865	866	876	923	960	959	984	962	941	916	872	859	863	820	789	867
27 D	789	821	854	860	855	834	855	865	868	873	873	882	898	894	899	945	942	932	914	890	886	872	857	840	859	876
28	859	855	844	856	868	869	870	877	881	881	888	882	885	896	906	895	894	903	921	917	906	891	886	879	870	884
29	870	855	858	865	875	874	876	882	884	888	896	905	899	904	906	922	930	902	903	896	891	890	884	869	874	889
30	874	868	863	860	850	854	855	867	872	880	884	885	892	894	902	908	907	917	911	893	884	851	872	877	877	880
31	877	878	881	877	874	873	873	876	879	882	883	886	899	895	895	913	918	916	904	896	899	869	865	872	868	886
Mean	867	863	865	866	866	865	867	869	872	873	874	875	877	880	886	895	902	903	898	893	890	881	876	872	867	878

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE:

308. Eskdalemuir.

MAGNETIC CHARACTER FIGURES: TEMPERATURE OF MAGNET HOUSE.

October, 1930.

Day.	Terrestrial Magnetic Elements.										Character Figure $\Sigma R^2$ $100\gamma^2$	Magnetic Character of Day (0-2).	Temperature in Magnet House $^{\circ}A$					
	North Component.					West Component.								Vertical Component.				
	Maximum $15000\gamma +$		Minimum $15000\gamma +$		Range.	Maximum $4000\gamma +$		Minimum $4000\gamma +$		Range.				Maximum $46000\gamma +$		Minimum $46000\gamma +$		Range.
1	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$			
2	18 5	1106	966	11 32	140	7 22	259	146	17 48	113	17 3	908	857	24 0	51	350	I	86.1
3 D	22 21	1107	961	12 6	146	12 24	254	108	22 12	146	15 29	891	857	1 0	34	438	I	86.1
4	20 14	1126	914	10 53	212	13 11	274	108	20 5	166	16 5	943	827	20 44	116	860	I	86.1
5	0 8	1114	945	11 51	169	14 7	262	164	0 1	98	15 2	912	844	0 25	68	428	I	86.1
6	16 21	1070	965	11 40	105	13 20	269	172	17 3	97	16 16	926	848	21 16	78	265	I	86.1
7	19 32	1080	980	9 21	100	12 49	258	122	19 49	136	16 3	894	844	1 58	50	310	I	86.1
8	21 15	1077	1005	14 9	72	12 50	255	150	21 42	105	16 29	892	853	22 41	39	177	I	86.1
9	19 56	1115	965	9 35	150	6 5	269	141	19 50	128	15 11	913	832	6 12	81	454	I	86.1
10	22 33	1101	990	11 30	111	1 44	255	161	22 5	94	17 40	888	844	2 30	44	231	I	86.1
11 Q	17 39	1064	999	12 0	65	13 22	244	177	17 15	67	17 19	896	862	12 19	34	99	I	86.1
12	22 58	1048	1003	12 58	45	13 43	247	201	1 12	46	19 10	888	863	5 10	25	48	0	86.0
13 Q	20 0	1069	995	13 22	74	13 37	245	195	18 59	50	19 0	880	859	12 35	21	84	0	86.0
14 D	23 57	1054	1014	11 31	40	12 52	253	201	23 48	52	18 50	881	859	12 30	22	48	0	86.0
15	7 0	1096	956	21 27	140	14 59	279	79	21 8	200	20 0	920	838	7 0	82	663	I	86.0
16 Q	0 18	1050	998	13 19	52	14 10	228	154	0 14	74	0 54	885	870	0 20	15	84	0	86.0
17 D	I 6 About	1045	997	11 46	48	14 26	225	194	9 25	31	21 32	881	868	13 20	13	34	0	86.0
18	17 16	1456	817	21 19	639	17 16	542	-99	21 35	641	17 10	1194	788	21 40	406	9840	2	86.0

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

309. Eskdalemuir. (X.)

15,000 γ (·15 C.G.S. unit) +

November, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	
1	1035	1022	1022	1031	1035	1037	1035	1035	1036	1022	1018	1004	999	996	1022	1020	1019	1013	1015	1021	1032	1036	1037	1037	1037	1037	1024
2	1036	1034	1035	1035	1038	1040	1041	1042	1037	1030	1021	1016	1017	1019	1031	1010	1006	1026	1033	1038	1044	1045	1043	1041	1073	1032	
3	1073	1031	1031	1031	1031	1035	1040	1041	1040	1029	1021	1017	1019	1024	1031	1034	1037	1041	1044	1040	1046	1046	1048	1046	1047	1036	
4 D	1047	1045	1046	1050	1054	1067	1076	1060	1037	1041	1000	985	985	1000	1008	1021	1030	1031	1034	1035	1036	1041	1071	1042	1050	1035	
5	1050	1032	1034	1035	1038	1041	1038	1044	1039	1031	1025	1023	1021	1023	1031	1030	1025	1029	1031	1041	1041	1061	1041	1029	1039	1038	
6	1037	1039	1034	1040	1040	1049	1046	1041	1042	1034	1030	1024	1014	1019	1029	1035	1039	1041	1044	1044	1044	1045	1044	1047	1044	1038	
7	1044	1044	1044	1045	1048	1050	1051	1047	1046	1039	1031	1024	1030	1023	1038	1044	1050	1055	1035	1041	1040	1041	1044	1045	1046	1042	
8	1046	1045	1045	1041	1046	1049	1052	1049	1049	1040	1028	1030	1033	1039	1035	1035	1036	1039	1040	1054	1041	1061	1045	1045	1049	1043	
9	1049	1056	1045	1040	1044	1037	1043	1044	1044	1033	1015	1014	1025	1031	1036	1036	1040	1041	1044	1048	1048	1050	1047	1045	1044	1040	
10	1044	1041	1043	1045	1048	1050	1041	1053	1048	1044	1035	1030	1029	1029	1035	1044	1043	1045	1049	1051	1049	1048	1049	1068	1044	1044	
11	1043	1040	1039	1043	1044	1044	1045	1044	1040	1034	1028	1028	1028	1034	1039	1043	1044	1048	1049	1049	1049	1048	1049	1050	1042	1042	
12 Q	1055	1050	1045	1040	1039	1046	1051	1049	1044	1038	1034	1034	1035	1038	1039	1043	1043	1048	1048	1044	1048	1048	1048	1048	1048	1048	
13	1048	1048	1048	1048	1049	1050	1049	1050	1049	1043	1039	1038	1039	1041	1045	1049	1050	1054	1053	1054	1060	1054	1057	1055	1053	1049	
14 D	1052	1048	1050	1056	1053	1054	1059	1051	1052	1045	1049	1047	1048	1048	1051	1056	1061	1058	1044	1048	1058	986	1022	1014	1006	1045	
15	1006	997	1001	1012	1022	1022	1023	1022	1025	1017	1008	982	1008	1018	1028	1026	1025	1031	1034	1036	1034	1037	1033	1031	1028	1020	
16	1028	1027	1027	1033	1029	1030	1034	1037	1039	1034	1032	1030	1031	1031	1033	1034	1035	1039	1038	1031	1037	1033	1039	1029	1050	1033	
17	1049	1028	1032	1034	1029	1034	1041	1040	1023	1025	1026	1020	1017	1027	1032	1035	1037	1037	1040	1036	1032	1039	1047	1038	1038	1033	
18	1038	1035	1037	1036	1041	1042	1038	1037	1037	1036	1024	1031	1035	1036	1037	1036	1017	1036	1044	1042	1041	1067	1036	1038	1038	1037	
19 Q	1038	1041	1038	1038	1043	1046	1046	1042	1042	1036	1029	1027	1030	1033	1038	1041	1047	1048	1042	1047	1047	1047	1046	1044	1042	1041	
20 Q	1041	1045	1043	1048	1050	1049	1051	1050	1046	1038	1036	1033	1031	1035	1040	1045	1046	1047	1046	1048	1049	1045	1045	1046	1045	1044	
21 Q	1045	1043	1045	1046	1049	1050	1050	1049	1046	1040	1034	1031	1035	1037	1041	1045	1046	1049	1051	1051	1049	1052	1055	1045	1045	1045	
22 Q	1045	1045	1046	1047	1050	1051	1054	1051	1049	1041	1035	1031	1034	1041	1049	1051	1055	1057	1057	1056	1057	1056	1055	1055	1055	1049	
23	1051	1052	1053	1052	1053	1056	1057	1060	1059	1054	1045	1039	1034	1034	1034	1031	1035	1031	1031	1010	1014	1013	1019	1021	1026	1039	
24 D	1026	1037	1036	1049	1045	1015	1039	1049	1035	1021	1035	1012	984	1010	1025	1021	999	1023	1025	1025	1029	1019	1081	1026	1008	1027	
25 D	1007	1034	1049	1020	1017	991	1031	1035	1023	979	954	984	968	978	998	1003	1013	993	1004	1011	1015	1008	1038	1024	1054	1008	
26 D	1054	989	1004	1019	1024	1020	1024	1013	1017	1022	1012	1004	1006	1008	1024	1023	1013	1034	1045	1033	1049	1036	1035	1039	1038	1022	
27	1038	1029	1039	1034	1044	1043	1038	1030	1029	1022	1008	1011	1010	1018	1012	1018	1034	1032	1054	1026	1034	1039	1038	1039	1046	1030	
28	1045	1034	1032	1028	1038	1043	1041	1044	1031	1024	1024	1007	1003	1009	1023	1032	1034	1038	1041	1033	1039	1038	1039	1039	1053	1032	
29	1053	1037	1037	1035	1046	1046	1048	1044	1038	1028	1034	1032	1029	1033	1028	1021	1021	1033	1043	1037	1021	1028	1036	1038	1042	1035	
30	1042	1040	1038	1038	1046	1044	1042	1052	1039	1033	1032	1024	1015	1023	1033	1037	1037	1034	1030	1027	1031	1033	1041	1042	1038	1035	
Mean	1042	1036	1037	1038	1041	1041	1044	1043	1039	1032	1025	1020	1020	1025	1031	1033	1034	1038	1040	1039	1041	1039	1044	1041	1043	1036	

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

310. Eskdalemuir. (-Y.)

4,000 γ (·04 C.G.S. unit) +

November, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	194	194	212	214	212	213	214	214	214	201	207	212	220	220	233	222	220	199	193	207	199	201	207	207	207	210
2	207	206	212	211	213	213	213	208	205	200	206	217	226	221	229	219	220	219	213	210	208	207	206	198	153	211
3	153	174	193	200	201	206	207	207	205	199	201	213	219	224	226	220	216	213	214	214	217	213	208	213	210	208
4 D	210	213	213	214	213	223	220	213	220	234	213	227	227	233	240	215	213	208	207	206	204	194	187	199	185	214
5	185	192	204	208	211	213	208	206	199	194	201	208	214	219	221	218	200	199	213	207	186	184	187	200	208	204
6	208	213	216	222	213	212	213	213	205	200	204	218	220	226	226	219	214	207	213	213	209	209	207	206	209	213
7	209	213	213	214	213	214	213	213	207	206	208	213	225	221	220	219	217	216	208	206	200	207	206	206	207	212
8	207	208	206	210	210	212	211	207	206	202	202	213	227	233	235	227	235	240	227	225	186	180	211	200	207	213
9	207	173	171	181	185	198	199	200	199	199	206	212	227	236	236	231	229	224	210	218	212	191	203	205	203	206
10	203	205	205	207	211	205	206	219	199	199	206	214	219	224	225	231	226	219	218							

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

311. Eskdalemuir. (Z.)

44,000  $\gamma$  ('44 C.G.S. unit) +

November, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1	869	870	870	875	879	879	881	883	884	887	888	888	892	901	911	914	917	920	918	909	901	896	892	890	889	893
2	889	888	887	888	888	886	885	887	888	888	885	884	887	888	890	909	918	900	894	891	888	888	887	889	881	890
3	881	877	877	881	881	884	883	885	886	889	886	885	886	886	886	886	885	885	885	885	884	885	887	887	886	884
4 D	886	886	885	881	877	870	869	872	876	872	878	885	895	899	899	899	899	895	891	890	890	891	881	875	873	885
5	873	876	878	879	880	879	882	882	883	883	884	883	884	884	886	892	895	897	892	891	884	884	886	883	884	884
6	884	884	884	879	880	883	880	880	883	884	884	883	886	888	888	891	889	890	888	887	886	885	885	885	884	885
7	884	885	886	886	885	885	882	885	884	885	882	882	880	885	890	888	887	886	889	892	892	890	887	887	886	886
8	886	886	886	887	886	884	884	884	887	888	889	886	887	887	888	896	896	893	896	892	909	902	891	889	886	890
9	886	875	871	871	873	877	881	885	884	885	882	880	881	885	888	890	890	891	896	890	891	895	890	888	886	885
10	886	888	888	886	886	886	885	877	877	878	881	882	884	885	886	889	889	890	889	887	887	889	888	884	886	885
11	886	887	887	887	886	887	887	887	887	887	887	887	885	885	887	888	888	888	887	887	887	887	887	885	882	887
12 Q	882	879	879	880	882	883	884	885	885	888	887	886	886	887	889	889	889	889	889	889	888	886	885	885	885	886
13	885	885	885	885	884	884	884	885	886	887	885	885	882	884	886	886	886	886	885	885	886	885	887	890	887	885
14 D	886	885	885	879	880	878	878	878	879	880	880	879	878	879	880	883	884	884	926	982	990	1001	995	930	909	903
15	909	880	887	888	887	877	887	894	893	897	895	902	899	896	896	898	898	898	898	898	899	990	902	903	902	895
16	902	898	897	894	893	893	983	893	892	891	891	891	892	894	895	896	897	895	895	899	899	899	899	902	899	895
17	899	895	894	892	892	891	891	891	892	892	891	893	896	899	900	901	901	901	901	897	900	901	897	897	897	896
18	897	897	895	893	892	893	893	893	893	893	894	894	897	897	897	898	904	898	897	897	898	893	890	892	893	895
19 Q	893	894	893	893	893	890	890	890	891	894	891	891	891	894	896	896	896	895	895	895	893	894	894	894	894	893
20 Q	895	892	892	892	892	890	890	890	890	892	889	889	890	894	894	894	894	894	894	894	894	894	895	895	893	892
21 Q	892	892	891	891	891	891	891	890	890	891	891	887	888	892	896	896	896	895	893	892	892	893	892	893	892	892
22 Q	892	892	892	892	891	890	888	889	889	892	892	894	896	897	897	895	893	892	891	891	891	892	893	893	892	892
23	892	893	891	891	890	889	889	888	886	886	885	885	889	891	895	894	899	901	904	915	932	938	920	908	905	898
24 D	905	895	882	868	847	833	848	873	881	886	883	886	894	901	903	908	937	954	943	952	925	913	883	861	874	894
25 D	874	793	809	827	824	806	820	862	879	891	904	907	927	956	957	978	989	991	970	926	910	902	885	867	846	893
26 D	846	790	820	868	879	886	893	894	901	900	903	907	914	916	916	914	927	919	917	916	904	899	899	891	891	893
27	891	889	877	889	892	892	895	895	896	899	901	902	908	907	909	913	922	917	917	913	909	905	905	903	902	902
28	902	896	893	891	889	893	896	896	901	901	903	905	906	906	906	906	906	907	909	909	911	907	904	900	889	901
29	889	894	897	895	892	896	897	899	899	900	899	900	905	904	906	914	918	912	909	906	919	914	909	904	898	903
30	898	901	901	905	900	898	897	896	897	899	900	901	899	902	910	909	910	913	914	914	914	915	911	908	904	905
Mean	888	881	882	884	883	882	883	886	888	889	890	890	893	896	898	900	903	902	902	902	902	901	896	892	889	892

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

312. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

November, 1930.

Day.	Terrestrial Magnetic Force.												Character Figure $\frac{ER^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House $^{\circ}A.$			
	North Component.					West Component.					Vertical Component.							
	Maximum $15000\gamma +$		Minimum $15000\gamma +$		Range.	Maximum $4000\gamma +$		Minimum $4000\gamma +$		Range.	Maximum $44000\gamma +$					Minimum $44000\gamma +$		Range.
1	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	100	I	85.7
2	24 0	1041	986	13 0	55	13 59	242	181	0 7	61	16 40	923	866	0 33	57	229	I	85.5
3	0 I	1096	1015	11 9	81	14 0	227	140	0 10	87	9 16	890	877	0 40	13	143	I	85.5
4 D	21 40	1126	974	11 9	152	13 48	253	165	22 12	88	12 40	902	868	6 9	34	320	I	85.5
5	19 38	1100	1013	15 51	87	13 41	239	168	21 21	71	16 41	900	873	0 1	27	133	I	85.3
6	5 19	1054	1009	12 29	45	13 9	231	199	9 12	32	16 46	892	878	3 20	14	32	0	85.3
7	16 59	1059	1014	13 15	45	11 58	239	186	19 40	53	18 36	895	878	11 56	17	51	0	85.2
8	20 38	1079	1024	12 15	55	13 56	247	131	20 20	116	20 20	918	884	6 10	34	176	I	85.2
9	0 24	1080	1003	10 53	77	13 24	240	161	2 4	79	17 40	897	871	1 49	26	128	I	85.2
10	22 49	1089	1024	11 4	65	6 45	232	178	24 0	54	15 20	890	873	7 3	17	74	0	85.1
11	24 0	1056	1026	11 41	30	13 52	225	174	0 4	51	1 20	887	881	24 0	6	35	0	85.1
12 Q	0 5	1059	1033	10 50	26	11 59	225	193	3 20	32	15 0	889	878	0 30	11	18	0	85.1
13	19 33	1089	1034	10 40	55	19 30	232	199	21 38	33	22 16	890	881	12 12	9	42	I	85.1
14 D	19 39	1141	913	21 6	228	20 29	376	138	21 59	238	20 37	1059	877	12 6	182	1418	2	85.1
15	5 25	1049	961	10 42	88	12 29	234	120	2 33	114	0 1	913	872	4 32	41	224	I	85.1
16	23 57	1058	1019	0 1	39	13 20	226	165	23 46	61	23 36	903	889	8 51	14	54	0	84.9
17	0 10 and 21 29	1057	1015	8 22	42	10 28	231	173	0 1	58	21 16	904	891	7 9	13	53	0	84.8
18	20 49	1086	1001	15 49	85	13 4	220	161	20 41	59	15 59	906	889	21 48				

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

313. Eskdalemuir. (X.)

15,000  $\gamma$  ( $\cdot 15$  C.G.S. unit) +

December, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	$\gamma$																										
1	1036	1041	1049	1031	1041	1050	1046	1042	1041	1031	1019	1025	1024	1025	1026	1031	1031	1032	1040	1044	1041	1041	1041	1043	1044	1044	1036
2	1044	1040	1041	1045	1046	1051	1050	1047	1044	1036	1040	1036	1034	1035	1035	1035	1039	1036	1041	1041	1040	1039	1040	1046	1046	1046	1041
3 D	1046	1056	1067	1062	1072	1066	1062	1063	1061	1036	1022	1021	998	996	1016	1086	981	1081	1247	1162	1052	953	995	986	982	1048	1048
4 D	981	972	976	974	1028	1010	969	988	992	970	968	979	979	985	992	995	1010	1015	1027	1015	1020	1024	1026	1025	1040	998	
5	1040	1030	1019	1023	1024	1025	1029	1029	1030	1029	1030	1032	1034	1035	1035	1034	1035	1034	1035	1038	1033	1034	1034	1031	1032	1031	1031
6	1031	1029	1032	1033	1032	1033	1033	1031	1037	1034	1035	1038	1039	1039	1042	1039	1039	1040	1040	1035	1029	1036	1040	1033	1037	1035	
7	1037	1055	1032	1029	1034	1044	1048	1045	1043	1043	1039	1035	1036	1034	1032	1033	1029	1038	1042	1042	1039	1040	1034	1038	1041	1038	
8 Q	1040	1038	1038	1039	1041	1042	1042	1041	1042	1039	1038	1038	1042	1037	1037	1038	1042	1046	1046	1047	1047	1045	1045	1044	1042	1041	
9	1042	1041	1039	1042	1043	1045	1047	1050	1052	1053	1045	1043	1038	1032	1033	1032	1033	1034	1043	1041	1041	1043	1045	1048	1043	1042	
10	1043	1039	1043	1047	1047	1048	1050	1052	1049	1045	1042	1041	1037	1035	1037	1039	1045	1048	1051	1046	1048	1044	1045	1043	1042	1044	
11	1041	1052	1052	1047	1047	1052	1052	1049	1049	1047	1043	1041	1040	1037	1041	1043	1046	1047	1047	1043	1042	1043	1042	1046	1043	1045	
12	1043	1044	1046	1047	1051	1054	1056	1056	1055	1051	1046	1047	1046	1048	1046	1033	1035	1035	1047	1051	1048	1038	1052	1036	1045	1046	
13 D	1045	1033	1042	1063	1043	1045	1047	1049	1048	1044	1042	1036	1028	1018	1031	1042	1022	1009	1032	1036	1036	1037	1061	1047	1035	1039	
14	1034	1037	1037	1036	1041	1046	1047	1050	1045	1044	1051	1042	1030	1031	1041	1041	1042	1047	1035	1046	1038	1038	1041	1056	1045	1042	
15	1045	1041	1037	1041	1045	1045	1045	1046	1047	1046	1036	1033	1027	1022	1030	1041	1047	1050	1051	1051	1040	1041	1044	1046	1045	1042	
16 Q	1045	1041	1041	1043	1045	1045	1046	1046	1046	1041	1040	1041	1037	1041	1044	1048	1050	1051	1046	1045	1047	1050	1047	1046	1046	1045	
17 Q	1045	1045	1045	1045	1049	1050	1049	1048	1046	1046	1043	1040	1038	1040	1046	1049	1050	1051	1052	1050	1050	1049	1045	1045	1044	1046	
18 Q	1044	1045	1045	1047	1049	1050	1050	1046	1046	1050	1054	1053	1051	1054	1054	1052	1054	1052	1051	1051	1051	1051	1050	1050	1050	1050	
19	1049	1048	1044	1046	1048	1049	1051	1049	1051	1049	1048	1049	1049	1049	1043	1032	1039	1059	1061	1055	1044	1043	1049	1045	1048	1048	
20 D	1048	1048	1048	1048	1047	1049	1064	1056	1053	1052	1051	1045	1044	1048	1047	1050	1043	1009	1019	1064	993	1033	1029	1029	1032	1042	
21 D	1032	1030	1022	1037	1037	1034	1040	1015	1003	979	999	1013	998	1019	1017	998	1018	1004	1010	1029	1044	1039	1059	1033	1024	1021	
22	1023	1027	1029	1033	1038	1018	1038	1037	1033	1024	1024	1023	1023	1024	1017	1016	1013	1041	1018	1047	1028	1038	1042	1059	1037	1030	
23	1037	1029	1033	1037	1038	1035	1042	1039	1031	1037	1023	1023	1020	1028	1032	1028	992	1017	1026	1038	1037	1031	1054	1037	1044	1031	
24	1043	1037	1037	1028	1033	1041	1048	1037	1027	1033	1032	1026	1015	1002	1006	1022	1019	1013	1026	1031	1029	1039	1040	1036	1037	1029	
25	1037	1042	1033	1040	1039	1042	1037	1040	1035	1027	1023	1001	1001	1027	1036	1036	1033	1037	1041	1029	1036	1036	1038	1042	1041	1035	
26	1040	1036	1038	1041	1043	1045	1042	1037	1045	1040	1046	1042	1035	1031	1031	1027	1026	1025	1051	1041	1036	1036	1050	1037	1032	1038	
27	1032	1040	1037	1041	1041	1041	1046	1046	1048	1046	1032	1037	1037	1036	1036	1026	1031	1033	1038	1030	1034	1040	1061	1045	1041	1039	
28	1040	1040	1040	1044	1045	1050	1045	1044	1042	1040	1039	1040	1040	1040	1039	1036	1035	1040	1044	1044	1045	1043	1043	1040	1040	1042	
29	1040	1039	1040	1043	1045	1049	1050	1049	1050	1045	1040	1040	1039	1040	1045	1049	1051	1049	1039	1039	1040	1031	1033	1032	1035	1042	
30	1034	1039	1039	1039	1044	1044	1045	1047	1046	1041	1039	1038	1039	1038	1035	1039	1039	1043	1042	1041	1045	1039	1034	1036	1036	1040	
31 Q	1036	1034	1034	1035	1038	1039	1040	1039	1039	1039	1038	1038	1038	1039	1043	1044	1045	1046	1044	1046	1049	1049	1047	1043	1041	1041	
Mean	1038	1038	1037	1039	1042	1043	1044	1043	1041	1038	1035	1034	1080	1031	1034	1036	1033	1037	1046	1046	1039	1037	1042	1039	1038	1038	

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

314. Eskdalemuir. (-Y.)

4,000  $\gamma$  ( $\cdot 04$  C.G.S. unit) +

December, 1930.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mean.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	$\gamma$																										
1	197	209	180	202	200	194	202	206	207	207	204	215	219	216	208	207	205	209	207	204	203	202	202	202	202	204	204
2	202	202	209	204	203	202	202	202	203	202	211	215	215	215	210	209	203	202	202	202	202	189	202	204	207	205	
3 D	207	213	210	210	216	220	215	210	207	221	236	221	224	236	263	281	264	287	343	261	154	162	116	122	65	218	
4 D	65	85	97	122	149	216	215	262	243	215	190	204	209	222	236	243	212	204	202	202	197	197	190	188	172	192	
5	172	181	193	195	193	195	196	196	196	197	202	202	208	209	204	202	202	202	202	201	200	196	196	196	191	198	
6	191	196	200	195	200	201	198	197	196	196	203	209	210	215	215	208	208	207	196	188	202	197	197	196	196	201	
7	195	193	179	194	198	202	207	202	201	202	202	201	210	217	214	219	201	206	204	201	201	199	193	193	195	201	
8 Q	195	195	201	201	201	201	201	200	200	200	201	208	215	215	214	2											

Mean values for periods of sixty minutes centred at the Hours of Greenwich Mean Time.

315. Eskdalemuir. (Z.)

44,000  $\gamma$  ('44 C.G.S. unit) +

December, 1930.

Hour. G.M.T.	o.	i.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.		
Day.	$\gamma$																											
1	904	892	888	889	889	892	894	897	898	898	901	902	904	906	910	911	911	910	908	907	906	906	906	905	903	901	901	
2	903	902	902	901	901	901	901	901	901	901	899	902	903	903	905	903	904	905	903	903	904	907	905	903	901	903	903	
3 D	901	899	892	895	892	891	892	893	895	895	891	896	903	915	941	1088	1071	1154	1154	1143	1121	990	965	924	876	962	962	
4 D	876	855	839	820	806	783	791	797	808	851	887	908	914	930	939	938	931	927	925	925	927	924	923	921	919	882	882	
5	919	911	915	915	915	915	912	912	911	909	911	911	909	911	913	915	915	913	913	913	914	917	917	917	916	913	913	
6	916	915	913	913	912	910	911	911	910	909	908	908	909	910	914	914	914	914	915	918	915	914	914	916	915	913	913	
7	915	904	905	906	908	906	906	907	906	902	902	903	903	907	912	916	919	916	913	913	912	911	912	911	910	909	909	
8 Q	910	910	910	910	909	907	907	907	906	904	903	903	904	904	906	908	910	910	910	908	908	908	908	908	908	908	907	907
9	908	908	908	908	909	908	906	905	904	901	901	901	901	902	905	909	911	913	916	913	913	912	912	910	909	908	908	
10	909	907	907	906	906	906	906	906	906	906	905	903	904	904	907	911	912	911	911	909	910	911	911	909	908	908	908	
11	908	904	903	904	904	904	904	906	904	904	903	901	901	902	904	907	908	909	909	909	909	908	908	906	905	905	905	
12	905	904	904	904	905	905	905	905	904	904	901	899	900	902	905	908	908	910	911	911	915	932	926	918	916	908	908	
13 D	916	913	908	892	899	902	902	904	904	906	906	902	902	903	908	910	918	932	926	925	931	926	929	919	913	912	912	
14	913	908	907	907	907	906	906	905	905	905	905	905	907	908	911	912	916	919	916	914	917	917	917	916	908	910	910	
15	908	906	907	908	908	908	908	907	908	908	906	909	909	909	909	909	912	912	913	914	916	921	919	914	913	910	910	
16 Q	913	912	910	909	909	908	910	910	910	910	910	909	910	911	911	915	915	915	914	915	914	914	914	913	913	912	912	
17 Q	913	911	911	910	908	908	908	909	909	909	909	909	911	909	909	910	911	911	911	911	911	912	912	912	912	910	910	
18 Q	912	912	912	912	911	909	909	909	909	908	908	908	908	912	910	911	911	910	910	912	912	912	912	912	912	913	910	
19	913	912	911	910	909	909	909	908	906	906	906	907	906	908	909	910	914	911	911	910	911	912	914	914	911	910	910	
20 D	911	911	911	911	910	909	906	906	906	905	905	906	908	908	911	914	918	935	962	992	953	935	928	927	927	921	921	
21 D	927	914	915	913	911	908	905	904	908	921	924	927	932	939	940	951	947	957	960	940	929	926	921	909	916	926	926	
22	916	918	918	914	913	912	912	914	915	917	917	918	919	919	924	928	939	940	937	934	928	923	919	906	902	921	921	
23	902	906	913	915	915	915	915	915	915	915	915	916	916	919	920	928	945	941	933	928	925	928	919	911	898	920	920	
24	898	906	909	908	908	912	912	915	915	916	916	914	916	921	929	930	933	939	944	937	929	925	921	921	919	920	920	
25	919	909	919	908	913	915	913	914	916	917	918	918	921	921	922	922	924	923	922	922	926	925	922	917	912	918	918	
26	912	914	917	916	916	916	916	914	911	914	914	912	913	914	917	921	923	927	930	924	920	923	923	918	916	918	918	
27	916	914	917	917	914	913	914	914	915	913	915	915	914	912	915	921	924	924	923	924	924	924	917	914	915	917	917	
28	915	915	915	915	915	911	913	914	915	915	916	916	916	913	915	916	920	920	918	918	917	916	916	916	916	916	916	
29	916	916	916	915	915	913	913	913	912	912	913	916	917	917	914	913	914	917	921	926	926	928	929	932	927	918	918	
30	927	921	918	917	917	915	914	914	913	913	912	913	914	914	915	918	918	920	922	924	927	926	930	931	930	919	919	
31 Q	930	927	924	922	920	918	918	918	918	917	917	918	917	918	919	919	919	919	918	918	919	918	918	918	917	919	919	
Mean	911	908	908	906	906	904	905	905	905	907	908	909	910	912	915	922	924	928	928	928	925	921	919	915	912	914	914	

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

316. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

December, 1930.

Day.	Terrestrial Magnetic Force.															Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 +
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 $\gamma$ +		Minimum 15000 $\gamma$ +		Range.	Maximum 4000 $\gamma$ +		Minimum 4000 $\gamma$ +		Range.	Maximum 44000 $\gamma$ +		Minimum 44000 $\gamma$ +		Range.			
1	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	h. m.	$\gamma$	$\gamma$	h. m.	$\gamma$	56	0	84.3
2	1 29	1060	1015	9 42	45	12 19	223	170	2 2	53	14 42	912	885	1 32	27	17	0	84.3
3 D	5 21	1055	1033	9 10	22	11 7	217	183	20 44	34	20 58	907	899	10 0	8	5267	2	84.3
4 D	About 15 8 & 17 35 to 17 46	>1301	891	15 26	>410	17 49	430	86	23 45	394	About 15 8 & 17 50 to 18 5	>1325	874	23 49	>451	974	2	84.2
5	3 53	1043	1014	2 51	104	7 18	287	55	0 1	232	14 24	942	761	5 33	181	104	1	84.1
6	18 32	1059	1022	19 23	37	13 20	218	169	18 26	49	19 10	918	907	9 33	11	39	0	84.1
7	0 39	1074	1014	15 47	60	15 5	222	173	1 52	49	16 6	919	900	9 30	19	64	0	84.1
8 Q	19 0	1048	1033	14 23	15	12 32	222	194	0 40	28	1 10	911	902	10 50	9	11	0	84.0
9	17 47	1062	1028	14 57	34	14 0	222	175	17 36	47	17 39	918	901	11 50	17	37	0	84.0
10	16 12	1057	1028	13 42	29	11 46	222	181	21 30	41	15 49	914	903	11 0	11	26	0	83.9
11	0 50	1056	1036	12 50	20	0 40	216	193	22 33	23	0 29	910	901	11 40	9	10	0	83.8
12	22 0	1067	1021	20 47	46	16 55	236	140	22 18	96	21 21	943	899	11 10	44	133	1	83.8
13 D	2 43	1073	996	16 50	77	15 30	243	114	22 22	129	17 15	936	889	2 52	47	248	1	83.7
14	23 0	1061	1024	12 50	37	11 12	221	155	22 40	66	16 33	921	903	10 3	18	60	1	83.7
15	19 17	1056	1016	13 12	40	14 2	221	184	20									

(Not corrected for the effect of the North Force on the West Magnetograph, or vice versa, or for the effect of the Horizontal Force on the V.F. Balance).

Departures from the mean of the day adjusted for non-cyclic change.

Month and Season.	NORTH COMPONENT (all days).																								
	Hour. GMT. 1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
<b>317. Eskdalemuir. 1930.</b>																									
Jan. ...	+4.0	+2.8	+4.1	+6.4	+10.1	+12.3	+10.4	+5.9	-0.9	-9.3	-15.6	-18.2	-15.2	-10.8	-5.8	-4.4	-1.8	+0.5	+1.9	+2.1	+5.2	+6.0	+5.2	+5.1	
Feb. ...	+5.4	+2.3	+3.7	+5.5	+8.3	+10.1	+10.4	+7.4	-2.0	-12.1	-18.9	-23.7	-19.0	-14.3	-8.3	-3.8	-1.8	+5.2	+6.7	+7.2	+9.8	+12.3	+6.5	+3.1	
Mar. ...	+7.5	+7.3	+6.0	+6.9	+6.4	+9.8	+4.8	-2.6	-12.7	-22.6	-29.1	-31.7	-26.5	-14.8	-1.2	+1.1	+4.6	+13.0	+16.0	+13.9	+14.0	+11.0	+11.3	+7.6	
Apr. ...	+4.7	+2.5	+2.2	+5.5	+7.1	+2.3	-0.3	-10.5	-22.3	-34.6	-38.4	-35.6	-24.0	-12.9	-0.8	+8.8	+22.4	+27.1	+27.1	+23.0	+19.2	+14.2	+13.4	0.0	
May ...	-2.5	-1.1	+0.2	-8.6	-8.8	-6.7	-10.9	-15.7	-24.9	-31.8	-32.8	-27.4	-21.5	-11.6	+1.5	+15.2	+27.3	+36.1	+27.6	+27.3	+19.5	+16.2	+12.2	+10.7	
June ...	+3.3	+2.3	+0.4	-2.6	+0.5	-3.6	-10.4	-21.9	-27.8	-32.8	-33.1	-30.3	-20.5	-8.8	+1.0	+6.4	+22.1	+28.2	+36.5	+31.6	+22.0	+16.2	+11.8	+9.5	
July ...	+5.9	+5.2	-1.9	+1.5	+4.0	-3.7	-8.6	-14.0	-21.1	-28.7	-32.4	-29.7	-22.0	-12.5	+0.1	+10.8	+18.9	+23.9	+31.5	+23.4	+19.2	+13.6	+11.0	+6.3	
Aug. ...	+8.2	+1.0	+2.1	+4.7	+3.5	-2.4	-5.8	-16.8	-25.0	-33.3	-34.8	-29.1	-21.4	-9.8	+0.9	+7.5	+20.0	+24.1	+25.0	+23.5	+19.8	+13.9	+13.7	+9.6	
Sept. ...	+10.4	+8.6	+10.4	+7.9	+7.3	+3.0	+1.3	-9.3	-20.6	-33.6	-37.2	-33.6	-24.3	-14.2	-2.1	+5.8	+12.1	+13.8	+17.4	+17.5	+17.9	+15.3	+15.1	+11.1	
Oct. ...	+6.3	+5.1	+8.0	+6.7	+8.6	+11.0	+5.3	-1.3	-12.0	-19.3	-26.8	-27.8	-20.5	-11.4	-2.0	+2.8	+4.8	+10.9	+9.7	+12.1	+4.6	+6.4	+10.4	+7.9	
Nov. ...	+0.5	+1.5	+2.5	+5.2	+5.1	+8.2	+7.6	+3.5	-4.1	-11.3	-15.6	-16.2	-11.5	-4.5	-2.8	-2.2	+1.6	+3.5	+2.5	+5.0	+3.1	+7.7	+4.3	+6.4	
Dec. ...	-0.4	-0.8	+0.7	+4.2	+4.9	+5.7	+4.4	+2.8	-0.7	-3.7	-4.6	-8.0	-7.3	-4.8	-2.6	-5.8	-1.0	+7.4	+7.5	-0.1	-1.7	+3.4	+0.8	-0.3	
Year ...	+4.4	+3.1	+3.2	+3.6	+4.7	+3.8	+0.7	-6.1	-14.5	-22.8	-26.6	-25.9	-19.5	-10.9	-1.8	+3.5	+10.8	+16.1	+18.4	+15.5	+12.7	+11.3	+9.6	+6.4	
Winter...	+2.4	+1.5	+2.7	+5.3	+7.1	+9.1	+8.2	+4.9	-1.9	-9.1	-13.7	-16.5	-13.3	-8.6	-4.9	-4.1	-0.7	+4.1	+4.7	+3.5	+4.1	+7.3	+4.2	+3.6	
Equinox ...	+7.2	+5.9	+6.7	+6.7	+7.3	+6.5	+2.8	-5.9	-16.9	-27.5	-32.9	-32.1	-23.8	-13.3	-1.5	+4.6	+11.0	+16.2	+17.5	+16.6	+13.9	+11.7	+12.5	+6.7	
Summer ...	+3.7	+1.9	+0.2	-1.3	-0.2	-4.1	-8.9	-17.3	-24.7	-31.7	-33.1	-29.1	-21.3	-10.7	+0.9	+10.0	+22.1	+28.1	+32.9	+26.5	+20.1	+15.0	+12.2	+9.0	

<b>318. Eskdalemuir. 1930.</b>																									
WEST COMPONENT (all days).																									
Month and Season.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
Jan. ...	-7.8	-6.8	-5.4	-2.6	-1.0	-0.2	+1.3	-1.7	-4.2	-0.7	+2.7	+9.4	+17.0	+17.9	+14.4	+11.1	+10.6	+7.1	+0.1	-9.6	-14.2	-14.2	-12.7	-10.7	
Feb. ...	-14.5	-10.4	-5.6	-3.2	-5.8	-1.6	-0.6	-1.3	-3.2	-2.8	+3.8	+12.9	+23.6	+28.4	+22.7	+16.0	+8.1	+0.8	-3.0	-7.6	-8.0	-13.7	-19.1	-13.9	
Mar. ...	-6.4	-0.8	-7.4	-10.2	-5.9	-4.1	-6.1	-9.6	-12.0	-8.3	+2.7	+17.7	+25.7	+30.8	+24.7	+14.2	+5.6	-4.0	-2.9	-5.4	-10.2	-11.0	-10.2	-6.4	
Apr. ...	-9.7	-8.6	-11.4	-10.2	-12.7	-8.9	-10.7	-15.2	-16.9	-7.2	+3.4	+18.6	+30.7	+38.0	+28.4	+21.3	+14.0	+9.9	-0.9	-6.4	-8.0	-9.7	-8.7	-14.9	
May ...	-12.4	-13.9	-12.2	-14.1	-15.0	-19.9	-21.2	-23.2	-19.1	-9.9	+1.2	+13.6	+24.2	+28.3	+29.4	+26.8	+25.5	+20.6	+20.5	+4.3	-0.8	-5.1	-8.6	-9.0	
June ...	-8.2	-8.2	-11.6	-11.9	-14.1	-19.0	-21.0	-22.5	-20.9	-16.1	-5.3	+10.3	+20.0	+25.1	+25.2	+21.8	+21.2	+18.4	+12.4	+8.2	+4.2	-1.4	-2.6	-4.0	
July ...	-9.7	-15.0	-11.4	-14.4	-16.3	-19.8	-18.1	-17.4	-17.8	-10.3	-1.3	+11.1	+18.4	+21.8	+20.8	+20.5	+18.4	+17.6	+15.4	+8.0	+2.1	+2.2	+1.3	-5.5	
Aug. ...	-8.4	-6.6	-9.1	-9.9	-10.5	-10.9	-15.7	-17.1	-15.5	-8.3	+1.0	+14.7	+24.0	+27.7	+25.0	+20.2	+14.4	+10.8	+6.1	-2.6	-8.3	-5.7	-8.0	-7.2	
Sept. ...	-6.3	-7.3	-7.8	-6.4	-2.4	-5.3	-10.7	-13.4	-14.3	-8.1	+4.3	+18.3	+28.6	+32.5	+24.5	+18.1	+6.6	-0.8	-5.0	-6.4	-8.1	-7.4	-10.5	-9.5	
Oct. ...	-4.7	-2.6	-3.6	+1.1	+4.0	+4.0	+3.2	-0.8	-6.2	-1.6	+6.6	+16.5	+23.3	+25.8	+19.1	+9.0	+2.8	-11.4	-9.5	-15.9	-16.3	-20.8	-13.0	-9.0	
Nov. ...	-10.1	-7.2	-4.2	-1.8	+1.9	+0.7	+1.0	-1.0	-3.3	0.0	+6.9	+13.1	+16.8	+17.5	+11.0	+3.6	+3.3	+0.6	-0.4	-4.7	-11.2	-10.9	-10.8	-10.8	
Dec. ...	-9.0	-7.5	-4.5	-2.0	+1.4	+1.7	+3.9	+2.7	+0.2	+2.9	+6.4	+9.1	+12.2	+13.5	+12.1	+6.6	+2.1	+3.9	-2.5	-5.4	-8.4	-14.7	-13.3	-11.4	
Year ...	-8.9	-7.9	-7.9	-7.1	-6.4	-6.9	-7.9	-10.3	-11.1	-5.9	+2.7	+13.8	+22.0	+25.1	+21.4	+15.8	+11.1	+6.1	+1.7	-3.6	-7.3	-9.4	-9.7	-9.4	
Winter...	-10.3	-8.0	-4.9	-2.4	-0.9	+0.1	+1.4	-0.3	-2.6	-0.1	+4.9	+11.1	+17.4	+18.8	+15.1	+9.3	+6.0	+3.1	-1.5	-6.8	-10.5	-13.4	-14.0	-11.7	
Equinox ...	-6.8	-4.8	-7.5	-6.4	-4.3	-3.6	-6.1	-10.5	-12.3	-6.3	+4.2	+17.8	+27.1	+30.8	+24.2	+15.7	+7.3	-1.6	-4.6	-8.5	-10.7	-12.2	-10.6	-9.9	
Summer ...	-9.7	-10.9	-11.1	-12.6	-14.0	-17.4	-19.0	-20.1	-18.3	-11.1	-1.1	+12.4	+21.7	+25.7	+25.1	+22.3	+19.9	+16.7	+11.1	+4.5	-0.7	-2.5	-4.5	-6.4	

<b>319. Eskdalemuir. 1930.</b>																									
VERTICAL COMPONENT (all days).																									
Month and Season.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
Jan. ...	-3.6	-7.3	-7.9	-9.3	-10.1	-9.6	-8.5	-6.8	-6.0	-4.6	-3.2	-2.4	-1.8	+3.9	+7.7	+9.7	+9.5	+10.1	+12.4	+10.8	+9.7	+5.9	+2.3	-0.6	
Feb. ...	-12.7	-15.2	-15.4	-13.3	-10.4	-9.2	-8.3	-6.0	-4.0	-2.4	-2.5	-1.4	+0.8	+5.9	+12.4	+16.1	+18.0	+19.1	+15.9	+13.5	+8.2	+4.8	-5.5	-8.4	
Mar. ...	-16.8	-20.6	-19.8	-19.1	-17.2	-12.9	-7.5	-4.0	-2.8	-1.9	-2.9	-2.3	+2.2	+6.8	+16.0	+20.3	+22.2	+23.0	+17.6	+13.3	+10.8	+5.3	0.0	-9.7	
Apr. ...	-24.2	-25.1	-28.0	-21.8	-14.4	-9.9	-6.6	-4.5	-2.8	-2.6	-3.1	-2.1	+1.0	+7.0	+16.6	+23.7	+28.8	+32.4	+31.2	+22.0	+12.4	+4.9	-12.0	-22.6	
May ...	-27.6	-30.8	-26.6	-27.7	-23.9	-13.2	-6.5	-2.8	-0.9	-1.6	-2.7	-2.4	+3.0	+9.4	+16.1	+21.6	+25.3	+29.9	+30.5	+26.5	+18.5	+9.6	-8.3	-15.4	
June ...	-19.6	-23.7	-23.1	-20.3	-14.4	-7.8	-3.7	-1.5	-2.6	-3.0	-3.9	-3.1	+1.3	+6.7	+11.7	+19.6	+22.9	+23.8	+28.1	+19.6	+14.5	+6.4	-9.3	-13.5	
July ...	-12.4	-11.8	-16.8	-17.5	-12.5	-7.8	-5.3	-4.5	-3.8	-4.5	-6.2	-6.3	-2.0	+4.2	+10.0	+13.7	+16.6	+18.2	+17.6	+16.9	+13.2	+7.0	0.0	-6.0	
Aug. ...	-17.1	-21.1	-22.3	-17.6	-14.5	-13.2	-7.4	-3.8	-2.5	-2.7	-3.8	-4.3	+1.5	+5.6	+15.6	+19.3	+23.5	+24.1	+22.6	+19.4	+9.8	+3.5	-2.9	-8.6	
Sept. ...	-15.0	-17.8	-18.6	-17.5	-17.3	-13.8	-8.3	-3.6	-2.6	-3.5	-4.9	-4.6	+0.6	+9.3	+16.4	+22.5	+25.8	+25.7	+19.3	+12.9	+6.5	+0.4	-3.9	-8.0	
Oct. ...	-14.8	-13.0	-12.2	-12.6	-12.7	-11.6	-8.6	-6.5	-4.7	-4.1	-3.5	-1.1	+2.0	+8.0	+17.1	+23.8	+24.4	+19.8	+15.1	+11.6	+2.5	-1.7	-5.8	-11.3	
Nov. ...	-10.4	-9.8	-8.0	-8.9	-10.2	-8.5	-5.7	-4.1	-2.7	-2.5	-1.9	+0.5	+3.2	+5.2	+7.9	+10.8	+10.0	+9.7	+9.8	+9.0	+8.1	+3.2	-1.0	-3.7	
Dec. ...	-5.2	-5.7	-7.4	-8.0	-9.3	-9.1	-8.6	-8.4	-6.8	-5.8	-4.9	-3.7	-1.7	+1.3	+8.3	+9.9	+14.1	+14.5	+13.9	+11.6	+7.1	+5.0	+1.1	-2.2	
Year ...	-14.9	-16.8	-17.2	-16.1	-13.9	-10.5	-7.1	-4.7	-3.5	-3.3	-3.6	-2.8	+0.6	+6.1	+13.0	+17.6	+20.1	+20.8	+19.1	+15.6	+10.1	+4.5	-3.8	-9.2	
Winter...	-8.0	-9.5	-9.7	-9.9	-10.0	-9.1	-7.8	-6.3	-4.9	-3.8	-3.1	-1.7	+0.1	+4.1	+9.1	+11.6	+12.9	+13.3	+12.9	+11.2	+8.3	+4.7	-0.8	-3.7	
Equinox ...	-17.7	-19.1	-19.7	-17.7	-15.4	-12.1	-7.7	-4.7	-3.2	-3.0	-3.6	-2.5	+1.5	+7.8	+16.5	+22.6	+25.3	+25.1	+20.8	+14.9	+8.1	+2.2	-5.4	-12.9	
Summer ...	-19.2	-21.9	-22.2	-20.8	-16.3	-10.5	-5.7	-3.1	-2.5	-2.9	-4.1	-4.0	+0.2	+6.5	+13.3	+18.5	+22.1	+24.0	+23.5	+20.6	+14.0	+6.6	-5.1	-10.9	

DIURNAL INEQUALITIES OF THE MAGNETIC COMPONENTS, DECLINATION, INCLINATION, AND HORIZONTAL FORCE. ALL DAYS.

Departures from mean of the day adjusted for non-cyclic change.

Table 320: Eskdalemuir. DECLINATION (measured positive towards the West) (all days). 1930. Columns: Month and Season, Hour G.M.T. (1-24), and values for each hour.

Table 321: Eskdalemuir. INCLINATION (all days). 1930. Columns: Month and Season, Hour G.M.T. (1-24), and values for each hour.

Table 322: Eskdalemuir. HORIZONTAL FORCE (all days). 1930. Columns: Month and Season, Hour G.M.T. (1-24), and values for each hour.

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE.— INTERNATIONAL QUIET DAYS.

Departures from the mean of the day adjusted for non-cyclic change.

Table 323: Eskdalemuir. NORTH COMPONENT (Quiet Days). 1930. Columns: Hour, G.M.T. (1-24), and rows: Month and Season (Jan-Dec, Year, Winter, Equinox, Summer) with values in gamma.

WEST COMPONENT (Quiet Days).

Table 324: Eskdalemuir. WEST COMPONENT (Quiet Days). 1930. Columns: Hour, G.M.T. (1-24), and rows: Month and Season (Jan-Dec, Year, Winter, Equinox, Summer) with values in gamma.

VERTICAL COMPONENT (Quiet Days).

Table 325: Eskdalemuir. VERTICAL COMPONENT (Quiet Days). 1930. Columns: Hour, G.M.T. (1-24), and rows: Month and Season (Jan-Dec, Year, Winter, Equinox, Summer) with values in gamma.

DIURNAL INEQUALITIES OF THE MAGNETIC COMPONENTS, DECLINATION, INCLINATION, AND HORIZONTAL FORCE.—INTERNATIONAL QUIET DAYS.

Departures from mean of the day adjusted for non-cyclic change.

Table 326: Declination (measured positive towards the West) (Quiet Days) 1930. Columns: Month and Season, Hour G.M.T. (1-24), and values for each hour.

INCLINATION (Quiet Days).

327. Eskdalemuir.

1930.

Table 327: Inclination (Quiet Days) 1930. Columns: Month and Season, Hour G.M.T. (1-24), and values for each hour.

HORIZONTAL FORCE (Quiet Days).

328. Eskdalemuir.

1930.

Table 328: Horizontal Force (Quiet Days) 1930. Columns: Month and Season, Hour G.M.T. (1-24), and values for each hour.

Departures from mean of the day adjusted for non-cyclic change.

Table 329: Eskdalemuir. NORTH COMPONENT (Disturbed Days). 1930. Columns: Month and Season, Hour.G.M.T. (1-24), and 24 columns of magnetic data.

Table 330: Eskdalemuir. WEST COMPONENT (Disturbed Days). 1930. Columns: Month and Season, 24 columns of magnetic data.

Table 331: Eskdalemuir. VERTICAL COMPONENT (Disturbed Days). 1930. Columns: Month and Season, 24 columns of magnetic data.

DIURNAL INEQUALITIES OF THE MAGNETIC COMPONENTS, DECLINATION, INCLINATION AND HORIZONTAL FORCE.—SELECTED DISTURBED DAYS.

Departures from mean of the day adjusted for non-cyclic change.

Table 332: Eskdalemuir. 1930. Declination (measured positive towards the West) (Disturbed Days). Columns: Hour GMT (1-24), Month and Season, and values for each hour.

INCLINATION (Disturbed Days).

333. Eskdalemuir.

1930.

Table 333: Eskdalemuir. 1930. Inclination (Disturbed Days). Columns: Month and Season, and values for each hour.

HORIZONTAL FORCE (Disturbed Days).

334. Eskdalemuir.

1930.

Table 334: Eskdalemuir. 1930. Horizontal Force (Disturbed Days). Columns: Month and Season, and values for each hour.

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS, YEAR, AND SEASONS OF 1930.

NOTE.—The ranges are those shown in Tables 317 to 334, in the preparation of which the non-cyclic change has been eliminated.

335. Eskdalemuir.

1930.

Month and Season.	" All Days."			Quiet Days.			Disturbed Days.			" All Days."			Quiet Days.			Disturbed Days.		
	N.	W.	V.	N.	W.	V.	N.	W.	V.	D.	I.	H.	D.	I.	H.	D.	I.	H.
January ...	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
February ...	30.5	32.1	22.2	23.6	22.5	5.7	49.3	71.4	71.4	7.36	2.30	27.0	4.81	1.45	20.8	16.15	3.71	45.1
March ...	36.0	45.5	34.5	37.4	31.6	8.1	42.7	102.3	92.3	10.20	2.17	29.5	7.35	2.40	34.6	20.76	1.95	38.5
April ...	47.7	42.3	43.6	34.7	34.1	12.8	60.1	71.6	110.4	9.62	2.76	42.2	8.03	1.81	29.9	15.05	4.54	56.3
May ...	65.5	50.7	60.1	60.8	52.7	20.5	91.9	72.4	130.3	10.42	3.50	64.9	11.17	3.84	62.2	14.04	5.33	85.1
June ...	69.9	52.6	61.3	43.8	54.2	23.8	124.4	85.8	155.9	10.08	4.19	73.5	11.20	2.47	44.9	16.85	7.39	128.9
July ...	69.6	47.7	47.5	45.8	46.0	21.1	110.6	72.1	107.3	9.11	4.35	74.3	9.72	3.03	48.9	13.87	6.42	114.0
August ...	64.1	41.6	35.7	32.4	31.0	22.6	95.8	66.4	104.2	8.78	3.89	66.2	6.90	1.53	29.9	14.27	5.72	96.9
September ...	60.7	44.8	46.4	48.4	47.4	24.9	108.6	41.6	112.1	8.89	3.47	60.9	9.99	3.14	52.2	10.28	6.21	107.8
October ...	55.1	48.9	44.4	44.9	38.1	17.8	94.5	70.6	130.3	10.15	3.18	50.5	9.36	2.71	43.1	16.91	5.55	88.1
November ...	39.4	46.6	39.2	30.0	31.5	12.6	66.6	101.2	111.1	10.26	2.63	35.8	6.65	1.66	25.6	19.79	4.51	63.8
December ...	24.4	28.7	21.2	19.5	22.6	5.7	53.6	55.4	84.0	6.55	1.63	21.4	4.63	1.20	18.4	12.59	3.85	42.3
Year ...	15.5	28.2	23.8	7.4	14.4	5.0	58.0	71.3	104.6	6.07	1.12	13.6	2.97	0.61	9.2	14.09	3.43	59.0
Winter ...	45.0	36.2	38.0	31.8	33.8	13.7	67.8	58.6	98.9	8.05	2.34	43.2	7.27	1.82	31.3	13.19	3.50	65.7
Equinox ...	25.6	32.8	23.3	20.9	21.1	5.0	40.6	67.6	78.1	7.28	1.75	21.9	4.70	1.29	18.4	14.01	2.92	34.5
Summer ...	50.4	42.9	45.0	37.1	38.9	15.6	71.3	68.0	109.1	9.89	2.79	46.5	8.86	2.23	35.4	15.05	4.18	63.6
Year ...	66.0	45.8	46.2	40.7	42.8	22.9	103.8	59.2	113.9	9.03	3.94	68.2	9.11	2.36	41.4	11.90	5.96	105.9

NON-CYCLIC CHANGE (24h.—0h.).

336. Eskdalemuir.

1930.

MEAN VALUE OF THE SQUARES OF THE ABSOLUTE DAILY RANGES. (Unit, 100 γ<sup>2</sup>.)

337. Eskdalemuir.

1930.

Month.	" All " Days.			Quiet Days.			Disturbed Days.			R <sub>N</sub> <sup>2</sup>	R <sub>W</sub> <sup>2</sup>	R <sub>V</sub> <sup>2</sup>	R <sub>N</sub> <sup>2</sup> + R <sub>W</sub> <sup>2</sup>	R <sub>N</sub> <sup>2</sup> + R <sub>W</sub> <sup>2</sup> + R <sub>V</sub> <sup>2</sup>	Mean Character Figure.
	N.	W.	V.	N.	W.	V.	N.	W.	V.						
January ...	γ	γ	γ	γ	γ	γ	γ	γ	γ	68	82	31	151	181	0.90
February ...	+0.9	+0.8	-0.3	+0.2	+2.2	-1.6	-3.6	-7.2	0.0	138	160	98	298	396	0.91
March ...	-0.1	-0.7	-0.3	+1.0	+0.4	+0.2	-6.6	-5.2	-2.2	163	114	78	277	356	0.90
April ...	+0.1	+0.7	-0.3	-0.4	-1.6	0.0	+0.2	+7.2	-16.0	317	176	175	493	668	0.90
May ...	+0.6	-0.6	+0.2	+0.6	+2.0	+1.6	+7.6	-4.0	+1.0	347	162	198	509	707	0.94
June ...	-1.0	-1.5	-2.4	+8.6	+2.2	-2.8	+8.4	+3.2	-15.8	271	126	93	397	490	0.87
July ...	0.0	+1.1	+1.8	+9.6	+4.2	-2.6	-18.4	-17.2	-23.2	211	85	77	296	373	0.84
August ...	+0.2	-0.3	+0.8	+3.4	+2.0	-0.4	-4.4	+5.2	-3.8	223	118	85	341	426	0.90
September ...	+0.3	0.0	-0.2	+6.6	+3.8	-4.4	-6.0	-11.0	-2.6	173	154	107	327	434	0.80
October ...	-0.8	-0.7	+0.2	+2.4	+9.0	+5.2	-23.6	-19.2	-22.8	280	262	117	543	660	0.87
November ...	+0.2	-0.5	-0.2	+4.2	+1.4	-1.2	-15.8	-6.6	+3.0	95	84	53	179	231	0.70
December ...	+0.4	+0.1	+1.2	+1.6	+0.2	+0.4	-6.0	-6.4	-0.8	94	121	88	215	303	0.65
Year, 1930 ...	+0.6	0.0	+0.4	+2.6	-0.4	-3.2	-7.8	-6.0	+4.0	198	137	100	335	435	0.85

MEAN MONTHLY AND ANNUAL VALUES OF TERRESTRIAL MAGNETIC ELEMENTS.

(All days except those noted in monthly tables.)

338. Eskdalemuir.

1930.

Month.	North.	West.	Vertical.	Total.	Declination. (West).	Inclination. (North).	Horizontal. Force.
January ...	γ	γ	γ	γ	°	°	γ
February ...	16036	4260	44887	47855	14	52.6	16592
March ...	16039	4256	44893	47862	14	51.6	16594
April ...	16037	4252	44878	47847	14	50.9	16591
May ...	16035	4244	44874	47842	14	49.4	16587
June ...	16039	4239	44866	47834	14	48.3	16589
July ...	16033	4236	44871	47837	14	48.0	16583
August ...	16037	4232	44878	47845	14	47.1	16586
September ...	16038	4228	44872	47839	14	46.1	16586
October ...	16031	4221	44871	47835	14	45.1	16577
November ...	16028	4212	44878	47840	14	43.4	16572
December ...	16036	4207	44892	47856	14	42.0	16579
Year, 1930 ...	16038	4201	44914	47876	14	40.7	16579
Year, 1930 ...	16036	4232	44881	47847	14	47.1	16585

Values of  $a_n, b_n$  in the series  $\Sigma (a_n \cos 15nt^\circ + b_n \sin 15nt^\circ)$ ,  $t$  being reckoned in hours from midnight G.M.T.

(Longitude of Eskdalemuir Observatory,  $3^\circ 12' W.$ )

339. Eskdalemuir.

1930.

Month and Season.	North Component.				West Component.				Vertical Component.							
	$a_1.$	$b_1.$	$a_2.$	$b_2.$	$a_3.$	$b_3.$	$a_4.$	$b_4.$	$a_1.$	$b_1.$	$a_2.$	$b_2.$	$a_3.$	$b_3.$	$a_4.$	$b_4.$
<i>All Days.</i>																
January	+ 8.6	+ 3.8	- 6.2	- 1.5	+ 2.6	- 2.3	- 0.3	+ 0.3	- 10.6	- 3.1	- 1.6	+ 6.8	+ 0.3	- 0.9	+ 2.0	+ 1.3
February	+ 11.1	+ 1.9	- 7.8	- 3.4	+ 2.7	- 2.0	- 1.1	+ 0.8	- 14.0	- 4.9	- 0.6	+ 7.6	- 0.8	- 3.7	- 1.1	+ 2.2
March ...	+ 16.5	- 3.6	- 10.6	- 0.1	+ 3.1	- 1.7	- 0.9	+ 1.2	- 10.9	- 6.9	+ 4.1	+ 9.8	- 0.7	- 4.7	+ 0.9	+ 3.6
April ...	+ 18.3	- 12.4	- 15.2	+ 1.6	+ 1.9	- 1.9	+ 0.3	+ 0.9	- 13.4	- 12.6	+ 2.9	+ 10.7	- 1.2	- 4.3	+ 1.4	+ 1.7
May ...	+ 16.2	- 20.1	- 12.4	- 0.1	+ 2.1	+ 1.3	+ 1.9	+ 0.9	- 10.5	- 20.2	+ 0.9	+ 9.3	- 1.7	- 1.4	+ 1.2	+ 0.3
June ...	+ 18.5	- 17.7	- 11.7	+ 0.9	- 0.7	- 0.7	+ 1.6	+ 1.8	- 5.5	- 19.7	+ 1.1	+ 8.3	- 1.7	- 2.4	+ 1.1	+ 1.1
July ...	+ 17.1	- 14.1	- 11.6	+ 1.1	+ 1.1	+ 0.1	+ 0.5	+ 0.7	- 6.3	- 18.7	+ 1.5	+ 4.9	- 1.3	- 1.9	+ 1.3	- 0.3
August...	+ 18.3	- 13.7	- 11.1	+ 2.3	+ 1.1	- 1.7	+ 1.2	+ 0.7	- 9.8	- 13.3	+ 2.4	+ 9.6	- 1.2	- 2.4	+ 1.6	+ 1.1
Sept. ...	+ 20.4	- 7.4	- 10.7	+ 2.6	+ 2.8	- 2.7	- 0.8	+ 1.1	- 11.4	- 8.5	+ 4.1	+ 10.8	- 2.3	- 5.7	+ 1.0	+ 1.1
October..	+ 13.6	- 1.7	- 9.5	+ 1.5	+ 3.3	- 1.8	+ 0.2	+ 0.9	- 12.6	+ 1.6	+ 2.4	+ 10.1	- 0.4	- 4.2	+ 1.4	+ 2.3
Nov. ...	+ 7.3	+ 0.7	- 5.4	- 0.4	+ 2.4	- 2.6	- 0.2	+ 0.7	- 10.0	- 1.3	0.0	+ 4.5	- 2.4	- 2.2	+ 1.5	+ 1.5
Dec. ...	+ 3.1	+ 1.2	- 4.1	- 1.1	+ 0.1	+ 0.1	+ 1.2	+ 0.2	- 10.1	- 0.4	- 1.6	+ 3.7	- 0.9	- 1.0	+ 0.6	+ 1.4
Year ...	+ 14.1	- 6.9	- 9.7	+ 0.3	+ 1.9	- 1.3	+ 0.3	+ 0.9	- 10.4	- 9.0	+ 1.3	+ 8.0	- 1.2	- 2.9	+ 1.1	+ 1.4
Winter...	+ 7.5	+ 1.9	- 5.9	- 1.5	+ 2.0	- 1.7	- 0.1	+ 0.5	- 11.2	- 2.4	- 0.9	+ 5.7	- 0.9	- 1.9	+ 0.7	+ 1.6
Equinox	+ 17.2	- 6.3	- 11.5	+ 1.4	+ 2.8	- 2.0	- 0.3	+ 1.0	- 12.1	- 6.6	+ 3.4	+ 10.3	- 1.2	- 4.7	+ 1.2	+ 2.3
Summer	+ 17.5	- 16.4	- 11.7	+ 1.1	+ 0.9	- 0.3	+ 1.3	+ 1.1	- 8.0	- 18.0	+ 1.5	+ 8.0	- 1.5	- 2.0	+ 1.3	+ 0.5
<i>Quiet Days.</i>																
Year ...	+ 11.7	- 1.3	- 7.8	0.0	+ 2.3	- 1.3	0.0	+ 1.2	- 4.6	- 9.7	+ 2.7	+ 6.2	- 2.3	- 2.9	+ 1.0	+ 1.4
Winter...	+ 6.0	+ 0.7	- 5.5	- 1.1	+ 1.7	- 1.5	- 0.4	+ 0.7	- 4.9	- 5.1	+ 0.5	+ 4.4	- 1.6	- 1.9	+ 0.8	+ 1.4
Equinox	+ 14.3	+ 0.2	- 9.6	+ 0.2	+ 3.4	- 1.6	- 0.1	+ 1.5	- 4.9	- 8.5	+ 3.1	+ 6.7	- 3.5	- 4.9	+ 1.7	+ 1.8
Summer	+ 14.8	- 4.8	- 8.1	+ 0.8	+ 1.9	- 0.8	+ 0.5	+ 1.2	- 3.9	- 15.5	+ 4.5	+ 7.6	- 1.9	- 1.9	+ 0.4	+ 0.9
<i>Disturbed Days.</i>																
Year ...	+ 16.9	- 13.1	- 14.5	+ 1.3	+ 3.3	- 0.1	- 0.3	+ 1.5	- 20.6	- 8.0	- 2.8	+ 9.8	+ 0.7	- 4.8	+ 1.1	+ 1.7
Winter...	+ 10.2	+ 0.9	- 9.5	- 2.1	+ 1.2	- 1.7	0.0	+ 0.8	- 25.5	- 1.2	- 5.8	+ 7.4	- 0.4	- 3.9	+ 0.2	+ 1.3
Equinox	+ 17.3	- 11.6	- 16.1	+ 4.0	+ 5.3	+ 0.1	- 2.9	+ 1.0	- 21.7	- 2.3	+ 2.0	+ 13.3	+ 2.4	- 7.6	+ 0.3	+ 2.5
Summer	+ 23.1	- 28.5	- 17.9	+ 2.0	+ 3.5	+ 1.5	+ 1.9	+ 2.6	- 14.7	- 20.3	- 4.7	+ 8.8	+ 0.2	- 2.9	+ 2.9	+ 1.4

HARMONIC COMPONENTS OF THE DIURNAL INEQUALITY OF MAGNETIC FORCE.

Values of  $c_n, \alpha_n$  in the series  $\Sigma c_n \sin (15nT^\circ + \alpha_n)$ ,  $T$  being Mean Local Time reckoned in hours from midnight.

340. Eskdalemuir.

1930.

Month and Season.	North Component.				West Component.				Vertical Component.							
	$c_1.$	$\alpha_1.$	$c_2.$	$\alpha_2.$	$c_3.$	$\alpha_3.$	$c_4.$	$\alpha_4.$	$c_1.$	$\alpha_1.$	$c_2.$	$\alpha_2.$	$c_3.$	$\alpha_3.$	$c_4.$	$\alpha_4.$
<i>All Days.</i>																
January	9.4	72	6.3	263	3.5	140	0.4	337	11.1	257	7.0	353	0.9	172	2.4	70
February	11.3	84	9.4	253	3.3	136	1.3	319	14.8	254	7.6	2	3.7	202	2.5	345
March ...	16.9	105	10.6	271	3.5	128	1.5	337	12.9	241	10.6	29	4.8	198	3.7	26
April ...	22.1	127	15.3	282	2.7	144	0.9	33	18.4	230	11.1	22	4.4	205	2.2	53
May ...	25.7	144	12.4	276	2.5	69	2.1	77	22.8	211	9.3	12	2.2	239	1.2	118
June ...	25.7	137	11.8	281	1.0	237	2.4	54	20.4	199	8.4	14	2.9	225	1.5	58
July ...	22.2	133	11.6	282	1.1	94	0.9	47	19.8	202	5.1	23	2.4	224	1.4	92
August	22.9	130	11.4	288	2.0	156	1.4	72	16.5	219	9.9	20	2.7	217	1.9	68
Sept. ...	21.7	113	11.0	290	3.9	143	1.4	337	14.2	237	11.6	27	6.2	212	1.5	54
October	13.7	99	9.6	286	3.7	129	0.9	25	12.7	281	10.4	20	4.2	195	2.7	44
Nov. ...	7.4	88	5.5	272	3.6	147	0.8	0	10.1	266	4.5	6	3.2	237	2.2	59
December	3.3	72	4.3	261	0.1	71	1.2	92	10.1	271	4.0	343	1.3	236	1.5	35
Year ...	15.7	119	9.7	278	2.3	135	0.9	32	13.8	232	8.1	15	3.1	212	1.8	50
Winter	7.8	79	6.1	262	2.6	140	0.5	7	11.4	261	5.7	357	2.1	215	1.8	37
Equinox	18.3	113	11.6	283	3.5	135	1.1	356	13.7	245	10.8	25	4.9	203	2.6	41
Summer	24.0	136	11.7	282	0.9	116	1.7	64	19.7	207	8.1	17	2.5	226	1.4	81
<i>Quiet Days.</i>																
Year	11.7	100	7.8	277	2.7	129	1.2	14	10.7	208	6.8	30	3.7	229	1.7	48
Winter...	6.1	87	5.6	266	2.2	141	0.8	344	7.1	227	4.5	13	2.5	230	1.6	43
Equinox	14.3	93	9.6	278	3.8	124	1.5	8	9.8	213	7.4	31	6.0	225	2.5	56
Summer	15.5	111	8.2	282	2.1	123	1.3	37	16.0	197	8.8	37	2.7	234	0.9	37
<i>Disturbed Days.</i>																
Year ...	21.3	131	14.5	282	3.3	101	1.5	0	22.1	252	10.2	351	4.9	181	2.0	46
Winter...	10.3	88	9.7	264	2.1	155	0.8	13	25.6	271	9.4	328	3.9	195	1.3	24
Equinox	20.9	127	16.7	290	5.3	98	3.1	301	21.8	267	13.5	15	8.0	172	2.5	20
Summer	36.7	144	18.0	283	3.8	76	3.3	49	25.0	219	10.0	339	2.9	185	3.2	77

341. MEAN VALUES, FOR THE YEARS SPECIFIED, OF THE MAGNETIC ELEMENTS AT OBSERVATORIES  
IN COMMUNICATION WITH THE ROYAL OBSERVATORY, GREENWICH.

Place.	Latitude.	Longitude.	1930.				1929.				1928.			
			Declina- tion.	Inclina- tion.	Hori- zontal Force.	Verti- cal Force.	Declina- tion.	Inclina- tion.	Hori- zontal Force.	Verti- cal Force.	Declina- tion.	Inclina- tion.	Hori- zontal Force.	Verti- cal Force.
Sodankylä, Finland ...	67 22	26 39E.	2 35.5E.	76 2.4	12228	49216	2 27.4E.	75 59.8	12273	49219	2 18.9E.	75 57.2	12317	49228
Lerwick, Shetland Islands ...	60 8	1 11W.	14 11.2W.	72 41.6	14528	46625	14 23.7W.	72 40.3	14556	46651	14 37.1W.	72 39.4	14585	46702
Pavlovsk, Leningrad, U.S.S.R. ...	59 41	30 29E.	...	...	...	...	...	...	...	...	3 50.2E.	71 38.6	15630	47106
Lovö (Stockholm) Sweden ...	59 21	17 50E.	...	...	...	...	3 8.3W.	71 24.9	15584	46344	...	...	...	...
Sitka, Alaska ...	57 3	135 20W.	30 15.5E.	74 22.9	15445	55250	30 17.7E.	74 22.7	15465	55307	30 21.2E.	74 22.8	15476	55352
†Sverdlovsk, U.S.S.R. ...	56 50	60 38E.	...	...	...	...	10 57.2E.	72 20.3	16285	51145	10 58.5E.	72 16.7	16335	51117
Copenhagen (in Rude Skov), Denmark.	55 51	12 27E.	...	...	...	...	6 11.0W.	69 16.2	16924	44718	6 22.0W.	69 13.9	16948	44691
Kasan (Sajmistsche), U.S.S.R.	55 50	48 51E.	9 6.8E.	70 36.3	16982	48238	9 5.2E.	70 31.6	17033	48168	9 4.5E.	70 27.4	17091	48148
Eskdalemuir, Scotland ...	55 19	3 12W.	14 47.1W.	69 43.2	16585	44881	14 58.9W.	69 41.9	16603	44878	15 10.5W.	69 41.2	16619	44894
Meanook, Alberta, Canada ...	54 37	113 21W.	26 39.2E.	*77 56.1	12755	*59675	26 42.9E.	*77 55.1	12781	*59709	26 48.5E.	*77 54.6	12790	*59719
Stonyhurst, Lancs., England	53 51	2 28W.	13 51.1W.	*68 47.8	17190	*44311	14 3.1W.	*68 46.2	17201	*44275	14 14.5W.	*68 46.5	17209	*44310
†Irkutsk (Zouy), Siberia ...	52 28	104 2E.	...	...	...	...	0 20.2E.	71 19.2	19038	56310	0 30.6E.	71 17.8	19061	56303
Potsdam, Prussia ...	52 23	13 4E.	...	...	...	...	...	...	...	...	5 58.3W.	66 45.8	18466	43010
Seddin, Prussia ...	52 17	13 1E.	5 38.6W.	66 48.3	18456	43072	5 49.1W.	66 45.6	18480	43034	5 59.5W.	66 42.8	18504	42995
Swider, Poland ...	52 7	21 15E.	1 57.3W.	67 1.1	18476	43565	2 6.3W.	66 57.6	18507	43517	2 15.3W.	66 54.2	18536	43404
De Bilt, Utrecht, Holland ...	52 6	5 11E.	9 26.3W.	67 0.4	18282	43084	9 37.3W.	66 58.6	18300	43063	9 48.8W.	66 57.4	18313	43053
Valentia, Cahirciveen, Ireland	51 56	10 15W.	*17 27.6W.	*67 59.8	*17813	*44081	*17 37.3W.	*67 59.6	*17821	*44094	*17 48.0W.	*67 59.3	*17826	*44096
Bochum, Prussia ...	51 29	7 14E.	*8 35.2W.	...	...	...	*8 40.0W.	...	...	...	*8 57.4W.	...	...	...
Abinger, Surrey, England ...	51 11	0 23W.	12 24.6W.	66 38.2	18542	42924	12 35.8W.	66 37.2	18555	42918	12 47.0W.	66 37.3	18564	42941
Uccle, Belgium ...	50 48	4 21E.	9 54.6W.	...	...	...	10 5.4W.	...	19234	...	10 16.0W.	...	...	...
Val Joyeux, near Paris, France	48 49	2 1E.	10 59.3W.	64 42.0	19031	41529	11 10.1W.	64 41.0	19041	41519	11 20.4W.	64 39.9	19048	41500
Maisach, Bavaria ...	48 12	11 15E.	*6 20.2W.	*63 39.7	*20279	*40963	*6 29.9W.	*63 35.8	*20292	*40872	*6 41.6W.	*63 35.2	*20298	*40867
Stará Dála, Czecho-Slovakia	47 53	18 11E.	3 18.8W.	...	...	...	3 27.4W.	...	...	...	3 36.7W.	...	...	...
Nantes, France ...	47 15	1 34W.	12 4.6W.	63 43.3	20226	40965	12 13.5W.	63 43.1	20222	40950	12 23.6W.	63 41.2	20220	40886
Agincourt, Ontario, Canada...	43 47	79 16W.	7 28.1W.	74 46.4	15544	57106	7 24.0W.	74 45.4	15586	57196	7 20.3W.	74 44.9	15628	57315
Karsani, U.S.S.R. ...	41 50	44 42E.	...	...	...	...	4 19.7E.	58 19.0	24627	39901	4 18.8E.	58 13.5	24646	39788
Ebro, Tortosa, Spain ...	40 49	0 30E.	10 20.1W.	57 25.3	23401	36621	10 28.0W.	57 25.8	23383	36605	10 37.7W.	57 26.8	23386	36633
Coimbra, Portugal ...	40 12	8 25W.	...	...	...	...	13 59.7W.	*57 57.9	23176	*37026	*14 10.3W.	*58 2.5	*23172	*37142
Cheltenham, Maryland, U.S.A.	38 44	76 50W.	6 56.0W.	71 8.4	18583	54403	6 52.0W.	71 6.5	18646	54485	6 49.0W.	71 4.4	18706	54551
†San Miguel, Azores Is. ...	37 46	25 39W.	18 29.4W.	*59 46.6	*23310	*40004	18 35.0W.	*59 48.0	*23309	*40046	18 40.5W.	*59 52.6	*23324	*40197
San Fernando, Spain ...	36 28	6 12W.	12 32.8W.	*53 29.9	25072	*33881	12 40.7W.	*53 29.8	25035	*33829	12 48.8W.	*53 32.2	25039	*33882
Kakioka, Japan ...	36 14	140 11E.	5 42.4W.	49 27.8	29713	34746	5 41.9W.	49 26.0	29704	34698	5 40.5W.	49 27.0	29707	34721
Tsingtao, China ...	36 4	120 19E.	4 32.8W.	52 6.8	30868	39673	4 33.0W.	52 6.6	30870	39669	*4 26.1W.	*52 6.7	*30839	*39713
Tucson, Arizona, U.S.A. ...	32 15	110 50W.	13 47.7E.	59 37.0	26432	45081	13 45.7E.	59 34.7	26491	45114	13 44.7E.	59 33.5	26536	45153
Lukiapang, Shanghai, China	31 19	121 2E.	*3 37.4W.	*45 25.1	*33264	*33753	*3 37.2W.	*45 24.9	*33278	*33763	*3 35.3W.	*45 25.4	*33233	*33737
Dehra Dun, United Provinces, India.	30 19	78 3E.	1 12.0E.	45 34.5	32903	33631	1 15.5E.	45 33.9	32950	33606	1 18.5E.	45 31.8	32940	33554
Helwan, Egypt ...	29 52	31 21E.	*0 14.7W.	*41 43.8	*30078	*26827	*0 19.3W.	*41 39.1	*30067	*26743	*0 24.0W.	*41 36.3	*30039	*26675
Hong Kong (Au Tau), China	22 27	114 3E.	*0 43.6W.	*30 37.3	*37485	*22187	*0 43.5W.	*30 38.7	*37481	*22206	*0 43.1W.	*30 38.9	*37478	*22207
Honolulu, Hawaii ...	21 19	158 4W.	10 4.3E.	39 29.2	28542	23516	10 4.6E.	39 30.2	28569	23553	10 4.7E.	39 30.1	28601	23578
Teoloyucan, Mexico ...	19 45	99 11W.	9 25.4E.	46 54.1	31202	33342	9 23.5E.	46 47.6	31301	33324	9 20.8E.	46 43.4	31339	33283
Alibag, Bombay, India ...	18 38	72 52E.	0 8.0W.	25 30.6	37253	17777	*0 6.1W.	*25 29.6	*37220	*17732	*0 4.3W.	*25 27.6	*37158	*17692
San Juan, Porto Rico ...	18 23	66 7W.	4 50.5W.	52 29.2	27493	35813	4 41.9W.	52 24.8	27551	35795	4 35.6W.	52 20.6	27644	35824
Antipolo, Philippine Is. ...	14 36	121 10E.	*0 26.7E.	*15 47.2	*38244	*10812	*0 26.5E.	*15 47.9	*38231	*10817	*0 26.9E.	*15 50.4	*38228	*10846
Batavia (Kuyper), Java ...	6 2	106 44E.	*0 55 E.	*32 18	*36820	*23280	*0 54.0E.	*32 16.6	*36815	*23252	*0 53.0E.	*32 14.9	*36834	*23239
Huancayo, Peru ...	12 3	75 20W.	...	...	...	...	*7 42.3E.	*1 33.9	*29675	*00811	*7 47.2E.	*1 25.8	*29667	*00741
Apia, Samoa ...	13 48	171 46W.	...	...	...	...	10 33.5E.	*30 6.7	35209	*20418	10 32.1E.	*30 5.7	35225	*20408
Mauritius ...	20 6	57 33E.	12 5.8W.	52 40.0	22697	29750	11 53.9W.	52 45.0	22732	29893	11 42.7W.	52 44.6	22768	29934
La Quiaca, Jujuy, Argentina	22 6	65 36W.	4 40.7E.	12 23.8	26266	05774	4 49.0E.	12 24.0	26295	05781	4 57.3E.	12 26.6	26338	05812
Vassouras, Brazil ...	22 24	43 39W.	...	...	...	...	...	...	...	...	12 27.7W.	16 46.9	24221	07304
Watheroo, West Australia ...	30 19	115 52E.	...	...	...	...	4 12.1W.	64 15.5	24645	51115	4 15.0W.	64 13.8	24656	51070
Pilar, Cordova, Argentina ...	31 40	63 53W.	6 26.8E.	25 50.6	24695	11961	6 34.4E.	25 48.2	24763	11973	6 42.0E.	25 46.8	24818	11987
Toolangi, Victoria, Australia	37 32	145 28E.	*8 21.6E.	*67 52.4	*22851	*56198	8 17.5E.	67 50.3	22883	56183	8 14.7E.	67 49.4	22891	56159
Christchurch, New Zealand ...	43 32	172 37E.	17 48.3E.	68 18.3	22108	55570	17 42.4E.	68 17.6	22123	55575	17 37.4E.	68 17.3	22126	55566
Christchurch (Amberley), N.Z.	43 10	172 43E.	17 51.0E.	67 58.5	22350	55247	...	...	...	...	...	...	...	...

NOTES.—\*Results derived from absolute observations only.

† A local anomaly is known to exist at the site of the Observatory.

Sitka.—A change of magnetometer was made in 1929 which affected declination observations. The systematic difference is  $-1.2$  E. Results for 1930 are estimated from 8 months' observation, January-August.

Potsdam.—Magnetic observation at Potsdam Observatory ceased after the middle of 1928 on account of electrification of Berlin railways.

Abinger.—The values of Inclination and Vertical Force for 1929 and 1930 depend upon direct measurement of the vertical component of the earth's field with a coil-magnetometer. The change of method involves a discontinuity in the observed secular change of mean values of these elements.

Apia, Samoa.—The results for 1928 are for five months only. For 1929 the results in Inclination and Vertical Force are for six months only.

La Quiaca, Argentina.—Results for 1928 are from hourly values January-April, combined with absolute observations May-December.

## 342.

## REVISED VALUES FOR EARLIER YEARS.

Place.	Latitude	Longitude.	1927.			
			Declina- tion.	Inclina- tion.	Hori- zontal Force.	Verti- cal Force.
Lukiapang, Shanghai, China	N. 31 19	o. 121 2E.	o. 3 34.0W.	N. 45 27.2	γ 33264	γ 33794

M.O. 340  
(Cahirciveen)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1930

Comprising the meteorological and geophysical results obtained from autographic records and eye observations at the observatories at Lerwick, Aberdeen, Eskdalemuir, Cahirciveen (Valentia Observatory), and Richmond (Kew Observatory), and the results of soundings of the upper atmosphere by means of registering balloons.

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CAHIRCIVEEN (VALENTIA OBSERVATORY)

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Published by the authority of the  
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1932

## CAHIRCIVEEN (VALENTIA OBSERVATORY).

Latitude	.. .. .	51° 56' N.
Longitude	.. .. .	10° 15' W.
G.M.T. of Local Mean Noon	.. .. .	12h 41m.

*Heights in metres above Sea Level.*

Barometer	.. .. .	13·7
Rain-gauge	.. .. .	9·1
Robinson Cup Anemograph	.. .. .	26
Dines Tube Anemograph	.. .. .	30

*Heights in metres above Ground.*

Thermometer Bulbs	.. .. .	1·3
Sunshine Recorder	.. .. .	12·8
Robinson Cup Anemograph	.. .. .	14
Dines Tube Anemograph	.. .. .	13
Beckley Rain-gauge Rim	.. .. .	0·5

## INTRODUCTION.

## SITE.

Valentia Observatory derives its name from the fact that it was originally established on Valentia Island in 1867. It was removed to the mainland in March, 1892, and now lies in a direct line between the old site on Valentia Island and the town of Cahirciveen, about  $2\frac{1}{2}$  miles (4 km.) north-east from the former, and three-quarters of a mile (1 km.) south-west of the latter. It is quite remote from any other buildings. The general character of the country surrounding the Observatory is hilly. The eastern bank of the Cahir river is about 150 metres to the westward, and in that direction there is no very high ground between the Observatory and the open sea, some  $3\frac{1}{2}$  miles (6 km.) away. To the north-west, however, are hills varying in height from 400 (120 m.) to 900 feet (275 m.), the highest being less than 3 miles (5 km.) distant. These are only separated by a narrow gully running in a N N W direction from other hills equally high, which stretch away to the northward: the nearest of these is but little more than a mile ( $1\frac{1}{2}$  km.) from the Observatory. Beyond the town of Cahirciveen to the north-east the river opens out considerably, and the country in this direction becomes an open boggy basin, rising by only a gentle gradient. Southward of this, however, it soon rises again, and at about a mile south-east of the Observatory it culminates in the hill Benteo upwards of 1,245 feet (380 m.) in height. Still further south it opens out once more to a distance of nearly 5 miles (8 km.) from the Observatory, where there is a range of hills running east and west, and varying in height from 400 (120 m.) to 1,300 feet (400 m.). To the south-west there is an opening to the sea, between Valentia Island and the mainland; and the circle of hills is completed by those on the island itself, the highest of which is about 800 feet (240 m.) high, and bears about west-south-west from the Observatory. Photographs of the Observatory building, together with a site plan, showing the disposition of the various instruments were reproduced in the introduction to the 1928 volume.

## METEOROLOGY.

The elements dealt with in the following tables are: atmospheric pressure, air temperature, humidity, rainfall, sunshine, wind speed and direction, minimum temperature on the grass, together with a diary of cloud visibility and weather.

*Pressure and Temperature.*—The photographic barograph and thermograph are installed in a room on the ground floor of the Observatory tower. The standard Fortin barometer, from which the control readings at 9h, 15h and 21h are taken, is mounted in the same room beside a window which faces the north-east. The stems of the dry and wet bulb thermometers pass out into the screen placed against the north wall of the tower. Close to the bulbs of these thermometers are the bulbs of the standard thermometers from which the control readings at 9h, 15h and 21h are taken.

*Rainfall.*—The Beckley raingauge and the 8-inch (20.3 cm.) check gauge are placed in a railed-off enclosure about 40 metres to the north of the tower.

*Sunshine.*—The recorder is cemented to a wooden rail on the roof of the tower. The exposure of the sunshine recorder is such that there is no appreciable loss of record due to obstructions in the months of May, June, July and August. During the remainder of the year the hill Benteé lying to the south-east cuts off early morning sunshine. The reduction in possible record, assuming that the recorder becomes sensitive to sunshine only when the sun is at an altitude of more than three degrees, is shown in the following table for the 1st and 15th of each month:—

Reduction in Possible Record in Tenths of an Hour.								
Month.	Jan.	Feb.	Mar.	Apr.	Sept.	Oct.	Nov.	Dec.
1st.	hr. .5	hr. .5	hr. .7	hr. .5	hr. .3	hr. .7	hr. .5	hr. .6
15th.	.6	.5	.7	.3	.5	.7	.5	.5

*Wind, Speed and Direction.*—Up to 1925 the measurements of Wind Speed and Direction as given in Tables 413-424, were obtained from the Robinson Cup Anemograph on the roof of the Observatory tower. Commencing with the 1926 values, measurements of Wind Speed and Direction published in the Observatories' Year Book are taken from the records of the Dines Pressure-tube Anemograph. This instrument stands in an open field, about 250 metres S E by E of the Observatory tower. The field slopes northwards and downwards to the river Cahir. About 1 mile (1½ km.) to the south-east is the highest point (1,245 feet) of the hill Benteé which extends for some little distance in a northerly and south-westerly direction. A description of the surrounding country has already been given.

In a few instances where records of the Pressure-tube Anemograph have been defective, the required values have been obtained from the records of the Cup Anemograph, a suitable adjustment of such values having been made in accordance with the table in the General Introduction showing the effect of exposure on the two instruments. Values thus obtained are entered as interpolated values.

*Minimum Temperature on the Grass.*—The grass minimum thermometer is of the type described in the General Introduction. It is exposed over short grass in the field enclosure. It is set at 18h and read at 7h on the succeeding day, the observation being entered to the day of reading.

*Visibility.*—Lists of the objects used for visibility observations and their distances and bearings from the point of observation are given in the following tables.

## LANDWARDS VISIBILITY OBJECTS AT VALENTIA OBSERVATORY.

Indication letter of object.	Standard distance of object.	Actual distance of object.	Bearing of object in degrees from N.	Description of object.
A	Metres. 25	Metres. 25	350°	Gate near workshop.
B	50	50	345°	North fence of enclosure.
C	100	100	125°	Hedge at S. end of vegetable garden.
D	200	200	330°	Notice board on beach.
E	500	500	360°	Hulk on shore.
F	1,000	1,100	50°	Parsonage.
G	2,000	1,910	55°	Wireless school.
Intermediate object	—	3,500	20°	Top of Castlequin Mountain.
h	4,000	—	—	No object available. (Top of Castlequin well visible.)
I	7,000	7,600	40°	Top of Knocknadober Mountain.
J	10,000	10,000	220°	Kilkeaveragh Mountain.
Intermediate object	—	17,000	55°	Drung Hill.
k	20,000	—	—	No object available. (Drung Hill well visible.)
l	30,000	—	—	No object available.
m	50,000	—	—	No object available.

## SEAWARDS VISIBILITY OBJECTS AT VALENTIA OBSERVATORY.

Indication letter of object.	Standard distance of object.	Actual distance of object.	Bearing of object in degrees from N.	Description of object.
F	Metres. 1,000	Metres. 1,000	205°	Farmhouse on skyline.
G	2,000	2,200	265°	Laght Point.
H	4,000	3,760	280°	Black Rock.
I	7,000	6,500	250°	Ridge between two hills on Valentia.
J	10,000	10,000	220°	Kilkeaveragh mountain.
k	20,000	—	—	No object available.
Intermediate objects	— —	23,500 25,500	320° 325°	Mount Eagle. Croaghmarhin Mountain.
l	30,000	—	—	No object available. (Croaghmarhin well visible.)
m	50,000	—	—	No object available. (Croaghmarhin exceptionally visible.)

Two observations, one in a landwards direction, the other in a seawards direction, are made at each hour of observation. The position of the Observatory is such that a distinction between visibility landwards and seawards cannot be made when the range of visibility is less than 1,000 yards. Objects corresponding with the letters A to E have therefore been included in the table of landwards objects only. Kilkeaveragh Mountain is used as both a landwards and seawards object corresponding with J.

Entries of "l" and "m" for visibility in a landwards direction are made:—

(a) When Croaghmarhin Mountain (see table of seawards objects) is clearly visible and there is reason to believe that the range of visibility in a landwards direction is as good as, or nearly as good as, visibility seawards.

(b) When Croaghmarhin Mountain is invisible but there is reason to believe from the appearance of Drung Hill that the range of visibility landwards is greater than the range seawards and is sufficiently good to justify the entry made.

When the mountains used as objects at 3,500 metres and beyond are cloud capped the appropriate entries for the range of visibility are determined by the clearness or otherwise with which the lower parts of the mountains can be seen.

The Observatory is far removed from smoky industrial areas; the observations are therefore not much affected by smoke pollution of the atmosphere.

#### Notes on the Meteorological Summaries.

*The Weather of 1930.*—The year was exceptionally wet, total rainfall exceeded normal by 250 millimetres: the month contributing most to the excess was January with 142 millimetres more than normal. January was also a month of frequent hail showers and persistent high winds: hail fell on 17 days and wind reached or exceeded force 6 on the Beaufort scale on 18 days.

Another outstanding feature of the year was the cold, dry and sunny weather of February. Temperature was  $2.6^{\circ}\text{A}$  ( $4.7^{\circ}\text{F.}$ ) and rainfall 102 millimetres below normal; sunshine averaged 1.5 hours a day in excess of normal.

August was a wet and dull month with 83 millimetres more rain and 1.6 hours a day less sun than normal.

*Pressure.*—No change in the values used for reducing pressure at station level to pressure at mean sea level was made at Valentia Observatory by the introduction in 1928 of the revised scheme as set out in the General Introduction.

The mean pressure for the year was  $2.6$  millibars below normal. Of the monthly mean pressures two were higher and ten lower than normal. The departures ranged from an excess of seven millibars in February to a deficiency of fourteen millibars in January.

Details of the Fourier analysis of the diurnal inequalities of pressure for the year are given in Table A, together with normal values referring to the period 1871–1915. The coefficients are given to the nearest  $.001$  mb. and the phase angles to the nearest  $1^{\circ}$  except for the third and fourth components in which case the values referring to the current year are taken to the nearest  $5^{\circ}$  only.

*Temperature.*—The mean temperature for the year 1930 was  $0.30^{\circ}\text{A}$  ( $0.54^{\circ}\text{F.}$ ) below normal. For the individual months February, with a deficit of  $2.64^{\circ}\text{A}$  ( $4.75^{\circ}\text{F.}$ ) showed the greatest departure.

The harmonic analysis of the monthly and seasonal diurnal inequalities of temperature is given in Table B, together with normal values referring to the period 1871-1915. The coefficients are given to the nearest  $\cdot 001^\circ$  A and the phase angles to the nearest  $1^\circ$  except for the third and fourth components in which case the values referring to the current year are taken to the nearest  $5^\circ$  only.

*Rainfall.*—The total rainfall for the year was 18 per cent. above normal, the actual excess being 250 millimetres. The month with the highest rainfall was January, with 281 millimetres, this amount being 102 per cent. more than normal. The lowest monthly total was that for February, the 30 millimetres which fell during that month being only 23 per cent. of the normal amount.

*Bright Sunshine.*—The total amount of bright sunshine for the year 1930 was about 6 per cent. less than the normal. Three months only had more than average sunshine, the greatest excess being about 61 per cent. for February. The most notable deficiency was for August, the total sunshine for this month being 68 per cent. of normal.

*Cloud and Weather.*—The mean amount of cloud at all observation hours was 7.3. The most cloudy month was July, with a mean cloud amount of 8.2. The month with least cloud was February with a mean of 5.9.

*Visibility.*—The observations of visibility in tables 428-439 refer to visibility in a landwards direction. The observations, when the range of visibility seawards differs from the range landwards, are shown in the following table:—

Date.	Hour.	Visibility Landwards	Visibility Seawards.	Date.	Hour.	Visibility Landwards	Visibility Seawards.
Jan. 9	15	J	k	June 6	9	l	k
" 17	13	k	J	" 6	13	J	l
" 24	15	m	l	" 17	13	l	G
" 31	15	J	k	" 17	15	l	J
Feb. 3	13	l	k	" 18	9	l	k
" 4	15	J	k	" 26	21	J	k
" 5	15	J	k	July 4	7	J	k
" 17	9	m	l	" 5	7	J	I
" 18	13	J	k	" 7	15	k	J
" 26	18	h	G	" 9	18	I	H
Mar. 1	9	k	J	" 9	21	I	H
" 16	7	l	k	" 27	18	J	k
" 17	18	m	l	" 30	18	J	m
" 27	7	k	J	Aug. 2	9	J	k
" 28	7	k	J	" 5	15	J	k
" 28	18	J	k	" 5	18	J	k
April 2	9	J	k	" 10	9	J	I
" 2	13	J	k	" 12	13	J	k
" 3	9	J	k	" 15	9	h	I
" 3	13	J	k	" 20	18	I	H
" 3	15	J	k	" 26	18	k	J
" 4	13	J	k	" 27	7	I	H
" 4	15	J	k	Sept. 12	7	F	H
" 4	18	I	J	" 12	9	h	I
" 12	7	k	l	" 13	13	J	k
" 23	18	J	k	" 22	21	I	H
" 25	18	J	k	Oct. 28	7	h	I
" 29	18	h	I	" 30	13	J	k
May 9	7	I	J	" 31	9	k	I
" 11	7	J	k	Nov. 5	21	J	k
" 11	9	J	l	" 21	18	k	J
" 14	7	J	k	" 24	13	J	k
" 16	7	J	k	Dec. 2	13	J	k
" 23	7	J	k	" 4	13	G	H
" 26	15	J	k	" 18	13	I	H
" 26	18	J	k	" 23	13	J	k

## IDENTIFICATION NUMBERS OF INSTRUMENTS IN USE IN 1930.

Standard Fortin Barometer ..	M.O. 463		
Standard Dry Bulb Thermometer ..	M.O. 1701	Corrections	Nil.
Standard Wet Bulb Thermometer ..	M.O. 1702	Corrections	$\left\{ \begin{array}{l} 255^{\circ} - 266^{\circ} + .2^{\circ} \\ 267^{\circ} - 268^{\circ} + .1^{\circ} \\ 269^{\circ} - 272^{\circ} \text{ Nil.} \\ 273^{\circ} \text{ and above, } - .1^{\circ} \end{array} \right.$
Recording Beckley Rain-gauge ..	—		
Control Rain-gauge .. ..	M.O. 402		
Glass for Control Rain-gauge ..	M.O. 1611 and 1627		
Campbell Stokes Sunshine Recorder	M.O. 5		
Robinson Cup Anemograph .. ..	Beck 46		
Dines Tube Anemograph .. ..	—		
Grass Minimum Thermometer ..	M.O. 18136/29	Corrections	$\left\{ \begin{array}{l} 2.0^{\circ} \text{ F. } - .3^{\circ} \text{ F.} \\ 12.0^{\circ} \text{ F. } - .2^{\circ} \text{ F.} \\ 32.0^{\circ} \text{ F. } \text{ Nil.} \\ 52.0^{\circ} \text{ F. } \text{ Nil.} \\ 72.0^{\circ} \text{ F. } \text{ Nil.} \end{array} \right.$

All thermometer corrections are applied before tabulation.

TABLE A.

*Diurnal Variation of Barometric Pressure Fourier Coefficients.*

Cahirciveen (Valentia Observatory), Longitude 10° 15' W.

Values of  $c_n, \alpha_n$  in the series  $\Sigma c_n \sin (15nt^\circ + \alpha_n)$ ,  $t$  being Local Mean Time reckoned in hours from midnight.

Month or Season.	$c_1$		$\alpha_1$		$c_2$		$\alpha_2$		$c_3$		$\alpha_3$		$c_4$		$\alpha_4$	
	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915
January	mb. .779	mb. .098	° 78	° 174	mb. .261	mb. .319	° 173	° 153	mb. .132	mb. .157	° 10	° 351	mb. .079	mb. .071	° 215	° 207
February	.123	.122	151	203	.373	.344	149	148	.129	.119	345	343	.055	.043	85	95
March	.159	.114	312	149	.407	.352	154	149	.051	.048	330	349	.049	.038	45	51
April	.198	.098	115	191	.299	.310	148	149	.032	.032	180	181	.033	.035	25	15
May	.207	.172	183	178	.283	.277	152	147	.051	.074	175	166	.011	.014	355	350
June	.244	.192	138	200	.282	.255	140	146	.079	.075	160	160	.012	.002	45	11
July	.172	.242	156	183	.243	.251	133	143	.074	.079	155	163	.013	.013	15	16
August	.125	.237	253	190	.260	.281	129	145	.051	.052	200	161	.031	.034	350	350
September	.266	.195	165	203	.319	.346	151	153	.017	.005	120	49	.059	.044	30	10
October	.417	.194	101	199	.398	.335	155	161	.104	.073	310	1	.037	.013	105	69
November	.669	.071	135	179	.321	.347	157	161	.120	.133	35	5	.051	.035	180	167
December	.322	.167	255	186	.357	.311	164	160	.109	.162	5	357	.081	.075	195	196
Arithmetic Mean	.307	.159	..	..	.317	.311	..	..	.079	.084	..	..	.043	.035	..	..
Year	.177	.150	131	189	.311	.307	151	151	.024	.034	5	3	.008	.004	110	83
Winter	.277	.112	117	187	.324	.329	161	156	.118	.142	10	355	.049	.043	185	181
Equinox	.155	.142	120	190	.356	.335	152	153	.029	.014	305	308	.039	.030	45	29
Summer	.147	.209	170	188	.263	.266	139	145	.060	.070	170	163	.016	.015	5	355

TABLE B.

*Diurnal Variation of Temperature Fourier Coefficients.*

Cahirciveen (Valentia Observatory), Longitude 10° 15' W.

Values of  $c_n, \alpha_n$  in the series  $\Sigma c_n \sin (15nt^\circ + \alpha_n)$ ,  $t$  being Local Mean Time reckoned in hours from midnight.

Month or Season.	$c_1$		$\alpha_1$		$c_2$		$\alpha_2$		$c_3$		$\alpha_3$		$c_4$		$\alpha_4$	
	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915	1930	1871-1915
January	°A .629	°A .496	° 244	° 239	°A .425	°A .269	° 45	° 52	°A .083	°A .114	° 245	° 226	°A .041	°A .025	° 55	° 43
February	1.458	.820	225	235	.544	.377	46	53	.159	.085	235	231	.070	.032	160	203
March	1.235	1.351	229	234	.362	.420	59	59	.033	.036	285	335	.096	.091	230	215
April	1.708	1.806	234	239	.288	.369	91	70	.137	.143	50	43	.030	.063	280	240
May	2.156	2.126	241	241	.132	.194	112	99	.265	.246	75	57	.098	.031	325	315
June	2.157	2.072	247	242	.029	.117	107	91	.334	.206	65	60	.056	.022	20	15
July	1.436	1.873	245	242	.148	.163	56	68	.161	.197	70	55	.014	.003	20	23
August	1.388	1.780	235	242	.123	.304	73	67	.192	.168	60	48	.045	.032	210	250
September	1.629	1.607	236	241	.376	.468	76	69	.097	.071	325	23	.075	.102	235	233
October	.570	1.131	250	241	.287	.424	55	67	.070	.076	270	278	.014	.071	60	239
November	.691	.716	235	239	.373	.354	59	63	.134	.120	245	253	.016	.022	145	105
December	.523	.446	234	234	.275	.272	57	57	.087	.103	225	240	.033	.032	10	60
Arithmetic Mean	1.298	1.352	..	..	.280	.311	..	..	.146	.130	..	..	.049	.044	..	..
Year	1.285	1.348	238	240	.265	.325	62	66	.045	.037	55	42	.011	.044	270	231
Winter	.804	.619	233	237	.398	.317	51	56	.113	.104	240	238	.018	.014	100	86
Equinox	1.272	1.472	235	239	.319	.419	70	66	.045	.054	340	9	.044	.081	240	228
Summer	1.777	1.963	242	242	.100	.191	81	78	.236	.203	65	56	.030	.013	335	306

NOTE.—The seasonal means are derived from the following grouping of months:—*Winter*: January, February, November and December; *Equinox*: March, April, September and October; *Summer*: May to August, inclusive.

## TERRESTRIAL MAGNETISM.

**Notes on the Magnetic Observations for the year 1930.**

Absolute observations of declination, horizontal force and inclination were made weekly at the Valentia Observatory during the year 1930. The instruments in use for observations of declination and horizontal force were the same as in previous years namely, the Dover unifilar, No. 139, with collimator magnet 139A and mirror magnet 139C. Dover dip circle, No. 118 was in use until May 16th when it was replaced by Dover dip circle No. 239. The mean times of observation were 10·21 for the declination, 11·45 for the horizontal force and 14·30 for the inclination, all according to Greenwich Mean Time. In the individual observations the greatest departure from the mean time in any element was 4 minutes. The deflection of the mirror magnet was measured for two distances of the collimator magnet, namely, 30cm. and 40cm. The complete deflection observation consisted of eight readings of the mirror magnet. The distribution constant, P, used for 1930 was computed from the mean deflections for 30cm. and 40cm. for the seven years 1923–1929 inclusive. The mean P so obtained was 7·63. The moment of the collimator magnet has decreased at the rate of about 1 unit per annum. An iron manhole cover weighing 84 lbs. was situated at a distance of 25½ feet from the dip circle and of 29½ feet from the magnetometer from December 5th to the end of the year.

The values of the declination, horizontal force and inclination obtained in the absolute observations are given in detail in Table C. All the observations made are included in this table, but in Table D the mean monthly values are computed from only such of the absolute observations as were taken at times subsequently found, by reference to the Eskdalemuir magnetograph curves, to be free from serious disturbance. Observations in Table C taken at disturbed times, and not, therefore, utilised for the mean values in Table D, are marked with an asterisk. The north, west and vertical components and the total force for each month and the year are computed from the corresponding mean values of the observed elements.

Westerly declination has diminished by 9'·7 as compared with 1929. From 1928 to 1929 the decrease was 10'·7 and in the previous 12 months 11'·5. The average annual decrease for the five years 1920–1925 was 11'·1, for the five years 1915–1920 it was 9'·2, and for the five years 1910–1915 it was 8'·2. During the five years ending in 1930 the average annual decrement is 11'·0 so that the rate of the eastward movement of the magnetic needle appears to have increased slowly up to about 1927 but is now apparently decreasing again.

Northerly inclination increased 0'·2 from 1929 to 1930. There has been no appreciable change in inclination in the past five years, each year's value being very slightly higher than the value for the preceding year with the exception of the years 1926–1927. Prior to 1926 inclination was diminishing at a slow but fairly steady rate.

Up to 1920 the mean annual values of horizontal force had shown a steady decline from year to year. In the years 1921 to 1924 and in 1927 the change was in the opposite direction, each year having a mean value higher than that of the preceding year. It would appear that the increase was temporary since a decline was in evidence

from 1924 to 1926 and again from 1927 to 1930. The amount of annual change is shown in the following table:—

Period.	Annual Change.
1910-15	5γ decrease (mean value).
1915-20	6γ „ (mean value).
1920-21	8γ increase.
1921-22	1γ „
1922-23	3γ „
1923-24	2γ „
1924-25	5γ decrease.
1925-26	14γ „
1926-27	2γ increase.
1927-28	11γ decrease.
1928-29	5γ „
1929-30	8γ „

The reversal of the annual change in the horizontal force from 1920 to 1924 and from 1926 to 1927 was not accompanied by any such reversal in the total force. From 1910 to 1915 the average yearly change in the total force was  $-49\gamma$ , from 1915 to 1920 it was  $-33\gamma$  and from 1920 to 1925 it was  $-32\gamma$ . From 1925 to 1930 the mean annual change is  $-20\gamma$ , so that the total force has continued to decrease, but at a rate which is apparently diminishing gradually. The individual changes from year to year as shown in Table D are somewhat irregular, but this may be due in considerable measure to instrumental uncertainties. The total force is computed from the horizontal force and the inclination, using the formula  $T = H \sec. I$ , so that an error of  $0' \cdot 1$  in  $I$  would give an error approximately  $4\gamma$  in  $T$  at Valentia. In addition, it is to be remembered that the secular change data for Valentia are obtained from absolute observations made at fixed hours at any of which the value obtained for an element may differ, by an amount which is not necessarily constant, from its true mean value for the day of observation. It is by no means improbable that owing to this and errors of observation, uncertainties to the extent of several tenths of a minute of arc may be introduced into the mean value of  $I$  for the year. For the average change over a series of years these possible errors are naturally much diminished and the average fall of  $33\gamma$  per annum in the total force obtained from the values in Table D is probably a close approximation to the true change. This continued decrease in the total force indicates that the rise in the value of the horizontal force observed from 1920 to 1924 and from 1926 to 1927 was not a true increase in the magnetic field but merely a component increase arising from the fall in the inclination, which becomes proportionally more effective in the horizontal component as the actual inclination angle itself becomes smaller. The magnetic field in the Valentia district continues to become less year by year, therefore, although without observations of inclination the opposite would have appeared to be the case in some recent years.

TABLE C.

*Cahirciveen (Valentia Observatory). Absolute Magnetic Observations, 1930.*

Latitude 51° 56' N. Longitude 10° 15' W.

Date.	Westerly Declination	Horizontal Force	Northerly Inclination	Date.	Westerly Declination	Horizontal Force	Northerly Inclination
January 6 ..	17 35.3	17792*	68 2.7*	July 4 ..	17 29.6*	17822*	67 59.6
" 14 ..	17 33.5	17818	67 59.5	" 10 ..	17 33.1	17782*	68 0.0*
" 22 ..	17 33.3	17821	67 59.9	" 16 ..	17 29.5	17820*	68 0.1*
" 30 ..	17 33.3	17802	68 0.9*	" 25 ..	17 29.0*	17783*	67 59.6*
February 7 ..	17 30.7	17795	68 0.4	August 1 ..	17 24.7	17811	67 59.5
" 14 ..	17 33.1	17788*	68 1.6*	" 8 ..	17 26.1*	17776*	68 1.9*
" 21 ..	17 33.5	17814	68 0.1	" 15 ..	17 27.8	17802	68 1.1
" 28 ..	17 35.7	17815	68 0.2*	" 22 ..	17 24.9	17795*	68 0.2
March 7 ..	17 29.7	17813	68 0.3	" 29 ..	17 24.7	17818	67 59.3
" 14 ..	17 31.2	17784	67 59.8*	September 5 ..	17 24.7	17789*	68 0.5*
" 21 ..	17 31.8	17822	68 0.1	" 12 ..	17 25.2	17798	68 0.4
" 28 ..	17 29.6*	17766*	68 1.1*	" 19 ..	17 25.6	17764*	68 1.2*
April 4 ..	17 26.8	17804	67 59.4	" 26 ..	17 23.3	17802	67 59.7
" 11 ..	17 31.9*	17786*	67 59.9	October 3 ..	..	17766*	68 1.7*
" 17 ..	17 30.1	17798	68 0.2	" 4 ..	17 28.9	..	..
" 25 ..	17 27.5	17796*	68 2.5*	" 10 ..	17 21.5	17795	68 0.3
May 2 ..	17 25.7	17818	67 58.6	" 17 ..	17 26.2	17755*	68 2.5*
" 9 ..	17 25.6	17797*	68 0.9*	" 24 ..	17 23.3	17816	67 59.2
" 16 ..	17 26.6	17823	67 58.5	" 31 ..	17 26.5	17774*	68 0.6
" 23 ..	17 27.0	17809	68 0.2	November 7 ..	17 23.0	17818	68 0.3
" 30 ..	17 26.3	17813	67 59.5	" 14 ..	17 24.4	17838	67 58.0
June 6 ..	17 23.8	17811	68 0.0	" 21 ..	17 22.9	17818	68 0.3
" 13 ..	17 28.8*	17789*	67 59.3*	" 28 ..	17 25.9	17798	68 0.3
" 20 ..	17 26.3	17796	68 0.6*	December 5 ..	17 23.8	17822	68 0.4
" 27 ..	17 25.6	17814*	67 57.0*	" 12 ..	17 22.9	17835	67 59.3
				" 19 ..	17 23.1	17841	67 59.0
				" 30 ..	17 23.9	17837	67 59.1

\* Disturbance at these times. Values not utilised in computing means given in Table D.

TABLE D.

*Valentia Observatory, Cahirciveen.*

Magnetic Data for the Year 1930.

1930.			Declination (West).		Inclination (North).		Horizon- tal Force.	North.	West.	Vertical.	Total.
			°	'	°	'	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
January	..	..	17	33.9	67	59.7	17814	16983	5376	44080	47543
February	..	..	17	33.3	68	0.2	17808	16979	5371	44086	47547
March	..	..	17	30.9	68	0.2	17806	16979	5359	44081	47540
April	..	..	17	28.1	67	59.8	17801	16980	5343	44051	47513
May	..	..	17	26.2	67	59.2	17816	16997	5339	44067	47531
June	..	..	17	25.2	68	0.0	17804	16988	5330	44066	47527
July	..	..	17	31.3	67	59.6	..	..	..	..	..
August	..	..	17	25.5	68	0.0	17810	16993	5332	44082	47543
September	..	..	17	24.7	68	0.1	17800	16984	5326	44060	47519
October	..	..	17	25.3	68	0.0	17805	16988	5331	44070	47530
November	..	..	17	24.1	67	59.7	17818	17002	5329	44090	47554
December	..	..	17	23.4	67	59.5	17834	17019	5330	44121	47589
Year, 1930	..	..	17	27.6	67	59.8	17813	16992	5345	44081	47546
Year, 1929	..	..	17	37.3	67	59.6	17821	16985	5395	44093	47559
Year, 1928	..	..	17	48.0	67	59.3	17826	16973	5449	44096	47563
Year, 1927	..	..	17	59.5	67	59.2	17837	16965	5509	44119	47588
Year, 1926	..	..	18	10.8	68	0.1	17835	16945	5565	44147	47612
Year, 1925	..	..	18	22.4	68	0.0	17849	16939	5626	44177	47646
Year, 1920	..	..	19	17.9	68	5.3	17840	16837	5896	44353	47806
Year, 1915	..	..	20	3.8	68	7.9*	17869	16785	6130	44519*	47972*
Year, 1910	..	..	20	44.6	68	13.0	17892	16732	6337	44771	48215

\* Mean of 11 months only.

Readings in millibars, at exact hours, Greenwich Mean Time.

343. Cahirciveen (Valentia Observatory) : H<sub>0</sub> (height of barometer cistern above M.S.L.) = 13.7 metres. January, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Sea Level' mean values.

344. Cahirciveen (Valentia Observatory) : H<sub>0</sub> = 13.7 metres.

February, 1930.

Table with 25 columns (1-24 hours + Mean) and 28 rows (Day 1-28). Includes 'Station Level' and 'Sea Level' mean values.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

345. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres. March, 1930.

Table with 25 columns (1-24) and 31 rows (Day 1-31). Includes 'Station Level' and 'Mean (Sea Level)' rows. Data values are in millibars (mb.).

346. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

April, 1930.

Table with 25 columns (1-24) and 31 rows (Day 1-31). Includes 'Station Level' and 'Mean (Sea Level)' rows. Data values are in millibars (mb.).

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

347. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres.

May, 1930.

Table with 25 columns (1-24, Mean) and 31 rows (1-31). Columns 1-12 are labeled 'Station Level' and columns 13-24 are labeled 'Hour. G.M.T.'. Data is presented in millibars (mb.) for each hour and station level. Includes monthly means for station and sea level.

348. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

June, 1930.

Table with 25 columns (1-24, Mean) and 31 rows (1-31). Columns 1-12 are labeled 'Station Level' and columns 13-24 are labeled 'Hour. G.M.T.'. Data is presented in millibars (mb.) for each hour and station level. Includes monthly means for station and sea level.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1001.7 mb. is written 001.7. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

349. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres.

July, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Station Level	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.
1	995.3	994.9	994.3	994.2	994.2	994.4	994.7	995.5	996.3	996.8	997.4	997.9	998.6	998.9	998.9	999.2	999.5	999.7	000.0	000.3	000.9	001.0	001.0	000.9	997.6
2	000.6	000.1	999.7	999.2	998.9	998.8	998.6	998.0	997.9	997.5	997.3	997.4	997.6	997.4	997.2	997.1	996.8	997.1	997.2	997.6	998.0	998.6	998.4	998.8	998.2
3	999.1	999.2	999.5	999.8	000.3	000.9	001.6	002.6	003.0	003.5	004.1	004.7	005.2	005.8	006.3	006.8	007.1	008.0	008.5	009.1	009.9	010.4	010.7	011.0	004.6
4	011.2	011.4	011.5	011.8	012.4	012.8	013.2	013.6	014.0	014.3	014.3	014.6	014.7	014.6	014.0	015.1	015.0	014.8	015.1	015.2	015.4	015.8	015.8	015.6	013.9
5	015.5	015.2	014.9	015.0	014.8	014.6	014.6	015.1	015.0	015.2	015.1	014.6	014.2	014.2	014.0	014.0	013.9	013.8	013.8	013.8	013.7	013.7	013.7	013.6	014.5
6	013.3	013.2	013.5	013.6	013.9	014.3	015.0	015.8	016.4	016.4	016.8	017.4	017.9	018.3	018.8	019.3	019.6	020.2	020.9	021.4	022.0	022.5	022.8	022.8	017.6
7	023.1	023.2	023.2	023.6	024.0	024.2	024.5	024.7	024.8	024.8	024.9	025.2	025.0	024.9	024.5	024.6	024.7	024.5	024.4	024.6	024.9	025.2	025.3	025.4	024.5
8	025.4	025.4	025.0	024.7	024.7	024.9	024.8	025.1	024.9	024.9	024.9	024.8	024.7	024.3	024.4	024.2	024.0	023.9	023.8	023.9	024.1	024.3	024.4	024.4	024.6
9	024.5	024.4	024.0	024.4	024.7	024.9	025.2	025.6	025.9	026.1	026.4	026.5	027.0	027.1	027.2	027.3	027.5	027.4	027.6	027.8	027.9	028.0	028.4	028.3	026.4
10	028.0	028.0	027.5	027.4	027.4	027.5	027.7	027.9	027.9	027.8	028.3	028.3	028.1	028.1	028.0	027.7	027.4	027.3	027.0	026.8	027.0	027.0	026.9	026.3	027.6
11	025.7	025.0	024.3	023.7	023.1	022.8	022.9	022.8	022.8	022.5	022.4	022.1	021.9	021.8	021.4	021.1	020.8	020.5	020.4	020.5	020.8	020.8	020.5	020.4	022.2
12	020.1	020.1	019.8	019.7	019.8	019.5	019.5	019.6	019.7	019.2	019.3	019.2	019.0	018.8	018.7	018.7	018.4	018.2	018.2	017.9	017.9	017.6	017.3	016.9	019.0
13	016.3	015.7	014.9	014.3	013.5	012.4	012.1	011.2	010.9	010.8	010.5	010.5	010.2	009.9	009.6	009.5	009.4	009.3	009.6	009.8	010.0	010.3	010.5	010.4	011.6
14	010.5	010.5	010.3	010.4	010.6	010.9	011.3	011.4	011.6	011.3	011.4	011.4	011.5	011.6	011.9	011.7	011.5	011.3	011.2	010.8	010.7	010.2	010.0	009.4	011.0
15	008.9	008.2	007.1	005.6	004.7	003.4	002.3	000.7	000.9	001.7	002.7	003.8	004.4	004.5	004.9	005.1	005.3	005.4	005.7	006.1	006.7	007.3	007.5	007.6	008.0
16	993.2	993.7	994.1	994.5	994.7	995.0	995.6	995.7	995.8	996.0	995.9	996.1	996.0	996.0	995.9	995.8	995.9	995.7	995.6	995.4	995.6	995.5	995.4	995.4	995.3
17	995.1	994.6	994.0	993.5	993.2	993.1	992.7	992.3	992.0	991.5	991.6	991.4	991.1	991.0	990.7	990.6	990.8	991.0	991.5	992.0	992.5	992.8	993.1	993.1	992.2
18	993.8	994.2	994.9	995.4	996.4	997.1	998.0	998.6	999.1	999.7	000.4	001.3	001.7	002.3	002.7	003.2	003.5	004.0	004.5	005.2	005.7	006.0	006.3	006.4	000.6
19	006.3	006.4	006.3	006.1	006.1	006.2	006.4	006.9	007.2	007.3	007.7	008.0	007.9	008.0	008.1	008.0	007.8	007.7	007.5	007.7	007.7	007.8	007.4	007.0	007.2
20	006.5	005.9	005.3	005.0	004.8	004.6	004.5	004.7	004.6	004.6	004.5	004.6	004.4	004.5	004.8	005.1	005.3	005.4	005.7	006.1	006.7	007.3	007.5	007.8	005.4
21	008.5	009.0	009.3	009.7	010.3	010.7	011.3	012.2	012.8	013.5	014.2	014.7	015.3	015.6	016.0	016.6	017.2	017.4	017.8	018.4	018.8	019.2	019.4	019.5	014.2
22	019.6	019.5	019.3	019.4	019.4	019.3	019.4	019.5	019.5	019.8	020.1	019.8	019.8	019.6	019.7	019.0	019.4	019.5	019.6	019.6	019.7	019.5	019.6	019.5	019.5
23	019.4	019.0	018.7	018.6	018.3	018.3	018.5	018.7	018.6	018.2	018.3	018.5	018.3	018.2	018.1	017.7	017.7	017.6	017.7	017.5	017.6	017.8	017.7	017.5	018.2
24	017.2	016.8	016.5	016.2	016.1	016.1	016.2	016.3	016.3	016.2	015.9	015.7	015.8	015.7	015.5	015.2	015.0	014.6	014.7	014.5	014.4	014.1	014.3	013.8	015.6
25	013.1	012.2	011.7	010.9	009.9	009.5	009.0	008.4	008.0	007.3	006.9	006.7	006.3	005.5	004.5	004.0	003.2	002.6	002.0	001.9	001.9	002.4	002.4	002.4	006.6
26	002.3	002.0	002.6	003.3	003.8	004.1	004.6	004.9	005.4	005.7	006.1	006.5	006.7	006.7	006.6	006.3	006.0	005.7	005.7	005.7	005.6	005.8	005.7	005.7	005.6
27	007.7	007.7	007.4	007.2	007.0	006.7	006.6	006.5	006.2	006.0	005.6	005.6	005.4	005.1	004.8	004.4	003.8	002.8	003.3	003.4	003.5	003.5	003.3	003.1	005.4
28	002.5	002.0	001.3	000.7	000.2	000.3	000.6	000.7	000.8	000.9	001.6	001.6	001.8	001.8	001.8	002.3	002.4	002.7	002.7	003.0	003.2	003.3	003.8	004.0	001.9
29	004.2	004.3	004.4	004.5	004.5	004.7	005.1	006.1	006.9	007.7	008.4	009.0	009.5	010.1	011.0	011.5	012.3	012.9	014.0	014.6	015.6	015.9	016.3	016.6	009.3
30	016.6	016.6	016.8	016.9	017.3	017.4	018.0	018.3	018.4	018.5	018.6	019.0	019.2	019.2	019.0	018.9	019.0	019.0	018.8	018.7	018.9	018.9	019.0	018.7	018.3
31	018.2	017.8	017.4	016.7	016.4	016.1	016.0	015.7	015.3	014.9	014.7	014.2	013.8	013.2	012.4	012.1	011.6	011.0	010.2	010.0	009.6	009.0	008.2	007.6	013.7
Mean (Station Level)	1011.02	1010.85	1010.63	1010.51	1010.49	1010.52	1010.66	1010.83	1010.88	1010.88	1010.99	1010.07	1010.09	1010.07	1010.01	1010.97	1010.97	1010.93	1010.03	1010.17	1010.40	1010.54	1010.58	1010.51	1010.97
Mean (Sea Level)	1012.67	1012.50	1012.28	1012.16	1012.14	1012.17	1012.30	1012.47	1012.52	1012.52	1012.63	1012.70	1012.72	1012.70	1012.64	1012.60	1012.57	1012.57	1012.67	1012.81	1012.04	1012.19	1012.23	1012.16	1012.61

350. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

August, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Station Level	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.
1	006.7	005.9	005.1	004.2	003.8	003.5	002.9	002.4	002.1	001.7	000.9	000.2	999.4	998.0	997.2	996.0	995.2	994.4	993.4	992.5	992.1	991.9	991.4	990.8	999.2
2	990.3	989.7	989.1	988.8	988.6	988.7	988.8	988.9	989.1	989.1	989.1	988.8	988.6	988.5	988.1	988.0	988.1	988.4	988.7	989.2	989.9	990.6	991.2	992.0	989.2
3	992.8	993.6	993.9	994.4	994.9	995.6	996.1	996.6	997.3	997.2	997.6	997.8	997.9	997.5	997.4	997.3	997.3	997.2	997.1	997.0	997.2	997.0	997.0	997.0	996.3
4	996.9	996.8	996.9	996.9	997.0	997.2	997.4	997.5	997.7	997.8	997.8	997.8	997.9	997.9	997.8	997.5	997.0	996.6	996.6	996.6	996.4	996.2	996.3	996.3	997.1
5	996.2	996.3	996.3	996.4	996.6	996.8	997.1	997.2	997.1	997.2	997.8	998.2	998.5	998.6	998.8	999.1	999.7	000.1	000.5	001.1	001.5	001.8	001.8	002.0	998.5
6	002.4	002.7	002.8	002.9	003.1	003.5	003.7	004.2	004.3	004.5	004.8	005.1	005.3	005.8	006.0	006.2	006.4	006.6	007.0	007.4	008.0	008.2	008.3	008.7	005.2
7	008.8	008.8	008.8	008.7	009.0	009.3	009.9	010.3	011.0	011.5	012.0	012.5	012.9	013.4	013.7	014.1	014.4	014.9	015.4	015.6	016.4	016.7	017.0	017.2	012.4
8	017.3	017.1	017.0	017.0	016.9	017.0	016.6	016.6	016.2	015.9	015.4	0													

Readings in millibars at exact hours, Greenwich Mean Time.

351. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres. September, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-30 hours + Mean). Columns 1-11 are labeled 'Station Level' and columns 13-24 are labeled 'Sea Level'. Data is in millibars (mb.).

352. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

October, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-30 hours + Mean). Columns 1-11 are labeled 'Station Level' and columns 13-24 are labeled 'Sea Level'. Data is in millibars (mb.).

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

353. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres. November, 1930.

Table with 25 columns (Hour, G.M.T. 1-24, Mean) and 31 rows (Station Level 1-30, Mean Station Level, Mean Sea Level). Data represents pressure readings in millibars for November 1930.

354. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

December, 1930.

Table with 25 columns (Hour, G.M.T. 1-24, Mean) and 31 rows (Station Level 1-30, Mean Station Level, Mean Sea Level). Data represents pressure readings in millibars for December 1930.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

PRESSURE AT STATION LEVEL AND AT SEA LEVEL.  
ANNUAL MEANS FROM HOURLY VALUES.

293

From readings in millibars at exact hours, Greenwich Mean Time.

355. Cahirciveen (Valentia Observatory) :  $H_b = 13.7$  metres.

1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Station Level.	mb. 010.11	mb. 009.91	mb. 009.74	mb. 009.55	mb. 009.48	mb. 009.51	mb. 009.62	mb. 009.74	mb. 009.87	mb. 009.94	mb. 010.00	mb. 009.95	mb. 009.81	mb. 009.63	mb. 009.53	mb. 009.51	mb. 009.58	mb. 009.69	mb. 009.83	mb. 010.02	mb. 010.18	mb. 010.24	mb. 010.23	mb. 010.16	mb. 009.83
Sea Level.	011.78	011.58	011.41	011.22	011.15	011.18	011.29	011.41	011.54	011.60	011.66	011.61	011.47	011.29	011.19	011.17	011.24	011.35	011.49	011.69	011.85	011.91	011.90	011.83	011.50

PRESSURE AT STATION LEVEL: MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

356. Cahirciveen (Valentia Observatory) :  $H_b = 13.7$  metres.

1930.

Month	Mean.	Hour GMT. 1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	999.13	+0.73	+0.60	+0.68	+0.45	+0.25	+0.04	-0.07	-0.09	-0.01	-0.06	-0.21	-0.51	-0.85	-1.18	-1.08	-0.81	-0.54	-0.32	-0.09	+0.31	+0.51	+0.60	+0.78	+0.87
Feb.	1018.49	+0.25	+0.07	-0.14	-0.37	-0.46	-0.43	-0.32	-0.15	+0.08	+0.24	+0.40	+0.37	+0.12	-0.18	-0.39	-0.41	-0.32	-0.09	+0.17	+0.29	+0.31	+0.32	+0.34	+0.30
Mar.	1007.84	+0.03	-0.07	-0.28	-0.42	-0.35	-0.21	-0.03	+0.24	+0.42	+0.53	+0.54	+0.50	+0.30	-0.06	-0.27	-0.47	-0.52	-0.34	-0.18	+0.05	+0.17	+0.16	+0.14	+0.12
Apr.	1009.19	+0.31	+0.11	-0.09	-0.26	-0.35	-0.29	-0.12	-0.03	-0.03	+0.02	+0.05	+0.04	-0.02	-0.13	-0.26	-0.33	-0.29	-0.23	-0.04	+0.16	+0.40	+0.51	+0.45	+0.42
May	1013.92	+0.05	-0.16	-0.34	-0.47	-0.49	-0.41	-0.20	-0.05	-0.02	+0.08	+0.17	+0.14	+0.13	+0.07	-0.01	-0.10	-0.08	-0.01	+0.04	+0.17	+0.42	+0.47	+0.36	+0.24
June	1013.21	+0.29	+0.10	-0.17	-0.39	-0.38	-0.33	-0.26	-0.13	-0.12	-0.08	-0.01	0.00	-0.01	-0.03	-0.09	-0.17	-0.18	-0.14	-0.02	+0.13	+0.38	+0.57	+0.57	+0.47
July	1010.97	+0.23	+0.03	-0.20	-0.33	-0.37	-0.36	-0.24	-0.07	-0.05	-0.07	+0.03	+0.09	+0.10	+0.06	-0.01	-0.07	-0.09	-0.14	-0.06	+0.06	+0.28	+0.41	+0.43	+0.34
Aug.	1009.75	+0.03	-0.10	-0.18	-0.34	-0.38	-0.25	-0.11	-0.06	+0.13	+0.19	+0.28	+0.34	+0.33	+0.21	+0.11	-0.06	-0.23	-0.24	-0.04	+0.17	+0.16	+0.13	+0.13	+0.15
Sept.	1011.86	+0.22	0.00	-0.32	-0.49	-0.63	-0.47	-0.28	-0.16	-0.02	+0.03	+0.08	+0.12	+0.08	0.00	-0.08	-0.18	-0.16	+0.01	+0.15	+0.40	+0.44	+0.45	+0.50	+0.31
Oct.	1006.84	+0.48	+0.30	+0.06	-0.13	-0.21	-0.29	-0.28	-0.20	-0.10	-0.05	+0.07	+0.06	-0.21	-0.53	-0.65	-0.70	-0.56	-0.23	+0.13	+0.39	+0.60	+0.75	+0.70	+0.60
Nov.	1008.75	+0.60	+0.23	-0.01	-0.44	-0.58	-0.67	-0.67	-0.54	-0.34	-0.27	-0.17	-0.30	-0.46	-0.51	-0.60	-0.16	+0.13	+0.28	+0.50	+0.61	+0.82	+0.91	+0.87	+0.77
Dec.	1008.95	-0.28	-0.52	-0.45	-0.49	-0.55	-0.43	-0.20	+0.04	+0.41	+0.64	+0.78	+0.61	+0.26	-0.02	-0.11	-0.10	+0.03	+0.04	+0.02	+0.13	+0.12	+0.06	+0.05	-0.04
Year	1009.83	+0.24	+0.05	-0.12	-0.31	-0.37	-0.34	-0.23	-0.10	+0.03	+0.11	+0.17	+0.12	-0.02	-0.19	-0.29	-0.30	-0.23	-0.12	+0.03	+0.22	+0.38	+0.45	+0.44	+0.38

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY.

Maximum and minimum for the interval 0 h. to 24 h., Greenwich Mean Time.

357. Cahirciveen (Valentia Observatory) :  $H_b = 13.7$  metres.

1930.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	mb. 019.4	mb. 006.6	983.7	965.9	032.2	024.6	984.8	978.7	018.4	014.5	015.2	008.2	001.1	994.1	007.6	990.8	025.3	024.3	020.5	018.3	007.2	990.5	020.2	015.7
2	014.3	003.4	992.9	983.7	024.6	013.5	996.4	984.8	021.0	013.1	014.7	008.2	000.9	996.8	992.0	988.0	025.1	022.0	022.2	017.6	999.8	974.6	025.6	017.2
3	003.9	999.5	991.2	982.9	021.9	012.9	996.0	985.8	022.5	019.9	020.9	014.7	011.0	998.8	997.9	992.0	022.0	015.5	022.6	017.2	001.1	993.3	029.0	024.2
4	000.6	976.1	999.4	982.4	024.5	020.2	996.0	986.0	019.9	005.9	024.1	020.7	015.9	011.0	998.0	996.2	016.3	013.2	017.2	000.1	012.6	993.1	027.5	022.3
5	003.2	981.2	016.2	999.4	023.5	019.7	013.5	002.9	005.9	996.2	023.9	020.4	015.3	013.6	002.0	996.1	013.3	006.8	007.7	002.7	002.8	982.5	022.5	017.2
6	010.1	003.2	025.3	016.2	019.7	016.5	020.4	013.5	017.3	005.3	023.2	019.0	022.9	013.1	008.7	002.0	012.3	004.8	008.7	005.6	017.1	002.8	017.2	006.5
7	009.6	999.1	034.4	025.3	020.3	017.7	021.1	017.4	021.5	016.8	027.6	023.2	025.4	022.8	017.2	008.7	014.8	012.3	008.4	988.0	017.9	008.2	011.3	999.1
8	007.6	000.2	037.8	034.0	017.7	002.8	017.4	011.0	021.2	015.0	027.5	020.9	025.4	023.7	017.3	013.7	012.8	006.6	003.7	985.0	025.0	010.7	002.4	999.4
9	001.3	996.2	038.6	036.2	008.6	001.5	011.0	008.4	015.0	004.8	020.9	009.0	028.4	024.0	017.4	012.2	006.6	005.5	015.4	003.7	029.9	024.2	009.3	000.1
10	001.3	977.7	038.1	035.8	011.7	006.8	016.7	010.2	008.4	994.4	009.0	005.2	028.3	026.3	012.3	009.2	010.7	005.6	015.1	006.4	036.0	029.9	006.2	992.1
11	989.8	979.9	035.9	032.3	009.5	996.8	016.7	008.4	010.5	997.5	014.4	005.2	026.3	020.4	012.8	010.1	013.0	010.5	006.4	988.8	040.0	035.9	000.7	986.3
12	996.5	968.2	033.0	025.3	005.8	998.6	010.1	007.6	010.5	004.5	017.9	014.1	020.4	016.9	018.0	012.5	013.1	001.8	008.4	000.4	039.6	034.6	001.2	987.4
13	998.8	996.5	025.3	018.1	005.7	991.0	008.7	003.0	008.3	004.2	021.5	017.4	016.9	009.3	017.8	006.7	012.6	994.0	007.6	999.1	034.6	025.6	000.0	985.1
14	002.8	997.3	018.4	015.4	991.0	982.8	020.4	007.5	013.4	008.3	023.7	021.0	011.9	009.4	015.6	007.0	023.1	012.6	999.1	989.3	025.6	015.0	009.5	000.0
15	009.6	002.8	029.1	018.1	988.8	981.0	025.0	020.4	017.8	007.9	023.6	022.1	009.4	991.6	021.2	013.3	023.4	012.4	995.3	987.1	021.1	010.8	010.2	000.2
16	009.0	000.7	029.9	028.8	998.5	988.8	025.3	023.8	020.8	016.8	022.9	020.4	996.2	992.6	021.1	017.4	015.1	012.1	003.1	995.3	023.9	020.6	017.2	002.5
17	013.4	004.8	033.0	027.7	997.9	994.0	024.7	021.9	016.8	006.1	020.4	015.3	995.4	990.6	017.5	005.4	013.1	002.3	003.4	979.0	023.3	019.0	024.3	017.2
18	014.3	998.7	033.2	028.1	001.1	993.7	024.4	020.8	022.8	010.9	015.3	010.9	006.5	993.0	010.2	003.3	006.0	990.6	006.7	994.8	019.0	993.5	030.7	024.1
19	009.2	998.1	028.1	021.5	007.4	001.1	020.8	009.3	023.3	021.4	011.0	004.8	008.1	006.0	012.9	010.1	990.6	986.0	003.6	986.0	008.7	994.9	031.4	030.4
20	014.5	008.8	025.3	021.2	007.0	001.9	012.1	008.2	024.0	022.6	011.3	005.3	007.8	004.3	011.3	985.1	005.8	980.9	003.1	995.6	994.9	984.9	035.7	030.2
21	011.6	001.0	026.1	025.0	009.8	000.0	012.7	010.6	023.8	021.3	011.3	008.8	019.5	007.8	009.2	987.4	012.3	005.8	012.5	001.5	989.4	979.2	036.6	035.1
22	006.6	003.7	026.3	025.6	015.7	006.1	012.6	001.0	021.7	019.9	010.9	005.6	020.2	019.0	009.8	002.5	011.2	008.3	013.8	008.2	011.2	978.1	035.2	024.2
23	003.7	984.7	025.6	024.7	018.9	006.9	001.0	002.5	024.5	021.4	006.9	002.1	019.5	017.4	012.7	000.7	008.3	003.0	008.5	006.3	014.6	998.9	024.2	014.1
24	990.2	984.2	025.4	008.4	025.4	018.9	002.5	992.0	024.4	017.5	008.7	004.0	017.5	013.8	017.9	012.7	015.6	005.2	011.9	006.9	998.			

Readings in degrees absolute at exact hours, Greenwich Mean Time.

358. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

January, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean		
Day.	°A																										
1	81.2	81.8	82.3	82.9	83.0	83.0	83.0	83.0	83.1	83.2	83.4	83.6	83.7	83.9	84.0	84.2	84.4	84.4	84.4	83.4	83.0	82.6	82.5	82.4	83.2	83.2	
2	82.3	82.0	82.1	82.0	82.1	81.9	81.5	81.0	81.0	81.2	82.1	82.9	82.5	82.1	83.6	84.0	84.0	84.0	84.0	84.0	84.0	84.0	83.9	83.8	83.8	82.7	82.7
3	83.7	83.9	83.3	82.2	82.0	81.8	81.9	81.4	81.4	81.0	81.0	81.2	80.6	79.9	79.9	79.3	79.0	79.0	79.1	79.1	79.8	79.4	79.3	78.2	78.2	80.8	80.8
4	78.0	78.0	79.0	78.9	79.0	78.2	80.0	80.9	80.4	80.9	80.4	80.9	81.0	80.2	79.8	79.0	79.2	79.2	79.5	79.5	79.6	79.0	78.6	78.2	78.4	79.4	79.4
5	77.5	78.4	78.9	78.6	78.0	78.5	78.1	79.0	79.4	80.0	80.0	80.8	80.8	78.9	80.0	80.4	80.3	80.4	80.6	80.0	80.1	79.1	80.0	80.0	80.0	79.5	79.5
6	80.0	79.9	79.6	79.9	78.5	78.4	78.9	79.0	79.9	80.9	80.4	80.4	80.9	81.9	82.6	83.4	83.6	83.7	83.9	83.9	83.9	83.7	83.7	83.7	84.0	81.4	81.4
7	84.0	84.2	84.1	84.1	84.1	84.3	84.1	84.0	84.2	84.2	84.4	83.7	82.5	82.2	82.4	82.0	81.7	81.0	80.7	79.1	79.2	79.0	76.0	76.8	76.8	82.3	82.3
8	76.4	76.3	78.1	78.2	77.6	76.3	76.6	76.2	76.1	76.8	78.0	79.0	79.5	79.3	78.8	77.8	78.0	77.9	77.5	78.2	78.9	79.0	79.4	79.1	77.8	77.8	77.8
9	79.6	79.6	79.0	79.7	79.8	79.8	79.8	79.8	78.1	78.1	78.9	78.9	79.6	80.0	79.9	79.0	79.0	79.4	78.1	78.0	78.8	79.0	78.6	78.2	79.0	79.0	79.0
10	78.8	78.7	77.9	77.9	78.1	78.4	79.0	79.2	80.0	80.9	81.7	83.0	83.0	83.0	83.3	83.3	81.0	80.0	79.6	78.4	78.0	77.2	77.2	77.9	79.8	79.8	79.8
11	76.8	77.0	77.2	76.4	76.0	76.2	75.1	75.4	76.1	75.0	76.3	76.3	76.6	77.0	76.7	77.2	77.1	75.4	76.2	77.1	77.4	76.6	77.4	77.2	76.5	76.5	76.5
12	78.7	78.9	77.8	78.0	78.2	78.3	78.0	78.0	78.4	78.7	80.8	83.7	84.0	82.4	80.0	80.0	80.0	78.9	79.2	79.0	78.2	78.9	79.2	79.8	79.8	79.4	79.4
13	80.0	80.0	79.0	78.3	78.0	78.9	79.9	79.9	80.0	80.0	81.0	81.2	81.2	80.9	80.7	80.0	80.2	79.9	79.6	79.4	79.1	78.9	78.5	78.1	79.8	79.8	79.8
14	78.0	78.1	78.0	78.1	78.0	78.0	77.9	77.5	78.0	77.9	78.1	78.8	79.0	79.1	79.2	79.0	78.2	77.4	76.1	75.0	74.0	74.8	74.8	74.0	73.4	77.4	77.4
15	73.0	73.1	73.0	73.0	72.6	73.0	72.4	72.6	72.3	72.7	73.9	77.8	78.0	78.2	78.6	78.3	78.0	78.0	77.9	78.5	79.0	79.6	80.1	80.3	80.3	75.9	75.9
16	80.9	81.0	81.0	81.1	81.9	82.4	82.7	82.9	83.1	83.1	83.6	83.9	83.1	83.1	83.0	82.6	82.7	83.1	83.1	83.1	83.1	83.0	83.1	83.1	83.2	82.6	82.6
17	83.4	83.3	83.2	83.1	83.1	83.1	83.2	83.1	83.0	83.0	83.1	83.4	83.8	83.8	83.5	83.3	83.1	83.1	83.1	83.1	83.0	83.2	83.1	83.0	83.0	83.0	83.2
18	82.9	82.9	83.0	83.0	83.0	83.0	83.0	83.2	83.2	83.2	83.1	83.6	83.9	84.0	84.0	84.0	84.0	83.7	83.5	83.5	83.3	83.6	83.8	83.9	83.9	88.4	88.4
19	84.0	84.4	82.9	82.0	82.0	82.0	81.6	81.0	81.0	80.2	80.0	80.1	80.0	80.9	79.9	80.1	79.0	79.0	78.6	79.0	78.6	79.6	78.6	79.3	79.0	80.7	80.7
20	78.9	78.9	78.6	78.4	78.6	77.5	77.8	78.0	77.0	77.6	78.0	79.4	79.9	80.6	81.0	80.9	79.6	78.9	78.1	78.0	78.9	78.9	79.0	79.9	79.9	78.8	78.8
21	80.1	80.9	81.0	80.4	81.0	81.2	81.3	81.0	81.1	81.0	81.0	81.0	81.1	81.3	81.9	82.0	82.1	82.4	82.9	82.0	81.7	81.6	81.9	81.0	81.0	81.3	81.3
22	80.6	80.4	79.9	80.0	79.4	78.6	78.6	78.6	78.0	78.2	79.3	80.3	80.7	81.0	81.1	80.8	80.3	80.0	79.8	80.0	79.4	79.0	78.8	78.4	79.7	79.7	79.7
23	78.2	79.0	79.7	80.1	79.0	79.1	79.1	79.1	79.3	79.2	80.3	81.0	81.6	81.9	81.6	81.9	82.0	82.0	82.0	81.0	81.0	81.0	81.0	81.0	80.0	80.4	80.4
24	80.6	79.9	80.0	79.4	78.7	78.0	77.1	77.0	77.9	78.2	79.1	79.1	78.5	79.0	78.4	77.3	77.0	77.0	76.3	76.8	76.0	77.0	76.4	77.0	78.0	78.0	78.0
25	77.4	77.9	76.4	77.1	76.7	75.4	75.0	76.0	76.0	75.9	77.4	77.9	77.9	77.1	77.2	77.2	76.1	75.6	75.9	76.1	75.0	74.9	74.4	74.0	76.2	76.2	76.2
26	74.0	73.9	74.2	75.8	75.0	75.1	75.0	75.9	76.5	76.9	77.0	77.4	77.9	78.0	78.1	77.7	77.5	77.8	77.5	77.3	77.0	76.9	76.6	76.1	76.4	76.4	76.4
27	75.9	76.5	78.0	77.9	76.8	77.3	77.4	77.0	77.0	76.9	78.1	78.7	79.1	79.0	79.4	79.0	77.9	75.9	75.1	74.0	74.1	74.0	77.0	77.4	77.0	77.0	77.0
28	77.6	77.8	78.2	78.3	78.8	79.0	79.1	78.9	79.2	79.9	79.0	78.9	80.0	81.0	80.3	79.7	79.0	78.9	78.0	78.1	76.0	76.1	77.9	77.5	77.4	77.6	77.6
29	78.0	78.0	78.0	79.0	77.8	78.5	78.2	77.6	77.1	77.2	78.0	78.0	78.6	79.0	79.0	78.6	77.0	76.1	76.0	76.1	76.0	76.0	76.4	77.4	77.0	77.6	77.6
30	78.9	78.8	78.0	78.0	77.5	77.4	79.0	79.0	78.5	78.9	79.0	79.9	80.3	80.4	80.4	80.0	79.9	79.1	78.0	77.8	77.6	78.1	78.9	79.0	78.8	78.8	78.8
31	79.3	79.6	79.9	79.3	78.9	79.0	80.1	80.5	79.9	80.0	80.0	80.4	80.5	78.0	77.6	77.5	77.5	77.0	76.1	75.5	74.6	74.0	74.9	74.3	78.2	78.2	
Mean ...	79.3	79.4	79.4	79.4	79.1	79.1	79.1	79.1	79.2	79.4	79.8	80.4	80.6	80.5	80.5	80.3	79.9	79.6	79.4	79.2	79.1	79.0	79.1	79.0	79.5	79.5	

359. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

February, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean		
1	74.5	73.8	74.2	74.0	74.0	74.0	73.0	73.2	74.0	73.8	75.9	77.0	78.9	80.0	80.1	80.0	80.0	78.1	78.2	79.0	78.1	77.9	77.0	76.0	76.4	76.4	
2	77.0	77.0	77.4	77.1	76.9	77.0	76.4	75.1	75.0	75.0	76.8	77.3	78.0	79.0	79.1	78.9	78.4	77.4	77.4	77.0	76.9	76.7	76.2	76.0	77.0	77.0	
3	76.1	77.9	78.3	78.4	79.1	78.7	78.2	78.0	78.0	78.5	79.0	79.1	80.0	80.9	79.4	79.6	79.5	79.3	78.9	79.0	78.9	78.7	79.0	79.0	79.0	78.7	78.7
4	79.2	79.1	79.1	79.3	79.2	79.1	79.0	78.9	80.0	79.6	80.0	80.0	79.6	80.0	79.6	79.1	79.0	78.7	78.7	79.0	78.6	78.0	78.9	78.7	79.0	79.2	79.2
5	78.8	78.2	78.0	78.0	78.1	77.9	76.9	77.9	77.4	78.0	79.1	79.1	79.0	79.2	79.4	79.0	79.0	78.8	78.0	78.3	76.7	76.9	77.0	76.1	78.2	78.2	
6	75.9	74.1	73.9	73.1	72.4	73.0	74.5	76.1	77.0	77.1	77.7	77.8	78.1	78.0	78.1	78.0	77.8	76.6	75.5	76.0	75.1	75.3	75.3	75.0	75.9	75.9	
7	75.3	75.0	74.0	73.9	74.1	74.0	74.3	74.5	74.6	75.0	75.9	76.6	77.1	77.4	77.6	77.4	77.0	76.0	75.5	74.5	74.9	74.4	74.0	73.4	75.3	75.3	
8	73.0	72.9	73.0	72.1	72.2	72.6	73.2	73.4	73.8	75.0	75.7	76.0	76.0	76.0	76.4	76.0	75.2	74.5	73.5	73.4	74.3	73.8	73.7	74.0	74.0	74.0	
9																											

Readings in degrees absolute at exact hours, Greenwich Mean Time.

360. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

March, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	°A																									
1	75.1	74.9	76.0	76.1	75.0	74.4	74.0	73.9	75.0	76.8	80.3	81.9	82.4	84.0	85.0	85.0	84.2	83.1	82.0	82.0	81.5	81.7	80.7	80.1	79.3	
2	79.1	79.1	78.9	77.8	77.0	76.0	76.0	75.4	77.0	79.0	80.3	80.7	81.0	80.9	81.6	82.0	81.1	80.3	79.7	78.9	79.0	79.2	80.3	80.9	79.2	
3	81.0	80.9	81.0	81.0	80.5	81.0	80.8	80.8	81.1	81.4	81.6	82.4	83.1	83.9	84.0	84.0	82.8	82.0	81.6	80.9	81.0	81.5	81.8	81.6	81.7	
4	81.8	81.4	81.1	80.6	81.1	81.8	82.0	82.0	82.7	83.0	83.3	83.8	84.0	84.0	83.8	82.6	82.6	82.7	82.9	82.9	82.9	83.0	82.9	82.8	82.5	
5	82.7	82.8	82.8	82.8	82.8	82.6	82.2	82.1	82.5	82.9	83.0	83.5	83.4	83.1	83.1	83.0	82.8	82.4	82.1	82.0	82.0	81.8	81.8	81.7	82.6	
6	81.1	81.0	80.0	79.1	79.1	79.9	80.0	80.0	80.1	80.9	81.9	82.0	82.2	82.4	82.3	82.0	82.0	81.6	81.4	80.5	80.5	81.0	80.9	80.7	81.0	
7	80.9	81.4	80.9	81.0	80.8	81.0	81.0	80.9	81.0	82.4	82.6	82.0	83.1	84.0	84.0	84.0	83.7	82.9	82.2	82.0	81.8	81.1	80.9	80.4	81.9	
8	80.9	81.0	81.0	81.2	81.8	81.8	81.8	82.0	82.4	82.5	83.0	83.0	83.1	83.4	83.7	83.4	83.1	83.0	83.0	84.0	83.2	83.0	83.1	83.1	83.1	82.5
9	82.4	82.1	81.4	81.0	80.2	80.0	80.0	80.0	80.1	80.3	80.4	80.5	80.0	80.5	78.8	79.2	79.6	79.6	79.0	78.0	78.2	79.0	78.3	78.5	80.0	
10	77.2	77.9	78.0	78.0	78.0	77.2	78.8	78.2	77.1	78.5	80.0	79.3	80.0	80.5	79.9	80.0	80.9	80.1	80.9	80.8	80.0	81.0	79.2	78.0	79.2	
11	79.1	80.0	80.0	80.0	79.8	79.1	79.0	80.0	80.2	80.4	81.0	80.1	80.0	80.0	80.1	80.7	82.1	82.1	82.8	83.0	82.8	82.6	82.3	82.1	80.7	
12	82.0	82.0	82.0	81.1	80.4	80.3	80.4	80.0	80.4	80.4	81.4	81.9	82.2	82.5	81.5	82.0	82.0	82.0	81.9	81.8	81.9	81.8	81.7	81.1	81.5	
13	81.1	81.3	80.8	80.9	80.4	80.4	79.4	79.9	80.0	81.0	80.6	81.0	81.0	81.0	80.7	81.0	80.5	80.1	79.0	78.5	78.6	78.8	78.0	78.0	80.1	
14	77.5	77.5	77.3	77.1	77.0	77.1	77.0	76.5	77.1	78.0	78.1	79.0	78.5	79.0	79.7	79.2	79.0	79.0	78.2	78.0	77.0	76.9	76.5	77.0	77.8	
15	76.8	76.0	75.8	75.7	75.6	75.6	75.9	76.0	75.6	76.0	76.2	76.4	76.3	77.6	77.0	77.0	76.9	75.9	76.0	76.1	75.9	76.0	76.1	76.2	76.2	
16	76.4	76.0	75.4	75.1	74.5	74.9	74.9	75.0	76.1	77.0	77.7	78.4	79.0	79.9	80.1	80.1	80.0	79.0	78.5	77.4	77.2	76.0	74.6	73.9	77.0	
17	73.3	73.3	73.1	75.0	74.0	73.2	73.3	73.8	75.3	77.5	78.9	80.0	80.3	80.9	80.3	80.2	80.0	79.0	78.0	78.0	77.6	76.8	76.9	76.2	76.8	
18	76.0	76.0	77.2	77.0	77.1	76.8	77.2	78.2	79.0	78.1	80.0	80.0	78.0	78.0	79.0	79.5	79.2	78.4	78.0	76.4	74.9	75.3	74.6	75.6	75.0	
19	75.4	74.1	74.4	74.1	75.0	75.3	74.9	75.1	75.6	75.7	75.7	76.7	76.9	77.0	77.2	77.1	77.0	76.8	76.1	75.4	74.4	75.4	74.6	73.5	75.6	
20	73.7	73.7	74.0	74.7	75.3	76.2	76.0	77.6	78.1	78.4	79.0	79.4	79.0	79.6	80.0	80.0	79.6	78.8	78.0	78.0	78.8	79.0	78.9	78.2	77.6	
21	78.1	77.8	78.0	78.4	78.3	78.5	79.4	79.7	80.0	80.0	80.0	80.0	81.0	81.1	81.0	80.9	80.4	79.8	78.8	78.0	77.7	77.0	76.0	75.0	79.0	
22	73.9	74.1	73.0	73.1	72.6	73.0	73.0	74.0	75.4	78.0	79.2	80.0	80.2	80.2	80.3	80.2	80.0	79.9	79.8	79.9	79.9	80.0	80.6	80.3	77.4	
23	80.6	80.4	80.0	80.0	78.4	79.0	79.1	80.0	81.0	81.2	81.2	81.2	81.8	82.0	82.1	82.2	82.0	81.6	81.0	80.7	80.9	81.1	81.1	81.1	80.7	
24	81.0	81.0	81.0	81.0	81.0	80.8	80.4	80.4	80.9	81.1	82.1	83.2	83.8	84.0	84.0	83.1	83.0	82.4	82.0	81.8	81.2	81.1	81.1	81.2	81.8	
25	81.4	81.9	82.0	82.2	82.4	82.4	82.9	83.0	83.0	83.2	83.5	83.5	83.6	83.4	83.5	83.3	83.0	82.9	82.6	82.5	82.5	82.4	82.4	82.3	82.7	
26	82.3	82.4	82.4	82.4	82.3	82.2	82.4	82.9	83.0	83.9	83.8	83.7	84.0	83.9	84.0	84.4	84.0	83.5	83.0	83.0	82.6	82.3	82.4	82.1	83.0	
27	82.0	82.0	81.9	81.9	81.9	81.9	81.9	82.1	83.0	83.5	83.1	83.5	83.9	83.9	83.6	83.0	83.0	83.0	82.9	82.8	82.8	82.6	82.4	82.4	82.0	
28	82.5	82.4	82.5	82.4	82.4	82.4	82.4	82.7	82.9	82.9	82.5	82.4	82.4	82.7	81.9	82.2	81.9	81.0	81.0	80.7	80.9	80.9	79.4	80.4	82.0	
29	80.6	79.8	80.0	80.0	79.9	80.2	80.6	81.0	81.2	80.9	81.4	82.8	83.0	81.9	83.0	82.5	82.2	82.0	80.9	80.6	80.2	80.0	80.0	79.4	81.0	
30	79.8	80.0	80.3	81.0	81.1	81.5	81.4	82.0	82.0	81.9	82.0	82.0	82.4	82.9	83.0	83.0	82.9	82.9	82.9	83.0	82.8	82.8	82.9	82.7	82.0	
31	82.4	82.0	82.0	81.9	81.9	81.6	81.5	81.8	82.7	82.5	84.0	84.3	84.7	84.1	83.6	83.2	83.0	83.0	83.1	83.3	83.6	83.9	84.0	84.0	83.0	
Mean ...	79.3	79.2	79.2	79.1	78.9	79.0	79.0	79.2	79.7	80.3	80.8	81.2	81.4	81.7	81.7	81.6	81.4	81.0	80.6	80.3	80.1	80.1	79.9	79.7	80.2	

361. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

April, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	84.0	84.0	84.0	84.0	83.8	84.0	83.8	83.3	83.1	83.0	84.1	84.2	84.9	84.7	84.2	84.1	83.9	83.5	83.5	83.2	83.4	83.6	83.5	83.8	
2	83.4	83.1	83.1	83.0	83.0	82.9	82.9	83.0	83.8	83.7	83.9	84.0	84.1	84.0	84.9	85.1	84.4	84.0	83.1	82.4	82.1	82.0	81.9	81.5	83.3
3	81.4	81.8	81.8	81.3	81.4	82.0	81.9	82.0	82.3	82.2	82.1	82.5	82.5	82.4	82.1	82.0	82.0	82.0	81.9	82.0	82.0	82.0	82.0	82.0	82.0
4	82.0	81.5	81.3	81.2	81.2	81.0	80.9	80.4	80.5	80.2	80.8	80.9	81.0	81.0	81.1	81.0	80.7	80.1	80.0	80.0	79.4	79.0	78.9	78.9	80.6
5	78.5	78.4	78.3	78.1	78.0	78.0	77.9	78.1	78.5	78.4	78.9	79.8	80.0	80.4	80.1	80.1	80.7	80.6	80.1	79.5	79.1	78.5	77.9	77.1	79.0
6	75.2	74.5	74.0	73.6	73.1	73.4	73.9	76.0	78.5	79.3	81.0	81.7	81.0	81.1	81.5	81.9	82.0	81.4	80.1	78.6	78.0	77.1	75.6	75.3	77.9
7	75.3	75.0	75.0	75.5	76.0	79.4	80.0	80.1	80.9	81.9	82.4	82.1	81.4	81.9	81.9	82.0	82.0	82.1	82.2	82.3	82.6	82.8	83.0	83.0	80.3
8	83.0	83.0	83.0	82.9	82.9	83.0	83.0	83.1	83.7	83.7	84.0	84.5	85.4	85.0	84.9	84.2	84.0	83.4	83.2	83.0	82.1	81.8	81.4	80.7	83.3
9	80.1	80.1	80.9	80.1	79.1	78.8	81.0	80.0	81.4	81.0	82.2	83.2	83.2	83.9	83.3	83.0	82.4	81.9	81.4	80.4	80.4	80.3	80.6	80.7	81.1
10	80.7	80.4	80.0	80.0	80.1	80.0	80.3	80.6	81.0	81.5	82.0	82.5	82.7	82.9	83.0	83.0	82.9	82.2	81.9	81.1	81.2	81.0	80.9	80.5	81.4
11	80.4	80.0	78.8	79.1	78.1	78.0	77.4	81.4	82.4	83.6	83.6	84.3	84.1	83.8	83.1	82.9	81.9								

Readings in degrees absolute at exact hours, Greenwich Mean Time.

362. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

May, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	81.2	80.0	80.3	79.7	79.2	79.4	81.1	83.0	84.6	87.0	88.0	88.1	88.1	88.1	87.6	86.8	86.9	86.0	84.6	83.0	82.4	82.0	81.1	81.1	83.7
2	82.0	82.4	82.6	82.5	82.9	82.9	82.9	83.3	83.3	84.0	84.1	84.6	85.6	86.2	86.6	86.8	86.3	85.8	85.0	84.0	83.8	83.0	82.5	81.1	83.9
3	81.0	81.0	81.0	81.0	81.0	80.1	82.0	83.1	85.0	85.8	85.9	85.9	86.0	86.0	86.0	86.1	86.0	85.1	84.1	83.4	82.6	82.0	80.9	80.0	83.4
4	79.9	78.5	77.6	77.6	77.4	78.0	81.3	83.0	85.0	85.0	85.4	85.8	85.5	86.4	86.1	86.0	85.0	84.5	84.2	84.0	84.0	84.0	84.0	84.0	83.4
5	83.1	82.9	82.6	82.5	82.4	82.6	82.9	84.2	83.0	83.0	81.1	82.1	84.0	84.4	84.9	85.4	84.3	83.5	83.0	82.2	82.0	81.8	80.6	79.1	82.9
6	79.0	78.9	79.0	78.4	80.1	80.5	82.0	83.0	82.4	83.1	84.0	84.6	85.0	85.6	86.1	86.7	86.1	86.0	85.0	83.0	82.2	82.0	82.0	81.9	82.7
7	81.9	81.4	81.4	81.5	81.0	81.1	82.0	82.6	83.0	83.9	83.4	83.7	84.0	84.3	84.2	84.0	84.0	83.4	83.0	82.4	82.2	82.0	82.0	82.0	82.7
8	82.4	82.0	81.7	81.5	81.1	81.7	82.0	81.3	82.4	83.0	82.8	83.1	83.8	83.0	83.9	84.1	82.4	83.1	82.9	82.7	82.2	82.0	82.0	82.0	82.5
9	82.1	82.0	82.0	81.7	81.4	81.2	81.7	81.8	82.3	83.0	83.0	83.1	84.1	84.5	84.5	84.0	84.1	83.5	83.2	82.4	82.9	82.1	82.1	81.9	82.7
10	81.1	81.0	81.0	80.9	81.0	81.0	81.6	82.0	81.5	81.0	81.1	81.9	82.4	82.0	82.9	84.3	84.1	83.4	83.0	83.2	83.0	83.0	83.1	83.1	82.2
11	83.1	83.1	83.0	82.7	82.8	82.8	83.9	84.0	84.0	84.9	84.9	85.1	85.2	85.3	85.0	85.0	84.3	84.3	83.8	83.0	82.9	82.9	82.5	82.4	83.8
12	82.7	82.9	83.0	83.0	82.9	83.0	83.2	83.6	84.1	84.1	84.4	84.3	84.2	84.4	84.9	85.0	84.8	84.6	85.0	85.0	85.0	84.9	85.1	85.0	84.1
13	84.8	85.0	84.9	84.9	85.0	84.8	84.9	85.2	85.8	86.1	86.0	87.1	87.1	86.4	86.0	86.3	86.0	85.9	86.0	84.9	83.6	83.1	83.1	83.0	84.1
14	82.9	82.6	82.6	82.0	82.4	82.7	84.1	85.8	86.0	85.9	86.5	87.1	87.1	88.0	88.0	88.0	86.7	85.9	85.3	84.9	84.7	84.0	84.7	85.0	85.1
15	85.0	85.0	85.0	84.1	83.5	83.5	84.1	84.9	85.4	86.8	87.1	88.0	88.0	87.9	87.4	87.1	87.0	86.4	85.8	84.7	84.0	83.3	83.0	83.3	85.5
16	83.0	83.0	82.7	82.4	82.1	82.7	84.0	85.0	86.1	86.6	87.4	87.6	87.0	87.0	86.9	87.3	87.0	85.8	85.3	84.9	84.5	84.1	84.1	84.0	85.0
17	84.0	83.9	84.0	84.5	84.1	84.0	84.0	84.2	84.6	84.6	84.9	84.9	84.5	84.3	83.8	83.1	84.0	84.1	84.0	83.8	83.4	81.9	80.6	81.3	83.8
18	81.0	80.1	79.8	81.1	81.4	82.0	80.7	82.5	83.1	83.9	84.0	84.6	84.1	84.9	85.0	85.1	84.0	84.0	83.4	83.1	83.0	83.0	83.1	83.0	82.9
19	83.1	83.0	83.0	83.0	83.1	83.2	83.6	83.9	84.0	84.0	84.5	84.7	84.9	85.0	85.0	85.0	85.0	84.5	84.3	84.0	84.0	83.9	83.9	83.9	84.0
20	83.9	83.9	83.9	83.8	83.4	83.4	83.5	84.0	84.1	84.1	85.0	85.5	85.7	86.0	86.4	86.1	86.0	85.3	85.0	84.1	83.5	83.1	82.6	81.1	84.4
21	80.6	79.6	79.2	78.4	78.3	80.0	82.9	85.1	86.0	87.0	87.2	89.0	89.5	89.4	90.0	89.2	89.0	88.0	87.0	86.0	84.4	84.1	83.9	83.0	84.8
22	82.1	82.0	81.9	81.0	81.1	82.1	84.5	87.0	88.4	88.4	88.9	88.0	88.0	86.9	87.6	88.1	89.8	90.0	89.1	88.6	87.2	85.9	84.9	83.7	86.0
23	84.0	84.0	83.0	83.6	83.9	83.9	85.3	86.4	87.1	87.2	87.7	87.8	88.7	89.2	88.7	88.4	88.5	87.9	87.6	86.4	85.7	84.9	83.0	83.0	86.1
24	82.0	81.6	82.8	81.2	82.1	81.8	83.9	84.0	83.1	84.0	84.0	84.1	84.0	84.0	84.4	85.4	85.1	84.4	83.3	82.8	82.4	82.7	83.0	83.0	83.3
25	82.1	82.0	81.6	81.0	80.4	81.0	82.4	84.0	86.0	85.6	86.0	86.0	85.9	86.4	86.3	86.4	86.2	86.2	85.4	84.9	84.4	84.2	84.0	83.3	84.2
26	82.6	82.5	82.1	81.8	81.0	81.4	82.9	85.6	87.1	88.0	88.0	88.0	88.1	87.1	88.0	88.2	89.3	87.9	86.0	85.9	85.0	83.8	83.1	82.9	85.3
27	82.7	83.0	83.0	82.9	83.0	83.9	83.9	84.1	85.0	85.8	85.8	86.0	87.8	88.0	88.0	87.9	88.2	87.0	85.9	85.5	85.1	85.0	84.8	84.4	85.2
28	84.6	84.9	84.6	84.4	84.1	84.0	84.1	84.2	84.5	85.0	85.4	87.0	86.7	86.9	86.9	87.0	87.0	86.4	85.7	84.9	83.0	82.4	82.1	81.7	85.0
29	81.1	80.4	80.4	80.8	81.0	82.0	83.9	84.8	85.1	85.9	86.0	87.5	88.0	88.1	88.9	89.1	89.1	88.1	87.0	86.4	86.2	86.1	86.0	86.0	85.2
30	86.0	85.9	85.9	86.0	85.4	85.0	85.6	87.0	88.0	87.8	87.8	88.0	88.5	88.5	88.8	87.9	88.0	87.8	87.1	86.7	85.9	85.4	84.4	85.0	86.8
31	84.1	84.3	84.4	84.8	84.0	84.1	85.6	88.0	89.4	89.0	88.6	89.0	90.3	90.9	90.9	89.8	88.0	87.9	87.6	87.0	86.6	86.3	86.2	86.1	87.2
Mean ...	82.6	82.3	82.3	82.1	82.0	82.3	83.2	84.2	84.8	85.3	85.4	85.9	86.2	86.3	86.4	86.4	86.2	85.7	85.1	84.4	83.9	83.5	83.2	82.9	84.3

363. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

June, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	86.0	86.0	85.9	85.8	85.6	85.4	85.2	85.4	85.7	85.9	86.4	86.9	86.1	85.8	85.9	86.0	86.1	86.0	85.3	84.8	84.9	85.1	85.3	85.0	85.7
2	85.0	85.0	85.0	85.0	85.0	85.2	85.4	86.0	86.9	87.0	88.0	89.1	90.0	89.9	89.9	89.0	90.1	90.5	90.2	89.0	87.7	87.0	86.0	85.0	87.3
3	85.1	85.7	84.5	84.0	83.2	84.1	85.9	87.1	89.0	90.0	89.5	90.1	90.3	90.4	91.1	92.0	91.3	90.0	88.9	88.0	87.0	86.0	86.0	85.1	87.7
4	84.2	84.0	83.0	82.4	83.0	85.4	86.0	87.0	87.1	88.4	89.1	88.9	89.3	89.2	89.0	90.0	90.9	89.0	88.0	88.0	87.1	86.9	86.0	85.1	84.8
5	84.0	83.9	83.0	83.2	82.2	83.9	87.0	88.5	89.7	90.0	89.7	89.4	89.5	89.9	90.0	90.2	90.1	89.0	88.0	88.0	86.8	86.2	86.0	85.3	87.3
6	85.0	85.0	84.0	83.8	83.2	85.1	86.8	87.0	87.9	88.5	87.0	86.9	87.0	87.8	87.2	88.6	88.0	87.2	86.8	86.0	85.7	85.6	85.4	85.0	86.3
7	85.0	85.0	84.9	84.9	84.6	84.9	85.1	86.0	86.1	86.0	86.7	86.8	87.0	87.0	87.1	87.8	87.9	86.6	86.0	85.4	84.2	84.1	83.8	83.3	85.7
8	82.4	81.9	81.0	80.6	80.3	81.1	84.1	86.0	87.0	86.9	87.0	88.0	87.9	87.9	88.0	88.0	88.0	88.1	87.1	86.4	85.0	84.5	85.0	84.9	85.3
9	85.1	85.1	85.2	85.2	85.5	86.0	86.1	86.9	87.0	86.8	86.8	86.8	86.9	86.8	86.6	87.0	86.8	86.6	86.6	85.9	85.8	85.6	85.7	85.8	86.1
10	85.6	85.5	85.2	85.1	85.0	85.0	85.0	85.1	86.0	86.2	86.0	87.0	87.1	86.8	85.9	86.0	85.4	86.1	85.9	84.4	84.4	84.2	84.3	84.6	85.5
11	83.9	83.5	84.0	84.0	83.9	84.0	85.0	86.1	86.0	87.3	87.4	86.0	85.8	88.0	86.8	86.0	86.0	86							

Readings in degrees absolute at exact hours, Greenwich Mean Time.

364. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

July, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	86.1	86.7	86.9	86.3	86.4	86.6	87.0	87.4	87.0	88.0	88.4	89.1	88.0	89.0	89.1	89.0	89.2	88.0	87.8	87.1	87.0	86.4	86.4	86.6	87.5
2	86.5	86.3	86.5	86.8	86.5	86.5	86.4	87.0	87.1	88.0	89.0	90.8	89.4	89.6	89.4	89.0	88.8	88.0	88.0	88.0	87.4	87.1	87.0	86.8	87.7
3	87.0	87.0	87.0	86.3	86.7	86.9	87.9	88.0	88.9	89.0	89.9	89.9	90.0	90.0	89.2	89.1	89.0	88.0	88.0	87.7	87.1	87.0	87.0	87.0	88.1
4	86.9	86.1	86.0	86.0	86.0	86.0	86.3	86.9	87.1	88.0	88.0	88.0	89.3	89.6	89.0	89.3	89.2	88.2	87.9	86.0	84.9	85.3	85.1	87.3	87.3
5	85.1	85.0	84.5	84.4	84.7	86.0	86.9	86.9	87.0	87.3	87.9	89.2	90.0	90.0	90.0	89.8	90.0	89.1	88.6	88.0	87.9	87.8	87.8	87.8	87.5
6	88.0	87.1	87.0	86.9	86.6	86.4	86.5	87.0	87.7	87.9	87.4	87.5	87.8	87.9	87.9	88.4	88.9	87.9	87.5	86.6	86.0	86.0	85.8	85.5	87.2
7	84.9	85.1	83.9	83.4	83.5	85.1	87.8	89.1	89.3	90.0	90.0	90.0	90.3	91.1	91.0	90.6	90.0	89.4	89.1	88.8	88.1	88.0	88.0	87.8	88.0
8	87.4	87.4	87.3	87.3	87.4	87.6	87.9	88.0	88.9	89.1	89.4	90.0	90.0	90.0	90.0	90.0	90.0	89.5	89.0	88.0	88.1	87.8	87.8	87.6	88.6
9	87.8	87.4	87.4	87.3	87.4	87.7	88.0	88.0	88.3	88.3	88.3	89.0	89.0	89.0	89.0	89.0	89.0	88.9	88.2	88.0	88.0	87.9	87.9	87.8	87.8
10	87.6	87.5	87.2	87.2	87.2	87.4	87.9	88.0	88.3	89.1	89.2	89.0	89.7	89.3	89.3	89.9	89.9	89.0	88.3	87.8	86.9	86.2	86.7	87.0	88.2
11	87.0	87.0	86.9	87.0	87.9	87.9	88.0	88.0	88.0	88.4	89.0	89.1	89.0	89.0	89.0	88.4	87.6	87.6	87.4	87.3	87.1	87.1	87.0	87.0	87.0
12	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.7	87.8	88.0	88.5	88.9	89.0	89.2	89.0	89.0	88.3	87.9	87.5	86.9	86.8	86.5	86.9	86.9	87.7
13	86.9	87.1	87.2	87.0	87.1	87.3	87.7	87.8	87.8	88.2	89.4	89.1	89.0	89.1	88.9	89.0	89.0	88.4	88.0	87.4	86.2	86.4	86.4	86.4	86.4
14	86.2	86.4	86.4	86.1	86.1	86.2	86.8	86.4	86.9	87.0	87.7	87.9	87.7	87.7	87.9	87.3	87.0	87.0	86.7	86.0	86.0	85.9	85.8	85.7	86.7
15	85.1	85.1	85.1	85.6	85.6	85.9	86.0	86.1	86.7	87.3	88.3	88.8	89.0	89.1	89.3	89.1	88.7	88.8	88.0	87.7	87.3	87.0	86.6	86.0	87.2
16	86.0	85.9	86.0	86.0	85.9	85.9	86.0	86.4	86.8	86.6	87.9	86.7	88.0	88.0	88.4	88.1	88.0	88.0	87.3	86.7	86.0	85.9	85.9	86.0	86.8
17	85.9	85.6	85.0	85.7	85.5	85.4	86.0	86.2	87.0	87.0	87.6	87.9	87.9	87.8	87.7	88.0	88.1	87.5	87.0	86.3	86.4	86.6	86.3	87.0	86.7
18	87.0	87.0	87.0	86.8	86.6	86.6	86.5	86.9	87.1	87.6	87.8	87.8	88.0	87.9	88.1	88.3	88.5	87.8	87.0	86.4	86.0	85.9	85.6	85.6	87.1
19	85.0	85.6	85.8	85.8	85.9	86.1	86.8	87.0	87.9	87.9	87.7	87.9	88.0	88.0	88.0	87.5	88.5	88.0	88.0	87.4	86.4	85.5	85.3	85.2	86.8
20	85.2	85.1	85.3	85.2	85.8	86.1	86.2	87.0	87.0	88.0	89.1	88.8	88.1	88.4	89.1	88.9	89.1	88.4	87.0	86.9	86.3	86.1	86.0	86.0	87.0
21	86.0	85.4	85.6	85.4	85.0	85.5	85.9	85.9	86.4	86.8	86.6	87.0	87.0	87.0	87.9	87.3	85.6	86.6	86.4	86.3	86.0	85.4	85.1	85.2	86.2
22	85.4	85.1	85.0	84.8	85.1	85.1	86.0	86.3	86.9	87.1	86.1	87.4	86.9	87.9	87.9	87.2	87.2	87.0	86.2	86.0	86.0	86.0	86.0	86.0	86.3
23	86.0	86.0	86.0	85.3	85.4	85.0	85.9	86.1	86.3	87.1	87.1	87.8	88.0	87.6	87.3	87.8	88.0	87.1	86.1	86.0	85.6	85.0	84.5	84.1	86.3
24	84.0	83.0	83.0	84.6	83.4	82.8	85.0	86.9	87.4	89.0	88.1	88.3	88.2	88.4	89.0	88.0	89.5	89.0	87.5	87.3	86.0	85.3	84.5	85.8	86.5
25	85.9	85.8	86.0	86.2	86.5	87.0	87.5	87.9	87.4	87.0	87.6	87.3	87.2	87.0	87.6	87.5	87.4	87.0	87.2	87.2	87.2	87.9	87.4	87.4	87.1
26	87.0	87.0	87.0	86.7	86.4	86.9	87.0	88.0	88.8	89.0	89.8	90.0	90.2	90.2	90.1	89.6	90.2	89.9	89.0	88.0	88.0	87.0	87.0	87.0	88.3
27	87.0	86.9	86.3	86.2	86.0	86.4	87.4	88.0	89.0	89.4	89.0	88.0	88.2	88.8	88.0	87.4	88.1	87.4	87.3	86.9	86.0	85.3	85.2	85.3	87.3
28	86.0	86.0	86.1	86.3	86.3	86.4	86.8	87.3	87.8	87.0	87.8	88.0	88.4	89.1	89.9	89.0	88.7	88.3	87.9	87.4	87.0	87.3	86.9	86.9	87.4
29	86.4	86.4	86.4	86.3	86.4	86.0	86.5	86.9	87.0	87.1	87.0	87.0	87.9	87.8	88.9	88.4	88.2	87.7	87.6	87.0	86.1	86.6	86.3	86.1	87.0
30	86.1	86.0	85.6	86.0	85.0	85.4	86.0	86.5	87.0	86.1	87.1	87.8	87.1	87.8	88.0	88.0	87.2	87.0	86.8	86.4	86.0	84.4	84.0	83.3	86.3
31	82.8	82.7	83.0	82.8	82.9	82.4	83.9	85.5	86.9	87.0	87.4	88.0	88.4	88.3	88.0	87.9	87.9	87.3	86.9	86.8	87.0	87.0	87.0	87.0	86.0
Mean ...	86.2	86.1	86.0	86.0	85.9	86.1	86.7	87.1	87.5	87.8	88.2	88.5	88.5	88.7	88.8	88.6	88.6	88.1	87.6	87.2	86.7	86.4	86.3	86.3	87.2

365. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

August, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	86.9	86.4	86.8	86.8	86.8	86.9	86.9	87.4	87.4	88.0	87.8	88.0	88.0	87.8	87.9	87.4	87.1	87.9	87.9	88.0	87.9	87.8	87.1	86.9	87.4
2	86.6	86.5	86.1	86.2	86.0	86.0	85.9	85.9	86.0	86.9	87.0	86.3	87.1	88.0	88.0	88.1	89.0	88.0	87.9	87.0	87.0	86.9	86.4	86.6	86.9
3	87.0	86.9	86.6	86.3	86.7	86.4	86.5	86.2	86.7	87.1	87.0	87.9	88.0	87.3	87.2	88.0	87.9	87.3	86.4	86.2	86.1	86.0	86.0	85.9	86.8
4	85.9	85.9	85.6	85.4	85.1	85.3	85.5	87.0	87.2	88.0	88.0	89.1	89.4	89.3	89.0	89.6	88.6	89.0	86.9	86.0	86.0	84.6	83.9	83.0	86.8
5	82.6	81.4	81.2	80.6	80.0	80.1	82.0	85.5	85.2	85.9	87.0	87.5	88.0	87.3	87.9	88.1	87.2	87.7	86.4	86.3	86.1	84.6	86.0	85.9	85.0
6	86.0	86.0	85.6	85.2	85.0	85.2	85.2	85.4	86.1	86.1	86.0	87.3	87.0	87.1	87.9	87.3	87.0	86.9	86.3	86.0	85.1	85.4	85.5	85.8	86.1
7	85.8	85.8	85.1	85.0	84.9	85.9	86.0	86.8	87.0	87.2	87.4	87.4	87.3	87.5	87.4	87.9	87.9	87.0	86.9	86.2	86.3	86.2	86.0	86.0	86.5
8	84.5	84.9	85.1	85.1	85.7	85.9	86.1	86.1	86.3	86.5	87.2	87.0	87.0	87.0	87.0	87.3	87.9	88.0	87.4	87.0	86.6	86.4	86.0	85.9	86.4
9	85.9	85.8	85.7	85.8	85.9	86.1	86.6	87.1	87.1	88.8	89.0	90.0	90.0	90.0	91.1	90.9	90.0	89.8	89.0	88.9	88.5	88.5	88.4	88.3	88.0
10	88.2	88.2	88.0	88.1	88.1	88.1	88.3	88.2	88.3	88.6	88.6	88.8	88.8	88.4	88.0	87.7	87.1	87.2	87.5	86.4	86.3	86.1	86.1	86.3	86.4
11	86.3	86.8	87.0	85.9	86.0	86.0	86.4	87.6	88.0	88.1	89.1	89.1	88.0	88.0	88.9	88.4	88.1	88.							

Readings in degrees absolute at exact hours, Greenwich Mean Time.

366. Cahirciveen (Valentia Observatory) : North Wall Screen : h, (height of thermometer bulbs above ground) = 1.3 metres.

September, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Each cell contains a temperature reading in degrees absolute.

367. Cahirciveen (Valentia Observatory) : North Wall Screen : h, = 1.3 metres.

October, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Each cell contains a temperature reading in degrees absolute.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is written 75.0.

Readings in degrees absolute at exact hours, Greenwich Mean Time.

368. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_1$  (height of thermometer bulbs above ground) = 1.3 metres.

November, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	84.0	83.9	83.7	83.8	83.7	83.7	83.9	83.7	84.0	84.1	84.5	84.6	84.1	84.0	84.0	83.2	83.0	82.0	81.9	82.0	82.5	81.8	82.1	83.0	83.4
2	85.0	85.8	85.3	85.0	84.9	84.4	84.0	83.9	83.6	83.0	83.0	83.9	84.0	84.0	84.5	84.0	83.9	83.3	83.2	83.5	83.0	83.1	83.2	82.2	83.9
3	82.9	82.4	82.0	82.2	82.4	82.1	81.9	80.8	80.0	80.4	81.0	81.0	81.0	81.1	81.1	81.0	80.4	80.4	80.2	80.4	80.6	81.0	81.4	81.0	81.2
4	81.0	81.0	79.8	79.0	79.0	79.0	78.0	77.0	76.9	78.4	79.7	80.9	81.1	81.1	81.0	80.4	80.2	80.4	81.0	81.3	81.7	82.0	82.2	82.0	80.1
5	81.0	81.0	80.6	81.0	81.8	82.2	82.3	82.3	83.0	83.0	82.7	83.9	83.4	83.4	82.7	81.9	81.4	81.1	81.0	81.0	80.9	80.8	80.8	81.0	81.9
6	80.2	80.4	80.1	79.6	79.5	79.5	78.9	79.2	78.8	79.5	80.5	81.4	82.0	82.6	82.2	82.6	82.0	81.1	81.8	81.9	82.4	82.2	82.0	82.2	80.9
7	82.2	83.0	82.9	82.5	82.8	82.9	83.0	82.0	82.4	83.1	83.9	84.0	84.2	84.1	83.6	83.5	83.6	83.8	84.0	84.9	85.0	84.8	84.6	85.0	83.5
8	85.3	85.0	85.0	84.8	84.4	84.1	84.1	84.0	84.0	83.9	83.9	84.1	84.4	84.4	84.5	84.4	84.3	83.9	83.8	83.6	83.8	83.9	83.9	84.0	84.2
9	84.0	84.0	84.0	84.1	84.1	84.2	84.2	84.3	84.9	85.0	85.5	85.6	85.6	85.1	85.1	85.0	84.7	84.4	84.1	83.9	83.2	83.0	83.4	83.3	84.4
10	83.0	81.3	83.0	83.0	83.1	83.0	83.0	83.0	83.1	83.5	83.9	83.9	83.9	83.9	84.0	83.9	83.1	83.0	83.0	82.9	82.1	82.6	82.1	81.7	83.1
11	81.5	81.3	81.1	79.7	80.0	77.8	77.5	77.0	77.8	78.8	80.2	81.9	82.7	82.6	82.9	82.2	81.1	80.1	79.8	79.0	78.4	78.0	77.7	78.2	80.0
12	77.9	79.1	79.9	79.9	80.0	80.5	80.9	80.9	81.1	81.9	82.6	82.9	83.0	83.0	83.0	82.9	82.3	82.1	82.1	82.3	82.4	82.7	82.6	82.7	81.5
13	82.7	82.6	82.8	82.6	82.8	82.9	82.9	82.9	83.0	83.2	83.9	84.1	84.2	84.1	84.0	83.7	83.1	83.0	83.0	83.0	82.9	82.8	82.8	82.6	83.2
14	82.0	82.4	83.0	83.1	83.4	83.6	83.9	83.9	84.0	84.1	84.1	84.5	84.6	84.8	85.0	84.5	84.4	84.2	84.2	84.6	84.8	84.6	84.8	85.0	84.0
15	85.3	85.5	85.6	85.6	85.6	85.7	85.6	85.9	85.8	85.5	83.4	83.9	82.5	82.7	82.2	82.0	81.6	81.1	80.9	80.3	79.6	79.4	79.1	79.0	83.2
16	79.0	79.0	79.0	78.9	78.7	78.3	78.1	77.4	77.1	77.6	78.4	79.0	79.1	79.0	79.0	78.0	77.1	76.4	76.9	76.0	77.4	77.9	78.3	79.0	78.1
17	79.0	79.7	79.0	79.9	80.0	80.0	80.4	80.4	80.4	80.8	80.9	81.1	81.3	81.9	81.8	81.8	81.9	82.0	82.0	82.0	82.2	82.2	82.2	82.3	81.0
18	82.7	82.9	82.9	83.0	83.1	83.4	84.0	84.0	84.6	84.9	84.9	85.3	85.9	85.5	85.2	84.9	84.6	84.8	84.9	84.9	84.8	84.4	84.2	84.1	84.3
19	84.1	84.1	84.3	84.1	84.1	84.0	83.6	83.5	83.6	83.6	83.9	84.7	84.3	84.5	84.8	84.4	84.1	84.1	84.1	84.4	84.9	85.0	85.0	85.0	84.2
20	85.1	85.3	85.3	85.1	84.9	84.6	84.6	85.0	85.0	85.0	85.3	85.9	85.9	85.8	85.7	85.0	85.0	85.0	84.9	84.3	84.0	84.0	84.2	84.9	85.0
21	84.9	85.0	85.0	84.9	84.9	84.9	84.8	84.8	84.4	84.8	84.9	84.2	85.0	84.6	84.8	84.4	84.4	84.4	84.4	84.5	84.1	84.1	84.1	84.0	84.6
22	82.6	82.1	82.6	83.0	83.0	82.5	81.9	82.0	82.0	83.0	83.5	83.7	82.1	81.4	81.2	81.0	80.4	80.3	80.3	80.3	80.2	80.1	80.1	79.9	81.7
23	79.1	77.4	77.0	76.1	75.9	75.2	76.7	78.1	80.0	81.0	82.0	82.1	82.1	82.2	82.4	82.7	82.9	83.0	83.0	83.2	83.5	83.7	83.9	83.9	80.6
24	83.6	83.6	84.0	84.2	85.0	84.9	83.1	83.1	83.1	83.1	83.2	83.1	82.3	83.1	82.3	82.2	82.3	82.8	83.0	83.0	83.0	83.0	82.8	82.8	83.2
25	82.4	82.0	82.2	82.9	82.5	82.2	83.1	83.0	83.3	82.1	83.0	82.9	83.0	82.1	82.0	82.0	81.8	81.2	79.9	79.6	79.8	79.0	79.4	79.0	81.8
26	78.9	78.0	79.0	78.0	77.6	76.3	77.0	78.0	79.0	79.9	79.9	79.7	80.5	81.5	81.0	81.0	80.0	79.2	79.4	79.0	78.1	77.0	76.1	76.3	78.8
27	75.5	75.0	74.9	75.0	74.4	74.4	74.1	73.4	74.9	75.2	76.0	78.3	79.6	80.2	80.7	80.0	79.2	78.4	77.0	76.5	75.3	74.2	74.0	73.9	76.3
28	73.4	72.8	72.4	73.2	72.2	72.0	73.0	73.0	73.9	74.1	75.2	76.8	78.1	79.0	79.6	79.9	79.5	79.0	77.8	77.8	77.9	77.9	77.0	77.0	78.8
29	78.1	78.8	78.9	79.0	79.1	79.5	79.5	79.1	79.3	79.3	79.8	80.1	80.4	80.9	80.9	80.5	79.4	78.4	77.3	76.3	75.9	75.0	74.8	74.0	78.6
30	74.9	74.0	74.5	74.4	74.1	75.7	75.3	75.7	76.1	76.6	79.1	80.2	80.9	81.0	81.0	81.2	81.0	81.0	81.1	81.2	81.4	81.4	81.2	81.1	78.4
Mean ...	81.4	81.3	81.3	81.3	81.2	81.1	81.1	81.0	81.3	81.6	82.1	82.6	82.7	82.8	82.7	82.5	82.1	81.8	81.7	81.6	81.5	81.4	81.4	81.4	81.7

369. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_1$  = 1.3 metres.

December, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	81.1	81.0	81.0	81.0	81.0	81.0	81.2	81.1	81.1	82.0	82.4	82.9	82.9	82.9	82.8	82.6	82.8	82.6	82.9	82.1	83.0	82.0	80.9	81.9	
2	80.5	80.2	80.0	79.9	79.0	80.0	80.4	81.0	80.7	82.1	82.5	82.7	82.8	83.0	82.9	82.6	82.2	82.1	82.0	82.0	81.7	81.3	81.0	81.2	81.4
3	81.2	81.3	81.1	81.0	80.8	80.9	80.2	80.3	80.7	80.7	80.2	82.1	82.3	82.0	82.3	81.1	80.0	79.0	78.9	77.0	76.3	76.3	76.0	76.6	80.1
4	75.9	76.1	76.0	75.0	75.0	75.1	75.4	74.7	75.2	75.1	76.1	78.1	79.1	80.1	80.0	80.1	80.1	80.4	79.9	80.0	80.0	80.0	80.0	80.0	77.7
5	80.1	80.1	80.1	80.2	80.3	80.3	80.5	80.8	80.5	80.9	81.0	81.8	82.1	82.9	82.6	82.4	82.3	82.1	82.0	82.0	82.0	82.0	82.1	82.0	81.3
6	82.0	81.9	81.3	81.7	82.0	82.0	82.0	82.0	82.0	82.0	82.1	82.1	82.6	81.8	81.6	81.2	80.9	80.9	80.9	80.8	79.3	79.6	80.0	79.0	81.4
7	79.3	79.6	79.5	79.5	78.0	77.5	78.0	76.8	75.4	75.0	76.0	78.0	79.1	80.0	80.0	79.6	79.7	80.0	80.5	81.0	81.3	79.8	78.6	79.0	78.8
8	80.0	79.9	79.6	79.4	79.5	79.9	79.1	79.3	79.0	79.1	79.0	78.0	77.8	77.8	78.0	78.1	78.0	77.0	77.8	77.9	78.0	77.9	78.9	79.0	78.6
9	78.9	79.0	79.0	79.0	79.4	78.2	78.1	79.2	78.8	79.7	79.0	80.0	80.2	80.2	80.2	79.2	77.1	76.6	76.9	76.9	79.0	79.4	79.9	80.0	78.9
10	80.2	80.0	79.6	79.5	80.0	80.7	81.0	81.4	82.1	82.3	83.0	83.0	83.0	82.9	82.9	82.4	82.6	82.3	82.4	82.9	83.2	83.5	84.0	83.8	81.9
11	84.0	84.4	85.0	83.8	83.9	83.9	83.9	83.4	83.9	83.3	83.4	83.3	83.4	83.3	83.0	82.9	82.8	82.8	83.0	82.9	83.0	82.9	82.4	82.8	83.4
12	82.4	82.0	82.0	82.0	82.7	82.9	83.0	83.2	83.2	83.0	83.1	83.2	83.6	84.0	84.5	84.5	84.9	85.0	83.2						

From readings in degrees absolute at exact hours, Greenwich Mean Time.

370. Cahirciveen (Valentia Observatory): North Wall Screen: h<sub>t</sub> = 1.3 metres.

1930.

Table with 25 columns (Hour GMT 1-24) and 2 rows of temperature data in degrees absolute.

TEMPERATURE: MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

371. Cahirciveen (Valentia Observatory): North Wall Screen: h<sub>t</sub> = 1.3 metres.

1930.

Large table with 25 columns (Hour GMT 1-24) and 13 rows (Month Mean and departures for Jan-Dec and Year).

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

Maximum and minimum for the interval 0 h. to 24 h., Greenwich Mean Time.

372. Cahirciveen (Valentia Observatory): North Wall Screen: h<sub>t</sub> = 1.3 metres.

1930.

Table with 25 columns (Month, Day, Max., Min.) and 31 rows (Days 1-31) showing absolute temperature extremes.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is written 75.0.

Percentages at exact hours, Greenwich Mean Time.

373. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

January, 1930.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	93	91	96	92	94	94	91	88	88	91	96	96	97	97	97	99	98	96	88	84	80	75	72	74	90.5	11.3
2	69	63	68	73	72	74	79	85	85	83	86	83	88	98	97	99	99	99	98	98	95	95	94	94	86.0	10.4
3	92	93	96	96	93	89	88	84	79	77	81	79	70	86	87	87	85	87	91	90	81	78	76	83	85.6	9.1
4	81	86	82	84	85	92	85	85	88	83	86	85	85	83	78	87	82	76	70	68	75	75	72	72	81.7	7.9
5	74	63	71	75	84	76	85	82	78	69	71	61	62	72	70	53	59	60	62	65	68	72	72	74	69.9	6.8
6	74	77	77	74	85	85	81	79	79	78	86	94	92	92	94	98	95	95	97	97	97	97	95	95	87.6	9.7
7	95	93	92	92	89	89	90	92	90	92	91	91	92	92	92	87	86	81	76	83	79	84	85	75	88.3	10.4
8	76	88	57	74	76	88	73	80	69	70	68	69	77	83	87	87	86	86	86	81	78	84	86	88	78.8	6.8
9	91	86	90	78	74	74	84	83	85	85	87	87	88	85	81	88	85	78	69	78	72	69	73	71	81.2	7.6
10	69	77	79	82	83	80	85	91	91	89	91	89	91	92	94	94	86	90	90	85	75	80	80	70	84.7	8.4
11	70	67	71	78	78	81	82	77	66	80	78	61	73	66	60	63	68	77	80	69	62	88	79	82	72.9	5.7
12	64	63	71	83	74	82	86	92	94	90	93	90	75	82	78	71	71	74	72	70	78	66	66	59	77.3	7.4
13	57	61	69	80	84	86	86	87	94	93	88	93	89	83	86	89	91	87	91	94	96	90	93	97	85.2	8.4
14	98	97	90	89	86	84	86	90	84	86	92	87	87	86	90	87	87	87	90	85	89	85	83	91	88.3	7.4
15	92	93	92	92	92	92	92	92	91	90	90	70	71	66	61	65	69	71	70	71	70	76	73	76	80.2	6.0
16	73	75	72	71	71	76	74	76	73	73	68	64	73	72	75	84	89	86	87	92	92	92	92	96	78.6	9.4
17	95	96	96	98	98	98	97	98	99	99	98	95	92	92	95	96	98	98	98	98	96	96	89	92	96.2	12.0
18	92	91	91	94	92	94	92	94	96	91	91	92	89	87	87	87	87	91	93	93	94	93	90	90	91.3	11.5
19	94	95	88	88	88	84	86	92	93	92	91	85	90	91	86	87	87	82	81	75	78	75	81	85	86.4	9.1
20	87	87	89	80	88	87	81	90	88	90	90	87	86	82	85	82	90	87	88	84	81	81	84	80	85.7	7.9
21	84	78	79	80	85	83	82	79	83	85	86	89	93	94	89	92	96	95	91	95	91	92	88	88	87.2	9.6
22	91	93	90	90	94	91	91	91	95	95	94	88	88	86	85	78	83	85	87	90	90	87	88	92	89.2	8.8
23	86	84	76	81	84	83	76	75	76	81	72	72	74	74	74	81	74	73	73	72	85	86	88	87	78.7	8.1
24	90	87	85	79	86	90	89	90	88	86	87	83	77	70	72	80	82	77	78	80	91	85	92	85	83.7	7.3
25	77	82	90	82	87	91	84	83	83	83	82	77	73	80	79	79	79	79	74	71	80	77	80	81	80.6	6.2
26	81	84	80	69	80	80	80	68	62	57	61	60	56	57	55	59	60	55	60	63	67	70	73	79	87.4	5.8
27	74	75	69	70	82	74	77	75	77	75	77	67	56	63	51	55	70	71	78	81	81	81	66	63	71.5	5.8
28	65	67	66	68	72	72	84	84	94	87	93	90	96	89	88	84	85	84	84	88	79	82	79	82	81.4	7.5
29	84	83	84	79	86	91	95	90	92	90	84	86	89	85	84	80	84	95	83	79	83	78	77	76	85.0	9.2
30	74	85	86	94	92	92	85	85	89	86	85	79	80	79	79	77	74	84	84	86	82	82	74	74	82.8	7.6
31	74	73	67	74	78	85	83	82	84	79	85	80	79	90	90	92	92	90	95	91	89	90	86	92	83.8	7.4
Mean ...	81.2	81.7	80.9	81.9	84.3	85.2	85.0	85.2	84.9	84.3	84.6	81.7	81.6	82.2	81.5	82.2	83.0	83.1	82.5	82.5	82.4	82.6	81.5	82.0	82.8	†8.2
Vapour Pressure* ...	mb. 7.7	mb. 7.9	mb. 7.8	mb. 7.9	mb. 7.9	mb. 8.0	mb. 8.0	mb. 8.0	mb. 8.0	mb. 8.1	mb. 8.4	mb. 8.4	mb. 8.5	mb. 8.5	mb. 8.5	mb. 8.4	mb. 8.3	mb. 8.1	mb. 7.9	mb. 7.8	mb. 7.8	mb. 7.7	mb. 7.7	mb. 7.7	†8.0	

374. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

February, 1930.

1	91	87	94	92	89	89	92	96	90	85	85	84	76	66	69	70	69	82	80	74	82	79	84	85	82.9	6.5
2	84	84	80	82	78	73	78	80	82	82	85	80	72	69	68	60	69	77	76	82	77	87	81	83	78.2	6.4
3	83	70	75	78	83	83	87	84	86	93	93	90	85	87	94	91	93	93	88	93	91	91	91	94	87.1	8.0
4	94	91	96	88	86	84	84	84	86	78	87	84	80	75	78	84	82	80	77	77	83	75	74	74	83.5	7.9
5	72	68	69	69	82	79	84	71	80	81	78	75	74	75	78	75	81	75	84	80	83	84	78	81	77.2	6.8
6	78	87	84	87	90	88	87	83	77	80	70	70	58	69	64	68	65	70	77	69	75	75	70	66	75.6	5.7
7	66	64	72	71	68	70	72	72	73	69	68	70	68	62	59	62	61	64	63	72	67	69	73	76	67.7	4.9
8	75	73	79	79	77	78	75	72	70	68	64	55	59	64	58	59	65	71	72	76	72	69	69	66	69.6	4.8
9	67	67	72	68	64	66	63	64	67	69	60	56	60	54	60	65	67	72	70	74	71	73	68	68	66.0	4.8
10	66	70	70	68	71	66	68	68	66	66	60	61	62	66	64	62	68	70	75	78	79	79	81	83	69.1	4.7
11	85	84	79	72	78	79	81	71	77	68	79	73	66	66	67	64	73	66	69	71	69	70	75	75	73.4	5.3
12	75	78	75	69	78	72	77	79	75	71	58	69	69	66	65	68	64	68	68	68	69	69	66	67	70.3	5.6
13	67	69	69	73	73	69	66	71	72	64	68	66	69	72	77	77	82	78	77	80	82	84	85	83	73.5	6.1
14	89	89	89	85	87	91	89	87	86	89	88	84	85	85	83	79	83	85	85	87	93	91	75	78	86.0	7.1
15	71	60	69	76	79	76	72	70	66	70	73	77	64	65	74	65	73	79	77	69	71	67	70	69	71.1	7.0
16	72	68	78	82	83	83	82	87	84	83	79	75	78	78	78	75	78	75	80	74	68	71	68	69	77.0	6.5
17	67	75	74	80	71	70	71	62	66	67	66	59	60	61	59	62	60	64	62	63	64	69	67	64	66.1	5.5
18	74	79	77	81	79	74	74	63	81	75	69	63	68	70												

Percentages at exact hours, Greenwich Mean Time.

375. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

March, 1930.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	93	86	85	88	87	93	90	85	87	87	82	77	82	60	57	58	63	72	71	65	66	68	75	77	77.4	7.4	
2	84	72	62	70	73	83	84	72	60	57	58	58	59	60	64	63	63	68	74	77	76	82	82	79	71.0	6.7	
3	76	75	79	75	79	72	82	88	85	82	81	80	78	74	75	75	80	87	88	88	89	91	88	92	81.4	9.2	
4	89	94	92	91	89	87	87	89	86	87	90	87	87	81	83	92	92	91	89	95	95	98	95	96	90.0	10.7	
5	96	96	95	95	95	96	98	99	95	95	99	94	95	98	95	92	92	95	95	95	92	93	93	93	95.1	11.4	
6	96	96	94	97	97	93	98	99	99	90	93	87	84	83	83	87	86	87	87	93	93	92	92	93	91.6	9.9	
7	88	88	86	87	84	88	88	88	93	95	91	88	89	91	91	93	94	94	92	92	96	94	98	96	90.6	9.9	
8	88	88	86	87	84	88	88	88	93	95	91	88	89	91	91	93	94	94	92	92	96	94	98	96	90.6	10.8	
9	95	98	94	90	94	91	87	85	83	76	67	65	72	68	82	75	73	67	67	74	66	70	66	67	78.6	7.9	
10	70	70	71	69	69	65	51	65	82	74	70	83	82	83	86	85	75	84	68	69	72	59	81	83	73.3	6.9	
11	72	62	57	62	63	83	85	71	69	73	71	84	85	93	96	90	98	99	91	88	89	87	89	91	81.0	8.5	
12	91	88	88	94	91	88	85	88	86	79	71	70	74	79	93	92	86	73	62	74	73	74	73	82	81.6	9.1	
13	78	66	73	73	79	80	87	86	85	86	83	78	86	75	76	71	73	76	81	86	89	87	86	86	80.2	8.1	
14	86	86	87	88	90	92	87	90	90	84	89	85	82	84	80	82	84	85	81	84	85	84	90	85	85.9	7.4	
15	83	83	84	85	85	87	82	81	85	85	83	83	85	79	82	82	84	85	85	87	85	83	81	80	83.6	6.4	
16	76	76	74	69	76	67	60	60	56	61	57	56	62	57	64	48	57	63	67	77	71	81	87	84	66.8	5.4	
17	87	85	87	80	81	89	93	85	89	78	62	48	70	61	66	69	67	75	75	74	78	83	77	81	76.7	6.1	
18	83	83	71	84	82	85	87	89	83	72	83	83	78	67	57	58	62	58	75	84	80	87	74	85	77.0	6.3	
19	77	85	83	79	64	59	65	62	57	69	69	54	53	52	49	50	52	54	71	66	74	75	76	87	65.9	4.9	
20	86	86	81	88	87	81	85	76	82	78	72	78	79	77	71	74	76	78	84	89	79	72	78	81	80.0	6.8	
21	83	84	84	85	85	86	79	76	84	77	78	84	72	70	59	60	67	60	70	69	64	66	68	75	74.5	7.0	
22	82	79	88	89	94	90	90	81	80	71	67	67	58	60	61	69	72	77	86	88	88	90	91	82	79.0	6.6	
23	73	79	72	72	80	83	76	84	79	69	70	71	66	68	65	62	70	69	73	80	82	83	83	82	74.6	7.8	
24	85	83	83	85	73	73	79	79	76	68	61	62	62	60	59	66	62	74	80	81	83	86	86	87	74.6	8.5	
25	88	88	88	89	92	93	91	95	98	97	94	95	95	95	94	96	98	95	96	96	96	96	96	96	93.9	11.3	
26	96	95	95	95	96	98	95	94	99	90	90	92	89	89	89	84	87	88	87	87	87	88	87	93	91.3	11.2	
27	97	95	96	93	91	88	88	87	87	82	84	80	76	77	81	88	88	87	88	87	87	87	88	87	87.2	10.5	
28	82	84	83	83	82	83	83	82	83	84	86	89	91	93	91	88	89	86	85	77	78	75	81	79	84.1	9.7	
29	77	80	82	79	83	79	77	72	73	73	74	69	70	74	66	75	74	73	78	77	83	82	85	86	76.6	8.2	
30	81	85	82	81	85	87	92	87	88	88	93	96	95	94	94	95	94	94	95	94	94	95	94	92	90.5	10.4	
31	95	99	97	96	88	92	94	91	92	88	87	83	79	83	80	84	87	89	92	94	93	90	92	93	89.9	11.0	
Mean ...	84.9	84.3	83.3	83.8	84.0	84.6	84.3	83.5	83.6	80.3	78.9	78.0	78.2	76.1	76.2	76.8	77.9	79.5	81.2	83.0	82.9	83.3	84.5	85.9	81.6	†8.5	
Vapour Pressure* ...	mb. 8.1	mb. 8.0	mb. 7.9	mb. 7.9	mb. 7.8	mb. 7.9	mb. 7.9	mb. 7.9	mb. 8.2	mb. 8.2	mb. 8.4	mb. 8.5	mb. 8.6	mb. 8.5	mb. 8.5	mb. 8.5	mb. 8.4	mb. 8.4	mb. 8.4	mb. 8.4	†8.3						

376. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

April, 1930.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*
1	95	95	93	92	90	94	90	95	95	95	90	80	76	78	79	76	81	84	82	82	86	84	81	82	86.7	11.2
2	82	84	86	86	86	87	87	86	81	83	89	87	85	87	83	83	82	81	86	89	91	88	88	87	85.5	10.7
3	84	77	76	81	78	74	77	86	83	84	86	80	80	82	83	86	86	87	88	87	86	86	87	87	83.0	9.5
4	86	86	84	83	83	85	83	80	80	83	76	78	75	78	75	73	75	76	72	71	78	75	72	72	78.6	8.2
5	77	77	72	74	72	71	71	72	74	77	71	60	61	62	69	69	62	61	68	64	69	74	70	79	69.7	6.5
6	82	87	83	89	87	85	82	83	76	72	59	59	56	58	54	55	56	63	70	77	78	82	89	84	73.5	6.4
7	87	84	85	82	78	54	49	58	65	67	70	77	92	88	89	92	93	96	96	96	94	94	95	96	82.1	8.4
8	98	98	96	98	98	99	99	98	97	97	97	97	95	90	83	85	85	87	86	87	88	89	93	90	93.0	11.7
9	90	91	88	93	97	90	92	85	84	86	78	72	73	65	69	66	72	78	79	80	77	77	77	77	81.0	8.7
10	79	77	75	81	80	81	76	72	71	66	65	66	65	61	57	62	63	70	72	81	82	86	76	80	72.6	8.0
11	82	85	88	88	89	87	92	89	88	80	72	72	73	71	74	75	88	94	96	96	96	92	93	78	85.0	9.4
12	82	73	65	73	77	68	69	79	65	69	69	67	67	64	62	72	71	73	62	74	72	73	70	78	70.6	7.9
13	79	85	88	94	94	98	96	98	86	83	70	76	70	63	67	71	66	62	77	72	70	75	75	73	78.8	8.6
14	72	72	76	73	71	72	80	75	71	77	68	67	67	67	70	70	63	65	72	73	77	73	72	72	71.5	8.2
15	81	81	81	81	81	74	70	66	62	59	54	58	61	61	61	61	62	63	71	76	73	79	81	77	69.6	8.2
16	83	81	83	81	82	81	88	88	86	87	90	95	89	88	90	90	90	96	89	87	76	73	73	75	85.1	10.1
17	79	74	76	77	74	77	73	72	70	65	67	66	71													

Percentages at exact hours, Greenwich Mean Time.

377. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres. May, 1930.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	96	93	96	91	97	94	98	87	84	70	66	58	59	57	61	53	49	51	57	61	63	62	71	70	73.1	9.4	
2	61	71	73	74	76	82	86	83	85	87	86	80	76	77	81	79	85	82	88	89	90	89	94	94	81.5	10.6	
3	88	92	92	94	99	98	93	88	86	80	81	78	80	83	80	82	78	75	84	84	91	89	89	96	86.6	10.9	
4	88	93	94	90	97	90	87	80	76	75	72	70	72	73	73	69	72	72	73	74	74	73	71	78	79.0	9.6	
5	78	75	78	79	76	78	69	72	84	84	89	87	84	72	67	63	72	74	74	83	74	76	79	84	77.0	9.4	
6	85	84	84	87	84	88	84	75	83	84	79	79	76	77	72	67	75	70	75	82	84	84	76	76	79.7	9.6	
7	77	79	79	67	72	71	73	61	58	54	59	60	54	60	54	62	62	69	68	70	78	82	72	78	67.4	8.1	
8	80	73	77	79	83	69	73	86	70	73	75	72	65	74	65	73	82	74	75	69	72	78	74	86	74.7	8.9	
9	86	87	86	91	94	96	91	89	95	88	94	98	94	86	81	75	75	73	76	93	79	81	84	83	86.5	10.4	
10	86	88	86	89	89	90	92	93	93	94	93	93	95	99	96	98	94	95	98	90	87	86	78	78	90.9	10.6	
11	78	74	74	77	76	78	77	79	80	77	77	75	76	78	76	76	76	77	77	83	84	79	88	92	78.2	10.1	
12	89	88	87	87	88	88	91	92	90	92	95	96	89	96	93	94	94	95	97	98	97	96	98	97	92.7	12.3	
13	96	99	97	96	96	96	97	98	94	95	94	90	87	89	90	88	89	89	89	89	92	94	96	92	98.1	13.3	
14	89	92	92	96	95	91	90	81	88	82	83	79	77	77	77	77	77	81	86	84	84	92	89	89	85.4	12.1	
15	90	94	94	98	94	94	90	89	86	81	83	78	80	77	76	76	76	77	80	81	87	86	89	90	85.2	12.4	
16	88	87	89	91	93	91	87	83	82	79	77	72	78	78	79	76	77	80	86	89	89	92	87	87	84.1	11.8	
17	87	81	87	95	98	97	98	98	95	95	96	95	96	97	94	89	87	74	70	65	59	80	85	82	87.6	11.3	
18	78	86	88	85	74	73	80	66	75	64	75	71	74	73	75	74	80	75	84	86	83	86	84	87	78.1	9.5	
19	87	87	87	91	93	93	93	94	95	99	96	94	94	94	94	94	93	95	97	99	98	90	92	92	93.0	12.2	
20	95	94	89	93	95	95	94	89	93	93	82	82	82	89	86	82	77	78	79	86	93	89	92	96	88.4	11.9	
21	93	94	97	96	96	96	92	88	81	82	76	73	79	69	70	77	71	78	84	88	89	87	89	89	84.9	11.7	
22	93	88	89	96	98	93	88	79	68	65	75	78	83	87	82	78	72	70	69	73	77	88	90	92	82.1	12.3	
23	93	93	94	93	90	90	85	77	65	60	61	61	73	68	61	64	63	74	69	78	76	79	88	87	78.1	11.8	
24	91	92	91	96	98	91	89	87	86	80	79	76	75	77	76	72	73	75	78	78	82	80	76	79	82.5	10.3	
25	84	80	88	86	93	90	89	84	77	71	71	72	78	78	78	76	77	76	80	77	83	85	87	90	81.0	10.8	
26	89	92	89	89	92	93	88	83	77	70	72	76	82	87	82	80	76	80	89	90	90	92	96	91	85.2	12.2	
27	91	92	95	92	95	92	90	87	82	85	77	73	75	71	77	70	72	78	80	83	87	86	91	96	83.9	11.9	
28	94	90	87	82	74	67	67	63	60	56	58	65	62	59	58	62	61	62	62	66	78	82	84	78	70.3	9.9	
29	85	88	90	86	86	86	76	73	74	69	69	68	68	67	64	64	61	68	73	73	74	76	77	78	74.7	10.6	
30	78	80	78	77	77	85	81	78	71	71	71	69	70	72	67	71	76	77	78	79	78	82	84	82	76.3	12.0	
31	86	88	89	86	87	93	93	88	75	79	83	81	77	76	76	85	90	93	93	96	95	97	97	98	87.2	14.1	
Mean ...	86.4	86.9	87.6	87.9	88.8	88.0	86.7	83.2	81.3	78.7	78.8	77.4	77.7	78.0	76.2	75.7	76.2	77.0	79.6	81.8	82.8	84.5	85.4	86.7	82.2	†11.0	
Vapour Pressure* ...	mb. 10.3	mb. 10.2	mb. 10.3	mb. 10.2	mb. 10.3	mb. 10.8	mb. 11.1	mb. 11.2	mb. 11.3	mb. 11.3	mb. 11.5	mb. 11.8	mb. 11.9	mb. 11.7	mb. 11.6	mb. 11.3	mb. 11.2	mb. 11.0	mb. 10.8	mb. 10.7	mb. 10.6	mb. 10.6	mb. 10.6	mb. 10.6	†11.0		

378. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres. June, 1930.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*
1	97	94	91	93	93	95	97	91	92	90	86	91	96	93	93	95	95	97	96	95	98	97	99	99	94.1	mb 13.8
2	97	98	97	96	98	98	95	93	91	86	81	78	71	73	85	81	74	79	83	80	89	87	89	89	86.5	14.1
3	93	92	93	89	94	92	90	90	85	80	77	88	73	71	70	75	78	75	80	80	86	91	91	94	84.4	14.1
4	95	90	92	95	89	91	88	81	79	75	73	71	76	77	74	70	63	70	77	78	86	89	89	91	81.7	13.0
5	95	89	88	96	98	90	90	84	82	80	82	85	82	78	80	78	79	77	72	80	84	88	89	90	84.9	13.8
6	89	89	89	90	93	88	80	78	78	83	95	90	85	72	72	62	63	68	69	66	74	71	69	65	78.8	12.0
7	65	62	62	59	59	66	66	57	65	56	59	59	58	59	61	60	59	65	66	72	78	75	79	83	64.2	9.4
8	87	88	94	91	94	92	87	88	74	68	78	78	78	78	76	78	77	78	84	85	89	92	89	90	83.7	12.0
9	93	88	85	93	96	96	97	99	96	91	91	94	92	94	94	94	92	94	94	95	94	95	96	96	93.8	14.1
10	96	97	98	98	99	95	89	91	82	85	85	80	77	78	89	89	86	83	86	96	93	92	93	94	89.7	13.0
11	90	94	87	75	75	75	76	66	68	66	75	66	72	67	71	75	72	71	69	76	81	82	86	86	76.0	10.7
12	89	88	86	88	89	87	81	73	67	61	60	59	66	63	55	63	67	68	76	73	78	81	87	88	74.7	11.0
13	82	77	75	72	70	67	69	71	89	80	85	80	72	80	75	68	70	72	71	82	88	89	89	86	77.5	13.0
14	86	87	88	88	89	89	78	78	72	73	76	68	72	71	72	70	71	74	79	82	85	83	84	80	79.1	13.8
15	80	83	84	80	80	80	73	70	71	72	74	69	67	71	69	68	67	69	74	80	79	73	78	73	74.5	13.5
16	68	79	75	75	84	78	69	71	69	70	70	68	68	70	74	70	69	79	85	90	91	97	94	98	77.0	14.1
17	94	93	96	96	97	93	96	91	91	85	81	86	88	90												

Percentages at exact hours, Greenwich Mean Time.

379. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

July, 1930.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	97	93	91	97	96	95	95	96	95	89	85	88	86	79	80	79	78	78	80	87	88	87	85	82	88.0	14.6	
2	81	82	83	80	88	86	85	85	87	80	81	72	85	83	86	89	88	96	94	90	96	98	94	92	86.5	14.5	
3	93	96	94	97	93	94	90	89	89	89	87	85	87	89	87	84	89	81	87	87	92	91	93	90	89.7	15.4	
4	91	98	96	90	89	89	86	81	79	76	74	77	85	74	79	75	76	80	88	89	87	88	89	88	88	83.4	13.6
5	89	89	88	89	89	88	91	92	95	95	91	91	89	88	86	83	84	88	87	90	91	92	93	94	89.5	14.8	
6	89	94	92	92	94	96	95	87	73	69	73	65	63	63	68	65	61	65	73	72	77	78	82	86	78.2	12.7	
7	89	89	89	94	93	89	83	79	79	79	79	80	87	84	86	88	90	95	95	92	99	99	98	96	88.6	15.1	
8	97	96	97	97	96	96	97	99	92	92	91	90	90	90	90	90	90	94	95	90	97	92	92	93	93.5	16.6	
9	92	96	96	97	96	93	93	98	97	96	93	91	95	91	90	90	89	90	97	96	96	92	91	91	93.6	16.4	
10	93	94	97	96	97	96	90	89	89	87	83	79	82	76	76	71	66	70	78	81	82	87	85	87	84.7	14.6	
11	87	90	93	97	94	93	91	93	91	89	80	85	79	79	79	79	92	92	93	93	93	94	94	92	89.1	15.0	
12	90	90	90	90	90	91	92	88	89	84	82	75	75	77	75	70	82	85	84	91	91	85	90	92	85.3	14.3	
13	94	98	98	98	99	97	96	96	96	98	95	95	89	89	87	85	85	85	86	86	96	90	86	85	92.2	15.5	
14	80	73	73	76	76	69	73	71	74	63	74	74	61	61	67	68	69	76	80	86	78	85	89	88	74.4	11.7	
15	93	96	97	93	93	94	95	98	93	97	97	94	93	92	89	89	92	90	93	92	97	99	94	95	93.8	15.2	
16	90	89	82	78	78	77	77	75	79	81	73	81	76	78	76	77	77	74	81	81	82	81	87	87	80.0	12.6	
17	86	83	89	87	88	86	87	87	80	90	84	80	81	82	83	80	87	87	91	97	96	96	97	91	87.2	13.7	
18	92	90	88	86	87	82	87	87	88	83	81	81	84	83	80	79	74	76	79	80	82	80	81	81	83.2	13.4	
19	83	82	80	80	85	82	87	86	84	81	80	80	78	78	86	84	84	78	78	83	85	86	87	87	82.5	13.0	
20	87	88	90	88	82	85	86	78	78	78	72	69	77	75	76	71	76	75	78	78	81	78	78	78	79.4	12.7	
21	77	80	70	72	76	73	70	68	66	59	71	67	67	69	67	74	85	75	77	76	78	85	82	82	73.5	11.1	
22	82	80	78	80	84	85	77	74	68	68	88	73	85	77	77	79	78	78	87	89	88	88	88	89	80.7	12.3	
23	88	88	89	88	93	91	83	86	85	77	78	66	68	72	81	80	74	77	87	87	86	89	88	87	82.9	12.7	
24	87	92	90	92	95	91	89	91	78	70	76	76	70	67	67	71	65	69	77	82	83	86	88	83	80.7	12.5	
25	82	85	86	85	83	87	84	85	92	94	93	95	97	94	93	94	96	99	98	98	99	99	98	97	91.9	14.8	
26	100	100	100	96	96	93	96	90	86	83	81	84	84	87	87	83	84	82	87	89	89	96	94	95	90.1	15.7	
27	96	91	96	88	95	96	95	90	88	86	88	93	96	91	91	96	97	96	97	92	95	97	97	96	93.4	15.2	
28	90	93	95	95	97	98	98	97	91	95	91	90	89	88	82	87	83	86	87	91	93	91	91	92	91.3	15.0	
29	94	93	91	88	90	97	95	90	88	88	90	92	88	88	81	85	87	87	85	88	93	90	85	87	89.4	14.3	
30	88	90	93	89	97	95	90	89	88	88	79	75	77	80	78	78	77	78	80	77	76	83	87	88	84.2	12.9	
31	89	91	88	89	89	95	89	85	79	80	77	74	70	70	72	76	80	82	80	86	80	80	82	79	81.9	12.3	
Mean ...	89.2	90.0	89.7	89.2	90.8	89.9	88.3	87.1	85.0	83.7	82.5	81.2	81.7	80.5	80.7	80.7	81.1	82.9	85.2	86.7	88.6	89.1	88.7	85.9	†14.0		
Vapour Pressure* ...	mb. 13.5	mb. 13.5	mb. 13.4	mb. 13.4	mb. 13.4	mb. 13.5	mb. 13.8	mb. 14.0	mb. 14.1	mb. 14.1	mb. 14.3	mb. 14.3	mb. 14.4	mb. 14.4	mb. 14.5	mb. 14.3	mb. 14.5	mb. 14.2	mb. 14.2	mb. 14.1	mb. 13.9	mb. 13.7	mb. 13.6	mb. 13.6	†13.9		

380. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres. August, 1930.

1	81	87	90	91	91	90	91	85	86	83	82	87	89	85	88	87	92	86	88	87	89	91	99	96	88.0	mb. 14.5
2	97	97	99	99	100	99	96	95	95	90	88	96	90	83	90	89	82	87	88	95	96	92	96	94	93.1	14.8
3	96	91	92	88	88	93	93	94	87	86	86	80	78	79	76	78	78	82	85	86	86	89	86	89	86.2	13.6
4	89	87	83	85	87	86	83	77	80	74	77	77	75	72	70	75	74	79	78	87	82	84	87	80.0	12.6	
5	89	92	92	91	91	98	91	90	97	96	90	88	88	96	90	89	87	88	91	87	89	89	90	90	90.7	12.7
6	88	86	82	83	83	87	84	87	88	88	89	86	90	86	82	85	88	80	86	88	93	89	86	85	86.3	13.0
7	86	80	91	90	90	85	78	86	77	77	75	75	76	78	74	78	76	78	79	81	82	83	89	88	81.3	12.6
8	91	89	90	96	92	93	96	98	96	95	94	98	99	99	99	97	94	100	97	99	98	97	99	96	95.7	14.7
9	96	95	95	94	97	96	98	95	97	98	88	89	89	89	88	81	85	82	89	91	94	94	96	97	92.1	15.7
10	98	98	99	98	99	99	99	97	98	98	96	96	94	96	89	93	96	98	96	99	97	99	97	96	96.9	16.3
11	97	95	96	94	91	90	95	91	91	89	88	88	85	93	85	86	89	88	86	91	94	95	91	89	90.9	14.8
12	91	90	90	91	90	95	90	91	95	88	82	84	84	80	85	81	82	82	86	87	89	92	89	89	87.6	13.7
13	93	95	86	90	96	89	89	95	93	95	98	93	98	99	94	97	98	98	99	99	99	98	99	97	95.1	14.7
14	95	94	90	80	79	78	79	81	73	77	78	75	76	77	78	75	74	79	84	90	90	91	96	96	82.5	13.7
15	96	96	93	92	94	96	97	96	92	91	88	88	83	80	79	79	76	77	82	84	90	91	89	89	88.4	14.5
16	96	96	91	92	91	89	95	96	94	85	88	93	96	97	96	86	81	84	87	93	92	94	92	91	91.4	14.1
17	92	93	95	94	94	93	93	93	96	93	89	85	89	94	88	93	97	95	96	97	96	92	92	94	93.0	15.2
18	96	97	97	98	99	99	98	95	96	93																

Percentages at exact hours, Greenwich Mean Time.

381. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres. September, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	89	92	89	94	95	95	89	87	81	84	79	80	81	80	76	77	79	88	89	91	90	91	95	90	90	86.7	13.8
2	96	95	95	96	95	97	94	89	86	84	78	74	74	72	63	64	62	63	71	74	78	78	70	61	61	80.1	14.7
3	62	59	60	57	46	43	57	47	50	58	61	65	67	67	68	63	66	70	77	80	84	83	89	90	90	64.4	13.9
4	92	95	87	88	90	90	90	91	92	93	94	98	92	90	92	92	91	95	90	94	92	91	91	96	96	91.8	17.3
5	91	88	91	91	91	92	93	90	92	86	88	90	87	78	75	73	71	79	85	88	89	90	94	98	98	87.0	14.8
6	98	96	93	93	93	98	93	92	91	88	88	85	83	91	87	97	88	89	90	91	91	96	95	96	96	91.8	15.9
7	94	92	93	92	96	94	97	94	97	89	89	88	84	85	82	85	82	89	92	95	91	91	94	93	91	90.5	15.3
8	96	94	94	92	94	96	91	94	99	96	93	99	99	97	96	98	97	93	98	96	92	98	96	96	96	95.5	16.3
9	99	99	95	95	94	96	95	96	93	88	87	87	82	81	81	80	86	87	90	91	93	94	96	94	94	90.8	14.7
10	96	93	90	95	91	90	90	86	80	81	77	73	70	72	81	90	88	87	87	81	83	90	93	89	89	86.1	13.9
11	88	93	91	94	89	92	96	91	96	88	72	78	68	63	77	81	79	81	88	92	91	94	96	93	93	86.2	12.8
12	94	97	95	99	98	93	95	96	93	97	90	85	82	82	83	87	86	85	82	82	80	81	78	79	79	88.6	13.9
13	86	82	89	85	83	80	95	92	94	91	88	87	85	84	83	84	88	89	88	90	91	88	87	90	90	87.2	14.0
14	91	92	91	90	86	89	91	91	90	88	91	82	79	79	76	72	75	72	75	75	81	88	98	99	99	84.9	13.1
15	96	98	100	98	100	99	99	96	89	86	79	75	78	77	78	81	85	95	94	91	90	94	93	98	98	90.4	12.3
16	100	100	99	97	94	95	95	92	87	85	81	78	78	80	83	87	88	91	92	95	92	95	93	95	95	90.6	14.7
17	94	93	97	98	94	97	98	91	95	85	77	75	75	77	80	83	87	87	90	87	91	89	90	94	94	88.5	12.6
18	98	97	94	90	85	81	88	89	88	91	90	80	78	80	78	82	81	79	80	76	78	68	74	74	74	83.7	13.0
19	85	82	88	90	86	98	89	87	89	85	83	94	89	89	88	87	87	92	94	90	87	90	94	88	88	88.5	14.0
20	88	88	85	85	82	78	78	82	87	88	75	76	76	78	77	69	75	70	70	73	74	76	71	75	75	78.4	11.8
21	72	72	77	73	72	78	77	77	81	81	78	78	80	78	77	79	83	90	93	94	98	94	96	96	96	81.7	12.9
22	96	94	96	98	97	96	94	96	94	96	98	98	99	99	97	96	97	96	99	99	97	97	97	99	99	97.1	17.1
23	96	98	98	96	97	96	94	96	96	95	93	93	94	97	93	92	93	92	90	93	91	88	90	89	89	94.0	16.1
24	88	91	95	94	90	90	93	89	87	81	78	77	85	83	81	87	88	85	88	89	93	91	89	90	90	87.6	13.6
25	92	88	88	90	89	83	90	78	77	72	68	67	69	67	67	69	71	76	84	80	80	76	83	75	75	78.6	11.6
26	64	67	64	62	74	75	78	70	74	63	63	57	59	59	56	58	61	70	64	67	67	67	70	73	73	66.0	8.6
27	76	74	68	72	68	63	63	75	66	55	63	59	59	60	64	64	64	68	70	76	75	75	75	80	80	67.9	8.9
28	86	86	83	84	86	81	84	83	87	83	77	77	71	68	72	74	74	74	77	82	77	77	75	82	82	79.1	11.2
29	80	76	79	79	84	81	82	80	76	70	66	66	66	64	59	61	63	75	77	79	80	84	83	80	80	74.6	9.7
30	80	82	82	86	88	87	87	87	87	87	77	75	76	67	69	67	65	66	72	67	70	72	76	77	77	77.1	10.7
Mean ...	88.8	88.4	88.2	88.4	87.6	87.5	88.6	86.7	86.1	83.9	80.7	79.9	78.8	78.1	78.1	79.3	80.2	82.4	84.5	85.3	85.7	86.3	87.3	87.6	84.5	†13.4	
Vapour Pressure* ...	mb. 12.9	mb. 12.8	mb. 12.8	mb. 12.7	mb. 12.6	mb. 12.5	mb. 12.8	mb. 13.0	mb. 13.4	mb. 13.7	mb. 13.8	mb. 13.9	mb. 14.0	mb. 13.9	mb. 13.9	mb. 13.8	mb. 13.8	mb. 13.7	mb. 13.5	mb. 13.4	mb. 13.2	mb. 13.1	mb. 13.0	mb. 13.0	mb. 13.0	†13.3	

382. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres. October, 1930.

1	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
2	76	75	75	76	71	73	69	73	72	67	67	67	68	76	78	77	79	79	77	83	78	77	68	80	80	74.1	11.5
3	88	90	86	88	90	95	91	91	95	92	88	84	84	81	86	87	86	89	93	93	95	96	95	98	98	89.8	14.7
4	96	98	98	99	96	96	96	96	93	91	94	94	93	94	97	96	98	96	92	82	76	74	74	72	72	91.8	14.2
5	73	72	74	87	71	83	85	86	79	83	87	86	85	86	79	73	75	68	75	70	70	72	71	69	71	77.5	10.7
6	68	76	74	76	72	71	80	79	84	75	73	75	69	72	76	72	67	67	67	68	66	67	66	67	67	72.0	10.0
7	83	85	86	80	80	84	83	89	89	90	95	89	86	83	88	90	94	91	98	93	86	92	83	83	83	87.2	11.9
8	83	91	83	83	83	82	83	85	88	88	82	80	85	84	72	75	74	74	74	83	70	72	71	73	73	80.1	11.0
9	71	73	73	76	83	74	82	87	86	81	73	65	74	66	73	74	70	78	73	78	81	87	86	81	81	76.7	9.1
10	86	89	82	81	84	79	86	85	90	94	86	81	85	81	78	82	88	88	88	88	92	94	93	93	93	86.1	11.3
11	97	99	89	89	92	88	91	89	86	80	80	80	79	81	92	82	87	75	67	68	83	83	79	82	82	84.8	10.8
12	77	79	73	74	76	72	71	72	71	75	78	78	75	70	72	74	78	85	85	85	86	86	80	91	91	77.3	10.2
13	93	94	95	95	94	94	93	93	97	95	91	84	86	87	86	87	90	90	90	88	90	88	90	90	90	90.9	14.1
14	91	93	94	94	94	93	93	93	96	98	98	99	99	94	93	93	92	93	93	96	94	96	96	96	96	94.5	15.8
15	94	97	94	96	96	92	94	96	97	92	91	90	90	90	90	91	96	96	96	97	96	95	97	94	94	94.4	15.0
16	95	92	87	92	94	92	96	93	94	98	97	93	91	90	87	85	88	89	92	88	89	88	89	89	89	91.3	12.1
17	88	87	84	79	80	79	80	76	84	81	79	86	81	77	78	87	88	80	79	73	86	74	75	81	81	81.1	10.4
18</																											

Percentages at exact hours, Greenwich Mean Time.

383. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

November, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	95	94	95	94	94	94	94	94	94	94	93	87	86	87	84	79	74	87	88	87	94	91	98	99	90.6	11.4	
2	98	95	95	86	79	83	75	65	69	84	87	89	87	87	78	75	72	71	72	69	69	73	67	71	79.6	10.4	
3	84	74	74	81	76	83	81	89	88	93	88	88	86	88	91	90	94	94	90	91	88	86	81	79	85.1	9.3	
4	86	79	86	85	85	82	86	87	87	83	87	73	75	72	76	79	73	79	72	74	72	73	72	73	78.7	7.9	
5	78	81	80	82	81	84	84	83	83	82	83	81	84	81	79	77	81	83	85	81	75	75	75	72	80.4	9.2	
6	82	79	76	78	78	78	78	75	78	78	74	70	72	70	74	69	68	79	76	76	78	83	86	84	76.4	8.1	
7	84	80	84	79	88	86	83	87	91	87	85	85	84	85	92	93	93	92	94	94	98	96	96	94	88.5	11.2	
8	96	93	90	91	95	98	92	94	93	93	98	96	95	95	95	96	93	92	93	92	93	92	93	95	93.9	12.5	
9	99	99	95	99	98	98	98	97	95	98	94	95	93	97	98	94	93	95	86	76	79	78	76	76	92.3	12.4	
10	74	87	78	76	75	75	76	83	75	81	75	76	79	75	75	76	79	75	86	80	87	82	75	77	78.2	9.7	
11	79	81	75	84	82	86	89	85	87	87	87	81	77	78	75	83	85	88	87	87	91	87	89	90	83.9	8.4	
12	86	90	86	86	87	88	86	85	83	77	79	75	76	75	79	76	82	84	84	83	83	77	79	77	82.1	9.1	
13	77	79	76	79	83	80	80	80	86	84	79	85	84	85	83	80	86	82	84	84	84	86	87	87	82.3	10.3	
14	87	89	87	88	89	92	87	89	87	87	87	83	86	84	85	89	89	94	95	91	91	94	93	98	89.0	11.7	
15	97	96	95	95	93	94	95	96	96	97	94	89	92	84	86	87	79	85	76	80	74	66	69	70	87.5	10.9	
16	65	62	62	60	66	72	74	70	66	60	59	56	62	63	66	69	66	71	54	68	63	64	66	65	64.6	5.7	
17	69	61	67	59	59	63	65	67	73	73	81	82	82	80	84	84	86	87	87	87	88	89	92	91	76.8	8.2	
18	89	88	88	89	94	95	94	99	96	99	99	98	95	96	98	95	95	92	93	90	90	89	90	87	93.2	12.5	
19	86	86	84	87	85	87	93	93	92	93	89	87	88	91	87	91	92	92	87	83	80	88	88	89	88.2	11.7	
20	94	97	97	99	94	95	96	97	97	99	91	90	90	91	91	90	91	90	90	94	90	90	97	91	93.3	13.1	
21	93	93	95	93	93	95	95	96	97	94	94	95	89	88	91	92	93	92	92	89	92	89	92	87	92.5	12.6	
22	82	87	84	88	89	94	88	88	88	87	84	84	75	70	57	58	53	54	56	66	66	69	70	73	75.7	8.5	
23	72	80	84	83	82	89	87	90	71	72	73	76	86	86	87	89	88	91	92	94	93	92	89	89	84.5	8.8	
24	90	81	81	85	90	98	89	92	86	86	86	86	91	89	84	84	89	80	82	87	83	74	78	76	85.7	10.7	
25	82	87	84	87	84	93	91	89	83	80	74	74	73	86	73	83	71	77	84	80	84	85	83	82	81.4	9.2	
26	84	84	84	84	87	83	85	84	87	79	80	83	74	77	78	75	77	87	87	85	89	87	88	92	83.1	7.7	
27	91	87	88	87	93	91	94	92	93	94	90	89	84	80	73	72	74	78	84	90	94	87	90	89	86.9	6.7	
28	92	92	92	91	91	91	92	92	89	87	87	88	83	88	91	87	93	94	92	87	92	92	90	88	90.1	6.8	
29	88	82	79	79	84	78	78	83	79	81	84	84	80	73	73	73	79	82	90	87	86	87	85	92	81.8	7.4	
30	88	85	89	87	80	85	85	87	93	90	90	83	88	86	88	87	86	86	88	87	87	84	85	85	82	87.2	7.8
Mean ...	85.2	84.9	84.3	84.7	85.5	87.0	86.3	86.8	86.3	86.0	84.7	83.6	83.2	82.9	82.4	82.1	82.5	84.5	84.1	84.0	84.4	83.5	84.0	83.9	84.5	19.4	
Vapour Pressure* ...	mb. 9.4	mb. 9.3	mb. 9.2	mb. 9.3	mb. 9.3	mb. 9.4	mb. 9.3	mb. 9.3	mb. 9.5	mb. 9.6	mb. 9.8	mb. 10.0	mb. 10.0	mb. 10.1	mb. 9.9	mb. 9.8	mb. 9.5	mb. 9.6	mb. 9.5	mb. 9.4	mb. 9.4	mb. 9.2	mb. 9.3	mb. 9.3	mb. 9.5	19.5	

384. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

December, 1930.

1	83	83	81	79	79	78	79	81	85	85	74	76	71	75	80	76	79	75	74	73	81	73	77	81	78.3	8.9
2	82	84	87	87	91	85	82	85	89	80	80	77	76	74	75	78	81	79	76	74	76	81	81	79	80.8	8.9
3	78	71	71	73	75	73	83	82	75	76	73	76	79	87	80	85	85	90	87	85	87	93	87	90	80.6	8.1
4	86	96	87	89	96	96	93	88	94	96	96	94	96	88	91	94	93	94	93	98	98	99	99	99	93.7	8.0
5	98	99	99	98	96	96	93	93	94	93	92	91	98	89	92	93	95	96	96	95	95	95	96	97	95.0	10.4
6	96	92	96	91	89	91	92	93	93	95	98	98	92	91	93	92	88	88	88	89	83	76	71	76	90.1	9.9
7	79	74	64	64	81	78	75	85	89	85	83	78	81	72	71	78	78	84	82	81	81	87	89	90	79.3	7.3
8	77	73	76	69	65	59	72	66	67	69	65	83	86	87	83	83	84	78	84	74	70	72	70	75.2	6.8	
9	65	60	57	62	65	75	74	65	73	61	74	59	66	65	69	74	79	78	75	80	69	68	66	71	68.7	6.4
10	73	78	88	81	79	85	82	84	84	84	84	87	88	89	89	92	92	95	94	97	96	94	94	94	87.0	9.9
11	99	97	99	89	71	72	65	71	65	71	70	74	78	75	75	79	78	80	84	86	84	87	93	89	80.6	10.2
12	89	89	88	91	91	91	91	94	96	98	98	97	94	98	96	96	96	94	93	86	89	73	73	76	91.0	11.2
13	79	81	88	83	79	79	85	82	72	74	72	72	71	75	72	79	69	69	67	65	76	68	67	71	74.9	8.1
14	83	69	72	78	73	81	77	72	78	77	78	86	69	84	77	77	72	71	70	69	71	73	67	67	74.7	7.4
15	73	82	86	84	90	94	91	91	93	90	94	88	91	93	95	98	95	96	94	88	82	79	78	72	88.1	9.6
16	67	73	75	69	69	59	60	70	68	72	69	62	68	83	69	82	75	74	72	65	68	72	71	70.2	7.4	
17	73	72	77	76	88	88	88	85	88	89	92	92	91	94	94	95	96	97	100	98	98	98	97	93	89.5	10.1
18	93	94	98	95	98	94	94	94	96	96	95	94	97	97	97	94	96	94	96	99	98	99	98	98	95.9	12.3
19	99	97	97	97	95	96	97	98	99	97	95	96														

For exact hours, Greenwich Mean Time.

385. Cahirciveen (Valentia Observatory): North Wall Screen:  $h_s = 1.3$  metres.

1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Relative Humidity ...	% 85.4	% 85.4	% 85.2	% 85.5	% 86.0	% 85.8	% 85.5	% 84.3	% 83.7	% 82.3	% 81.2	% 80.2	% 79.8	% 79.4	% 79.1	% 79.3	% 80.1	% 81.3	% 82.4	% 83.3	% 84.3	% 84.5	% 84.7	% 85.1	% 83.1
Vapour Pressure in millibars* ...	mb. 10.0	mb. 10.0	mb. 9.9	mb. 9.9	mb. 9.9	mb. 9.9	mb. 10.0	mb. 10.2	mb. 10.4	mb. 10.5	mb. 10.6	mb. 10.8	mb. 10.9	mb. 10.9	mb. 10.8	mb. 10.8	mb. 10.7	mb. 10.6	mb. 10.5	mb. 10.4	mb. 10.3	mb. 10.2	mb. 10.1	mb. 10.1	mb. 10.3

\* Computed from the mean temperatures and mean relative humidity.

RELATIVE HUMIDITY: MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

386. Cahirciveen (Valentia Observatory): North Wall Screen:  $h_s = 1.3$  metres.

1930.

Month	Mean.	Hour. G.M.T.																							
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	% 82.8	% -1.6	% -1.0	% -1.8	% -0.9	% +1.5	% +2.4	% +2.2	% +2.4	% +2.1	% +1.5	% +1.8	% -1.1	% -1.3	% -0.6	% -1.4	% -0.7	% +0.1	% +0.2	% -0.4	% -0.3	% -0.5	% -0.3	% -1.4	% -0.9
Feb.	% 76.5	% +1.5	% +0.9	% +2.4	% +2.4	% +3.1	% +1.7	% +2.7	% +0.6	% +1.1	% -0.3	% -1.6	% -3.2	% -4.5	% -5.1	% -4.5	% -3.8	% -1.8	% +0.3	% +0.7	% +1.2	% +1.9	% +2.3	% +1.1	% +0.9
Mar.	% 81.6	% +3.4	% +2.8	% +1.7	% +2.2	% +2.4	% +3.0	% +2.7	% +1.9	% +2.0	% -1.3	% -2.7	% -3.6	% -3.4	% -5.5	% -5.4	% -4.9	% -3.8	% -2.1	% -0.5	% +1.3	% +1.2	% +1.6	% +2.8	% +4.2
Apr.	% 78.0	% +5.1	% +4.2	% +4.6	% +4.9	% +4.2	% +3.3	% +3.3	% +2.6	% -0.2	% -1.8	% -4.7	% -5.2	% -6.0	% -6.4	% -6.3	% -5.6	% -5.0	% -2.4	% -1.1	% +1.2	% +2.7	% +2.8	% +2.7	% +3.1
May	% 82.2	% +4.3	% +4.8	% +5.5	% +5.8	% +6.7	% +5.9	% +4.5	% +1.0	% -0.9	% -3.5	% -3.4	% -4.8	% -4.5	% -4.2	% -6.1	% -6.6	% -6.1	% -5.3	% -2.7	% -0.5	% +0.5	% +2.1	% +3.1	% +4.4
June	% 82.1	% +5.0	% +4.7	% +4.1	% +4.2	% +5.1	% +4.2	% +2.2	% -1.3	% -2.2	% -3.9	% -3.3	% -4.5	% -4.4	% -4.7	% -5.2	% -6.2	% -4.7	% -4.5	% -2.4	% 0.0	% +3.1	% +3.7	% +5.2	% +5.8
July	% 85.9	% +3.1	% +3.9	% +3.6	% +3.1	% +4.8	% +3.9	% +2.3	% +1.2	% -1.0	% -2.2	% -3.5	% -4.7	% -4.2	% -5.4	% -5.2	% -5.1	% -4.2	% -2.9	% -0.6	% +0.9	% +2.9	% +3.4	% +3.4	% +3.0
Aug.	% 88.7	% +2.9	% +2.6	% +2.3	% +2.5	% +2.8	% +3.6	% +2.8	% +1.5	% +0.6	% -1.1	% -2.1	% -2.0	% -3.2	% -3.2	% -3.5	% -3.9	% -5.1	% -4.1	% -1.5	% +0.2	% +1.9	% +1.8	% +2.1	% +2.1
Sept.	% 84.5	% +4.0	% +3.7	% +3.5	% +3.8	% +2.9	% +2.9	% +3.9	% +2.1	% +1.5	% -0.7	% -3.8	% -4.7	% -5.7	% -6.4	% -6.3	% -5.1	% -4.2	% -2.0	% +0.1	% +0.9	% +1.3	% +2.0	% +3.0	% +3.3
Oct.	% 85.5	% -0.3	% +1.3	% -0.3	% +1.4	% +1.1	% +1.1	% +1.6	% +1.7	% +2.0	% +1.4	% +1.1	% 0.0	% -0.8	% -1.3	% -1.6	% -1.7	% -0.2	% -0.7	% -0.6	% -1.3	% -0.9	% -0.9	% -1.2	% -0.9
Nov.	% 84.5	% +0.6	% +0.3	% -0.3	% +0.1	% +0.9	% +2.4	% +1.8	% +2.3	% +1.8	% +1.5	% +0.2	% -0.9	% -1.2	% -1.5	% -2.0	% -2.3	% -1.9	% +0.1	% -0.2	% -0.4	% +0.1	% -0.8	% -0.3	% -0.3
Dec.	% 83.8	% -0.2	% 0.0	% +0.8	% -0.9	% -0.2	% -1.4	% -0.8	% -0.6	% +0.2	% +0.6	% -0.1	% -0.2	% -0.5	% +0.1	% -0.5	% +1.2	% +1.2	% +1.9	% +0.9	% +0.1	% +0.4	% -0.4	% -1.2	% -0.4
Year	% 83.1	% +2.3	% +2.4	% +2.2	% +2.4	% +2.9	% +2.7	% +2.4	% +1.3	% +0.6	% -0.8	% -1.8	% -2.9	% -3.3	% -3.7	% -4.0	% -3.7	% -3.0	% -1.8	% -0.7	% +0.3	% +1.2	% +1.4	% +1.6	% +2.0

RAINFALL: ANNUAL TOTALS OF HOURLY VALUES.

Amounts, in millimetres; durations in hours for periods of sixty minutes between the exact hours, Greenwich Mean Time.

387. Cahirciveen (Valentia Observatory):  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 9.1 metres + 0.5 metre. 1930.

Hour. G.M.T.	0 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	21 to 22.	22 to 23.	23 to 24.	0 to 24.
Amount ...	mm. 65.1	mm. 84.1	mm. 69.4	mm. 49.3	mm. 62.8	mm. 78.5	mm. 65.9	mm. 73.0	mm. 91.6	mm. 77.0	mm. 83.8	mm. 56.3	mm. 63.7	mm. 66.2	mm. 78.2	mm. 69.0	mm. 70.8	mm. 70.2	mm. 63.6	mm. 54.5	mm. 63.8	mm. 61.5	mm. 68.9	mm. 77.2	mm. 1664.4
Duration ...	hr. 43.5	hr. 50.6	hr. 49.5	hr. 39.8	hr. 40.2	hr. 41.2	hr. 42.0	hr. 45.1	hr. 43.3	hr. 39.7	hr. 36.4	hr. 36.4	hr. 42.0	hr. 43.1	hr. 39.7	hr. 39.8	hr. 38.2	hr. 39.1	hr. 32.9	hr. 38.0	hr. 37.3	hr. 34.4	hr. 35.1	hr. 38.6	hr. 965.9

388. Cahirciveen (Valentia Observatory).

NOTES ON RAINFALL.

1930.

Notable Falls of the Year.—

Details of the greatest continuous falls are as follows:—

Date.	Amount mm.	Duration hrs.	Date.	Amount mm.	Duration hrs.
January 18th	25	7.8	September 19th	28	5.4
January 21st	16	11.5	October 19th	26	4.9
April 25th	27	9.1	November 7th	25	6.5
June 29th	28	10.3	November 18th	23	7.0
July 15th	21	7.3	November 24th	22	5.8
August 17th	24	10.0	December 15th	20	6.5
August 20th	25	10.6			

There were two "noteworthy" falls in the year: one of 5 mm. in 5 minutes, on August 19th; the other of 19 mm. in 30 minutes, on September 19th. The greatest fall in the year between one exact hour and the next was 22.1 mm. between 5h. and 6h. on September 19th.

Dry Periods.—

The longest period without rain was the eight days from February 6th to February 13th.

Wet Periods.—

The first 25 days of January were part of a period of 40 days beginning on December 17th, 1929, on all of which rainfall measurements were 0.2 mm. or more; on only one day of the period was the fall less than 1.0 mm. (0.2 mm. on July 15th).

There was a period of 35 days, from July 25th to August 28th, on all of which rain was measured; the amount measured on one of these days, however, was only 0.1 mm. (August 14th).

On each of the 29 days, October 10th to November 7th, rainfall of 0.2 mm. or more was measured.

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

389. Cahirciveen (Valentia Observatory) :  $H_r$  (height of receiving surface above M.S.L.)= $H$  (height of station above M.S.L.)+ $h$ ,  
(height of receiving surface above ground)=9.1 metres+0.5 metre. January, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.	
1	.1	1.3	.9	.4	(...)	...	...	...	...	...	...	.3	.5	.5	.4	.1	.1	.1	(...)	...	...	...	...	...	...	4.7	6.8	
2	...	...	...	...	...	...	...	...	...	...	...	(...)	.4	.6	1.0	.4	.2	(...)	(...)	(...)	(...)	(...)	.2	1.3	.3	4.4	4.3	
3	...	.2	.2	.2	.3	.2	(...)	...	...	...	...	...	...	1.4	1.3	...	1.2	.7	.3	1.0	(...)	(...)	(...)	.1	.7	7.1	4.3	
4	...	.2	...	.1	.6	1.3	1.9	1.9	3.5	2.5	1.9	2.4	.1	...	...	.2	.2	...	...	...	.2	.2	.4	...	17.6	6.3		
5	(...)	...	.2	.4	.7	1.5	1.8	.7	...	(...)	.1	...	(...)	.3	...	...	...	.9	.1	.5	.3	.7	.4	...	8.6	4.7		
6	...	...	...	...	...	...	...	...	...	...	.4	.7	.7	.8	.2	(...)	.1	.3	.1	(.1)	...	...	(...)	...	3.4	4.4		
7	...	...	(...)	...	...	(...)	(...)	...	...	...	1.9	...	.4	.3	1.0	.8	.4	...	...	...	...	...	.1	2.5	1.0	8.4	3.8	
8	...	...	...	...	...	.2	...	...	...	...	...	...	(...)	.3	...	2.6	1.0	.5	...	...	...	...	.4	3.9	...	8.9	2.8	
9	.2	.3	.3	(...)	...	...	...	...	...	.2	(...)	.5	...	...	.7	.6	.1	(...)	...	.9	...	...	...	...	...	3.8	1.5	
10	...	...	.7	...	...	...	.2	.4	3.5	1.7	2.7	3.6	.7	1.6	.9	.2	7.7	2.9	1.4	.2	(...)	...	(...)	.4	28.8	9.4		
11	.2	...	(...)	.1	.2	(...)	.3	.1	.1	(...)	...	.1	...	...	(...)	(...)	...	(...)	...	...	(...)	.8	...	.2	2.1	2.1		
12	(...)	...	...	...	...	.2	1.1	1.3	1.0	1.2	1.1	.1	(...)	.7	(...)	.1	(...)	.1	(...)	.2	(...)	.1	...	...	...	7.2	5.9	
13	...	...	...	...	...	.2	1.3	5.4	.2	.5	...	...	...	.1	...	(...)	...	1.7	.4	1.0	1.9	1.6	.6	.6	15.5	8.8		
14	.6	.4	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(P)	1.3	2.5							
15	(P)	(P)	(L)	(.1)	(L)	(L)	(L)	(L)	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	(...)	.4	1.1	3.7	3.0	.2	.1	1.0	1.0	.1	.6	.3	11.5	6.8		
17	4.6	.8	.1	.1	...	...	(...)	...	(...)	.2	...	...	...	(...)	(...)	.1	(...)	(...)	(...)	.1	(...)	(...)	(...)	(...)	6.0	2.9		
18	.1	.1	(...)	(...)	...	.1	...	...	...	...	(...)	...	...	...	...	...	...	1.5	5.0	4.0	3.5	3.5	2.6	2.0	22.4	8.1		
19	2.0	1.1	.4	.1	.1	(...)	.1	.9	.7	.7	.1	(...)	1.8	.2	1.6	...	...	...	...	...	...	...	...	...	9.9	7.5		
20	2.4	1.3	...	...	...	...	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.9	0.6	
21	...	...	...	.1	.2	.2	(...)	.2	.2	.6	1.4	.5	1.7	1.6	.6	.3	1.9	2.0	2.8	2.1	.9	...	...	...	17.3	12.6		
22	...	.1	(...)	.5	.3	...	...	.5	.1	...	...	...	(...)	(...)	...	...	...	...	...	.2	(...)	...	.5	.2	2.4	1.4		
23	...	...	...	1.0	.5	...	...	...	...	...	...	...	(...)	(...)	...	.3	...	...	...	...	2.0	2.9	3.2	2.5	12.4	4.2		
24	.4	5.2	.4	...	...	...	(...)	2.6	...	.4	...	...	(...)	...	...	(...)	.5	(...)	...	...	.4	.4	.5	.6	11.4	3.5		
25	(...)	.5	.1	(...)	.3	.3	(...)	...	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	1.0	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	2.2	.5	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	...
28	...	...	...	...	...	...	...	.4	3.9	4.6	4.0	6.6	.1	.3	...	(...)	...	...	...	...	...	...	...	...	...	19.9	4.3	
29	...	...	...	...	1.2	.5	2.9	2.7	1.9	.1	...	1.4	(...)	.7	...	...	.2	...	...	...	.5	.2	...	...	...	12.3	5.4	
30	...	.5	.7	5.0	...	...	...	...	...	...	(...)	...	...	...	.1	.2	.1	(...)	(...)	.9	...	...	...	...	...	7.5	2.4	
31	...	...	...	.4	1.6	2.0	2.1	3.2	2.1	...	...	...	...	3.2	2.4	.8	.1	.4	...	...	...	...	...	...	...	18.3	7.8	
Sum.	10.6	12.0	4.3	8.5	8.2	7.0	11.0	20.0	23.2	11.8	14.8	11.6	6.6	12.7	11.3	10.4	16.8	11.3	10.2	12.2	10.7	10.8	13.0	12.2	281.2	136.8		
Total Duration.	4.5	5.8	3.8	4.2	4.2	3.9	5.4	10.3	8.1	6.5	4.9	4.5	5.5	7.4	7.3	5.9	6.5	5.7	3.8	5.9	5.3	5.0	6.1	6.3	136.8			

390. Cahirciveen (Valentia Observatory) :  $H_r = 9.1$  metres + 0.5 metre.

February, 1930.

	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.							
1	...	...	...	...	...	...	(...)	(.1)	...	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.2
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	1.6	.4	1.6	.2	1.4	1.6	.2	...	.3	1.3	.2	1.0	.2	.8	.9	.4	.5	.5	.6	13.7	6.1	...	
4	.4	1.1	2.2	.3	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	1.5	
5	...	...	...	...	.2	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.5	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	.1	(...)	...	...	(...)	...	...	...	...	(...)	...	.3	.1	...	...	.5	.4	...	...	...	0.9	1.1	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	.1	0.1	0.3	
20	...	...	...	...	...	...	...	.1	.1	(...)	(...)	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	...	...	0.2	0.6	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	(...)	(...)	.1	1.3	.6	(...)	...	(...)	.4	1.6	1.2	.1	...	...	...	...	5.3	3.2	
26	...	.2	.8	1.5	1.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(.1)	...	...	...	4.2	3.3	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	0.4	1.3	3.0	1.8	1.9	2.0	0.5	1.8	0.2	1.4	1.9	1.5	0.6	0.3	1.3	0.2	1.4	2.1	2.1	1.0	1.0	0.9	0.5	0.7	29.8	17.2		
Total Duration.	0.2	0.5	1.8	1.2	1.3	1.4	0.5	0.9	0.2	0.3	0.8	0.7	0.3	0.2	0.5	0.3	0.8	1.2	1.2	0.5	0.8	0.8	0.3	0.5	17.2			
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24			

RAINFALL.

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

391. Cahirciveen (Valentia Observatory):  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h$ ,  
(height of receiving surface above ground) = 9.1 metres + 0.5 metre. March, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24		
Day.	mm.	mm.	hr.																									
1	...	(L)	(L)	(L)	(L)	(L)	(L)	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	1.9	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	0.5	
4	...	...	...	(...)	(...)	(...)	...	...	...	...	...	...	...	(...)	1.1	.5	.5	.5	.4	.5	.3	.6	(...)	(...)	4.4	6.2		
5	.1	.6	.8	2.0	.8	1.4	.3	.1	(...)	(...)	(...)	(...)	...	...	(...)	.1	.7	.1	...	...	.1	.2	2.1	3.0	12.4	10.4		
6	2.6	.7	.3	...	...	.4	(=)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.2	...	...	4.2	2.1		
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	2.0	2.7	3.5	2.1	1.9	.7	.2	(...)	(...)	(...)	(...)	(.1)	(...)	(...)	1.1	.1	.1	.1	...	.4	.2	...	(...)	(...)	1.4	3.5		
10	...	...	...	...	...	...	.1	...	.3	...	...	.3	...	.1	1.3	.5	.1	.3	(...)	...	.6	.1	...	.8	4.5	1.9		
11	.3	(...)	...	...	.1	.1	1.4	(...)	...	(...)	...	(...)	1.2	1.9	2.7	3.2	3.1	.6	.2	.3	.2	.1	(...)	.2	15.6	8.3		
12	.1	.1	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	.3	.3	(...)	...	...	...	.1	...	.1	1.0	1.6		
13	(...)	(...)	...	...	...	...	(...)	.7	.1	(...)	.2	.4	.4	(...)	(...)	...	...	...	...	...	.6	(...)	...	.1	2.5	1.4		
14	(...)	...	.6	...	.7	1.0	1.5	.7	.5	(...)	(...)	.2	.5	1.0	...	...	...	...	...	...	.4	(...)	...	(...)	7.1	6.0		
15	.1	...	...	...	...	...	.1	(...)	(...)	.1	(...)	(...)	(...)	(...)	...	...	(...)	.6	.3	.2	.4	.1	.1	...	2.0	3.2		
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	...	...	...	...	(L)	(.1)	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	...	...	...	0.1	...	
18	...	...	...	...	.8	1.0	.2	.2	(...)	.1	...	.2	.1	...	(...)	...	...	...	...	.2	1.0	.2	.5	.3	5.0	3.7		
19	.1	(*)	(.2)	(.2)	(.2)	(.1)	(*)	(.1)	(.1)	(.2)	(.2)	(*)	(*)	(.1)	(.2)	(.2)	(*)	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)	1.3	2.4		
20	...	...	...	...	...	...	.2	...	(...)	(...)	(...)	(...)	(...)	(.1)	(...)	(...)	(...)	(...)	(...)	(...)	.2	.6	.5	.1	...	1.9	1.5	
21	...	...	...	...	.2	.2	(...)	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.5	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	.9	2.4	3.8	5.6	5.2	17.9	4.8	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	.2	.1	(...)	0.3	0.6	
25	(...)	(...)	(...)	(...)	(...)	(...)	.1	.2	.7	.4	(...)	(...)	(...)	(...)	(...)	(=)	(=)	(=)	(=)	(=)	(=)	(=)	(=)	(=)	(=)	1.4	3.2	
26	...	(...)	(.1)	(...)	(...)	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	...	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	...	.2	.2	.2	.1	...	...	...	...	(...)	.4	1.3	1.4	2.2	1.0	.6	(...)	.3	.2	.2	.2	...	.5	...	8.1	5.1		
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.3	(...)	(...)	.1	1.3	17.5	10.3
31	2.9	6.3	3.6	1.2	.3	.1	.5	.8	...	...	...	...	...	...	(...)	(...)	.5	1.2	.9	.3	3.6	2.8	2.6	2.9	30.5	12.8		
Sum.	8.2	10.6	9.4	5.8	5.1	5.1	4.6	4.0	1.9	3.7	3.9	5.0	5.7	7.0	7.6	7.0	6.0	4.4	3.0	4.6	11.2	9.8	12.3	15.8	161.2	99.7		
Total Dura- tion.	hr. 3.9	hr. 3.3	hr. 4.4	hr. 3.5	hr. 4.4	hr. 4.3	hr. 4.2	hr. 4.3	hr. 2.3	hr. 2.5	hr. 2.4	hr. 3.2	hr. 3.4	hr. 4.0	hr. 3.2	hr. 4.8	hr. 4.8	hr. 5.0	hr. 3.6	hr. 5.7	hr. 7.1	hr. 5.5	hr. 4.7	hr. 5.2	hr. 99.7			

392. Cahirciveen (Valentia Observatory):  $H_r = 9.1$  metres + 0.5 metre.

April, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1	2.6	1.4	.5	(...)	(...)	.2	.2	1.0	2.5	1.3	.5	...	...	...	...	.2	.3	(...)	(...)	.2	.1	...	...	...	...	11.0	7.6
2	...	...	...	...	...	...	(...)	...	...	(...)	.6	.1	.3	.1	.1	...	...	...	...	...	(...)	...	...	...	...	1.2	1.0
3	...	...	...	...	...	...	...	...	...	(...)	.8	.5	1.0	.4	.5	.3	.5	.6	(...)	...	...	...	...	...	...	4.6	5.9
4	.1	.2	...	...	...	.2	(...)	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.6
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	.1	.2	.1	.2	.4	1.6	1.0	1.9	1.0	.8	1.4	.1	.2	.3	.1	.4	.6	.1	.3	.2	(...)	.1	(...)	.1	2.4	3.8	
9	...	...	...	.7	...	...	...	...	(...)	1.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.8	8.4
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	0.5
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.8	.9	1.0	.4	.1	.1	...	...	...	...	3.3	4.2
12	...	...	...	...	...	...	...	...	...	...	(...)	...	...	.1	...	.1	...	...	...	...	...	...	...	...	...	0.2	0.2
13	.3	.2	.3	.6	.2	.5	.5	.2	...	(...)	(...)	.1	.2	...	.1	.2	...	...	.3	...	(...)	(.1)	.3	...	4.1	6.1	
14	...	.3	...	.2	...	...	.5	.1	...	(...)	(...)	...	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	1.2	0.6
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	(...)	.6	(...)	(...)	...	.1	...	...	...	...	...	...	...	0.7	0.4
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	(...)	.2	(...)	(...)	...	...	.1	.4	.9	.4	.5	.3	2.8	4.1	
24	.7	1.0	.6	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.4	2.7
25	.5	.3	1.1	...	...	...	...	...	1.0	.2	.1	(...)	.3	.3	.8	1.4	.6	1.6	1.2	2.0	2.2	5.0	3.9	4.9	27.4	11.8	
26	3.6	2.8	.4	.6	.2	.2	.1	.1	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	5.5
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	.7	...	...	...	...	...	...	...	...	...	...	2.3	1.3
Sum.	7.9	6.4	3.0	2.4	0.8	2.7	2.3	3.3	4.6	3.4	3.4	0.8	2.1	3.6	2.3	2.4	2.7	3.6	2.9	3.0	3.4	5.7	4.5	5.6	82.8	64.7	
Total Dura- tion.	hr. 4.8	hr. 4.7	hr. 4.7	hr. 2.8	hr. 1.2	hr. 3.0	hr. 2.9	hr. 2.7	hr. 2.4	hr. 1.9	hr. 2.4	hr. 1.1	hr. 1.8	hr. 3.4	hr. 2.6	hr. 2.2	hr. 3.0	hr. 2.9	hr. 2.5	hr. 3.3	hr. 2.6	hr. 2.3	hr. 1.4	hr. 2.1	hr. 64.7		
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9																		

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

393. Cahirciveen (Valentia Observatory) :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 9.1 metres + 0.5 metre. May, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
Day.	mm.	mm.	hr.																									
1	(P)	(-1)	(P)	(P)	(P)	(P)	(P)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1.4	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	1.4	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	(P)	(-1)	(P)	(P)	(P)	(P)	(P)	...	...	...	...	...	...	...	...	...	...	...	...	...	(P)	(P)	(P)	(P)	...	0.5	0.2	
5	.6	1.6	1.1	2.3	1.5	.1	...	...	...	...	1.7	1.4	...	...	...	...	...	...	...	...	...	...	...	...	...	10.5	6.0	
6	...	(P)	(P)	(P)	(-1)	(P)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	0.3
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.5	8.4
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.1	9.7
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
13	.2	.9	(...)	.1	.1	.2	(...)	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.6	7.2	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	2.6
15	.1	.7	.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	1.3
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	.1	.5	.8	1.2	3.0	2.0	1.3	2.1	.4	.1	3.8	1.8	1.4	.9	1.0	.5	...	.3	...	...	...	...	...	...	...	21.4	13.7	
18	...	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	0.9
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	1.4
20	(...)	(...)	.3	(...)	.1	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.4
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	1.2
28	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.7
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.4	2.9
Sum.	1.0	3.9	3.0	4.1	5.5	4.5	3.4	4.7	3.7	2.8	7.5	5.6	2.1	3.6	3.2	2.0	2.9	3.5	5.3	0.6	0.5	1.6	1.3	1.1	77.4	60.5		
Total Duration.	hr. 1.7	hr. 3.4	hr. 3.1	hr. 3.4	hr. 3.5	hr. 3.5	hr. 4.1	hr. 4.5	hr. 3.8	hr. 2.0	hr. 4.1	hr. 4.0	hr. 2.4	hr. 2.9	hr. 2.5	hr. 2.2	hr. 1.2	hr. 1.2	hr. 1.8	hr. 1.0	hr. 0.5	hr. 1.4	hr. 1.2	hr. 1.1	hr. 60.5			

394. Cahirciveen (Valentia Observatory) :  $H_r$  = 9.1 metres + 0.5 metre.

June, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
1	...	...	...	...	...	.7	...	(...)	(...)	(...)	.2	(...)	.1	1.4	.1	.2	.1	.1	(...)	...	...	...	...	...	...	2.9	2.4	
2	...	.4	1.1	(...)	.1	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	1.3
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
10	.2	.3	.3	(...)	(...)	.2	.1	.1	...	...	...	...	...	(...)	(.1)	(...)	(...)	(...)	.1	(...)	.4	.1	.2	.3	1.7	3.3		
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.4	2.2
12	1.5	1.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0	2.0
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.8
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17.0	9.9
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.2	2.3
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	1.2
23	.1	.8	.6	.1	.6	2.8	1.5	(...)	.8	(...)	.5	...	1.0	.4	.6	.2	.2	.2	...	...	...	(...)	...	.4	...	3.2	1.9	
24	...	...	...	.3	.5	...	...	...	...	...	...	...	...	...	.5	...	.4	1.5	...	...	...	...	1.1	.1	...	11.4	2.9	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	1.2
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	.1	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.9	3.8
28	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.3
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1
30	2.8	1.7	.8	.5	.2	.2	.1	.2	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22.7	7.4
Sum.	4.7	5.0	2.8	0.9	1.6	4.6	2.3	1.5	2.4	0.6	1.3	1.9	3.7	5.4	6.7	3.9	2.2	3.7	6.3	8.6	9.8	2.1	5.2	5.2	92.2	49.4		
Total Duration.	hr. 2.7	hr. 3.1	hr. 1.9	hr. 0.8	hr. 1.1	hr. 2.6	hr. 1.8	hr. 2.4	hr. 2.8	hr. 1.4	hr. 1.4	hr. 1.1	hr. 2.3	hr. 3.6	hr. 2.1	hr. 1.2	hr. 1.3	hr. 2.4	hr. 2.8	hr. 3.2	hr. 2.3	hr. 1.7	hr. 1.6	hr. 1.8	hr. 49.4			
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24			

RAINFALL.

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

395. Cahirciveen (Valentia Observatory):  $H_r$  (height of receiving surface above M.S.L.)= $H$  (height of station above M.S.L.)+ $h$ ,  
(height of receiving surface above ground) = 9.1 metres + 0.5 metre. July, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24	
Day.	mm.	hr.																									
1	...	...	...	7	...	4	(...)	(...)	2	...	...	...	2	(...)	...	...	...	...	(...)	...	(...)	...	...	...	1.5	0.7	
2	...	...	...	...	7	2	1	(...)	8	2	...	...	(...)	6	2	2.3	4	8.2	...	...	...	...	...	...	13.7	4.2	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.6	
4	...	3	3	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.6	
5	...	...	...	...	...	...	(...)	(...)	2	...	...	...	...	...	...	...	...	...	...	...	(...)	6	3	3	1.4	2.4	
6	4	3	(...)	1	1	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	2.0	
7	(...)	(...)	1	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	(...)	0.8	2.8	
8	1	1	1	(...)	...	1	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	(...)	0.5	2.3	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	0.4	1.1	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	...	...	...	
11	...	...	...	1	3	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	1.4	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	...	...	...	...	...	
13	...	...	...	...	1.4	2.8	5.9	4.9	4.1	2.3	...	1	(...)	...	(...)	(...)	...	...	...	...	2	...	...	2	21.9	5.6	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15	...	...	...	...	2	1.3	2.7	3.4	5.5	3.6	2.9	1.4	1.8	...	...	(...)	...	...	...	...	1	(...)	3	1	23.3	9.2	
16	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	1.0	
17	...	...	...	...	2	...	...	...	...	(...)	...	...	...	...	...	...	...	...	...	...	2	2	1	3	7	1.8	2.3
18	8	...	...	...	...	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	0.5	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	0.1	0.2	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	0.2	0.4	
23	...	...	...	...	...	3	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.2	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25	...	...	...	...	...	...	...	...	8	2.0	2.6	1	7	1.4	2.2	2.1	1.2	1.0	2.5	7	2	1	2	...	17.8	11.9	
26	...	4	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	1.1	
27	...	...	...	...	...	...	...	...	(...)	(...)	...	9	2	(...)	2	2.6	2	8	4	...	...	...	...	...	5.3	2.7	
28	...	...	...	...	3	3.6	1	(...)	...	5	4	6	1	...	(...)	(...)	(...)	1	...	...	2	2	...	...	6.1	2.2	
29	...	...	...	...	...	2	4	(...)	...	...	1	6	...	...	(...)	(...)	(...)	...	...	(...)	1	1	...	...	0.9	1.4	
30	...	(...)	2	...	1.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	0.8	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	7	1	...	...	...	1.0	1.5	
Sum	1.4	1.3	1.0	1.0	4.3	9.1	9.4	8.3	11.6	8.6	6.0	3.1	3.1	2.0	2.6	7.0	1.8	10.2	3.1	1.6	1.2	2.0	1.4	1.7	102.8	58.5	
Total Duration.	hr. 2.0	hr. 2.2	hr. 1.7	hr. 1.0	hr. 3.6	hr. 4.8	hr. 4.0	hr. 2.0	hr. 3.6	hr. 2.5	hr. 2.2	hr. 2.1	hr. 2.3	hr. 1.6	hr. 1.7	hr. 2.4	hr. 1.5	hr. 2.7	hr. 1.8	hr. 2.3	hr. 2.3	hr. 2.6	hr. 2.5	hr. 3.1	hr. 58.5		

396. Cahirciveen (Valentia Observatory):  $H_r = 9.1$  metres + 0.5 metre. August, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24		
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.																	
1	1	1	5	8	7	1	4	(...)	(...)	(...)	(...)	(...)	(...)	7	9	3.2	5.0	(...)	1.0	(...)	(...)	(...)	(...)	(...)	(...)	13.5	6.9	
2	...	1	7	3	1.0	1.8	1	(...)	(...)	(...)	(...)	(...)	(...)	...	3	(...)	...	...	...	...	...	...	...	...	1.0	5.4	4.0	
3	7	6	2	...	...	...	(...)	4	1	...	(...)	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	2.0	1.8	
4	...	...	...	...	...	...	...	...	...	...	2	...	(...)	...	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.2	0.2	
5	...	...	...	...	...	...	...	4	1.3	7	(...)	(...)	(...)	5	(...)	(...)	(...)	(...)	(...)	1	3	...	...	1	3.5	1.9		
6	...	...	...	1	...	1	1	(...)	3	1	...	...	4	(...)	...	...	...	(...)	1	1	1.0	1	...	...	2.4	2.0		
7	...	...	5	2	5	...	...	1	2	(...)	(...)	(...)	3	6	4	3	2	(...)	(...)	(...)	(...)	(...)	(...)	(...)	...	1.3	0.9	
8	...	...	(...)	2	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	...	2.1	5.0	
9	...	...	(...)	2	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	...	0.3	0.8	
10	(...)	2	5	2	2	3	1.1	7	1.4	1.2	1	2	1.0	3	(...)	2.5	1.0	1.4	4	5	3	(...)	(...)	(...)	13.5	13.2		
11	...	...	...	...	...	...	(...)	...	...	...	...	...	(...)	4	(...)	1	3	...	...	(...)	(...)	(...)	(...)	(...)	4	1.2	0.6	
12	3	...	(...)	5	1.0	7	2	(...)	3	1	(...)	(...)	(...)	...	(...)	...	...	...	...	(...)	(...)	(...)	(...)	(...)	...	3.7	1.2	
13	...	1	(...)	4	2	...	...	(...)	1	6	6	7	7	3	1	6	4	2	1	1	1	1	(...)	(...)	...	4.7	8.3	
14	1	(...)	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.4	
15	...	...	...	...	...	6	5	1	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	1.4	1.9	
16	(...)	(...)	(...)	(...)	...	...	...	(...)	(...)	(...)	(...)	(...)	2	2	1	...	...	...	...	...	...	...	...	...	...	0.5	0.8	
17	...	...	...	...	...	...	...	...	1.4	6	(...)	5	1.7	3.0	1.5	1.9	2.7	4.4	5.0	2.2	1.0	1	(...)	1	26.1	11.4		
18	1.2	2.2	1.4	1.0	1.0	5	(...)	1.3	1	2	5	9	7	(...)	5	2	...	...	...	(...)	(...)	(...)	(...)	(...)	...	11.7	9.7	
19	(...)	2.2	5	7	6.7	(...)	5	(...)	(...)	(...)	(...)	(...)	(...)	1	...	2	...	1	...	...	...	...	...	...	...	11.0	2.5	
20	...	5	...	...	...	...	3.1	3	5	1.6	1.5	2.5	3.0	3.9	6.0	2.1	9	1.5	1.0	6	1	1	(...)	(...)	...	29.2	12.7	
21	...	...	...	...	...	2	1	...	...	...	...	1.0	...	...	(...)	...	...	...	...	1	...	...	...	5	1.9	0.6		
22	...	...	...	...	...	(...)	2	...	...	...	...	...	3	5	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	...	1.0	0.5	
23	...	...	6	6	1.6	1	...	(...)	7	...	(...)	7	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	...	3.6	2.3	
24	...	...	...	...	4	...	(...)	4	3.1	1.5	5	...	5	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	...	5.9	1.9	
25	...	...	...	...	5	2.6	3.8	1.5	2.0	3.7	5.2	8	...	2	3.9	6	(...)	(...)	(...)	1	2	5	4	(...)	26.0	11.5		
26	1	5	2	5	2.1	...	5	5	1	...	...	(...)	(...)	(...)	...	...	...	...	...	(...)	1	(...)	1	...	...	4.7	6.1	
27	(...)	1	(...)	(...)	(...)	4	3	1.3	3	5	1	1.0	(...)	(...)	4	6	2	...	...	(...)	(...)	(...)	(...)	(...)	...	5.2	5.7	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	1.4	2	5	...	...	2.1	1.0	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	5	10.2	2.8	1.6	4	...	2	8	2.4	3	...	...	...	(...)	7	7	...	...	...	20.6	8.1	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	...	...	...	
Sum	2.5	6.6	5.1	5.5	1.5	7.8	7.7	9.9	16.9	11.7	14.4	8.7	8.9	10.8	14.5	16.1	11.5	7.0	8.1	4.2	4.2	3.7	0.8	2.7	204.8	123.9		
Total Duration.	hr. 3.2	hr. 4.0	hr. 5.3	hr. 6.4	hr. 6.9	hr. 5.3	hr. 5.3	hr. 6.1	hr. 5.8	hr. 6.5	hr. 6.4	hr. 7.1	hr. 7.0	hr. 7.1	hr. 7.9	hr. 7.4</												

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

397. Cahirciveen (Valentia Observatory) :  $H_r$  (height of receiving surface above M.S.L.)= $H$  (height of station above M.S.L.)+ $h$ ,  
(height of receiving surface above ground) = 9.1 metres + 0.5 metre. September, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24		
Day	mm. (-)	mm. (P)	mm. (P)	mm. (P)	mm. (P)	mm. (P)	mm.	mm.	hr.																			
1																										0.1	...	
2																											...	...
3																											...	...
4																											...	...
5																											1.8	3.3
6																											5.8	1.3
7																											10.0	2.1
8																											0.1	0.1
9																											7.2	7.4
10																											1.6	1.1
11																											9.5	3.8
12																											...	...
13																											2.6	2.6
14																											5.0	3.9
15																											0.4	0.6
16																											6.8	2.9
17																											2.3	1.4
18																											2.6	3.4
19																											0.3	0.1
20																											42.3	11.2
21																											8.6	6.2
22																											0.4	2.5
23																											4.1	5.6
24																											2.1	4.2
25																											6.2	2.0
26																											1.3	0.9
27																											...	0.6
28																											...	...
29																											...	...
30																											...	...
Sum.	5.0	14.0	8.0	6.7	3.5	25.7	3.7	3.5	3.9	2.8	0.4	1.3	2.9	2.6	5.4	3.2	2.5	2.5	1.2	0.8	2.4	0.6	11.4	7.8	121.8	67.2		
Total Duration.	hr. 4.3	hr. 6.1	hr. 4.7	hr. 4.1	hr. 3.0	hr. 2.9	hr. 2.1	hr. 2.9	hr. 4.1	hr. 3.2	hr. 0.8	hr. 1.7	hr. 2.8	hr. 1.5	hr. 1.7	hr. 3.3	hr. 1.6	hr. 2.3	hr. 1.7	hr. 1.2	hr. 1.9	hr. 1.2	hr. 4.1	hr. 4.0	hr. 67.2			

398. Cahirciveen (Valentia Observatory) :  $H_r$  = 9.1 metres + 0.5 metre.

October, 1930.

	mm.	mm.	hr.																									
1																											0.6	0.3
2																											5.3	2.9
3																											...	...
4																											...	...
5																											15.3	7.3
6																											2.7	1.4
7																											3.5	1.6
8																											14.9	9.2
9																											2.4	1.7
10																											...	...
11																											...	...
12																											0.4	0.6
13																											5.3	6.2
14																											7.8	5.2
15																											22.4	8.1
16																											9.0	2.1
17																											2.2	1.6
18																											4.2	1.5
19																											29.7	6.2
20																											7.1	2.6
21																											...	...
22																											2.3	2.1
23																											11.6	9.7
24																											3.7	3.0
25																											4.4	2.1
26																											2.3	1.5
27																											...	...
28																											1.2	1.7
29																											1.5	3.9
30																											1.2	3.3
31																											10.0	6.8
Sum.	4.2	5.9	3.9	4.7	5.0	4.3	12.8	5.8	9.0	17.9	17.4	4.1	7.2	7.9	12.7	4.1	7.3	3.3	9.0	9.1	9.5	12.1	7.1	5.5	189.8	99.8		
Total Duration.	hr. 4.8	hr. 5.6	hr. 4.7	hr. 3.5	hr. 3.7	hr. 3.4	hr. 5.7	hr. 3.6	hr. 4.5	hr. 5.8	hr. 5.4	hr. 3.8	hr. 4.9	hr. 3.3	hr. 3.2	hr. 3.2	hr. 3.8	hr. 3.1	hr. 3.7	hr. 5.4	hr. 3.8	hr. 3.0	hr. 4.0	hr. 3.9	hr. 99.8			
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24			

Amounts in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

399. Cahirciveen (Valentia Observatory) :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h$ ,  
(height of receiving surface above ground) = 9.1 metres + 0.5 metre. November, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	hr.																									
1	(...)	...	...	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	1.4	.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	.5	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	(...)	.8	.1	...	(P)	(P)	(P)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	2.6	1.9	2.0	.7	(P)	(P)	(P)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
11	...	...	...	...	...	(P)	(P)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	1.6	.3	6.1	1.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
24	3.5	4.0	3.8	2.0	5.6	1.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25	.5	...	.2	(...)	.3	1.0	1.7	(...)	...	.6	.2	(...)	2.7	.2	.5	...	.3	1.9	(...)	.1	.2	(...)	...	...	...	...	
26	...	...	.2	(...)	(...)	(...)	.5	(...)	(...)	.7	2.2	1.4	.1	...	.8	.1	.4	.5	...	(...)	.3	...	...	...	...	...	
27	(L)	(L)	(L)																								
28	(L)	(L)	(L)																								
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	10.1	8.0	12.4	3.8	7.4	4.0	6.9	6.4	10.8	4.4	8.8	8.4	6.5	1.2	3.8	5.4	7.9	9.5	8.2	6.7	5.1	5.1	2.5	7.9	161.2	74.2	
Total Duration.	hr. 4.1	hr. 3.6	hr. 3.6	hr. 2.4	hr. 2.9	hr. 4.2	hr. 5.0	hr. 2.7	hr. 3.2	hr. 2.9	hr. 2.9	hr. 3.5	hr. 3.7	hr. 2.1	hr. 2.5	hr. 3.1	hr. 3.3	hr. 3.4	hr. 2.7	hr. 1.8	hr. 2.0	hr. 2.3	hr. 2.6	hr. 3.7	hr. 74.2		

400. Cahirciveen (Valentia Observatory) :  $H_r = 9.1$  metres +  $0.5$  metre. December, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
1	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
5	(...)	(...)	(...)	(.1)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
6	.1	(...)	(.1)	(...)	...	...	...	.5	.2	(...)	.2	.2	...	1.1	.9	1.8	1.8	.6	.5	.3	.6	(...)	(...)	(...)	(...)	8.9	6.7	
7	.1	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	.2	...	(...)	(...)	3.5	3.2	.2	7.3	2.4		
8	.2	...	...	...	...	...	...	...	...	...	...	...	...	1.3	.6	(...)	.2	(...)	.2	...	.6	...	.1	.1	3.8	1.9		
9	.2	...	...	...	.5	.2	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	0.6	
10	...	.3	2.7	.7	.7	.9	...	(...)	...	...	...	...	...	(...)	(...)	...	...	.7	.2	.4	.5	1.1	.8	2.5	11.5	10.2		
11	4.2	2.6	1.0	1.2	...	...	...	...	...	.2	...	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	9.3	3.9	
12	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	.1	(...)	.1	.1	.1	.1	1.1	.2	...	1.4	3.2	4.5		
13	(...)	.3	2.2	...	...	...	...	...	...	.2	1.7	.4	.5	(...)	(...)	.2	(...)	(...)	(...)	.1	(...)	.1	(...)	.1	.2	6.5	3.9	
14	.1	(...)	.3	.1	.5	.2	.5	.5	.1	.8	(...)	.6	.9	.4	1.0	.3	.3	.1	(...)	...	...	...	...	...	...	6.4	4.3	
15	...	.3	(...)	...	.2	(...)	...	...	...	...	...	...	1.4	2.5	2.4	3.3	3.0	5.1	2.3	.3	...	...	...	...	...	20.8	8.1	
16	...	...	...	...	...	...	...	(...)	.1	.3	...	(...)	...	.3	.1	(...)	...	.3	...	...	...	...	...	...	...	1.1	0.7	
17	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	.1	.3	.1	(...)	.1	.3	.1	...	(...)	(...)	.1	.1	(...)	(...)	1.2	3.9	
18	.1	.1	.2	.1	(...)	.1	(...)	(...)	(...)	(...)	(...)	(.1)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.7	3.5	
19	.1	.1	.2	.2	(...)	.1	.1	.1	.2	...	...	...	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	1.4	5.4	
20	(...)	.2	.4	.4	.2	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	1.9	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
23	.1	.2	1.0	.1	.1	(...)	(...)	.1	.1	.1	(...)	(...)	(...)	.2	(...)	.1	(...)	(...)	(...)	(...)	.1	.1	.1	...	...	...	2.5	3.6
24	...	...	...	...	...	...	...	...	...	.5	.5	.2	.4	.4	.7	1.6	1.9	.4	.1	(...)	.6	.9	3.5	4.1	15.8	11.6		
25	.5	.5	.2	.2	.3	(...)	...	...	...	(...)	.1	.4	.2	.3	...	...	...	...	...	...	(...)	...	...	...	...	1.3	4.0	
26	1.5	2.0	1.0	(...)	.2	.1	(...)	.1	(...)	...	...	...	...	(...)	...	...	...	...	...	...	.2	(...)	.5	.9	6.5	5.0		
27	.4	1.0	1.2	.3	...	(...)	.2	...	(...)	.9	.1	...	.5	(...)	...	(...)	1.0	.1	...	...	...	(...)	...	...	5.7	3.5		
28	.2	...	...	...	...	...	.1	(...)																				

For periods of sixty minutes, between the exact hours of Local Apparent Time.

401. Cahirciveen (Valentia Observatory) : h<sub>s</sub> (height of recorder above ground) = 12.8 metres. **January, 1930.**

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	10
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	15
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	18
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	19
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	13
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	12
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	2
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.3	77
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	24
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	53
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	17
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.9	46
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	33
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.2	49
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.8	84
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	13
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	15
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.7	42
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
Sum.	—	—	—	—	...	0.8	5.1	7.3	6.7	7.6	9.5	5.3	3.2	...	—	—	—	—	—	45.5	—
Mean	—	—	—	—	...	.02	.16	.24	.22	.25	.81	.17	.10	...	—	—	—	—	—	1.47	18

402. Cahirciveen (Valentia Observatory) : h<sub>s</sub> = 12.8 metres.

February, 1930.

1	—	—	—	—	...	.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	—	—	—	—	—	7.5	83
2	—	—	—	—	...	.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.1	...	—	—	—	—	6.6	73
3	—	—	—	—	...	...	...	.5	.7	.3	...	...	...	...	...	—	—	—	—	1.5	16
4	—	—	—	—	...	.2	.9	.7	.2	.3	...	...	...	...	...	—	—	—	—	2.3	25
5	—	—	—	—	...	.2	.9	.6	.8	.7	.9	.2	...	...	—	—	—	—	—	4.3	47
6	—	—	—	—	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.4	—	—	—	—	—	8.1	87
7	—	—	—	—	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.3	—	—	—	—	—	8.0	85
8	—	—	—	—	...	...	.5	1.0	1.0	1.0	.8	.7	.4	...	—	—	—	—	—	5.4	57
9	—	—	—	—	...	.8	1.0	1.0	1.0	1.0	1.0	.8	.8	.1	—	—	—	—	—	7.5	79
10	—	—	—	—	...	.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	—	—	—	—	—	7.8	82
11	—	—	—	—	...	...	...	.1	.4	.8	...	...	...	...	—	—	—	—	—	1.3	14
12	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
13	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
14	—	—	—	—	...	.9	1.0	1.0	1.0	.7	...	...	...	...	—	—	—	—	—	4.6	47
15	—	—	—	—	...	.3	.3	.7	1.0	1.0	.8	.9	.2	...	—	—	—	—	—	5.2	53
16	—	—	—	—	...	1.0	1.0	.9	.3	...	...	...	.2	...	—	—	—	—	—	3.4	34
17	—	—	—	—	...	.9	.5	.8	1.0	1.0	.7	.4	...	...	—	—	—	—	—	5.3	53
18	—	—	—	—	...	1.0	1.0	1.0	.5	.7	1.0	1.0	.6	...	—	—	—	—	—	6.8	67
19	—	—	—	—	...	.2	.9	.4	...	...	...	...	...	...	—	—	—	—	—	1.5	15
20	—	—	—	—	...	...	...	...	.2	...	...	...	...	...	—	—	—	—	—	0.2	2
21	—	—	—	—	...	...	...	.2	...	...	...	...	...	...	—	—	—	—	—	0.2	2
22	—	—	—	—	...	.1	1.0	1.0	1.0	1.0	1.0	1.0	.1	...	—	—	—	—	—	7.2	70
23	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
24	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
25	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
26	—	—	—	—	...	.3	1.0	1.0	1.0	1.0	.3	...	...	...	—	—	—	—	—	5.6	53
27	—	—	—	—	...	.5	...	.3	...	...	.4	1.0	1.0	.2	...	—	—	—	—	3.4	32
28	—	—	—	—	...	.1	1.0	1.0	1.0	1.0	1.0	1.0	.9	.4	...	—	—	—	—	8.4	79
Sum.	—	—	—	...	0.5	12.2	16.0	17.2	16.1	15.5	12.9	12.0	8.3	1.4	...	—	—	—	—	112.1	—
Mean	—	—	—	...	.02	.44	.57	.61	.57	.55	.46	.43	.30	.05	...	—	—	—	—	4.00	41
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	

For periods of sixty minutes, between the exact hours of Local Apparent Time.

403. Cahirciveen (Valentia Observatory) :  $h_s$  (height of recorder above ground) = 12.8 metres. March, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	...	.2	.8	.9	.8	.4	1.0	1.0	1.0	.8	.5	...	—	—	—	7.4	69
2	—	—	—	...	.4	1.0	1.0	1.0	.7	...	...	...	...	...	...	—	—	—	4.2	39
3	—	—	—	...	...	.3	.1	1.0	.8	.6	.9	.7	.5	.2	...	—	—	—	5.1	47
4	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
5	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
6	—	—	—	...	...	...	.7	.2	.4	1.0	.8	.8	.8	...	...	—	—	—	4.7	42
7	—	—	—	...	...	...	.4	...	.2	1.0	1.0	.8	.3	.3	...	—	—	—	4.6	41
8	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
9	—	—	—	...	...	...	...	...	...	.1	.4	...	.5	.4	...	—	—	—	1.4	12
10	—	—	—	...	.4	.1	.3	.2	.9	.8	.5	.4	.6	.1	...	—	—	—	4.3	38
11	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
12	—	—	—	...	...	.3	.6	.1	...	...	...	...	...	...	...	—	—	—	1.0	9
13	—	—	—	...	...	.6	...	.3	.2	.6	1.0	.9	.6	.7	.1	...	—	—	5.0	43
14	—	—	—	...	...	...	.4	.2	.1	.1	.3	...	...	...	...	—	—	—	1.1	9
15	—	—	—	...	...	...	.1	...	...	.3	.1	...	...	...	...	—	—	—	0.5	4
16	—	—	—	...	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.8	.3	...	—	—	10.0	85
17	—	—	—	...	.8	1.0	1.0	1.0	1.0	.8	1.0	1.0	1.0	.8	.2	...	—	—	9.6	81
18	—	—	—	...	.4	.8	.2	...	.1	.9	.9	.6	.9	.2	...	—	—	—	5.0	42
19	—	—	—	...	.9	.7	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.1	...	—	—	9.6	80
20	—	—	—	...	.2	.5	...	.1	.2	.1	...	...	...	...	...	—	—	—	1.1	9
21	—	—	...	...	.6	.2	.7	.1	...	...	...	.8	1.0	.7	.2	...	—	—	4.3	35
22	—	—	...	...	.1	...	...	.3	...	...	...	...	...	...	...	—	—	—	0.4	3
23	—	—	...	.2	.2	1.0	1.0	.7	.7	1.0	1.0	1.0	1.0	1.0	.5	...	—	—	9.3	76
24	—	—	...	...	.1	.8	.9	.9	.8	.4	.3	.3	...	...	...	—	—	—	4.5	37
25	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
26	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
27	—	—	...	...	...	...	.1	.1	...	...	...	...	...	...	...	—	—	—	0.2	2
28	—	—	...	...	...	...	...	...	...	...	...	...	.6	.2	.3	...	—	—	1.1	9
29	—	—	...	...	.8	.8	.8	.7	.8	.4	.7	.9	.9	.8	.3	...	—	—	7.9	62
30	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
31	—	—	...	...	...	.2	.7	1.0	.5	.4	...	...	...	...	...	—	—	—	2.8	22
Sum.	—	—	...	0.2	6.0	10.8	11.8	10.6	9.8	11.5	12.0	11.2	11.5	7.7	2.0	...	—	—	105.1	—
Mean	—	—	...	.01	.19	.35	.38	.34	.32	.37	.39	.36	.37	.25	.06	...	—	—	3.39	29

404. Cahirciveen (Valentia Observatory) :  $h_s$  = 12.8 metres.

April, 1930.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	...	...	...	...	...	.6	.4	1.0	.2	...	...	...	...	—	—	—	2.2	17
2	—	—	...	...	...	...	...	.2	...	...	.2	.4	.8	.3	...	...	—	—	1.9	15
3	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
4	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
5	—	—	...	.2	...	...	...	.7	.8	.4	.5	.1	.5	.6	.2	...	—	—	4.0	30
6	—	—	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.4	...	—	—	11.1	84
7	—	—	...	...	...	...	...	.2	...	...	...	...	...	...	...	—	—	—	0.2	2
8	—	—	...	...	...	...	...	...	...	.2	...	...	.1	...	...	—	—	—	0.3	2
9	—	—	...	.5	.8	...	.5	.6	.9	1.0	1.0	1.0	.8	...	.3	.1	...	—	7.5	56
10	—	—	...	...	...	.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	—	—	9.5	71
11	—	—	...	1.0	1.0	1.0	.9	...	.7	.1	...	...	...	...	...	—	—	—	4.7	35
12	—	—	...	.1	...	.9	.7	.4	.3	.3	.5	.4	.1	.1	...	—	—	—	3.8	28
13	—	—	...	...	...	.6	.1	.2	.1	.3	.7	.7	.7	.8	.5	...	—	—	4.7	34
14	—	—	...	...	.4	.5	.9	.8	.6	.9	1.0	1.0	1.0	1.0	.7	...	—	—	8.8	64
15	—	—	.1	.5	.6	.4	.4	.5	1.0	.4	.6	.2	.9	1.0	.3	...	—	—	6.9	50
16	—	—	...	...	.4	.3	...	...	.2	.7	.5	...	...	...	...	—	—	—	2.1	15
17	—	—	...	...	...	...	...	.3	.5	.2	1.0	1.0	1.0	1.0	1.0	.3	...	—	6.3	45
18	—	—	...	...	.6	1.0	.4	...	.5	.4	1.0	1.0	1.0	1.0	.2	...	—	—	7.1	51
19	—	—	...	...	...	.4	.5	...	...	.4	.9	.5	.7	.9	.9	...	—	—	5.2	37
20	—	—	...	...	...	...	.9	1.0	.7	...	.1	.9	.4	...	...	...	—	—	4.0	28
21	—	—	...	...	...	...	...	...	.5	.4	.5	...	...	...	...	...	—	—	1.4	10
22	—	—	.5	1.0	1.0	1.0	.9	.1	.6	1.0	.9	.6	.7	.8	...	.2	...	—	9.3	65
23	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...
24	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...
25	—	—	...	.4	...	...	...	...	...	...	...	...	...	...	...	...	—	—	4.3	30
26	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	0.4	3
27	—	—	...	.4	1.0	1.0	.6	.3	.8	1.0	.2	1.0	1.0	1.0	.2	.3	.2	...	2.0	14
28	—	—	...	...	.5	.1	...	...	.4	1.0	1.0	1.0	1.0	1.0	.9	.6	...	—	11.6	80
29	—	—	...	.9	1.0	1.0	1.0	1.0	.7	1.0	1.0	1.0	1.0	1.0	1.0	...	—	—	0.6	4
30	—	—	...	...	.3	...	.2	...	...	...	...	.2	1.0	.7	.1	...	—	—	11.6	79
31	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	2.6	18
Sum.	—	...	1.0	6.3	8.6	9.3	9.9	9.2	11.9	12.2	14.3	12.9	14.6	13.0	8.7	2.2	...	—	134.1	—
Mean	—	...	.03	.21	.29	.31	.33	.31	.40	.41	.48	.43	.49	.43	.29	.07	...	—	4.47	32
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day	Per cent. of Possible.

For periods of sixty minutes, between the exact hours of Local Apparent Time.

405. Cahirciveen (Valentia Observatory) : h<sub>s</sub> (height of recorder above ground) = 12.8 metres. May, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	...	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.9	87
2	—	...	...	...	...	...	...	...	...	2	5	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4.7	32
3	—	...	...	7	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	11.6	78
4	—	...	3	5	9	7	4	1.0	7	...	8	1.0	6	...	...	...	...	...	...	6.9	46
5	—	...	2	5	3	1	...	...	...	1.0	4	9	9	4	6	4	...	...	...	5.7	38
6	—	...	8	1.0	2	...	...	...	4	8	8	1.0	7	1.0	1.0	5	...	...	8.2	54	
7	—	...	1.0	3	...	7	2	1	2	2	9	8	1.0	1.0	9	3	...	...	7.6	50	
8	—	...	...	1	5	7	...	4	3	4	2	3	...	...	...	...	...	...	2.9	19	
9	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	—	...	2	5	2	4	7	5	6	1.0	1.0	8	9	5	5	3	...	...	8.1	53	
12	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	—	...	...	...	...	...	...	...	...	...	...	...	...	...	5	4	...	...	...	0.9	6
14	—	...	4	9	5	5	7	8	9	7	1.0	1.0	1.0	3	8	...	...	...	9.5	61	
15	—	...	6	...	...	3	7	9	6	7	1.0	1.0	1.0	1.0	1.0	7	...	...	9.5	61	
16	—	...	...	2	2	8	7	1.0	8	8	...	2	7	...	...	...	...	...	5.4	35	
17	—	...	...	...	...	...	...	...	...	...	...	...	7	7	8	...	...	...	2.2	14	
18	—	...	1	2	1.0	1.0	1.0	1.0	1.0	9	1.0	1.0	9	...	1	2	...	...	9.4	60	
19	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	—	...	...	...	...	...	...	...	...	...	...	1	7	9	8	1	...	...	2.6	16	
21	—	...	5	1.0	1.0	1.0	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2	...	13.2	83	
22	—	1	1.0	1.0	1.0	1.0	7	8	9	1.0	7	1.0	1.0	1.0	1.0	1.0	...	...	13.2	83	
23	—	...	5	1.0	1.0	1.0	9	8	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	13.6	85	
24	—	...	5	8	5	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	4	...	...	11.0	69	
25	—	...	...	1.0	1.0	1.0	1.0	1.0	1.0	3	1	...	...	1	1	...	...	...	6.6	41	
26	—	...	...	1	1.0	9	5	3	...	1	4	1	8	9	2	...	...	...	5.3	33	
27	...	...	...	...	...	...	...	2	8	1.0	7	8	1.0	7	3	...	...	...	5.5	34	
28	...	...	...	...	...	...	7	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1	...	9.7	60	
29	...	...	...	...	...	...	...	1	1.0	1.0	9	1.0	1.0	1.0	8	1	...	...	6.9	43	
30	...	...	...	1	1	...	...	...	...	...	...	...	...	1.0	8	1.0	4	...	3.4	21	
31	...	...	...	5	1.0	1.0	9	1	3	1	...	...	...	...	...	...	...	...	3.9	24	
Sum.	...	0.1	6.8	11.4	12.1	13.5	12.6	13.9	15.4	16.2	16.4	17.7	19.2	17.5	16.2	10.2	1.2	...	200.4	—	
Mean	...	.00	.22	.37	.39	.44	.41	.45	.50	.52	.53	.57	.62	.56	.52	.33	.04	...	6.46	41	

406. Cahirciveen (Valentia Observatory) : h<sub>s</sub> = 12.8 metres.

June, 1930.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	2	...	6	8	2	1	2	...	7	1.0	1.0	1.0	1.0	1.0	4.8	29	
3	...	...	...	2	9	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	12.5	76		
4	...	...	1.0	7	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	6	4	...	13.3	81	
5	...	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	14.8	90		
6	...	...	9	8	4	4	3	...	...	9	1.0	1.0	1.0	1.0	1.0	7	3	...	8.3	51		
7	...	...	...	3	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	...	...	11.3	69		
8	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	...	...	14.1	86		
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
11	...	...	...	8	8	8	7	9	3	1	9	4	...	9	1.0	1.0	2	...	8.8	53		
12	...	2	3	6	6	1.0	1.0	1.0	1.0	1.0	9	6	...	1	...	...	...	...	8.3	50		
13	...	4	2	...	2	...	...	2	9	9	1.0	1.0	1.0	1.0	1.0	1.0	7	...	9.5	57		
14	...	...	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	...	13.9	84		
15	...	1	6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	...	...	14.4	87		
16	...	6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	...	...	14.0	84		
17	...	...	...	...	...	...	...	1	9	1.0	1.0	9	1.0	4	...	...	...	...	5.3	32		
18	...	...	...	...	...	...	9	1.0	1.0	9	6	1.0	1.0	4	...	3	...	...	7.6	46		
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	1	...	0.6	4		
20	...	...	...	...	...	...	...	(1)	(3)	(8)	(7)	(5)	(5)	(4)	(4)	(3)	...	...	(4.0)*	(24)		
21	...	...	2	3	2	...	...	...	...	...	5	8	5	1.0	8	5	...	...	4.8	29		
22	...	...	3	8	1.0	1	9	7	2	1	3	6	7	9	7	5	...	...	8.5	51		
23	...	...	...	2	5	5	6	4	8	1.0	5	1.0	8	6	1.0	8	2	...	8.9	53		
24	...	...	2	3	3	8	6	6	4	3	7	6	1	1	1	1	...	...	5.2	31		
25	...	...	2	9	7	1.0	8	5	8	4	1.0	1.0	1.0	1.0	1.0	7	...	...	12.0	72		
26	...	...	3	...	...	1	3	...	...	...	...	...	...	...	...	...	...	...	0.7	4		
27	...	...	...	1	3	9	6	1.0	1.0	1.0	1.0	1.0	1.0	9	8	6	...	...	10.2	61		
28	...	...	...	...	...	...	7	4	...	3	...	...	...	...	2	1	...	...	1.7	10		
29	...	...	...	...	...	...	...	3	5	6	...	6	4	...	...	...	...	...	2.4	14		
30	...	...	...	...	...	...	1	7	5	7	2	9	6	9	6	...	...	...	5.2	31		
Sum.	...	2.2	8.1	11.0	11.7	13.6	15.5	16.5	17.4	17.3	17.8	19.8	17.9	18.3	17.9	14.9	5.2	...	225.1	—		
Mean	...	.07	.27	.37	.39	.45	.52	.55	.58	.58	.59	.66	.60	.61	.60	.50	.17	...	7.50	45		
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.		

\*Record lost owing to sphere having been displaced.

For periods of sixty minutes, between the exact hours of Local Apparent Time.

407. Cahirciveen (Valentia Observatory) :  $h_s$  (height of recorder above ground) = 12.8 metres. July, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	9
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	11
3	...	...	.3	.3	.1	.3	.4	.2	.2	.2	.1	.4	.2	.1	...	...	...	...	2.8	17	
4	...	...	...	...	...	1.0	1.0	1.0	1.0	1.0	.9	.9	1.0	1.0	1.0	.9	...	...	10.7	65	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	.1	...	.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.8	.3	...	11.7	71	
7	...	.6	.6	.9	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	2.2	13	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
10	...	...	...	...	...	...	.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	...	10.7	65	
11	...	...	...	...	...	...	...	...	.8	.2	...	...	...	...	...	...	...	...	1.0	6	
12	...	...	...	...	.6	.1	.8	1.0	1.0	1.0	1.0	1.0	.2	.3	.2	...	...	...	8.2	50	
13	...	...	...	...	...	...	.1	...	...	...	...	.3	.6	.6	.2	...	...	...	1.8	11	
14	...	...	...	...	...	...	...	.1	.2	...	...	...	...	...	...	...	...	...	0.3	2	
15	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	0.1	1	
16	...	...	...	.4	.2	.6	.7	.8	...	...	.4	.7	...	.7	.9	.8	.3	...	6.5	40	
17	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	0.1	1	
18	...	...	...	...	.1	...	.1	...	.1	.2	.9	1.0	1.0	1.0	1.0	.8	...	...	6.2	38	
19	...	.2	.7	.3	.2	.6	.2	.1	.7	.5	.7	.3	.6	.1	.2	.7	.4	...	6.5	40	
20	...	...	.2	...	...	.7	1.0	.9	.6	1.0	.9	1.0	1.0	1.0	1.0	.5	.3	...	10.1	63	
21	...	.1	.4	...	.1	...	...	.1	...	.6	.4	.4	.1	...	...	...	...	...	2.2	14	
22	...	...	...	.3	1.0	.7	.1	...	...	...	...	...	...	...	...	...	...	...	2.2	14	
23	...	...	...	...	.2	...	...	...	.4	...	.1	.3	.6	.7	.1	.7	.4	...	3.5	22	
24	...	.4	1.0	1.0	.7	.7	1.0	1.0	1.0	1.0	1.0	.5	1.0	1.0	.2	.4	.4	...	12.3	78	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	.3	...	.5	.6	.3	.9	.5	1.0	.5	...	.6	.9	.6	.2	...	...	6.9	44	
27	...	...	...	...	.2	.2	.4	...	...	...	...	...	...	...	...	...	...	...	2.2	13	
28	...	...	...	...	...	...	...	...	.1	.2	.2	.5	.3	.2	.1	...	...	...	1.6	10	
29	...	...	...	...	...	...	...	...	...	.1	.7	.1	.3	.3	...	...	...	...	1.5	10	
30	...	...	.5	.3	.3	.6	.9	.3	.3	...	.2	.7	...	...	...	.1	...	...	4.2	27	
31	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	
Sum.	...	1.3	4.2	3.5	4.8	7.1	9.0	9.5	10.0	9.0	10.6	10.0	10.5	9.8	8.4	8.3	3.0	...	119.0	—	
Mean	...	.04	.14	.11	.15	.23	.29	.31	.32	.29	.34	.32	.34	.32	.27	.27	.10	...	3.84	24	

408. Cahirciveen (Valentia Observatory) :  $h_s$  = 12.8 metres.

August, 1930.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
4	...	...	.1	.9	.8	.8	.5	.9	1.0	1.0	1.0	1.0	.8	1.0	.2	.2	...	...	...	...	10.2
5	...	...	.3	.5	...	...	...	...	...	...	.3	.3	...	...	.2	...	...	...	...	...	1.6
6	...	...	...	...	.1	...	...	...	...	.3	...	.2	.6	.1	.1	...	...	...	...	...	1.4
7	...	...	...	...	...	.5	.6	...	.1	.6	1.0	.9	.8	.4	...	...	...	...	...	...	4.9
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	.1	...	...	...	...	.2	.3	.2	.4	.8	.3	.1	.9	.1	.4	...	...	...	3.7
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.8
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	.4	.9	.2	.8	.3	.4	.6	.8	1.0	.5	.4	...	...	...	...	...	6.3
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.7
17	...	...	...	...	...	.1	.4	...	...	...	...	.4	1.0	.7	.8	.9	...	...	...	...	4.3
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3
20	...	...	.2	.5	.7	.9	.9	1.0	.8	.9	.8	.7	.8	.7	.9	.1	...	...	...	...	9.9
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	.4	1.0	.6	.6	.8	.8	.9	1.0	.5	.2	.1	...	...	...	...	6.9
23	...	...	...	...	...	.7	.5	.7	.2	...	.2	.2	.8	.1	...	...	...	...	...	...	3.4
24	...	...	...	...	.7	.4	.3	...	.7	1.0	1.0	1.0	.6	.6	...	...	...	...	...	...	7.3
25	...	...	...	...	.1	.6	...	...	...	1.0	1.0	1.0	.6	.4	...	...	...	...	...	...	4.9
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0
29	...	...	...	...	.1	.1	...	.3	...	.1	...	...	...	...	...	...	...	...	...	...	0.6
30	...	...	.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.6	...	...	...	...	12.8
31	...	...	...	.6	.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	.2	...	...	...	...	...	10.5
Sum.	...	...	0.9	4.3	5.6	6.5	6.7	7.0	7.3	10.4	11.4	11.7	12.8	11.4	6.4	3.5	...	...	...	...	105.9
Mean	...	...	.03	.14	.18	.21	.22	.23	.24	.34	.37	.38	.41	.37	.21	.11	...	...	...	...	3.42
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	

For periods of sixty minutes, between the exact hours of Local Apparent Time.

409. Cahirciveen (Valentia Observatory):  $h_s$  (height of recorder above ground) = 12.8 metres. September, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	·1	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·5	...	...	—	—	10·6	78
2	—	—	...	·6	·2	...	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	...	—	—	9·8	72
3	—	—	...	·8	1·0	1·0	1·0	·9	·5	·7	·5	·7	1·0	1·0	...	—	—	—	9·1	68
4	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...
5	—	—	...	...	...	...	...	...	...	...	·4	1·0	1·0	1·0	·8	...	—	—	4·2	31
6	—	—	...	·1	·3	·6	·3	·6	·3	·2	·2	...	·7	·5	·1	...	—	—	3·9	29
7	—	—	...	...	·3	·1	·8	1·0	1·0	1·0	1·0	1·0	·7	·5	...	...	—	—	7·4	56
8	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...
9	—	—	...	·2	1·0	1·0	1·0	1·0	·8	1·0	1·0	1·0	·7	·5	...	...	—	—	9·2	70
10	—	—	...	·4	·5	·5	·1	·8	·1	·4	...	...	·2	·5	·9	...	—	—	4·4	34
11	—	—	...	·7	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·6	...	—	—	11·8	87
12	—	—	...	·2	·1	·3	·6	1·0	...	·2	...	...	...	...	...	...	—	—	2·4	19
13	—	—	...	...	...	...	...	...	...	·1	·2	...	...	·3	·2	...	—	—	0·8	6
14	—	—	...	...	...	...	...	...	·1	·9	1·0	·7	·6	·5	·5	...	—	—	4·3	34
15	—	—	...	...	·8	·7	·7	·8	·7	...	·2	...	...	...	...	...	—	—	3·9	31
16	—	—	...	...	...	·1	·5	·2	·4	...	·6	·7	...	...	...	...	—	—	2·5	20
17	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...
18	—	—	...	·1	·8	·7	·8	·9	1·0	·7	·3	·1	·1	...	...	...	—	—	5·5	44
19	—	—	...	...	...	...	·3	...	·2	·1	·2	·1	...	...	...	...	—	—	0·9	7
20	—	—	...	...	...	...	...	...	...	·3	·1	·1	·4	...	...	...	—	—	0·9	7
21	—	—	...	...	·3	1·0	1·0	·7	·5	·2	·4	...	...	...	...	...	—	—	4·1	33
22	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...
23	—	—	...	...	...	...	...	...	...	...	...	·1	...	...	...	...	—	—	0·1	1
24	—	—	...	·3	·6	1·0	1·0	·7	·5	·9	·6	·5	·4	...	...	...	—	—	6·5	54
25	—	—	...	·3	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·5	...	...	—	—	8·8	73
26	—	—	...	·1	·2	1·0	1·0	·9	·4	·2	·7	·9	·2	...	...	...	—	—	5·6	47
27	—	—	...	...	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·8	·3	·9	·3	...	—	—	8·3	70
28	—	—	...	...	·3	1·0	1·0	1·0	1·0	1·0	·4	·3	·7	·8	·1	...	—	—	6·6	56
29	—	—	...	·7	·4	·8	1·0	1·0	1·0	·7	·9	·4	·6	·2	...	...	—	—	6·7	57
30	—	—	...	...	·1	·1	1·0	·4	·6	·5	·4	·3	·8	...	...	...	—	—	3·8	33
Sum.	—	—	0·1	4·1	8·7	11·6	16·0	17·9	14·6	14·0	13·8	12·3	12·9	11·1	4·5	...	—	—	141·6	—
Mean	—	—	·00	·14	·29	·39	·53	·60	·49	·47	·46	·41	·43	·37	·15	...	—	—	4·72	37

410. Cahirciveen (Valentia Observatory):  $h_s$  = 12.8 metres.

October, 1930.

1	—	—	...	·1	...	·9	1·0	·5	...	·1	·2	...	...	...	...	—	—	—	2·8	24
2	—	—	...	...	...	...	·1	...	...	...	...	·1	...	...	...	—	—	—	0·2	2
3	—	—	...	·3	·2	·1	...	...	...	...	...	·2	...	...	...	—	—	—	0·8	7
4	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
5	—	—	...	...	...	...	...	·1	...	·4	·5	·6	·5	...	...	—	—	—	2·1	19
6	—	—	...	·1	...	·2	·5	·9	·7	·6	·5	·7	·3	...	...	—	—	—	4·5	40
7	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...
8	—	—	...	...	...	·4	·7	·6	·5	·4	·6	·6	·2	...	...	—	—	—	4·0	36
9	—	—	...	·5	1·0	·9	1·0	1·0	1·0	1·0	1·0	1·0	·6	...	...	...	—	—	9·0	81
10	—	—	...	...	...	...	·2	·6	·6	·2	...	...	...	...	...	—	—	—	1·6	15
11	—	—	...	·2	·2	·3	·1	·9	·3	·3	...	·2	·5	...	...	—	—	—	3·0	27
12	—	—	...	·3	·9	1·0	1·0	·9	·9	1·0	·5	...	...	...	...	—	—	—	6·5	60
13	—	—	...	...	...	·2	·2	·3	·7	·3	·3	...	...	...	...	—	—	—	2·0	18
14	—	—	...	...	...	...	...	...	...	·2	...	...	...	...	...	—	—	—	0·2	2
15	—	—	...	...	·4	·3	...	...	...	...	...	...	...	...	...	—	—	—	0·7	7
16	—	—	...	...	...	...	·2	·9	·3	·6	·9	·8	·6	...	...	—	—	—	4·3	40
17	—	—	...	...	...	...	...	...	·2	·5	·6	·8	...	...	...	—	—	—	2·1	20
18	—	—	...	·1	·9	·5	1·0	1·0	·6	·9	·9	·6	·4	...	...	—	—	—	6·9	66
19	—	—	...	...	...	...	...	...	...	·7	·6	·2	·3	...	...	—	—	—	1·5	14
20	—	—	...	...	...	·2	·2	·5	...	·7	·6	·2	·3	...	...	—	—	—	2·7	26
21	—	—	...	...	...	·2	·2	...	...	...	...	...	...	...	...	—	—	—	0·4	4
22	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
23	—	—	...	...	...	·2	...	·1	...	·1	·1	·3	...	...	...	—	—	—	0·9	9
24	—	—	...	...	...	·1	·6	·3	·7	·8	·7	·6	·1	...	...	—	—	—	3·9	38
25	—	—	...	...	...	·3	·5	·5	...	·2	...	...	...	...	...	—	—	—	1·5	15
26	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
27	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
28	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
29	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
30	—	—	...	...	·3	·1	·9	·8	·5	1·0	·5	...	...	...	...	—	—	—	4·1	42
31	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
Sum.	—	—	...	1·6	3·6	6·1	7·6	10·0	7·4	9·5	9·0	7·4	3·5	...	...	—	—	—	65·7	—
Mean	—	—	...	·05	·12	·20	·25	·32	·24	·30	·29	·24	·11	...	...	—	—	—	2·12	20
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.

For periods of sixty minutes, between the exact hours of Local Apparent Time.

411. Cahirciveen (Valentia Observatory):  $h_s$  (height of recorder above ground) = 12.8 metres. November, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	—	...	.1	.7	1.0	.8	...	...	.3	...	...	hr.	hr.	hr.	hr.	2.9	30
2	—	—	—	—	...	...	...	...	...	.2	.4	.1	...	...	—	—	—	—	0.7	7
3	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...
4	—	—	—	—	...	.8	1.0	1.0	1.0	1.0	.6	.2	...	...	—	—	—	—	5.6	59
5	—	—	—	—	...	.1	.3	.3	.1	...	...	...	...	...	—	—	—	—	0.8	9
6	—	—	—	—	...	.4	1.0	1.0	.7	.4	.9	.8	.6	...	—	—	—	—	5.8	62
7	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	0.1	1
8	—	—	—	—	...	...	...	...	.2	.1	...	...	...	...	—	—	—	—	0.3	3
9	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...
10	—	—	—	—	...	...	...	...	...	.7	.8	.7	.5	...	—	—	—	—	2.7	30
11	—	—	—	—	...	.5	1.0	.6	.1	.7	.8	.6	.5	...	—	—	—	—	4.8	53
12	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...
13	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...
14	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...
15	—	—	—	—	...	...	...	...	...	...	.1	...	...	...	—	—	—	—	0.1	1
16	—	—	—	—	...	...	.9	1.0	1.0	1.0	.8	.9	.9	...	—	—	—	—	6.5	74
17	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...
19	—	—	—	—	...	...	...	.3	.1	...	...	...	...	...	—	—	—	—	0.4	5
20	—	—	—	—	...	...	...	.2	.6	.1	.1	.6	...	...	—	—	—	—	1.6	19
21	—	—	—	—	...	...	...	...	...	.4	.3	...	...	...	—	—	—	—	0.7	8
22	—	—	—	—	...	.2	.5	.4	.1	.1	.5	.6	.2	...	—	—	—	—	2.6	31
23	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...
24	—	—	—	—	...	...	.4	.4	...	.1	.2	...	...	...	—	—	—	—	1.1	13
25	—	—	—	—	...	...	...	.4	.4	.6	.4	.6	.1	...	—	—	—	—	2.5	30
26	—	—	—	—	...	...	...	...	.5	.8	.9	.6	...	...	—	—	—	—	2.8	34
27	—	—	—	—	...	...	1.0	1.0	1.0	1.0	1.0	.8	...	...	—	—	—	—	6.8	83
28	—	—	—	—	...	...	.9	1.0	1.0	1.0	.6	.3	...	...	—	—	—	—	4.8	59
29	—	—	—	—	...	...	1.0	1.0	1.0	1.0	1.0	.6	...	...	—	—	—	—	6.6	81
30	—	—	—	—	...	...	1.0	1.0	.7	.3	.1	...	...	...	—	—	—	—	3.1	38
Sum.	—	—	—	—	...	2.1	9.8	10.8	9.2	9.4	9.5	8.3	4.2	...	—	—	—	—	63.3	—
Mean	—	—	—	—	...	.07	.33	.36	.31	.31	.32	.28	.14	...	—	—	—	—	2.11	24

412. Cahirciveen (Valentia Observatory)  $h_s = 12.8$  metres.

December and Year, 1930.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	—	—	—	—	...	.6	.6	.4	.4	.9	.2	.4	...	...	—	—	—	—	...	...	3.1
3	—	—	—	—	...	.5	.3	1.0	1.0	1.0	.9	...	...	...	—	—	—	—	...	...	4.7
4	—	—	—	—	...	.4	1.0	1.0	1.0	1.0	.8	...	...	...	—	—	—	—	...	...	4.2
5	—	—	—	—	...	...	.4	...	...	.1	...	...	...	...	—	—	—	—	...	...	0.5
6	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
7	—	—	—	—	...	.9	1.0	.6	.4	.3	.1	...	...	...	—	—	—	—	...	...	3.3
8	—	—	—	—	...	.1	.2	.1	.8	.7	.6	.1	...	...	—	—	—	—	...	...	2.6
9	—	—	—	—	...	.6	.6	1.0	.9	.9	.5	.3	...	...	—	—	—	—	...	...	4.8
10	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
11	—	—	—	—	...	...	.6	.3	.4	...	...	...	...	...	—	—	—	—	...	...	1.3
12	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
13	—	—	—	—	...	.1	.3	.2	.2	...	...	...	...	...	—	—	—	—	...	...	0.8
14	—	—	—	—	...	...	.1	...	...	...	...	...	...	...	—	—	—	—	...	...	0.1
15	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
16	—	—	—	—	...	...	.9	.8	.5	.1	.4	...	...	...	—	—	—	—	...	...	2.7
17	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
19	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
20	—	—	—	—	...	.1	.3	.5	...	...	...	.2	...	...	—	—	—	—	...	...	1.1
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
22	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
23	—	—	—	—	...	...	...	...	...	...	...	.5	.1	...	—	—	—	—	...	...	0.6
24	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
25	—	—	—	—	...	...	...	.4	1.0	...	...	...	...	...	—	—	—	—	...	...	1.4
26	—	—	—	—	...	.1	.1	.6	.5	.4	.1	...	...	...	—	—	—	—	...	...	1.8
27	—	—	—	—	...	.3	.7	.5	.5	.3	.1	...	...	...	—	—	—	—	...	...	2.4
28	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...
29	—	—	—	—	...	.4	.6	.7	.7	.9	.5	...	...	...	—	—	—	—	...	...	3.8
30	—	—	—	—	...	...	...	...	...	...	...	.1	...	...	—	—	—	—	...	...	0.1
31	—	—	—	—	...	...	.3	.6	.5	.2	...	...	...	...	—	—	—	—	...	...	1.6
Sum.	—	—	—	—	...	4.4	8.3	8.6	9.1	5.6	4.4	0.5	...	...	—	—	—	—	40.9	—	
Mean	—	—	—	—	...	.14	.27	.28	.29	.18	.14	.02	...	...	—	—	—	—	1.32	17	
Annual Total	...	3.6	21.1	40.8	59.6	91.1	122.9	135.8	137.0	139.6	143.3	134.6	123.0	93.7	64.1	39.1	9.4	...	1358.7	...	
Annual Mean	...	.01	.06	.11	.16	.25	.34	.37	.37	.38	.39	.37	.34	.26	.18	.11	.03	...	3.72	31	
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	

Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°) : Speed in Metres per second.

413. Cahirciveen (Valentia Observatory) :  
Dines Anemograph from Jan., 1926.

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	195	7.9	195	8.6	210	11.7	220	10.8	225	9.3	230	10.1	225	10.4	225	10.0	225	10.6	230	10.5	220	10.0	220	11.6
2	265	10.4	275	9.7	280	7.9	280	7.2	270	7.2	270	7.3	260	4.6	240	4.2	205	4.4	195	4.6	190	5.9	190	7.1
3	210	12.3	215	10.4	220	8.9	230	8.8	225	6.8	235	6.1	265	4.7	270	4.0	285	4.2	285	3.0	270	3.6	245	4.3
4	200	5.0	200	5.0	195	6.4	180	5.1	185	7.1	160	5.3	170	7.7	165	9.3	170	10.7	175	11.1	175	13.2	175	8.0
5	240	10.0	250	10.6	250	10.6	250	10.8	260	9.9	285	9.9	270	10.7	275	9.2	280	7.1	285	7.9	295	8.5	300	7.8
6	310	5.2	330	3.4	320	3.4	295	3.6	—	1.2	235	2.7	200	3.6	190	4.7	190	5.6	200	7.8	195	8.6	190	9.7
7	190	10.7	185	10.6	185	11.0	190	11.2	190	11.9	190	11.9	190	13.0	190	13.5	190	13.1	195	13.3	190	13.4	205	11.8
8	45	2.0	125	1.6	300	4.5	295	5.4	290	5.1	20	3.6	250	5.1	230	4.7	240	5.6	235	5.6	235	6.4	230	8.0
9	225	9.7	255	8.9	260	5.9	295	6.2	295	4.8	305	3.9	—	1.0	200	3.5	200	3.1	185	3.3	205	4.6	195	4.5
10	275	7.1	280	6.6	275	4.6	225	5.6	220	6.7	210	6.4	210	8.1	200	10.5	200	12.5	200	12.6	205	13.5	225	14.1
11	260	15.1	270	13.5	270	13.5	260	11.0	265	13.9	270	12.2	275	11.3	265	10.8	275	11.7	275	11.4	265	12.1	275	12.7
12	270	11.0	260	10.9	250	9.6	245	7.9	235	6.4	230	6.4	215	6.0	195	5.1	175	7.3	170	10.0	200	13.5	230	17.6
13	245	10.8	230	9.0	230	6.5	195	4.6	165	3.1	160	6.2	180	7.2	205	5.6	200	4.6	205	6.4	220	7.0	225	5.4
14	—	0.5	—	0.5	45	2.1	25	1.9	40	2.1	70	2.1	—	0.5	—	0.5	—	1.3	—	1.2	—	0.5	—	0.5
15	45	1.7	45	1.6	45	2.1	—	1.4	45	2.0	—	1.2	45	2.0	—	1.1	45	2.6	70	1.7	90	2.4	85	4.0
16	105	8.5	125	9.5	130	9.4	130	10.2	125	10.5	135	12.9	135	12.0	145	12.1	140	13.6	145	15.4	145	16.6	145	16.7
17	180	7.4	180	6.8	180	6.6	180	6.4	185	5.6	185	5.2	175	5.4	180	4.2	175	3.8	170	2.7	155	4.2	170	4.8
18	195	6.3	190	6.5	195	7.6	190	7.4	180	7.1	180	8.0	180	8.9	180	10.0	180	11.6	180	11.9	175	12.3	175	12.9
19	190	13.2	195	15.1	240	6.1	170	4.8	190	3.8	190	4.5	240	4.9	230	2.4	210	1.6	185	3.5	180	4.1	195	4.5
20	205	7.9	210	5.4	215	4.3	180	4.1	190	2.8	—	1.0	—	1.1	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5
21	170	6.8	175	7.9	175	8.0	180	8.6	175	9.5	175	9.6	175	10.2	180	11.3	180	12.5	175	11.7	175	12.8	180	13.5
22	205	2.6	—	1.3	—	0.5	—	1.3	—	1.3	—	0.5	—	1.4	—	1.1	—	1.1	—	1.0	—	1.0	125	3.7
23	180	4.8	185	6.4	190	9.3	200	11.6	200	12.8	215	11.2	220	10.1	225	8.7	215	6.9	205	7.1	195	6.4	180	7.7
24	175	9.2	175	8.6	190	7.6	195	7.5	220	6.7	210	6.4	215	4.7	195	4.4	165	4.3	175	3.8	220	6.6	230	7.2
25	245	8.9	250	7.0	245	4.6	275	3.4	265	2.0	—	0.5	145	2.3	250	2.2	200	3.4	—	1.5	125	2.8	180	3.3
26	65	3.1	80	3.4	65	1.9	75	2.9	70	2.8	70	1.8	—	0.5	65	2.3	80	6.9	90	7.2	90	6.8	70	7.1
27	45	2.7	35	3.9	30	6.3	25	6.7	360	6.9	360	6.2	360	7.9	5	6.4	25	4.3	35	1.6	—	0.5	45	3.5
28	130	5.8	155	9.4	155	10.9	160	11.0	170	11.5	175	12.2	175	12.9	175	13.5	180	13.3	195	9.0	105	3.5	110	2.9
29	200	4.5	185	4.6	180	4.6	180	6.5	190	8.8	190	8.1	210	6.5	230	5.3	205	3.6	90	2.0	150	3.1	200	3.9
30	195	8.0	205	7.6	180	4.9	130	2.5	55	2.5	55	2.1	245	5.1	250	6.5	250	4.4	225	3.3	230	4.2	250	6.2
31	155	11.1	155	12.2	150	13.3	145	14.3	140	16.9	140	17.1	135	16.9	140	12.2	250	6.4	275	4.0	280	1.6	—	1.4
Mean	—	7.4	—	7.3	—	6.9	—	6.8	—	6.7	—	6.5	—	6.7	—	6.4	—	6.5	—	6.8	—	6.9	—	7.4

414. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	1.0	75	1.6	—	1.0	—	0.5	—	0.5	—	0.5	75	2.0	—	1.4	—	0.5	—	0.5	—	1.1	—	0.5
2	95	3.1	85	3.2	80	4.7	75	5.2	75	7.9	90	5.7	90	2.2	—	0.5	—	0.5	—	0.5	—	1.0	—	1.0
3	120	3.9	110	5.7	105	6.4	95	6.4	110	6.7	110	6.9	130	6.3	95	3.9	45	2.1	175	2.0	125	1.8	35	2.5
4	160	4.5	150	4.5	125	3.6	120	4.7	105	4.6	100	5.5	90	5.0	90	5.0	80	4.1	95	5.0	75	6.5	65	6.6
5	15	7.7	15	7.6	25	6.1	35	4.5	25	4.7	50	2.7	55	3.0	20	6.2	30	3.2	60	2.1	50	4.4	30	6.0
6	—	1.3	—	1.5	70	2.5	70	2.9	70	2.1	—	1.4	—	0.5	50	5.3	55	6.2	40	4.4	70	5.6	60	6.6
7	85	4.3	70	5.1	55	4.7	50	5.1	50	6.9	60	5.1	85	6.5	70	7.7	75	6.3	85	6.0	85	5.6	65	4.7
8	—	0.5	—	1.2	95	2.3	60	1.7	100	1.6	85	1.8	95	1.6	100	2.1	100	2.2	95	1.8	—	1.3	60	2.7
9	100	2.8	100	1.9	95	2.0	—	1.4	—	1.5	—	1.0	100	3.2	100	3.8	95	4.0	65	1.9	65	4.1	60	4.7
10	95	2.7	—	1.2	100	2.9	90	3.1	100	2.5	90	1.9	90	1.8	65	1.8	85	2.5	85	3.2	75	3.7	70	4.0
11	85	2.2	—	1.4	—	1.1	150	3.1	85	2.9	70	2.5	40	2.5	65	2.6	65	2.5	85	2.8	85	1.8	80	2.2
12	—	1.2	95	2.6	115	2.0	85	1.8	—	1.2	80	4.0	115	3.4	—	0.5	—	1.4	50	2.0	95	4.0	90	4.2
13	95	3.4	85	5.0	80	5.5	75	5.4	85	4.1	100	4.6	95	4.9	90	4.6	90	5.3	110	6.8	100	5.7	100	5.7
14	85	1.9	—	1.5	95	2.1	75	2.6	95	1.7	105	2.1	100	2.5	100	1.7	100	2.5	—	1.5	85	1.8	—	0.5
15	350	10.0	345	9.4	350	6.9	355	7.0	350	8.4	350	7.4	350	7.9	355	6.0	350	7.2	325	7.5	345	7.4	345	7.0
16	10	3.2	5	3.0	—	0.5	—	1.0	50	1.7	—	1.1	—	1.5	—	1.5	—	1.1	—	1.1	—	1.1	—	0.5
17	120	3.8	115	2.3	105	3.4	125	4.2	135	4.4	130	4.5	120	5.0	110	6.5	110	6.8	100	6.3	105	5.7	125	5.6
18	90	1.8	80	2.0	80	2.3	—	1.4	220	1.7	—	1.5	—	0.5	—	1.1	90	3.1	—	1.1	95	2.5	115	4.3
19	140	6.1	140	5.9	145	5.6	150	5.9	155	5.9	145	5.9	145	6.5	150	6.8	145	7.0	160	7.2	160	7.6	160	8.0
20	140	7.3	140	7.8	145	8.3	145	8.5	140	7.7	140	7.3	130	6.9	105	4.9	100	4.9	120	4.5	125	4.7	100	4.2
21	—	0.5	—	0.5	105	1.7	—	1.2	—	1.5	—	1.2	70	1.6	—	1.3	—	0.5	—	0.5	—	0.5	190	1.9
22	85	2.2	—	1.2	—	0.5	—	0.5	95	1.6	90	1.6	85	2.1	50	3.0	60	2.8	—	0.5	—	0.5	—	1.2
23	95	3.7	105	3.9	120	3.1	130	3.9	115	4.5	115	4.5	125	3.5	120	4.2	125	4.3	130	2.1	150	2.3	150	4.3
24	—	1.3	—	1.3	—	1.5	95	3.5	105	3.4	90	2.6	335	1.8	210	1.7	95	6.0	120	5.6	120	2.6	100	4.6
25	120	7.0	125	8.3	115	7.9	130	8.1	120	8.0	115	9.2	110	9.1	100	8.5	80	9.3	70	10.6	5			



Direction expressed in degrees from North (E=90°, S=180°, W=270°, N=360°) : Speed in Metres per second.

415. Cahirciveen (Valentia Observatory) :  
Dines Anemograph from Jan., 1926.

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T. Day.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	50	2.2	55	2.0	55	2.3	45	1.8	45	1.7	—	1.1	—	0.5	60	2.1	—	1.0	—	1.1	—	—	0.5	
2	80	3.5	105	4.5	85	5.5	110	3.5	—	1.3	65	2.5	—	1.3	15	1.9	70	6.4	90	8.2	85	8.5	75	8.0
3	100	7.6	90	6.8	90	7.0	100	7.9	90	7.4	100	7.4	85	6.5	90	5.8	90	5.1	110	6.5	100	6.8	100	6.0
4	170	4.0	175	4.0	170	5.0	170	3.5	160	5.9	155	6.0	160	6.6	155	7.6	150	7.3	160	7.5	170	7.5	165	7.7
5	175	3.1	175	3.5	170	3.5	170	3.3	—	1.2	200	1.8	—	1.0	—	0.5	—	0.5	170	3.5	160	2.8	170	4.8
6	—	0.5	90	1.7	—	1.2	—	1.0	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	275	1.8	295	3.3
7	315	2.7	305	4.5	335	3.2	330	2.1	—	0.5	—	1.0	—	1.1	—	1.1	180	2.3	225	3.8	250	4.7	255	4.3
8	170	5.7	160	6.5	155	6.8	155	8.8	170	9.8	170	7.7	175	6.7	170	9.0	170	9.3	175	9.2	175	9.5	175	8.9
9	210	7.4	205	6.7	270	3.5	320	4.0	345	4.8	350	6.3	350	7.0	350	7.3	355	8.6	355	8.4	360	9.5	360	9.5
10	20	6.4	15	4.3	355	6.1	350	7.1	350	8.0	350	4.2	340	7.7	345	6.5	300	5.3	305	3.2	290	5.7	270	7.3
11	300	10.8	310	11.1	310	12.2	315	11.6	320	11.3	320	9.6	325	7.9	310	9.3	305	7.8	310	6.2	295	7.7	285	5.9
12	295	7.4	305	7.0	320	7.5	335	7.5	350	5.8	360	5.4	355	6.5	350	6.2	350	6.7	5	5.4	360	5.0	325	2.4
13	295	8.0	305	7.2	300	6.7	295	5.2	300	4.5	300	4.2	290	2.1	275	3.8	270	3.5	235	4.1	255	6.7	260	7.4
14	190	3.4	185	2.1	—	1.0	105	2.2	75	1.8	—	1.4	95	2.7	80	3.5	80	3.8	75	3.9	75	2.8	70	3.8
15	50	8.7	50	9.0	65	8.9	65	8.3	75	8.9	70	8.6	70	9.0	55	9.2	65	8.6	65	8.5	65	9.7	55	10.1
16	70	7.8	70	6.0	75	5.8	55	5.6	50	3.5	50	6.2	30	8.2	30	7.4	40	7.1	45	4.7	35	4.6	185	3.3
17	35	1.9	35	2.2	35	2.3	60	3.3	60	1.6	60	2.8	60	2.0	60	2.1	—	1.5	65	1.7	—	0.5	325	2.2
18	—	1.4	—	1.5	10	6.5	10	4.1	10	3.3	10	4.2	50	2.4	20	2.5	15	4.0	10	5.0	360	6.1	20	6.3
19	360	7.4	30	7.1	30	4.5	25	4.5	15	6.5	10	7.4	20	7.1	20	7.4	20	6.5	15	6.2	15	6.6	15	6.3
20	—	1.3	—	1.1	170	3.3	175	4.6	200	3.8	225	5.7	225	5.8	240	7.7	240	7.0	250	8.2	250	9.0	245	8.1
21	215	5.2	205	5.6	210	5.4	225	5.7	225	5.4	230	5.5	250	6.7	240	5.9	265	6.3	305	4.8	300	4.4	285	3.9
22	—	1.0	—	1.0	55	2.3	55	2.5	55	3.3	95	2.0	55	2.5	—	1.4	—	0.5	175	3.7	170	5.7	170	7.5
23	295	6.0	320	5.1	310	5.2	290	5.5	345	5.4	330	1.6	310	4.1	295	3.7	300	5.2	330	6.4	325	6.0	325	6.6
24	355	2.6	355	2.5	355	3.5	355	4.1	5	4.8	15	4.9	25	4.5	60	2.3	—	1.0	35	1.7	—	0.5	—	0.5
25	175	5.5	185	5.6	190	6.4	190	6.1	195	6.5	200	6.0	220	6.5	220	6.6	225	5.7	230	6.0	250	7.5	250	7.1
26	—	0.5	—	0.5	—	1.1	—	1.0	—	1.0	—	1.4	165	3.3	165	3.6	175	3.2	175	4.1	180	4.8	180	5.3
27	175	4.2	170	4.5	180	4.7	175	4.5	175	4.1	180	4.9	180	3.5	180	4.4	180	5.3	180	6.0	185	6.7	185	6.2
28	185	11.0	175	12.0	175	12.0	175	12.3	175	13.1	175	12.8	175	14.0	170	14.0	170	14.7	175	14.2	175	13.8	175	15.0
29	245	11.0	240	10.4	240	9.4	245	10.0	250	9.3	250	9.8	255	10.3	250	10.3	250	9.8	250	10.1	270	8.3	260	9.7
30	215	4.5	195	5.3	190	5.2	185	7.0	185	7.5	180	7.7	185	8.8	175	9.7	175	10.6	175	10.9	170	12.2	170	12.0
31	105	2.5	60	1.6	—	1.0	—	1.0	350	3.5	295	3.0	260	5.0	270	4.4	255	5.2	250	6.6	235	8.0	220	8.0
Mean	—	5.0	—	4.9	—	5.1	—	5.1	—	5.0	—	5.0	—	5.2	—	5.4	—	5.5	—	5.8	—	6.3	—	6.4

416. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	175	15.2	175	15.0	170	12.5	175	11.7	170	10.9	170	10.9	170	10.8	170	9.3	160	8.7	175	11.9	190	14.5	185	13.1
2	185	11.2	185	10.8	185	11.1	185	10.3	180	10.1	190	9.9	190	9.7	185	9.6	185	10.2	190	10.3	190	10.0	190	10.0
3	105	3.8	95	4.8	90	5.2	90	6.2	85	6.6	85	6.5	60	5.2	60	4.8	45	6.7	45	8.5	45	10.2	40	9.6
4	35	11.0	40	10.4	45	9.8	45	9.0	40	11.2	45	11.1	45	10.8	45	10.7	35	9.5	35	9.9	45	12.4	40	11.6
5	50	7.4	55	5.8	40	7.4	45	7.8	45	8.0	40	9.1	35	9.2	45	7.6	30	7.0	25	7.5	30	7.7	35	7.0
6	—	0.5	—	0.5	—	1.0	—	1.1	5	1.6	—	1.0	5	1.7	—	1.0	—	0.5	—	0.5	310	2.0	310	3.7
7	120	1.7	75	2.2	—	1.5	—	0.5	125	4.2	145	5.2	150	4.9	155	6.1	160	6.7	160	7.2	165	7.7	170	6.4
8	170	6.8	175	7.0	175	7.0	175	7.2	170	7.1	170	7.8	180	8.0	185	8.2	195	7.5	195	6.3	215	5.6	210	6.0
9	180	3.6	170	3.6	175	3.5	230	1.6	180	1.8	90	1.6	50	2.2	65	2.4	155	2.8	155	4.4	160	3.7	175	4.0
10	15	5.6	50	5.8	85	5.3	65	5.5	45	6.6	45	7.2	40	8.4	35	9.5	35	8.3	30	9.1	20	8.7	20	9.0
11	60	1.7	50	1.6	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.1	—	1.0	255	2.0	260	3.8	225	5.5
12	310	4.3	315	5.5	305	5.6	300	5.8	310	5.5	295	6.2	325	7.0	300	5.5	300	7.1	310	7.2	305	6.7	310	7.2
13	290	6.9	280	7.9	285	7.4	275	6.3	280	3.9	260	3.2	235	2.7	270	4.5	315	5.9	305	6.8	300	8.9	315	11.0
14	325	10.5	330	10.9	335	11.2	330	10.4	340	10.5	345	11.0	345	9.9	340	10.5	340	10.0	335	11.1	340	10.8	340	11.4
15	355	6.1	350	5.9	350	6.8	350	8.1	355	6.5	355	6.4	360	6.4	355	7.4	360	7.5	10	7.0	15	6.9	5	8.0
16	355	3.4	350	2.7	355	3.5	360	4.3	345	4.1	355	5.1	340	6.4	340	6.6	330	5.5	345	5.2	335	3.9	350	4.5
17	20	5.9	15	7.2	30	4.8	15	4.9	10	5.0	360	5.6	360	6.1	15	5.9	355	7.9	345	8.6	350	10.0	350	9.7
18	40	4.8	35	5.2	40	5.5	45	6.1	35	6.4	30	6.8	30	6.4	35	6.9	40	8.5	30	8.1	20	8.8	30	7.8
19	30	7.5	40	7.4	40	7.0	45	6.7	45	6.5	40	6.0	45	7.0	50	6.9	35	9.6	20	10.6	15	8.9	10	7.6
20	35	13.0	35	11.5	35	11.6	40	11.7	35	10.8	45	7.5	45	7.5	50	7.9	45	8.2	50	10.2	50	10.2	45	9.8
21	60	6.5	65	5.2	55	4.7	65	4.1	85	3.4	60	2.9	35	4.3	45	4.2	55	5.0	70	4.2	60	4.8	20	3.0
22	85	2.2	75	1.8	90	1.9	85	2.3	80	3.0	—	1.4	80	1.6	—	1.3	—	0.5	305	1.6	315	2.3	280	3.0
23	210	2.0	55	1.8	35	2.4	20	2.2	—	1.5	30	2.0	40	1.6	180	2.1	70	5.8	70	7.5	70	7.2	60	7.8
24	5	4.3	350	8.0	360	6.6	360	6.0	10	5.3	20	4.2	20	4.1	360	5.8	355	6.8	350	6.3	345	6.0	340	5.9
25	360	5.2	5	5.7	25	4.9	15	5.0	10	5.2	15	4.3	360	4.8	360	5.6	5	6.2	10	6.8	355	7.0	345	8.1
26	1																							

Averages for periods of sixty minutes, centred at the exact hours, Greenwich Mean Time.

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 17 metres + 13 metres.

March, 1930.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
—	0.5	—	1.5	50	2.4	60	3.9	35	3.9	—	1.4	85	5.2	80	5.8	80	7.0	70	6.6	75	5.2	85	4.8	2.7	1
70	7.0	90	5.2	95	3.9	105	3.1	110	4.9	105	5.2	105	7.1	90	6.1	100	7.2	90	7.3	100	7.5	100	7.5	5.2	2
160	2.6	170	3.7	170	2.5	200	4.8	180	3.8	170	3.9	165	4.0	170	3.7	160	3.8	160	3.1	170	4.3	170	5.0	5.3	3
165	8.1	165	8.5	160	9.6	160	9.2	155	8.5	150	7.3	155	6.8	155	6.0	180	4.0	180	3.0	180	3.5	175	3.2	6.3	4
175	5.5	175	3.5	175	3.0	180	1.8	—	1.5	—	0.5	85	1.8	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	2.1	5
310	4.0	315	4.9	320	6.0	325	4.7	325	3.4	310	3.5	310	2.6	—	0.5	—	0.5	300	2.0	—	0.5	—	1.5	1.9	6
245	3.7	225	5.1	220	5.2	220	4.8	220	4.8	200	3.7	200	3.1	200	3.5	180	3.4	175	4.9	175	4.8	180	4.0	3.4	7
180	8.5	180	8.6	175	8.6	175	8.0	180	7.5	175	8.2	180	8.5	190	7.4	190	8.8	190	9.8	200	9.5	205	10.0	8.3	8
350	9.0	350	10.0	360	10.6	5	9.4	10	9.0	5	9.7	10	8.5	355	11.1	360	9.0	360	9.3	25	7.2	360	7.9	8.1	9
270	7.0	270	7.5	275	6.3	285	6.5	280	8.2	285	7.1	290	10.2	285	11.3	290	11.9	305	12.1	310	11.4	305	11.7	7.5	10
285	3.1	215	4.5	190	5.3	195	7.0	255	10.0	270	7.8	280	9.7	295	9.6	305	8.7	300	7.6	300	7.3	300	7.5	8.4	11
290	2.2	—	1.5	245	2.1	275	4.8	305	9.0	305	8.5	305	7.6	315	8.5	315	7.3	310	7.2	310	6.9	300	5.7	6.0	12
275	6.2	290	6.4	300	6.1	290	5.5	285	6.6	285	5.9	305	4.5	—	1.0	285	1.6	275	4.0	270	3.5	210	3.0	5.0	13
90	2.5	355	2.2	—	1.2	55	5.3	85	4.0	180	2.0	115	4.2	70	6.7	55	5.5	75	6.8	70	5.9	50	6.5	3.5	14
65	9.5	60	10.4	70	10.6	65	10.3	70	9.0	70	10.0	70	10.4	65	10.9	65	11.7	65	11.1	65	12.3	55	9.9	9.7	15
315	3.0	320	4.1	285	4.4	315	5.3	335	5.2	255	3.5	350	2.3	—	0.5	—	0.5	—	0.5	—	1.0	35	1.7	4.4	16
275	3.6	280	3.9	275	4.1	275	4.1	275	2.9	240	2.5	200	2.5	240	1.9	210	3.4	190	2.3	150	2.5	—	1.3	2.5	17
25	5.6	15	6.0	350	7.5	340	9.2	345	9.3	350	9.1	355	7.7	355	9.0	5	5.3	350	10.5	10	7.1	345	8.9	5.8	18
20	6.6	10	6.5	10	6.2	345	6.7	345	6.4	355	4.6	325	3.7	360	2.0	—	0.5	—	1.2	—	0.5	—	1.3	5.3	19
240	9.0	250	8.7	265	8.0	255	7.2	240	7.5	245	7.6	230	5.6	230	6.0	255	6.1	250	6.2	240	5.4	215	5.2	6.1	20
275	5.7	280	6.8	285	6.9	280	7.9	285	7.6	310	6.9	345	6.9	360	6.3	5	4.9	35	3.2	—	1.5	—	1.5	5.5	21
165	8.2	170	8.5	165	9.5	165	7.6	160	8.0	155	9.1	160	9.0	175	7.6	170	9.2	165	10.0	215	9.7	300	6.0	5.6	22
325	7.5	340	7.4	345	8.0	350	9.0	350	8.6	355	7.9	350	7.5	350	6.4	360	3.8	350	5.0	355	5.2	355	3.6	5.9	23
275	2.8	275	3.0	280	2.8	250	3.1	230	3.9	215	4.7	220	4.5	190	3.5	180	4.0	175	4.5	175	5.0	180	5.5	3.3	24
255	5.5	255	5.7	255	5.0	255	4.7	260	2.6	265	2.0	—	1.5	—	0.5	—	0.5	—	1.4	275	1.9	—	0.5	4.6	25
185	4.7	195	5.0	210	6.3	215	6.4	210	5.8	210	5.9	200	5.1	195	5.3	195	4.6	180	3.3	195	4.5	190	3.6	3.7	26
185	6.5	185	7.6	195	7.3	190	7.6	185	7.7	185	7.7	185	8.3	185	8.2	170	8.7	175	8.4	175	9.0	180	10.7	6.4	27
180	14.6	185	15.2	210	9.8	205	9.6	215	9.7	220	9.3	230	8.6	295	7.9	280	6.2	265	7.5	260	6.9	250	10.0	11.4	28
260	8.5	265	7.3	270	7.4	265	7.1	260	7.9	260	6.7	265	6.8	260	5.8	240	5.4	245	5.6	220	4.6	200	4.6	8.3	29
180	12.1	180	12.3	185	11.8	180	10.6	180	9.7	185	8.2	180	7.2	180	6.3	170	5.7	170	6.0	155	5.6	145	4.9	8.4	30
210	9.5	190	9.2	185	9.5	170	10.4	165	11.7	165	12.3	170	13.0	170	13.1	170	14.2	170	14.8	170	15.1	170	15.6	8.0	31
—	6.2	—	6.5	—	6.4	—	6.6	—	6.7	—	6.2	—	6.3	—	5.9	—	5.6	—	6.0	—	5.7	—	5.6	5.8	

April, 1930.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
185	14.0	180	13.5	175	14.3	175	14.5	175	14.0	180	13.7	180	14.0	180	14.5	180	14.4	180	14.3	185	14.4	185	14.4	18.1	1
200	9.8	205	9.0	210	8.5	210	8.5	210	8.4	205	8.1	195	5.7	175	4.4	170	4.3	155	4.4	150	4.5	140	3.6	8.6	2
40	10.2	45	9.8	45	10.4	45	10.5	55	9.0	50	8.8	50	7.7	55	8.3	50	6.8	50	9.1	45	9.1	40	10.3	7.7	3
40	12.2	45	11.8	45	11.5	40	10.5	30	9.9	30	11.4	25	10.2	35	11.7	40	9.0	45	9.3	50	9.2	50	7.4	10.5	4
25	6.5	15	6.4	5	6.4	10	6.3	10	6.4	360	6.1	360	5.7	360	5.6	360	4.0	360	1.9	—	0.5	—	1.0	6.3	5
325	5.0	320	5.1	325	5.3	320	5.0	305	4.0	295	2.6	—	1.1	—	0.5	—	1.1	—	1.2	40	2.3	40	2.3	2.1	6
165	6.9	160	7.3	160	8.7	155	7.1	160	6.3	160	9.1	160	8.5	155	7.3	165	6.5	160	7.3	155	7.9	160	7.3	5.9	7
225	7.7	235	6.9	255	5.9	225	6.0	215	6.1	205	6.0	200	6.6	200	5.5	190	4.5	185	4.3	195	4.1	185	4.0	6.4	8
185	4.8	185	4.4	180	3.7	225	2.3	280	3.6	285	2.2	345	2.4	30	3.5	20	5.0	35	2.7	40	3.8	30	3.7	3.2	9
15	9.6	20	9.8	20	8.9	20	7.9	15	8.5	15	8.7	10	7.0	10	5.1	10	5.7	15	5.7	—	1.5	40	2.0	7.1	10
230	7.0	235	7.2	250	7.7	240	7.4	230	6.3	220	6.9	220	7.4	225	6.3	255	7.3	330	4.2	285	3.9	310	4.5	3.9	11
290	6.9	295	6.7	290	7.1	295	6.7	290	7.2	290	6.6	295	7.5	295	6.7	290	7.6	295	7.1	295	7.4	290	7.5	6.5	12
325	11.4	320	11.3	325	11.3	315	10.8	320	11.2	325	10.2	320	10.8	320	11.6	325	10.9	325	10.6	330	10.5	330	9.6	8.5	13
340	12.6	340	12.3	340	12.1	345	11.6	360	12.7	355	12.1	350	12.0	355	10.0	360	7.9	360	7.3	360	7.4	360	5.4	10.6	14
350	7.5	345	8.4	355	7.6	360	7.5	345	8.2	350	7.8	350	6.5	360	4.0	5	4.1	355	4.5	360	4.0	355	3.8	6.6	15
340	7.9	340	7.5	340	6.9	335	7.1	340	7.0	330	8.4	350	8.4	350	9.0	360	7.0	20	6.0	10	4.9	10	5.5	5.8	16
345	10.0	345	10.9	340	11.5	345	12.4	345	12.7	350	11.4	350	9.6	10	9.9	20	8.5	15	5.7	55	5.0	65	6.5	8.1	17
20	7.1	25	7.6	20	8.6	20	8.3	20	8.2	15	7.7	20	6.6	20	6.8	30	7.8	40	4.0	40	6.4	45	7.5	7.0	18
5	10.1	10	12.5	20	12.8	15	12.4	15	11.8	15	11.6	25	10.5	25	10.7	20	11.3	20	11.5	20	13.0	25	11.7	9.6	19
40	9.1	50	8.2	55	7.3	55	7.0	55	6.3	50	7.1	60	5.8	65	4.4	65	4.1	60	5.1	65	8.1	70	7.8	8.4	20
10	4.0	360	6.0	360	5.7	360	4.7	320	5.0	325	3.6	300	2.0	—	0.5	200	1.7	—	1.2	—	1.0	—	1.2	3.8	21
265	3.4	265	4.2	270	3.7	270	3.5	270	3.4	270	3.1	310	1.8	—	0.5	70	2.2	85	2.6	—	1.1	50	2.6	2.3	22
60	6.8	65	5.6	60	6.4	45	6.3																		

Direction expressed in degrees from North (E=90°, S=180°, W=270°, N=360°) : Speed in Metres per second.

417. Cahirciveen (Valentia Observatory) :  
Dines Anemograph from Jan., 1926.

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	1.5	—	1.0	—	1.0	45	2.0	—	1.2	—	1.2	—	0.5	—	0.5	—	0.5	100	3.2	150	4.6	140	4.5
2	145	6.5	125	5.3	105	5.2	95	4.6	130	4.6	125	4.2	125	4.5	145	4.6	150	4.3	175	3.7	175	3.8	185	5.0
3	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	275	1.7	270	2.7	270	3.7	270	4.2
4	—	0.5	—	1.1	50	1.7	—	0.5	—	1.3	75	2.2	130	3.6	150	5.2	160	6.2	170	7.3	175	8.5	175	8.8
5	145	9.5	140	9.7	135	9.4	130	7.4	110	9.4	105	10.7	110	9.6	140	8.7	205	8.5	240	11.2	240	10.7	250	6.4
6	60	2.2	60	2.0	—	1.3	20	2.1	50	3.9	45	4.2	25	5.0	40	5.5	20	4.5	25	5.5	20	7.1	20	7.4
7	15	5.9	35	6.3	30	7.4	25	9.0	30	7.0	35	5.0	25	4.6	20	5.6	20	6.0	15	8.0	20	7.0	25	7.4
8	360	4.9	360	4.3	360	5.2	350	4.1	355	5.2	5	4.6	350	3.8	350	4.2	350	3.1	310	3.3	320	4.8	320	5.0
9	250	4.0	240	3.6	240	4.0	235	4.0	220	4.0	215	4.0	180	4.0	165	4.3	155	4.7	145	3.7	65	2.0	45	2.3
10	350	2.5	—	1.1	—	0.5	—	1.2	180	2.2	185	3.1	185	4.5	195	5.6	225	5.4	185	3.2	165	5.8	170	7.4
11	275	12.1	280	12.2	285	10.8	280	9.9	280	8.6	280	7.7	275	7.4	275	7.1	275	7.1	270	6.9	260	8.8	265	8.5
12	250	6.7	250	7.0	250	7.7	240	5.6	230	5.5	220	4.5	220	4.5	220	4.8	220	5.5	215	5.0	205	4.5	180	4.5
13	220	8.1	220	8.5	220	8.6	220	7.2	220	6.6	220	6.1	215	5.5	215	6.6	220	7.4	225	6.2	230	7.0	225	7.5
14	210	3.8	205	4.0	210	3.9	200	3.7	205	4.2	210	4.3	215	4.7	230	5.9	230	5.6	230	5.7	220	6.4	220	6.5
15	160	6.7	180	6.5	205	6.6	240	7.3	260	5.8	215	3.4	225	5.1	225	5.4	215	7.5	220	9.0	225	10.4	225	10.3
16	230	4.6	235	4.8	235	4.5	230	4.5	215	3.6	205	3.3	230	3.8	245	4.4	230	5.5	230	5.8	230	5.9	230	5.8
17	165	8.2	160	9.9	160	10.6	175	12.5	180	12.0	180	13.2	180	13.7	185	12.8	185	12.5	190	10.8	195	9.3	210	9.4
18	250	6.5	245	4.2	265	3.6	290	6.0	295	6.6	295	6.5	285	8.1	280	7.6	285	7.7	295	7.8	285	7.8	280	7.6
19	255	6.6	245	6.8	235	6.0	230	6.5	220	6.1	235	6.3	245	7.7	255	9.4	255	8.2	260	7.2	260	6.6	260	6.4
20	285	2.2	290	2.9	310	3.4	300	2.5	310	2.5	300	3.9	320	3.6	305	3.2	290	3.4	300	4.4	305	4.2	290	3.9
21	—	1.0	—	1.5	—	1.4	50	1.7	—	1.2	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	250	2.7
22	—	1.5	—	0.5	—	1.2	—	0.5	—	0.5	—	0.5	—	0.5	—	1.5	60	1.8	—	0.5	270	3.2	265	4.5
23	—	0.5	—	0.5	—	1.0	—	0.5	—	0.5	70	1.8	70	1.6	—	0.5	—	1.0	320	2.5	305	4.3	285	3.4
24	—	0.5	—	0.5	—	0.5	—	1.0	—	0.5	—	1.1	355	2.0	320	4.0	335	6.1	340	7.4	330	7.3	330	7.2
25	350	1.7	355	2.6	—	1.3	—	1.0	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	320	3.0	320	4.0	310	4.1
26	—	1.4	—	1.0	—	1.2	—	0.5	—	0.5	—	0.5	—	1.1	—	1.4	—	1.0	300	1.7	355	3.4	110	2.5
27	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.5	345	4.1	355	4.5	360	3.5	330	2.8	310	3.7	325	3.6
28	260	4.5	260	4.4	305	1.8	305	2.0	320	3.8	320	4.4	310	2.8	310	3.6	345	3.7	340	3.1	310	3.0	265	4.2
29	—	1.5	—	1.5	60	2.2	60	1.6	—	1.5	—	0.5	150	3.1	150	4.4	150	4.6	160	5.0	160	5.2	160	6.2
30	140	3.9	145	4.0	140	3.5	130	4.0	100	3.9	90	4.2	90	3.6	115	2.7	155	3.0	165	2.8	180	2.6	—	1.0
31	195	1.9	—	1.0	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.3	40	4.3	50	5.5	40	4.4	50	3.3
Mean	—	3.9	—	3.9	—	3.8	—	3.7	—	3.7	—	3.7	—	4.0	—	4.4	—	4.7	—	5.0	—	5.5	—	5.5

418. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	175	2.0	—	1.5	—	0.5	—	0.5	—	0.5	—	1.1	50	1.8	50	1.6	—	1.5	—	0.5	—	0.5	—	0.5
2	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	45	3.1	50	4.2	45	3.6	50	2.7
3	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.2	305	2.1	315	3.2
4	—	0.5	—	0.5	—	1.0	—	0.5	—	0.5	30	1.9	350	3.9	345	4.0	350	4.7	345	2.9	325	3.8	315	4.5
5	—	1.0	—	0.5	—	1.4	—	1.2	40	2.1	—	1.0	—	1.0	—	1.0	—	1.3	270	1.8	265	2.8	265	3.4
6	—	0.5	5	1.6	—	1.5	40	1.6	45	1.7	40	3.6	20	3.3	345	3.1	330	3.0	325	4.4	340	6.0	350	8.2
7	15	7.8	10	7.8	10	8.0	10	8.0	10	7.7	10	6.0	15	7.7	20	8.2	20	8.2	20	8.3	25	7.7	25	7.8
8	45	1.7	—	0.5	—	1.3	—	1.1	—	1.1	—	1.4	—	1.0	—	0.5	—	0.5	325	3.1	290	2.7	270	3.8
9	185	4.9	200	6.5	200	5.8	195	6.5	195	6.8	200	7.9	195	8.5	200	8.2	200	8.0	220	7.3	220	7.0	210	6.8
10	220	4.8	240	5.0	235	4.8	260	4.6	255	2.9	265	2.8	260	3.2	255	4.8	250	5.5	250	5.6	255	5.5	250	5.5
11	260	5.5	275	4.7	260	3.3	290	4.2	290	3.5	280	4.5	265	4.7	270	5.4	260	6.0	255	6.0	240	5.6	255	5.6
12	—	1.5	50	2.1	50	1.9	50	2.0	50	2.5	50	2.2	100	2.5	165	3.2	175	3.4	185	4.2	180	5.1	195	4.6
13	135	2.5	120	2.1	125	1.8	140	3.5	130	3.9	140	4.9	145	4.3	170	6.3	165	6.0	170	5.2	160	5.3	180	5.4
14	150	4.1	150	4.5	150	4.5	155	4.6	155	4.7	150	4.5	155	4.5	170	5.8	170	6.1	185	7.4	185	7.0	180	6.5
15	145	4.4	145	3.5	150	2.7	145	3.3	150	3.8	145	3.3	155	2.7	170	3.9	180	5.3	180	5.6	185	6.7	185	7.2
16	—	1.5	—	1.3	80	2.4	—	1.5	70	1.6	—	1.4	—	0.5	175	2.7	175	3.2	195	3.6	185	3.6	180	3.7
17	—	0.5	—	0.5	—	0.5	—	0.5	—	1.3	—	1.3	—	1.1	—	1.0	—	0.5	—	0.5	265	2.3	270	2.3
18	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.3	—	1.3	270	3.2	270	1.8	270	2.0
19	160	5.9	165	6.5	170	6.7	170	7.6	170	7.7	175	7.7	175	7.5	175	8.5	170	8.4	175	7.6	180	6.7	185	6.5
20	185	3.4	175	3.3	170	3.0	165	3.2	160	3.6	170	5.8	180	3.6	—	1.4	—	0.5	265	3.0	275	2.9	275	2.8
21	190	5.7	195	5.3	190	5.1	185	4.8	180	4.6	180	4.2	170	5.5	175	5.3	175	5.3	175	5.0	170	4.2	180	3.0
22	195	4.0	200	4.2	210	3.9	200	3.2	210	4.7	195	4.8	210	6.2	215	7.6	215	8.9	195	7.9	210	8.2	210	9.4
23	230	6.0	210	5.4	230	4.4	185	3.6	205	3.5	175	3.3	165	2.5	180	4.4	210	4.2	240	6.5	245	6.7	255	7.4
24	275	7.6	275	7.5	270	6.6	285	7.4	285	7.0	285	8.1	285	7.0	285	7.6	290	7.3	290	7.6	290	7.0	280	7.4
25	285	2.5	290	2.5	—	0.5	—	1.0	—	1.2	—	1.2	—	1.2	—	0.5	—	0.5	275	2.3	275	2.7	270	2.3
26	—	1.2	165	2.5	155	4.4	150	5.3	150	5.9	150	6.5	155	6.1										



Direction expressed in degrees from North (E=90°, S=180°, W=270°, N=360°) : Speed in Metres per second.

419. Cahirciveen (Valentia Observatory) :  
Dines Anemograph from Jan., 1926.

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	170	4.5	170	4.9	160	6.1	170	6.5	180	5.2	185	5.4	190	4.6	215	5.2	220	5.4	225	5.0	225	5.9	210	6.5
2	105	3.5	95	4.1	95	4.0	90	4.3	90	4.6	90	4.6	85	4.5	80	4.9	70	4.7	95	5.3	100	5.2	145	5.0
3	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	235	1.6	325	3.4	320	2.5	285	2.9	275	3.8	270	4.1
4	310	5.0	310	5.9	310	5.4	315	5.8	320	5.2	310	4.5	315	4.8	320	4.6	320	5.4	325	4.0	305	4.1	305	4.3
5	—	1.4	185	3.6	185	2.8	—	1.5	—	1.5	165	4.3	185	4.9	190	5.1	190	5.4	190	6.5	200	6.5	210	6.7
6	230	4.2	270	3.7	290	3.0	300	3.0	315	2.9	330	4.0	350	6.0	345	5.9	335	6.0	325	5.4	325	6.5	320	6.3
7	—	1.4	—	1.0	—	0.5	—	1.1	—	1.4	—	0.5	—	1.3	245	3.4	235	4.3	230	4.7	230	4.9	225	5.5
8	280	4.5	280	3.1	270	2.7	265	2.5	265	1.6	—	1.2	265	2.2	265	3.8	270	4.0	270	3.1	265	2.6	235	3.3
9	285	1.9	285	2.5	280	1.8	280	1.9	—	1.5	—	0.5	—	1.2	—	1.4	270	1.6	285	2.6	260	2.9	260	2.3
10	330	3.0	335	3.8	355	2.9	345	4.6	345	4.4	345	4.5	345	4.1	340	4.4	330	4.1	325	4.7	335	6.5	320	6.2
11	—	1.5	—	1.5	—	0.5	325	1.7	320	5.7	320	6.0	320	5.7	315	5.4	315	5.4	315	4.9	335	6.2	330	6.3
12	345	6.0	345	5.7	350	4.8	355	4.5	350	3.6	350	4.2	335	5.1	340	5.4	330	5.2	335	6.2	320	5.3	330	5.8
13	—	0.5	—	1.2	—	1.3	175	3.2	185	3.5	195	4.5	220	5.0	225	4.8	215	4.6	260	5.5	260	5.3	260	6.4
14	325	6.0	335	7.5	330	7.8	330	6.7	325	6.6	330	6.8	335	8.0	345	7.0	340	7.3	335	7.0	335	7.0	330	7.4
15	160	3.3	160	3.5	155	4.4	160	5.4	165	5.5	160	6.0	160	8.2	160	8.8	160	10.1	160	9.0	190	7.8	205	6.3
16	310	10.6	310	10.6	310	10.1	310	8.9	300	7.5	300	7.3	295	7.1	290	6.5	290	6.4	300	6.0	285	6.7	305	6.5
17	270	4.7	260	5.3	235	4.9	260	6.2	250	6.4	230	5.8	225	6.1	225	7.0	220	7.0	220	7.5	220	7.3	210	8.1
18	10	7.3	360	7.6	10	6.8	360	8.9	345	8.9	345	8.5	340	8.3	340	8.2	330	8.6	320	7.5	325	8.0	320	8.2
19	300	3.7	295	5.4	290	4.5	290	3.9	290	4.0	290	4.0	290	4.2	290	4.1	290	3.7	290	3.7	290	4.2	310	5.4
20	90	4.5	75	4.2	80	2.8	75	2.7	75	3.0	50	2.6	65	5.2	55	4.8	25	6.0	30	6.5	30	6.2	10	6.1
21	10	7.9	5	6.2	5	7.2	360	8.5	360	7.6	5	7.3	350	8.2	360	8.0	10	9.0	360	9.0	350	9.0	360	8.9
22	360	3.4	360	3.8	360	2.7	345	3.0	315	4.0	320	3.8	335	4.7	340	6.1	340	6.5	340	7.1	360	6.7	325	5.5
23	350	5.7	350	6.3	350	5.6	350	5.2	350	4.4	10	6.2	360	3.8	355	6.8	10	6.2	360	8.1	20	7.1	350	7.9
24	—	1.5	—	0.5	—	0.5	—	1.4	—	0.5	—	0.5	—	0.5	—	1.0	—	1.3	270	3.6	270	2.9	265	2.5
25	155	5.9	155	6.1	160	6.1	160	6.6	160	7.2	165	8.7	165	9.5	165	10.5	165	10.0	160	11.1	170	11.2	170	11.1
26	180	7.4	190	7.9	225	7.0	220	5.9	220	6.9	210	6.1	210	6.3	205	7.7	220	8.1	225	8.7	225	9.4	220	9.4
27	215	7.2	220	5.8	220	4.6	210	4.5	185	5.0	195	5.8	205	6.4	200	6.7	205	7.5	205	7.5	210	7.5	205	8.8
28	205	6.7	205	6.9	205	7.6	200	7.9	210	8.7	225	7.5	220	5.5	225	6.6	230	7.5	225	8.0	235	8.6	240	9.0
29	270	6.4	270	5.9	275	6.2	270	7.0	265	8.6	265	10.0	285	9.9	290	9.7	290	9.6	295	9.5	295	8.9	295	8.0
30	325	5.8	320	5.6	325	5.0	330	5.6	340	4.4	330	4.6	320	4.6	330	5.0	330	5.0	340	6.8	340	6.7	335	5.8
31	—	0.5	—	0.5	—	0.5	75	1.7	70	2.0	70	1.9	60	2.0	—	1.2	—	1.5	170	2.7	155	3.8	160	4.3
Mean	—	4.4	—	4.6	—	4.2	—	4.6	—	4.6	—	4.8	—	5.2	—	5.6	—	5.8	—	6.2	—	6.3	—	6.4

420. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	145	8.8	140	7.4	150	7.4	150	7.8	140	8.2	140	7.8	135	7.8	130	7.9	130	7.2	130	7.2	110	8.4	110	8.0
2	205	1.6	170	3.2	185	3.6	250	4.4	260	5.2	270	5.7	260	8.2	260	8.3	255	8.4	250	8.1	250	8.6	250	9.1
3	335	6.9	325	9.4	320	8.1	320	6.3	305	6.0	295	6.5	290	5.4	295	6.0	290	5.7	295	5.2	290	5.1	285	5.0
4	275	3.1	290	3.5	285	3.2	275	3.3	270	2.8	260	4.6	230	3.7	235	5.5	230	6.2	240	5.7	245	5.5	230	7.5
5	—	1.1	70	1.6	—	1.2	—	0.5	—	1.5	70	1.9	70	1.6	170	4.5	175	4.8	225	4.6	285	5.5	280	5.8
6	280	6.6	285	7.2	290	8.0	290	7.5	280	7.4	275	6.3	285	6.8	280	5.6	275	6.2	270	6.6	275	7.2	275	6.1
7	295	4.4	295	4.4	295	4.4	295	4.3	290	4.0	290	4.5	300	4.6	280	5.0	290	5.3	305	5.4	295	5.0	280	6.4
8	225	2.5	185	2.0	—	1.5	185	2.7	175	4.0	180	4.3	190	5.0	185	5.5	185	6.8	175	7.7	180	8.9	180	9.5
9	—	0.5	—	0.5	205	1.8	155	2.0	100	1.7	—	1.4	165	2.3	165	2.5	180	4.2	180	5.8	180	6.0	190	6.3
10	170	4.4	175	3.5	180	3.9	200	2.7	210	4.2	200	4.0	200	4.3	190	4.0	175	4.0	(180)	3.5	(200)	4.4	(220)	4.4
11	210	3.5	215	3.6	250	5.3	260	4.4	260	5.1	260	5.4	260	5.1	260	5.9	255	6.8	260	6.8	265	5.8	260	6.4
12	315	4.5	320	6.6	315	5.6	320	5.7	310	4.7	315	5.1	340	5.7	345	5.3	325	6.8	325	6.6	325	7.1	320	6.9
13	315	4.5	310	3.0	305	4.1	305	4.2	305	3.5	290	4.7	275	3.7	250	4.0	250	5.5	245	6.0	240	5.9	225	6.7
14	310	7.6	320	7.4	325	8.9	320	7.5	320	7.0	320	6.7	305	6.5	300	7.2	295	7.3	290	7.5	285	7.6	290	7.0
15	—	1.2	—	1.0	225	2.1	215	3.1	240	4.3	220	2.7	255	6.9	265	6.7	275	5.7	295	6.7	315	7.1	330	6.9
16	—	0.5	—	0.5	—	1.3	70	1.8	—	1.0	—	0.5	105	1.8	165	4.9	165	5.6	170	6.6	175	6.6	175	7.4
17	150	2.7	160	5.2	165	5.3	165	5.4	155	3.6	—	1.5	145	2.3	135	2.5	—	1.0	155	2.4	150	2.7	110	4.3
18	—	0.5	—	0.5	—	0.5	—	1.1	—	1.4	—	0.5	—	0.5	330	8.8	340	8.8	335	7.8	330	7.8	325	6.5
19	260	4.3	270	4.7	245	4.1	240	4.5	255	5.2	195	4.1	245	4.2	245	3.5	250	6.8	250	7.3	250	7.8	250	8.0
20	200	4.4	190	4.3	190	5.3	180	4.7	170	4.8	165	5.2	165	5.3	170	6.3	175	6.2	165	6.2	165	6.1	150	6.6
21	330	8.7	345	8.3	330	7.6	335	7.3	325	7.8	320	8.8	315	9.5	305	9.2	300	9.7	295	8.6	295	8.3	290	8.9
22	220	4.5	190	3.8	190	3.6	180	4.4	170	5.0	170	5.3	180	4.9	185	5.9	185	6.2	200	7.5	190	7.4	190	7.5
23	110	4.9	100	3.7	—	0.5	—	1.5	180	4.5	220	5.9	220	5.8	220	6.8	240	7.8	260	8.2	255	8.3	255	8.8
24	190	4.5	185	4.8	180	4.8	190	5.4	200	6.5	220	6.6	215	5.6	210	5.8	210	7.1	210	6.1	200	4.1	210	8.0
25	160	4.7	155	6.2	150	7.2	150	8.7	140															



Direction expressed in degrees from North (E=90°, S=180°, W=270°, N=360°) : Speed in metres per second.

421. Cahirciveen (Valentia Observatory) :  
Dines Anemograph from Jan., 1926.

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.5	—	0.5	—	0.5	—	1.5	50	1.9	—	1.3	—	1.0	50	1.6	45	2.1	—	1.1	—	1.2	250	2.6
2	—	0.5	—	0.5	—	1.1	50	2.8	—	1.1	—	0.5	—	1.1	40	2.3	—	1.1	60	2.1	—	1.1	—	1.3
3	85	4.2	95	5.1	95	5.6	105	6.1	105	6.4	85	4.4	105	3.8	110	4.6	110	6.2	100	7.4	100	6.2	90	5.1
4	175	2.6	165	3.4	145	5.3	165	3.5	175	2.5	170	3.2	175	4.5	170	6.3	175	6.3	175	6.4	180	6.5	185	6.6
5	190	3.7	180	4.0	200	3.7	185	3.7	200	3.2	185	2.6	205	3.3	195	3.0	195	4.4	190	4.3	190	4.9	230	4.3
6	175	6.1	175	3.6	205	5.1	205	5.0	205	5.5	220	6.0	205	5.1	200	5.6	205	6.5	210	7.2	215	8.7	220	8.0
7	245	2.3	220	2.9	235	2.7	240	1.7	—	1.4	—	1.5	260	2.5	265	2.5	290	2.1	270	2.8	270	2.9	265	2.5
8	155	4.2	150	4.1	145	4.2	140	3.9	145	5.0	150	5.1	160	5.2	170	4.6	165	5.0	165	6.3	160	7.2	165	7.2
9	—	0.5	—	0.5	—	0.5	—	1.0	30	1.6	—	1.3	175	3.0	185	2.1	215	3.4	215	4.4	220	3.5	235	3.6
10	155	3.7	140	3.5	125	3.4	85	4.0	90	3.7	80	3.1	80	3.0	80	3.4	85	2.4	105	3.1	90	2.2	95	2.4
11	—	1.1	—	1.3	—	1.0	—	1.0	45	2.0	45	2.4	45	1.7	—	0.5	—	0.5	—	0.5	—	1.5	305	2.4
12	—	1.4	—	1.2	—	1.1	140	2.0	—	1.0	—	1.0	150	1.8	70	1.7	—	1.0	—	0.5	220	2.0	180	3.8
13	110	7.6	100	8.9	100	8.8	75	7.9	75	8.5	125	3.6	225	2.7	230	2.0	315	2.8	295	4.1	10	7.5	15	10.1
14	340	4.2	330	4.0	320	4.8	330	4.5	345	6.7	350	5.7	340	6.7	340	6.4	340	7.7	345	8.2	350	7.5	345	7.3
15	—	1.5	60	2.2	60	1.8	—	1.2	—	1.5	—	1.5	—	0.5	—	1.0	160	4.4	165	5.5	175	6.8	175	7.5
16	180	5.4	260	4.2	290	5.3	285	3.0	300	3.8	305	4.8	315	3.3	320	3.9	330	4.1	340	4.2	320	3.5	310	4.2
17	—	1.3	—	1.5	—	1.0	75	1.7	—	1.5	—	1.0	—	1.5	—	1.4	—	0.5	110	3.0	90	3.5	120	4.1
18	—	0.5	215	2.1	285	4.4	305	4.2	300	5.0	300	4.1	305	2.6	290	2.7	255	4.1	245	3.8	255	4.1	255	4.9
19	120	11.0	115	12.3	115	14.8	110	14.9	115	14.2	155	7.4	145	9.0	135	9.1	120	7.3	130	7.0	105	6.4	70	6.1
20	310	15.1	310	13.3	305	12.7	300	11.2	300	11.6	295	12.5	290	12.7	290	12.2	290	11.9	285	12.0	290	13.0	295	12.0
21	310	7.0	300	7.9	300	6.9	300	6.9	300	5.9	300	4.9	295	4.3	295	4.2	285	3.1	265	3.4	260	3.5	245	3.5
22	170	6.4	175	5.4	170	7.4	180	5.9	200	6.5	200	6.4	200	6.3	210	7.0	205	5.9	200	5.1	200	5.0	210	5.9
23	185	10.5	185	10.6	185	10.7	185	11.8	190	12.0	190	12.1	185	13.5	190	14.0	195	13.4	185	11.6	185	11.6	190	11.6
24	230	9.8	230	8.5	230	8.4	230	8.0	235	8.5	240	7.6	235	6.8	235	7.2	235	7.6	240	8.9	235	9.3	235	10.5
25	285	5.7	295	6.3	300	5.7	310	5.5	330	5.5	330	4.6	345	3.9	345	5.6	345	7.5	345	8.4	340	8.1	345	8.5
26	5	6.0	20	5.4	360	6.4	360	6.2	360	6.9	5	6.4	10	6.2	10	6.8	10	7.0	15	7.2	15	7.7	10	7.4
27	55	4.5	30	6.9	35	6.0	30	6.7	25	7.5	35	9.4	35	9.6	45	7.2	45	8.2	35	9.0	30	8.0	30	7.7
28	50	4.8	70	1.7	210	2.2	55	3.8	60	5.8	55	8.0	90	4.7	60	5.7	60	7.2	60	8.0	50	7.4	40	7.2
29	5	2.0	75	4.3	85	4.4	80	4.2	80	3.4	85	5.5	70	4.2	85	4.0	70	2.9	55	4.5	55	5.7	55	5.8
30	90	4.1	80	2.7	85	4.0	60	4.7	60	5.3	65	6.8	70	6.8	70	7.6	70	6.9	60	5.4	60	4.7	40	5.2
Mean	—	4.6	—	4.6	—	5.0	—	4.9	—	5.2	—	4.8	—	4.6	—	4.9	—	5.1	—	5.5	—	5.7	—	6.0

422. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	80	5.8	90	7.9	100	4.7	90	4.0	95	5.0	90	6.1	90	6.3	75	4.6	80	5.0	85	6.1	80	6.9	70	7.1
2	105	12.9	105	13.0	100	12.5	100	11.8	95	10.6	100	9.9	100	10.2	105	10.2	105	8.5	95	8.9	105	8.4	110	7.6
3	115	4.1	85	3.9	85	3.9	95	3.0	120	2.8	—	0.5	—	0.5	—	1.0	—	0.5	—	0.5	160	3.0	—	1.5
4	—	0.5	—	1.1	210	3.1	200	3.0	195	3.2	195	4.1	195	5.7	200	5.7	200	7.7	195	7.5	205	9.2	205	9.7
5	310	5.1	300	6.5	295	5.3	275	4.4	300	5.9	280	3.0	260	4.2	230	4.8	225	5.4	235	6.4	240	6.6	250	8.6
6	290	7.6	285	8.4	285	9.1	280	8.1	285	8.4	290	8.7	290	8.6	285	8.3	290	8.8	295	8.2	300	8.4	290	8.1
7	275	6.2	270	6.5	280	4.8	280	5.0	280	4.5	265	4.2	265	2.9	210	2.1	160	2.9	175	3.8	170	4.4	125	3.2
8	230	13.7	230	14.3	240	14.8	240	14.0	240	13.2	250	13.4	250	12.4	260	11.7	265	10.5	280	8.7	275	9.4	270	9.4
9	340	5.5	355	4.0	360	3.9	10	3.5	360	4.2	5	3.7	—	1.0	—	0.5	—	0.5	5	2.1	35	3.5	310	2.4
10	200	4.7	205	6.0	215	7.0	210	6.5	210	6.6	210	7.5	200	7.1	210	7.5	210	8.0	205	7.7	200	8.7	210	8.8
11	190	2.7	180	3.1	165	3.4	180	3.1	210	3.3	190	4.0	180	4.3	180	4.4	180	3.6	215	6.0	230	6.6	220	8.0
12	285	5.9	290	5.4	300	5.9	295	5.4	295	5.2	290	5.4	300	5.4	295	4.8	285	4.3	275	4.8	255	4.1	230	5.4
13	200	8.1	195	7.7	190	7.7	185	7.7	185	9.5	190	10.5	195	11.8	195	11.8	195	12.5	190	12.6	190	12.8	185	12.8
14	165	11.1	165	11.4	170	11.8	170	12.8	165	12.4	165	12.9	165	13.7	175	13.5	185	13.4	190	12.3	190	11.0	185	10.3
15	170	12.4	175	12.5	175	12.1	170	10.7	175	11.0	180	12.1	210	(7.7)	215	(4.2)	190	(5.0)	195	5.9	195	6.9	185	7.0
16	195	5.8	200	6.5	200	6.2	190	5.1	190	5.3	190	6.6	175	6.0	175	7.7	175	9.1	200	7.3	175	(4.0)	190	(6.2)
17	180	3.7	155	3.6	145	3.3	130	3.5	100	4.5	105	5.9	90	5.3	90	4.7	80	4.5	80	8.2	95	11.2	165	10.0
18	215	9.5	210	9.5	210	7.7	220	7.3	225	7.2	240	5.3	230	5.5	235	5.9	235	5.5	235	7.3	240	7.3	235	7.2
19	185	9.7	180	11.4	180	10.6	180	11.7	175	14.6	175	15.7	170	16.4	170	17.8	175	17.9	205	14.8	230	7.0	245	7.4
20	240	6.1	250	6.8	250	7.8	250	8.0	250	7.2	260	6.6	260	6.3	255	6.9	250	5.7	270	5.6	260	6.4	280	6.1
21	265	9.5	270	8.6	275	9.1	285	9.4	285	9.4	290	9.8	285	10.1	290	10.2	290	8.5	290	10.1	290	10.0	285	9.4
22	290	7.1	290	5.6	290	4.9	285	4.3	290	3.0	—	1.4	—	1.0	180	2.2	200	2.4	255	4.8	260	5.1	260	6.3
23	250	8.3	255	8.5	255	8.4	310	2.5	355	2.6	355	2.1	—	1.1	—	1.4	—	0.5	—	0.5	275	3.0	275	3.6
24	295	7.2	285	7.1	285	7.6	280	8.4	290	7.6	275	8.4	285	8.6	295	8.6	290	9.7	295	10.0	295	9.9	300	9.8
25	315	11.7	320	11.9	330	11.0	335	10.7	320	10.0	335	10.2	320	9.9	330	10.3	325	10.0	335	9.1	335	8.6	330	9.2
26	330	7.8	315	6.5	325	5.9	320	5.6	320															



Direction expressed in degrees from North (E=90°, S=180°, W=270°, N=360°) : Speed in Metres per second.

423. Cahirciveen (Valentia Observatory) :  
Dines Anemograph from Jan., 1926.

H<sub>a</sub> (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
1	200	2.5	205	2.8	225	3.0	230	2.0	220	2.6	240	2.9	260	3.2	260	3.4	260	3.5	270	4.4	265	5.2	280	5.5	
2	220	13.4	240	13.0	255	13.1	250	13.7	250	13.6	250	13.7	255	14.8	265	16.9	255	18.1	255	18.4	270	17.5	270	17.3	
3	335	9.3	325	8.4	325	6.8	315	5.5	315	4.4	310	3.6	305	1.8	—	0.5	25	2.1	40	3.2	50	2.4	75	2.2	
4	340	6.8	360	6.5	40	4.0	50	3.9	45	3.5	50	4.0	65	2.4	—	1.5	—	1.1	85	2.0	—	1.5	185	2.7	
5	130	10.1	115	12.7	110	15.1	100	15.0	100	14.1	105	13.9	90	9.6	55	6.8	80	6.5	65	8.4	70	8.7	75	6.0	
6	40	7.4	30	5.7	35	5.6	25	6.0	35	4.2	55	5.2	40	4.5	45	5.6	50	3.2	40	2.4	25	2.5	5	2.8	
7	280	3.8	295	4.2	290	3.6	270	4.0	260	3.8	260	5.0	255	7.6	225	4.6	220	5.7	225	7.0	225	8.1	225	9.5	
8	295	8.7	300	8.1	325	6.0	320	5.8	320	3.1	310	3.0	320	2.5	305	1.9	290	2.7	280	2.8	265	2.6	255	2.5	
9	185	5.7	190	4.7	180	4.6	190	5.3	215	4.7	230	4.9	220	4.5	215	4.9	230	6.1	245	7.0	235	6.7	245	7.5	
10	305	1.9	295	2.0	295	4.0	290	3.5	290	4.8	295	4.8	300	4.9	300	4.6	315	3.8	305	3.3	305	3.8	315	3.1	
11	5	3.9	5	3.3	5	2.1	—	0.5	—	1.0	—	1.0	—	0.5	5	1.6	—	1.0	—	0.5	—	0.5	—	0.5	
12	150	2.3	155	4.3	160	4.4	160	4.6	175	3.8	180	3.6	185	3.9	190	4.4	195	4.6	190	4.4	185	6.0	185	6.7	
13	200	4.3	200	5.3	200	4.7	200	4.2	200	4.0	200	4.8	200	4.6	195	4.7	195	4.2	195	4.6	195	6.2	190	6.1	
14	180	3.8	185	3.5	180	4.9	180	5.4	185	5.6	185	5.4	200	4.9	200	4.9	200	4.9	200	5.1	200	4.9	210	5.7	
15	215	10.1	215	10.2	220	9.9	210	9.1	215	10.6	225	10.5	230	9.7	240	9.5	250	8.9	290	6.9	340	5.3	15	6.0	
16	65	6.2	70	6.4	70	6.2	65	6.7	70	7.2	75	6.7	70	6.5	70	6.8	70	7.0	60	7.2	55	6.8	65	7.1	
17	110	5.9	125	5.5	110	5.5	100	5.4	95	6.1	85	6.5	100	6.0	90	6.6	95	5.6	90	5.5	90	6.9	95	6.5	
18	135	8.3	140	8.1	140	9.2	140	9.5	140	9.6	140	9.3	145	8.7	150	9.8	150	10.4	155	10.6	160	10.7	170	11.5	
19	275	9.6	280	9.1	285	8.4	285	8.6	290	9.0	285	6.8	285	5.3	300	3.8	—	1.5	270	1.9	250	1.8	200	3.0	
20	135	9.1	145	7.8	170	8.3	190	8.3	190	7.1	180	6.2	175	7.8	200	10.4	210	10.9	215	12.2	220	12.1	210	12.0	
21	205	8.5	200	8.3	195	7.3	180	6.6	180	6.7	185	6.7	180	6.5	185	7.1	190	7.3	185	6.8	190	8.1	205	8.2	
22	205	5.3	190	4.2	180	4.7	175	5.5	210	4.7	230	4.8	225	4.9	225	4.8	230	5.5	245	7.4	260	8.1	295	9.1	
23	—	1.4	—	0.5	—	0.5	—	1.0	—	1.0	—	1.1	170	3.3	155	5.6	155	6.1	150	7.4	145	7.3	155	8.1	
24	145	8.9	125	8.3	105	8.6	110	11.4	165	8.5	265	9.9	295	9.0	260	7.0	250	10.9	245	11.0	235	9.8	225	7.7	
25	235	6.5	220	6.0	215	6.9	210	8.4	190	6.8	180	9.0	195	11.3	215	10.9	230	12.6	235	11.0	245	13.0	250	14.6	
26	190	2.2	260	3.1	—	1.1	—	0.5	—	0.5	—	0.5	—	1.1	—	0.5	280	1.8	300	3.7	355	4.5	320	2.5	
27	65	3.0	—	1.5	65	3.3	65	2.1	65	3.5	65	2.6	65	2.0	—	1.1	—	1.0	60	1.7	—	1.0	—	1.0	
28	—	1.0	—	1.0	—	1.3	—	0.5	—	1.4	—	0.5	—	75	1.6	80	1.8	—	1.4	—	1.2	—	1.2	—	0.5
29	40	3.2	40	5.2	40	4.1	40	3.5	45	4.5	45	5.5	40	5.3	65	6.7	60	6.8	45	7.0	45	6.8	220	2.6	
30	55	1.8	55	2.0	—	1.0	—	0.5	55	1.9	—	1.5	55	2.9	—	0.5	—	0.5	—	0.5	165	3.8	180	5.4	
Mean	—	5.8	—	5.7	—	5.6	—	5.6	—	5.4	—	5.5	—	5.4	—	5.8	—	5.5	—	5.9	—	6.1	—	6.1	

424. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 17 metres + 13 metres.

Day.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	165	8.8	165	8.8	170	8.4	175	7.8	180	8.6	180	8.2	185	7.0	180	5.6	165	3.7	170	4.8	180	4.8	165	4.8
2	—	1.5	—	0.5	—	0.5	—	0.5	—	1.4	55	2.4	45	2.3	55	3.0	55	3.5	50	5.1	20	6.5	20	6.9
3	50	9.3	65	10.2	65	10.8	55	6.1	80	8.7	65	9.2	50	5.9	25	5.0	65	6.6	100	4.2	150	2.9	—	0.5
4	—	1.1	—	0.5	—	0.5	90	1.8	75	2.9	95	1.6	—	1.2	—	1.3	—	1.1	90	1.8	80	1.9	—	0.5
5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.2	—	1.1	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5
6	160	4.4	170	3.2	165	2.6	160	3.4	175	5.4	175	6.5	170	5.2	165	5.1	165	5.6	160	5.7	160	6.0	160	6.6
7	360	7.2	355	7.1	350	6.0	340	6.1	295	2.0	—	1.4	15	1.7	—	1.5	—	1.5	65	2.4	65	2.1	155	3.2
8	295	5.2	275	5.1	275	5.9	295	6.1	290	6.0	290	6.2	295	6.4	295	5.1	290	4.9	290	5.4	285	5.3	240	4.4
9	285	11.4	315	13.7	325	10.8	305	8.4	310	9.7	310	8.8	340	7.8	320	7.4	360	5.4	330	6.1	305	5.4	320	6.7
10	145	7.4	155	6.7	155	8.4	135	9.0	115	9.7	125	9.2	140	11.5	140	10.5	140	11.4	140	9.2	140	6.4	165	4.9
11	200	9.0	205	11.1	235	13.5	270	14.1	285	14.2	290	13.5	290	13.9	290	13.1	290	14.7	295	13.0	290	12.4	290	11.3
12	250	5.2	235	3.8	205	3.7	190	3.8	200	4.2	190	4.5	190	4.7	180	6.7	180	6.0	175	7.4	170	8.7	170	8.1
13	235	10.2	235	10.1	235	8.9	240	11.0	260	11.9	260	12.0	270	9.9	275	10.5	280	9.8	275	10.4	280	9.1	290	9.9
14	295	8.9	290	7.7	295	8.0	300	8.5	290	9.2	290	9.9	295	8.5	295	8.2	290	9.6	295	9.8	300	10.1	315	9.5
15	325	7.1	355	4.1	355	2.2	—	0.5	—	0.5	—	1.4	—	1.1	—	1.2	60	2.0	175	5.4	180	5.0	185	6.0
16	305	8.2	320	8.6	300	7.4	300	8.1	300	7.5	310	8.5	310	7.6	320	6.5	330	7.1	310	6.6	315	7.9	325	8.7
17	290	3.6	280	4.2	260	2.4	240	2.8	200	2.5	—	0.5	100	1.7	160	3.4	165	5.8	175	5.4	165	7.0	170	6.5
18	170	6.7	170	7.0	175	4.8	170	3.8	170	6.2	175	5.1	175	5.6	180	4.9	185	4.8	185	5.0	190	6.4	190	6.8
19	175	7.7	180	7.9	185	7.0	185	7.2	190	7.5	190	8.1	185	7.0	190	8.0	190	8.6	190	8.7	195	9.6	190	9.5
20	200	7.7	195	8.0	200	7.3	210	7.1	215	4.6	205	2.4	185	2.4	220	2.7	200	2.1	230	3.0	240	2.2	235	3.1
21	—	0.5	—	0.5	—	1.3	35	1.6	—	0.5	—	0.5	—	1.0	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5
22	—	0.5	170	1.8	165	3.2	160	4.0	160	4.9	160	5.0	150	5.5	150	5.8	150	5.4	170	4.4	185	5.3	185	5.6
23	200	8.7	205	8.1	205	8.1	220	5.9	235	5.0	240	5.1	260	5.6	265	3.8	260	5.1	255	4.7	260	4.6	260	4.8
24	290	2.7	295	3.1	300	2.3	—	1.3	—	1.0	—	1.2	175	3.7	175	4.0	165	5.2	170	5.6	165	6.0	160	7.6
25	350	5.9	5	6.2	15	5.9	10	5.2	10	3.5	5	3.4	350	6.1	355	2.5	345	3.9	355	4.6	20	3.0	15	3.8
26	190	14.1	195	13.5	220	12.5	245	10.7	260	11.0	250	12.3	260	12.0	270	11.2	280	9.8	270	11.2	270	10.0	270	10.5
27	195	11.9	205	14.5	220	13.7	215	1																



425. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 17 metres + 13 metres.

1930.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.
1	22	18 15	7	19 15	10	21 55	23	16 25	13	14 40	5	19 10	11	12 50	17	16 10	5	12 15	22	23 15	18	23 10	13	5 05
2	19	22 40	12	4 50	15	22 05	19	0 15	11	0 45	7	17 10	13	9 55	14	12 30	9	15 25	21	1 55	30	16 45	21	23 30
3	19	1 10	11	3 10	13	2 30	18	13 25	7	14 55	7	12 45	9	15 05	13	1 55	12	17 25	7	1 05	19	0 10	19	1 40
4	24	11 15	15	16 45	14	14 45	18	7 15	19	23 30	7	8 35	10	2 15	11	10 10	11	14 35	20	15 20	23	23 25	6	13 35
5	21	1 50	11	1 15	7	10 25	14	6 50	19	10 25	6	15 45	10	11 25	13	16 10	13	22 55	16	20 30	25	4 30	25	23 15
6	15	13 05	10	11 40	8	14 45	7	14 55	11	10 30	15	16 50	9	11 35	14	2 30	12	10 35	18	8 55	13	1 10	20	20 55
7	21	7 40	11	5 20	8	10 40	14	17 55	13	3 20	13	3 20	9	19 35	13	4 00	5	13 10	21	23 30	21	17 15	19	21 50
8	20	23 50	7	14 30	15	23 20	12	13 10	11	7 30	7	15 55	8	0 10	14	13 35	11	10 05	23	2 25	13	0 50	18	23 20
9	18	18 45	9	14 50	18	19 45	9	20 35	13	21 00	14	14 00	6	18 25	11	18 55	8	14 50	11	3 10	11	12 45	23	0 05
10	25	21 30	8	13 00	25	20 10	14	14 00	19	23 15	10	12 40	10	16 25	8	7 45	7	3 35	15	14 15	11	5 10	22	8 45
11	27	0 30	6	5 30	24	0 50	11	14 40	20	1 00	11	13 40	11	12 45	11	12 30	8	14 40	19	14 40	8	0 45	26	5 15
12	35	14 50	7	16 25	15	16 40	17	7 00	14	23 15	9	15 25	10	13 15	14	16 10	15	21 10	11	21 05	12	13 05	26	19 20
13	19	0 15	10	11 45	17	13 35	22	13 00	12	14 55	10	7 45	11	18 55	13	23 45	18	13 00	20	13 25	10	13 30	23	12 05
14	6	5 30	15	23 55	11	22 00	22	1 40	11	23 45	11	10 35	12	7 10	15	0 00	12	8 25	23	6 35	15	21 50	24	5 50
15	14	23 25	18	5 10	19	23 10	13	9 00	15	10 50	11	11 25	17	23 55	13	10 10	15	21 55	21	1 25	16	5 20	17	20 35
16	31	12 45	8	1 50	15	1 10	13	20 10	10	14 00	7	13 55	17	1 40	11	11 40	10	0 15	19	9 40	11	9 50	17	12 55
17	12	1 00	9	9 15	8	20 55	17	16 45	21	7 25	6	13 40	13	12 05	8	3 40	8	16 55	26	15 40	13	24 00	10	11 15
18	23	23 25	9	21 50	20	19 55	15	9 30	18	6 40	11	15 30	14	4 25	15	8 20	18	23 20	16	0 40	24	19 10	11	22 05
19	23	2 05	16	20 50	14	1 30	20	20 05	14	7 55	13	8 25	10	1 45	16	4 35	27	23 50	28	8 05	18	23 55	14	13 05
20	13	1 25	14	2 55	17	10 30	19	0 50	8	10 15	11	20 40	14	13 00	19	16 25	25	0 45	18	23 05	21	0 05	12	0 15
21	21	15 05	4	13 25	12	15 55	11	0 10	6	13 00	9	1 10	16	10 15	19	6 10	14	1 50	20	9 50	18	23 35	4	16 40
22	11	23 00	7	14 25	15	23 20	6	13 45	8	20 05	15	9 25	13	10 30	12	14 20	15	20 10	18	22 00	19	15 15	12	23 10
23	26	20 05	7	14 45	12	16 35	11	12 00	9	16 10	15	23 00	13	13 10	16	9 35	20	6 50	15	23 50	15	23 40	12	1 10
24	18	1 15	15	23 45	9	23 35	11	2 00	12	14 00	15	4 10	8	23 55	13	12 05	18	12 30	23	22 00	30	14 50	15	18 05
25	18	1 25	21	8 55	11	3 00	19	19 35	6	10 40	7	13 05	22	10 50	21	10 15	12	9 30	22	3 05	22	6 35	20	23 05
26	15	18 35	12	18 35	9	14 50	17	2 05	7	13 40	14	12 00	16	15 25	14	8 45	15	21 55	13	1 05	14	14 25	22	5 10
27	15	4 50	13	9 30	17	23 55	9	21 35	10	23 35	11	22 35	14	11 40	12	1 00	16	5 45	10	23 40	6	15 30	27	10 05
28	22	7 40	4	1 35	25	14 10	9	9 05	8	13 25	12	3 10	17	15 45	7	18 35	13	21 40	10	13 25	5	24 00	27	12 50
29	17	5 30	—	—	21	1 35	8	14 00	12	14 55	19	14 40	17	7 25	8	13 15	10	2 20	13	20 15	14	8 10	15	12 50
30	14	1 15	—	—	21	13 50	10	11 30	8	19 20	14	16 55	11	9 45	8	17 20	14	21 55	14	9 10	12	12 40	19	18 30
31	32	5 50	—	—	23	20 40	—	—	9	9 50	—	—	12	23 45	10	5 30	—	—	8	17 10	—	—	14	2 10

DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES TUBE ANEMOGRAPH.

426. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 17 metres + 13 metres.

1930.

Month.	DISTRIBUTION OF WIND.									EXTREME VELOCITIES.								
	More than 17.2 m/s.		10.8 to 17.1 m/s.		5.5 to 10.7 m/s.	1.6 to 5.4 m/s.	0 to 1.5 m/s.	No Record.	Highest Hourly Wind.			Highest Gust.						
	Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Time.					
Jan.	...	...	12th	2	18	174	272	235	61	0	230	18	day. 12	hour. 12	35	day. 12	h. 14	m. 50
Feb.	...	...	—	0	1	1	158	373	140	0	30	11	4	16	21	25	8	55
Mar.	...	...	—	0	8	44	351	268	81	0	170	16	31	24	25	28	14	10
Apr.	...	...	—	0	10	83	332	217	88	0	175	15	1	1	23	1	16	25
May	...	...	—	0	4	19	253	326	146	0	180	14	17	7	21	17	7	25
June	...	...	—	0	1	8	240	341	131	0	170	12	29	16	19	29	14	40
July	...	...	—	0	1	9	351	324	60	0	170	12	25	16	22	25	10	50
Aug.	...	...	—	0	1	9	320	318	97	0	180	14	25	15	21	25	10	15
Sept.	...	...	—	0	4	46	267	307	100	0	310	17	19	24	27	19	23	50
Oct.	...	...	19th	2	13	76	417	216	33	0	175	18	9	19	28	19	8	05
Nov.	...	...	2nd, 24th	6	12	85	276	265	88	0	330	19	2	17	30	24	19	10
Dec.	...	...	—	0	14	76	338	228	102	0	255	17	27	18	27	27	10	05
Year	...	...	4 days	10	87	630	3575	3418	1127	0	330	19	Nov. 2	17	35	Jan. 12	14	50

## MINIMUM TEMPERATURE "ON THE GRASS" DURING THE INTERVAL 18H. TO 7H. G.M.T.

Readings in degrees absolute.

427. Cahirciveen (Valentia Observatory).

1930.

Month.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	76.9	70.3	70.4	82.4	75.0	84.2	84.2	84.7	79.8	81.3	81.6	80.2
2	78.9	72.1	70.2	81.4	76.7	83.6	84.2	85.5	80.8	84.4	79.3	75.8
3	80.3	73.9	77.1	76.6	75.4	78.5	82.8	84.0	84.2	77.8	78.8	79.6
4	75.3	76.9	77.3	79.8	73.4	77.4	85.3	82.6	85.4	78.4	74.8	72.2
5	75.3	72.4	80.7	75.1	80.4	78.1	79.3	76.2	84.4	79.6	78.9	79.4
6	74.8	69.3	76.8	69.4	73.9	78.1	85.2	83.0	85.2	78.6	76.5	79.6
7	83.3	70.3	75.8	71.4	77.6	81.7	79.8	83.2	84.0	78.2	77.4	73.8
8	72.8	67.6	77.3	81.9	77.7	74.7	86.9	80.8	82.9	79.9	83.3	76.8
9	74.2	70.7	78.9	74.2	79.4	81.3	86.8	84.7	79.7	72.4	83.0	74.6
10	74.8	68.0	74.3	76.5	77.6	84.0	85.8	87.6	83.1	75.8	77.7	75.1
11	73.6	—	76.3	72.2	80.2	80.4	80.7	83.6	78.1	76.9	72.9	81.5
12	73.9	72.1	78.7	77.5	80.2	76.3	85.8	84.0	79.6	77.7	74.3	79.9
13	76.4	75.1	75.9	79.1	83.8	81.3	84.7	84.0	84.1	79.6	81.5	78.2
14	75.8	71.3	74.7	78.2	79.1	80.8	84.3	85.2	84.9	83.2	79.3	77.2
15	69.2	76.5	74.3	78.6	81.9	83.0	83.8	84.4	75.2	83.7	83.4	77.9
16	76.1	73.1	71.3	78.1	79.7	77.2	84.3	78.0	85.1	78.8	75.9	78.4
17	81.9	69.3	70.4	77.4	81.9	85.8	83.1	80.9	80.9	74.5	71.3	76.9
18	82.1	68.9	73.3	77.7	77.4	85.6	85.3	85.4	81.8	77.4	80.8	82.6
19	80.9	70.8	71.9	76.7	81.2	81.7	81.8	79.3	83.6	80.6	82.8	82.3
20	74.1	76.9	70.2	76.8	82.8	83.4	80.1	81.4	83.2	76.3	82.9	79.9
21	74.3	73.6	74.2	72.6	75.8	84.7	83.5	83.7	82.9	78.4	82.2	73.0
22	75.9	70.2	70.1	71.9	77.8	82.1	78.4	80.7	85.1	82.2	76.3	78.1
23	75.4	70.1	74.7	71.4	79.1	80.3	83.8	84.4	87.8	83.3	71.7	79.9
24	75.4	71.3	78.0	78.6	77.4	82.6	75.2	81.2	83.5	80.2	81.6	78.2
25	72.2	75.9	—	76.4	76.9	80.9	79.3	84.5	82.5	78.8	80.1	78.2
26	71.4	77.3	81.5	77.7	77.5	77.9	85.4	88.1	79.7	79.8	73.8	78.3
27	72.3	75.0	79.2	75.4	78.4	82.9	84.7	87.5	78.9	82.9	72.3	80.1
28	69.7	69.9	80.9	80.9	82.3	83.0	83.0	81.2	77.6	84.3	69.5	77.0
29	73.8	—	76.8	76.3	77.6	85.0	84.6	80.2	77.3	83.6	74.1	74.8
30	72.7	—	76.7	75.6	83.7	86.4	83.0	81.5	78.7	84.2	71.2	75.8
31	79.0	—	80.3	—	79.1	—	77.3	84.2	—	83.2	—	76.4
Mean ...	75.6	72.2	75.6	76.6	78.7	81.4	83.0	83.1	82.0	79.9	77.6	77.8

- NOTES:—(1) The initial 2 of the readings is omitted, i.e., 275.0 degrees absolute is written 75.0.  
(2) The minimum refers to the interval from 18h. the previous day to 7h. on the day to which it is entered.  
(3) Annual Mean 278.6°A.  
(4) Mean for February is for 27 days only.  
(5) Mean for March is for 30 days only.

Table for Cahirciveen (Valentia Observatory) in January 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

429. Cahirciveen (Valentia Observatory).

Table for Cahirciveen (Valentia Observatory) in February 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

NOTE.—Visibility in these tables refers to a landwards direction; visibility seawards, when it differs from visibility landwards, is given on p. 281.

430. Cahirciveen (Valentia Observatory).

March, 1930.

Table for March 1930 at Cahirciveen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

431. Cahirciveen (Valentia Observatory).

April, 1930.

Table for April 1930 at Cahirciveen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

NOTE.—Visibility in these tables refers to a landwards direction : visibility seawards, when it differs from visibility landwards, is given on p. 281.

432. Cahirciveen (Valentia Observatory).

Table for 432. Cahirciveen (Valentia Observatory) for May 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

433. Cahirciveen (Valentia Observatory).

Table for 433. Cahirciveen (Valentia Observatory) for June 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

NOTE.—Visibility in these tables refers to a landwards direction; visibility seawards, when it differs from visibility landwards, is given on p. 281.

434. Cahirciveen (Valentia Observatory).

July, 1930.

Table for July 1930 at Cahirciveen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows are numbered 1 to 31.

435. Cahirciveen (Valentia Observatory).

August, 1930.

Table for August 1930 at Cahirciveen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows are numbered 1 to 31.

NOTE.—Visibility in these tables refers to a landwards direction: visibility seawards, when it differs from visibility landwards, is given on p. 281.

Table for 436. Cahirciveen (Valentia Observatory) for September 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

437. Cahirciveen (Valentia Observatory).

Table for 437. Cahirciveen (Valentia Observatory) for October 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

NOTE.—Visibility in these tables refers to a landwards direction; visibility seawards, when it differs from visibility landwards, is given on p. 281.

438. Cahirciveen (Valentia Observatory).

November, 1930.

Table for Cahirciveen (Valentia Observatory) in November 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day. Remarks include cloud types like St-Cu, Fr-Cu, and visibility conditions like 'Fair generally' or 'Mainly fair to fine'.

439. Cahirciveen (Valentia Observatory).

December, 1930.

Table for Cahirciveen (Valentia Observatory) in December 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day. Remarks include cloud types like St-Cu, Fr-Cu, and visibility conditions like 'Fair to fine all day' or 'Continuous'.

NOTE.—Visibility in these tables refers to a landwards direction: visibility seawards when it differs from visibility landwards, is given on p. 281.



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Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1930

Comprising the meteorological and geophysical results obtained from autographic records and eye observations at the observatories at Lerwick, Aberdeen, Eskdalemuir, Cahirciveen (Valentia Observatory), and Richmond (Kew Observatory), and the results of soundings of the upper atmosphere by means of registering balloons.

RICHMOND (KEW OBSERVATORY)

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1932

## RICHMOND (KEW OBSERVATORY).

Latitude .. .. .	51° 28' N.
Longitude .. .. .	0° 19' W.
G.M.T. of Local Mean Noon .. .. .	12h 1m.

*Heights in Metres above Sea Level.*

Barometer .. .. .	10·4
Raingauge Site .. .. .	5·5
Dines Tube Anemograph .. .. .	25

*Heights in Metres above Ground.*

Thermometer Bulbs .. .. .	3·0
Sunshine Recorder .. .. .	13·3
Dines Tube Anemograph .. .. .	20
Beckley Raingauge Rim .. .. .	0·53

## INTRODUCTION.

The Observatory was built in 1769 as the private observatory of King George III. Since 1842 it has been devoted to physics and meteorology. The meteorological records are continuous from 1854. The Observatory is in the Old Deer Park, Richmond (Surrey), about 10 miles (16 km.) to the west of the City of London. The Observatory stands on a low artificial mound whose level is about 1½ metres higher than that of the surrounding park. Round the Observatory a golf course has been laid out. The river Thames is distant about 300 metres on the north and west. Kew Gardens, which are extensively wooded, lie to the east-north-east, the nearest point of the Gardens being about 600 metres away. The town of Richmond, to the south-east, is about 1,100 metres distant. On the east side of the Park is the main road from Richmond to Kew; on the south side the railway from Richmond to Twickenham. An open area partly wooded, Syon Park, lies to the north-north-east across the river. Richmond Park is about 1½ miles (2½ km.) to the south-east. General views of the Observatory building and the exposure lawn are to be found in the 1928 volume. The photographs were taken in 1925, but the only changes (before the end of 1930) which need be noted are the substitution of other experimental screens for the small marine screens which were being tested in 1925, the removal in 1929 of the hedge near the North-wall screen and the erection in place of the Robinson anemometer of the New Dines anemometer with its vane 5·3 metres above the dome. For the early history of the Observatory reference may be made to papers by S. P. Rigaud (*The Observatory* 1882, p. 279), R. H. Scott (*Royal Society's Proceedings*, Vol. 39 (1885), pp. 37-86), C. Chree (*The Record of the Royal Society*, 1897), and R. S. Whipple (*Proceedings of the Optical Convention*, 1926).

## METEOROLOGY.

The elements dealt with in the following tables are: atmospheric pressure, temperature, humidity, rainfall, sunshine, solar radiation, wind speed and direction, earth temperature, minimum temperature on the grass, level of underground water; there is also a diary of cloud and weather.

For brief descriptions of most of the instruments from which values of the above elements have been obtained and of the methods of tabulating the records, reference should be made to the General Introduction. The following notes supplement, where necessary, the information contained therein.

## Notes on Instruments.

*Pressure.*—The barograph is mounted in the basement of the Observatory, where the diurnal variation of temperature is very small. The normal position of the instrument has been in the north room occupied by the magnetographs. When the magnetographs were removed and the preparations for the installation of the seismographs were commenced, the barograph was placed in the photographic dark-room (June 16th, 1925). The instrument remained in that position until May 21st, 1928, when it was restored to its original site and electric lighting installed. The barograph magnifies barometric changes in the ratio 1.553:1, i.e., the change of ordinate equivalent to a change of 1 mm. in the height of the barometer is 1.553 mm. "Residual corrections," obtained from the control observations taken daily with the Newman barometer at 9h, 15h and 21h, are applied to the hourly measurements. The same correction is applied to all the readings on the same photographic sheet, i.e., generally for forty-eight hours. The individual entries published for the hours of the control observations may differ by .3 mb. from those observations. The Newman barometer is compared from time to time with the two large mercury barometers, which were set up in 1855 and 1860 respectively and are still recognised as standards. A zero correction is based on these comparisons. The correction + 0.2 mb. (+ .006 mercury inch) which has been applied for many years, remained in use. Comparisons are made on the assumption that the value of the acceleration due to gravity is  $g=981.199$  cm./sec<sup>2</sup>. This is the value given by pendulum observations.† The departure from the value given for the latitude by Helmert's formula is insignificant. On occasions when a loss of trace occurred, the missing hourly values were derived from the Dines Float Barograph.\* There were 39 hours in the year for which this was necessary.

*Temperature and Humidity.*—The thermograph is mounted in the West Room on the first floor of the Observatory, the thermometer bulbs being exposed in the screen attached to the north wall of the building. This screen has single louvres and the bottom is open. There is an additional flat louvred screen which shields the main screen from direct sunshine when the sun is in the West and not too low. The height of the bottom of the bulbs of the recording thermometers above the bottom of the sides of the screen containing them is 30 cm. in summer, 33 cm. in winter. The height of the bulbs above the top of the artificial mound on which the Observatory stands is approximately 3 metres; the height above the lawn where the rain-gauge is situated is approximately 5 metres. The scale values of the photographic records are not identical for the dry- and wet-bulb curves. For the dry-bulb, tube No. 4 II was in use and the scale value was 1 mm. = 0.3336a; for the wet-bulb, the old Falmouth wet-bulb tube (no number) was in use and the scale value was 1 mm. = 0.290a.

The control thermometers, which were graduated and mounted by Messrs. Negretti & Zambra in 1915, had been made and filled many years before and were therefore well seasoned. The National Physical Laboratory certificates dated 1916 give corrections to the nearest 0.05° C., the largest being 0.10°. The thermometers are tested each January in ice. According to tests made in January, 1930, there was no indication of any change of zero. The water for the wet-bulb thermometers used to be supplied from a small open tank inside the screen and it was customary to fill the tank to overflowing several times each day. In November, 1925, a tank was fitted outside the screen. A tube leads from this tank to two cups from which

\* For descriptions of this instrument see *Observatories' Year Book*, 1923, p. 94, and *London, Q. J. R. Meteor. Soc.*, 55, 1929, p. 37.

† A comparison between the values of "g" at Cambridge and Kew Observatory was made during the year 1925 by Sir G. P. Lenox-Conyngham with the assistance of Mr. G. Manley. A similar comparison between Potsdam and Cambridge was made by Prof. Meinesz earlier in the year. These observations are in accord with those made at Kew and Potsdam by Putnam in 1900, from which the value stated above was derived. The value for Potsdam,  $g=981.274$ , based on the observations of Kühnen and Furtwängler, is adopted as the standard of reference.

wicks are taken to the wet-bulbs. A further improvement was made in July, 1926, when a large inverted bottle was set up over the tank. Water flowing from this bottle keeps the level constant in the tank and the cups. The height of the apparatus is adjusted so that water drips slowly from the wet-bulbs. A bottleful of water lasts at least a week. It is found that the bottle survives severe frost.

Control eye-readings of the standard thermometers are taken daily at 9h, 15h and 21h. Residual corrections obtained from the control observations are applied to the hourly measurements of the curves. The same correction is applied to all the readings on the same photographic sheet, i.e., generally for forty-eight hours. The individual entries published for the hours of the control observations may differ by  $0.3^{\circ}\text{A}$ . from these observations. The larger departures refer to occasions when temperature is oscillating or changing rapidly.

In cases of loss of the dry-bulb record owing to the failure of the electric light or any other cause the readings of a thermograph in a second North-wall screen are adopted. There were 32 hours in the year for which this was necessary.

When the wet-bulb trace is missing or defective, the missing values are derived from the dry-bulb trace and the records of a hair hygograph. The same procedure is always adopted when the wet-bulb reading is below  $273^{\circ}\text{A}$ . 394 hours had thus to be dealt with during the year. Humidity was determined from the dry and wet-bulb readings by the procedure described in the General Introduction to this Volume.\*

It may be noted that during 1930, as in previous years, the temperatures published for Kew Observatory in the Daily Weather Report and elsewhere also refer to the North-wall screen. For the daily and weekly reports the readings of maximum and minimum thermometers exposed in that screen are utilised.

*Rainfall.*—As from January, 1921, the standard raingauge for the Observatory has been an 8-inch gauge with the deep "Snowdon" funnel. The site is level and protected from wind, principally by hedges about  $1\frac{1}{2}\text{m}$ . high and distant 11 metres to East and 17 metres to West. The readings of this standard gauge are at 7h and 18h. The hourly readings of the Beckley gauge are adjusted to give totals in agreement with the standard gauge.

*Sunshine.*—The sunshine recorder is mounted on the south parapet of the roof. The same frame has been in use since 1880 and it is believed that the ball has not been changed. The ball is now somewhat yellow. The exposure is satisfactory. The greatest elevations of the sky line in the azimuths in which the sun can rise and set are  $1^{\circ}$  and  $3^{\circ}$  respectively.

*Solar Radiation.*—Observations are made with an Ångström pyrheliometer, which measures the intensity of the direct radiation received from the sun by a surface which is normal to the sun's rays. The observations are made within half an hour of noon on all days except Sundays, provided that the sun is visible and not too much obscured by cloud, fog or thick haze. The conditions of the intervening atmosphere are indicated in Tables 498–509 in the column "sky." The amount of radiation is given in milliwatts per square centimetre in the column headed "total." For conversion to the unit more ordinarily employed abroad, the following relation may be used,  $1\text{mw. per sq. cm.} = 0.01435 \text{ gramme-calorie per sq. cm. per minute}$ . The vertical component, i.e., the direct radiation received per square centimetre of a horizontal surface, is also given.

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\* Prior to 1926 the tables, based on Glaisher's factors, published in "The Computer's Handbook," M.O. 223, Sec. 1, 1916, were used.

The Ångström instruments in use are by Rose, Stockholm. No. 24 was in use throughout the year. The ammeter is No. 68956, which was certified at the National Physical Laboratory in 1919.\* The readings are evaluated according to Ångström's original instructions.† To bring the readings into accordance with the scale adopted by the Smithsonian Institution, a correction of + 3.5 per cent. would be required.‡

*Wind Speed and Direction.*—To the end of 1925 the record of wind velocity was based on the readings from the Robinson-Beckley cup-anemograph.‡‡ From the beginning of 1926, readings of the Dines tube-anemograph have been used for all the wind data. The vane of the Dines instrument is at the same level as the cups of the other anemograph, 20 metres above the lawn. There are trees in the neighbourhood reaching greater heights. Those along the river to the west of the Observatory and about 280 metres away average 25 metres. The head of the present Dines instrument, set up at the beginning of the year 1923, is of the Mark II pattern. In the vertical tube there are 80 holes in 4 rows of 20. The diameter of each hole is 3 mm. The connecting tubes, 17 metres long, have the internal diameter 12 mm.

Wind direction is given by a twin-lever recorder attached to the vane of the Dines instrument. In accordance with an old convention, wind direction is not printed when the speed of the wind averages less than 1.6 metres per second, though the present vane is sensitive to lighter currents.

*Earth Temperature.*—The two thermometers in use were at 30 cm. and 122 cm. The ground in which the tubes for the thermometers are sunk is under grass. The soil is gravel. The site is well exposed. There are, however, three fruit trees about 9 metres to the east and 6 metres high. The bulb of the lower thermometer is 430 cm. above sea level.

*Minimum Temperature on the Grass.*—The grass minimum thermometer is set at 18h and read at 7h on the succeeding day, the reading being assigned to the day of reading.§ The thermometer is placed with the bulb about 25 mm. above the turf. The exposure is good, there being no obstruction within 76° from the zenith. The thermometer in use until August 24th was M.O. 23006. On this day it was accidentally broken and replaced by M.O. 23007 which is still in use. The latter thermometer, like the former, has a spherical bulb, diameter 17 mm.

#### Identification Numbers of Instruments in use in 1930.

Control Barometer	.. .. .	Newman 34
Control Dry Bulb Thermometer	.. .. .	Negretti & Zambra 173971
Control Wet Bulb Thermometer	.. .. .	Negretti & Zambra 173969
Control Raingauge (8-inch)	.. .. .	M.O. 1271
Measuring Glass for the Control Raingauge	.. .. .	M.O. 1615
Campbell-Stokes Sunshine Recorder	.. .. .	M.O. 12
Dines Tube Anemograph Head	.. .. .	M.O. 1017
Dines Tube Anemograph Recorder	.. .. .	M.O. 1017
Earth Thermometer 1 ft.	.. .. .	M.O. 5
Earth Thermometer 4 ft.	.. .. .	M.O. 10
Grass Minimum Thermometer	.. .. .	M.O. 23006, & M.O. 23007
Photo-thermograph	{ Dry Bulb .. .. .	4 II
	{ Wet Bulb (Old Falmouth Wet Bulb)	No number
Photo-barograph	.. .. .	..

\* In view of the discovery by Marten (*Berlin. Ber. Meteor. Inst.*, 1928, p. 64) that errors are likely to be caused by temperature changes produced in a microammeter when sunshine falls on it, it may be noted that the instrument used at Kew is always in shadow.

† Report of the International Meteorological Committee, St. Petersburg, 1899, p. 57.

‡ R. E. Watson, *Geophysical Memoirs*, No. 21, 1923.

‡‡ The cup-anemograph which had been in action since 1869 was dismantled on October 21st, 1929, and a Dines P. T. anemograph of the latest type installed.

§ The hour of the readings to be published in the *Observatories' Year Book* was changed from 9h. to 7h. as from January 1st, 1924.

## Thermometer Corrections, 1930.

	173971. N.P.L. 1915.				173969. N.P.L. 1915.				MO 5. N.P.L. 1913.		MO 10. N.P.L. 1913.		MO 23006. N.P.L. 1918.		MO 23007. N.P.L. 1918.	
Certified.	°A		°A		°A		°A		°A		°A		°A		°A	
	255	+0.20	285	-0.10	255	+0.15	285	-0.10	260	+0.1	260	+0.3	253	-0.1	253	-0.1
	260	+ .15	290	- .10	260	+ .15	290	- .10	273	.0	273	+ .1	263	- .1	263	- .1
	265	+ .10	295	- .05	265	+ .10	295	- .05	280	.0	280	+ .2	273	- .1	273	.0
	270	+ .05	300	- .10	270	+ .10	300	- .05	290	.0	290	+ .1	283	.0	283	.0
	273	- .05	305	- .05	273	.00	305	- .05	300	.0	300	.0	293	.0	293	.0
	275	.00	310	- .05	275	.00	310	- .05	310	.0	316	+ .1	303	.0	303	.0
280	- .05	—	—	280	- .05	—	—	—	—	—	—	—	—	—	—	
Applied.	260 } +0.1	—	—	260 } +0.1	—	—	—	—	—	275 } +0.2	253 } 0.0	255 } -0.1				
	270 } 0.0	—	—	270 } 0.0	—	—	—	260 } 0.0	285.1 } +0.1	278.1 } +0.1	268.1 } 0.0					
	283.0 } -0.1	—	—	283.0 } -0.1	—	—	—	310 } —	295 } —	303 } —	303 } —					

## Notes on Meteorological Tables.

The year was not marked by any really outstanding meteorological features.

The lowest temperature was 269.1 °A (25.0 °F) on November 17th. There were no "ice days," *i.e.*, days with maximum temperature in the screen below 273 °A.

There was a hot spell from August 26th-29th, the maximum temperature reaching 304.7 °A (89.1 °F) on 29th, the highest temperature recorded since 1923.

The rainfall for the year was nearly 7 per cent. above normal. February, June and October were well below, while January, May and November were above normal.\*

Sunshine was below normal, the deficit amounting to 72 hours.

The highest wind velocity recorded in a gust was 29 m/s (65 mph), on January 12th, and November 2nd.

*Diurnal Variation of Pressure and Temperature.*—Harmonic Analysis. In accordance with the precedent of the last six years, the first four harmonic components have been computed for each month. The results are tabulated in Tables A and B.

The inequality is supposed to be given by the expression.

$$c_1 \sin (15 t^\circ + \alpha_1) + c_2 \sin (30 t^\circ + \alpha_2) + \dots$$

$t$  being the time in hours since midnight. The angles  $\alpha$  are the phases of the several sine-waves at midnight. The curves are tabulated according to Greenwich mean time but the phases in Table A have been reduced to local mean time. The difference in Longitude between Kew and Greenwich being only 19' the correction is hardly appreciable in the figures, which are rounded to the nearest degree.

\* See "Notes on Rainfall" table No. 484.

TABLE A.

Diurnal Variation of Barometric Pressure. Fourier Coefficients.  $\Sigma c \sin (nt + \alpha)$ .  
 Richmond (Kew Observatory), Longitude  $0^{\circ} 19' W$ . 1930. Local Mean Time.

Month or Season.	$c_1$	$\alpha_1$	$c_2$	$\alpha_2$	$c_3$	$\alpha_3$	$c_4$	$\alpha_4$
	mb.	$^{\circ}$	mb.	$^{\circ}$	mb.	$^{\circ}$	mb.	$^{\circ}$
January .. .. .	.770	298	.374	144	.170	3	.103	202
February .. .. .	.055	78	.398	146	.129	339	.018	53
March .. .. .	.129	280	.500	<del>147 95</del>	.052	341	.028	46
April .. .. .	.243	51	.408	<del>146 94</del>	.044	164	.018	51
May .. .. .	.140	299	.331	162	.089	167	.027	338
June .. .. .	.408	17	.389	138	.090	146	.018	345
July .. .. .	.278	43	.303	143	.095	142	.015	314
August .. .. .	.368	123	.391	138	.099	121	.045	311
September .. .. .	.141	240	.328	160	.010	192	.037	328
October .. .. .	.508	252	.430	166	.116	2	.005	38
November .. .. .	.762	13	.185	153	.200	14	.042	137
December .. .. .	.683	76	.355	165	.165	356	.088	200
Arithmetic Mean .. .. .	.374	—	.366	—	.105	—	.037	—
Year .. .. .	.142	6	<del>.238</del> .360	<del>136</del> 51	.043	158	.007	238
Winter .. .. .	.324	9	.324	151	.162	0	.049	187
Equinox .. .. .	.137	265	<del>.178</del> .412	<del>94</del> 55	.029	359	.017	15
Summer .. .. .	.169	47	.348	145	.090	143	.025	324

NOTE.—*Winter* comprises the four months, January, February, November, December,  
*Equinox* the months March, April, September, October, and *Summer* May to August.

TABLE B.

Diurnal Variation of Temperature. Fourier Coefficients.  $\Sigma c \sin (nt + \alpha)$ .  
 Richmond (Kew Observatory), Longitude  $0^{\circ} 19' W$ . 1930. Local Mean Time.

Month or Season.	$c_1$	$\alpha_1$	$c_2$	$\alpha_2$	$c_3$	$\alpha_3$	$c_4$	$\alpha_4$
	$^{\circ}A$	$^{\circ}$	$^{\circ}A$	$^{\circ}$	$^{\circ}A$	$^{\circ}$	$^{\circ}A$	$^{\circ}$
January .. .. .	1.100	212	.416	46	.208	220	.054	307
February .. .. .	1.326	221	.455	34	.075	169	.038	193
March .. .. .	2.623	219	.627	37	.067	273	.066	221
April .. .. .	2.692	226	.396	54	.184	2	.023	191
May .. .. .	2.944	223	.263	52	.114	23	.066	276
June .. .. .	3.983	225	.075	190	.256	20	.112	70
July .. .. .	3.130	225	.091	158	.213	25	.083	11
August .. .. .	3.628	226	.255	32	.402	27	.057	187
September .. .. .	2.557	226	.616	58	.075	340	.168	184
October .. .. .	2.298	235	.863	55	.122	279	.099	194
November .. .. .	1.684	227	.575	40	.210	231	.020	201
December .. .. .	.830	209	.450	35	.165	230	.079	33
Arithmetic Mean .. .. .	2.400	—	.423	—	.174	—	.072	—
Year .. .. .	2.390	224	.396	47	.061	343	.019	193
Winter .. .. .	1.226	219	.472	39	.156	221	.012	337
Equinox .. .. .	2.531	226	.619	51	.087	323	.087	194
Summer .. .. .	3.420	225	.106	59	.246	24	.021	33

NOTE.—*Winter* comprises the four months, January, February, November, December,  
*Equinox* the months March, April, September, October, and *Summer* May to August.

*Level of Underground Water.*—In Table 526 there is given for each day the mean height above sea level of the surface of the underground water. The level actually measured is the surface of water in a pipe which passes through the floor of the basement into the ground. The water level depends mainly on the state of the river Thames. The Observatory is close to Richmond lock, which is half-tidal, and the underground water is in summer a little below the level of low water above the lock (220 cm. above M.S.L). The effects of the spring and neap tides are conspicuous in the fluctuations of level in summer.

*Cloud Amount.*—The mean cloud amounts for the six hours of observations are given month by month in the diary of cloud and weather. The following means are derived from these data :—

*Mean Amount of Cloud from Six Observation Hours.*

Month	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Cloud ..	7.1	7.1	6.8	7.3	7.8	6.1	7.5	6.0	7.4	6.7	7.0	8.2	7.1

*Mean Amount of Cloud for the Year at the Six Observation Hours.*

Hour ..	7h	9h	13h	15h	18h	21h
Cloud ..	7.2	7.5	7.5	7.5	6.8	6.0

*Visibility.*—The objects used for the classification of visibility are enumerated below. The Observatory is on very low ground. The view is bounded on the south-east by Richmond Hill and on the west by the trees near the river. For object H a church tower seen through trees and with high ground behind it has to be used. There is no conspicuous object at the appropriate distance to serve as I, and interpolation is necessary. The object J is in London and is therefore more affected by atmospheric pollution than the other objects.

VISIBILITY AND FOG.

LIST OF OBJECTS.

Identification Letter.	Actual Object.	View Point.	Bearing.	Actual Distance.	Standard Distance.
X	Verification House (Not Visible).	S.W. Corner of Observatory Bldg.	S.W.	<25 metres	25 metres
A	Verification House ..	" "	S.W.	25 "	25 "
B	17ft. Stevenson Screen	S.E. Corner of Observatory Bldg.	S.W.'S.	50 "	50 "
C	New Magnetic Hut ..	S.W. Corner of Observatory Bldg.	S.'W.	110 "	100 "
D	S.W. Tree .. ..	" "	S.W.	200 "	200 "
E	Golf Club House ..	Observatory ..	S.E.'E.	500 "	500 "
F	Orange Tree Hotel ..	" ..	S.E.'E.	970 "	1,000 "
G	St. Matthias Church ..	" ..	S.E.	1,900 "	2,000 "
H	South Ealing Church	" ..	N.'W.	4,000 "	4,000 "
	Mortlake Chimney well visible.	" ..	E.	3,500 "	7,000 "
i	Chelsea Chimneys not visible.	" ..	E.	9,300 "	
J	Chelsea Chimneys ..	" ..	E.	9,300 "	10,000 "
K	Surrey Hills .. ..	" ..	S.'E.	20,000 "	20,000 "
l	Surrey Hills well visible	" ..	S.'E.	>20,000 "	30,000 "
m	Surrey Hills, exceptionally visible.	" ..	S.'E.	>20,000 "	50,000 "

## ATMOSPHERIC ELECTRICITY.

The systematic observations in atmospheric electricity are devoted to potential gradient, air-earth current and ionization. In the case of potential gradient there is continuous autographic registration; the other elements are observed each afternoon when conditions are favourable.

*Potential Gradient.*—The Kelvin water-dropper electrograph has been housed since 1915 in a low building known as the Clinical House. The pipe carrying the jet projects through a hole in a window and is adjusted so that the point where the jet breaks into spray is 1.50 m.\* from the window and 1.73 m. above the pool into which the water falls.† The electrogram is a record of the difference of potential between the ground and the point where the jet breaks. The aim is, however, to obtain the potential gradient in the open. For this purpose observations are made at a site in the Observatory garden. The apparatus for these “absolute” observations consists essentially of a long insulated rod carrying at the end a lighted fuse, which is connected to an electrostatic voltmeter. Readings are taken with the fuse at one metre and at two metres above the ground, the grass on which is kept short. The observations are taken about noon on all convenient dry days. From the observations the ratio of the potential gradient in the garden to the potential recorded by the electrograph is computed. Such a ratio is given for each month in Table 541.

Two exposure factors are given for February: 2.22 applying before and 2.09 after the 13th, the batteries charging the electrometer quadrants having been renewed on that date.

On the few occasions when the water dropper was out of action, the values of potential gradient were derived from a subsidiary electrograph consisting of a radioactive collector attached to a Dolezalek quadrant electrometer run in the New Magnetic Hut.

During the year‡ two electrostatic voltmeters, No. 1684 and No. 1685, were used for the absolute observations. The voltmeters and also the electrograph are calibrated at frequent intervals by means of a high tension dry battery. In previous years the calibration of the battery was made by means of a potentiometer; this involved taking current from the battery. A new method was introduced in February 1930, the procedure being to use an electrometer for giving comparative measurements of the voltage of a series of standard cells and of the sections of the dry battery. A Lindemann electrometer with low plate potentials is found to be suitable for the purpose. The advantage of the method is that the battery is tested on open circuit.

The data appearing in Table 540 include the electrical character figure assigned to each day from the consideration of the electrograms. Of the character figures, 0 denotes the absence of negative potential, 1 implies the existence of negative potential at one or more times during the day but with a total duration of less than 3 hours, while 2 implies the existence of negative potential with a total duration of 3 hours

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\* This measurement was made in July, 1926. It is believed that there has been no appreciable change since 1915.

† This height is regulated and has been kept the same.

‡ As from January 1st, 1923, the electrostatic voltmeters took the place of the Kelvin portable electrometer, No. 81, previously used for this purpose.

or more. As a negative potential gradient hardly ever occurs except when rain is in the neighbourhood, character 0 occurs on dry days and character 2 on days with continuous rainfall.

The present criteria for character figures were adopted as from the beginning of 1914. Correcting for missing days, the average frequency of character figures 0, 1, and 2 during the years 1914–1929 inclusive were 186 : 139 : 40. The corresponding figures for 1930 are 176 : 140 : 49. In accordance with a resolution of the International Union for Geodesy and Geophysics (Section for Terrestrial Magnetism and Atmospheric Electricity : Prague Meeting 1927) tabulations of the duration of negative potential gradient have been included in the Year Book, since 1928. The total duration of negative gradient is given for each day for which the electrographic record is satisfactory.

Table 541 gives daily data derived from measurements of the electrograms. They represent means for 60-minute intervals centred at the exact hours 3h, 9h, 15h, and 21h G.M.T. On occasions when the trace was defective, either through failure of insulation or some other cause, values of potential gradient have been omitted. On some occasions the curve, though existent, is so oscillatory that no satisfactory estimate is possible of the mean value of the ordinate. Such occasions are indicated by the letter *z*. If there is no doubt as to the sign of the hourly mean value, though a numerical measure is unobtainable, the sign is indicated by a + or a – attached to the *z*. The symbol  $z \pm$  indicates that there were oscillations on both sides of the zero line, and that the sign of the mean value was uncertain.

The extreme hourly mean values in Table 541 are 1355 v/m at 9h on January 21st and –1150 v/m at 9h on December 25th. The former value is representative of foggy conditions; on this particular occasion the fog developed in the early morning after a fine evening. The potential gradient started rising gradually at 5h., reached a maximum at 10h and then fell gradually until 13h, after which it persisted at about 750 v/m until 20h when the fog thinned. The extreme negative gradient of December 25th was associated with continuous slight rain and mist. The gradient varied from high negative to high positive values from 2h until 10h.

Of the two sets of mean monthly values at 3h, 9h, 15h and 21h given in Table 541 at the foot of each month's data, the first set (*a*) represents the arithmetic means of all the positive potential gradients in the column, the second set (*b*) represents the algebraic mean derived from all days on which all four hours were represented. The last line gives the mean value for each month as derived from the (*a*) and the (*b*) values respectively. For reasons explained in the 1922 Year Book, it is expected that the mean derived from the values at 3h, 9h, 15h and 21h, on a sufficiently large number of days, will approximate closely to the mean value derived from all hourly values of all the days. But a reservation is necessary, for the occasions of highly oscillatory potential gradient, such as are met with during thunderstorms, have been omitted, and this omission may have a sensible effect.

If the monthly means in Tables 541 and 542 be compared, it will be found that the quiet day mean is in excess of the means (*a*) and (*b*) in nine months out of the twelve. In two months, April and June, the excess of the quiet day mean over the mean (*a*) is notable. In January and February the quiet mean is notably less than the mean (*a*). For the year as a whole, allowing equal weight to the twelve months, the quiet day mean, the mean (*a*) and the mean (*b*) are respectively 333 v/m, 328 v/m, and 308 v/m.

As to comparison with earlier years it is to be noted that the present method of making the "absolute" observations was initiated at the beginning of 1910. Since then there has been no considerable change in the exposure at the control station.\* The annual mean potential gradient for selected quiet days is available from that date onwards.†

1910	310 v/m	1917	354 v/m	1924	329 v/m
11	301 v/m	18	346 v/m	25	326 v/m
12	300 v/m	19	331 v/m	26	279 v/m
13	335 v/m	20	315 v/m	27	315 v/m
14	345 v/m	21	281 v/m	28	298 v/m
15	354 v/m	22	318 v/m	29	338 v/m
16	367 v/m	23	318 v/m	30	333 v/m

The average for the 21 years is 323 volts per metre.

The mean for 1926 was a minimum. Along with the low value for 1921 it was probably to be attributed in part to the exceptional atmospheric conditions prevailing during the coal strikes of those years.

The diurnal inequalities and the mean monthly and annual values in Table 542 are based on the curves of quiet days selected from those entirely free from negative potential gradient. Other objects aimed at in the selection of the days are freedom from large irregular movements, absence of indications of inferior insulation in the electrograph, and the avoidance, so far as possible, of large non-cyclic changes. The quiet days numbered 10 in each month; but to complete that number in September it was necessary to include one 24-hour period which did not commence at midnight. Except in this case the non-cyclic change is given explicitly in Table 542, so that anyone who may desire to reproduce the figures as they were before the non-cyclic correction was applied can easily do so.

All the inequalities show a well marked double oscillation with minima in the early morning and early afternoon, maxima in the late morning as well as in the evening. The diurnal inequality for the whole year shows the higher maximum at 9h, the lower minimum at 3h. This is not the case in every year. The hours of the extremes and the range of the inequality is given for each year from 1910 in the following list.

Year.	Max. hr.	Min. hr.	Range v/m	Year.	Max. hr.	Min. hr.	Range v/m	Year.	Max. hr.	Min. hr.	Range v/m
1910	20	4	138	1917	20	4	154	1924	20	4	133
1911	9	4	154	1918	20	2	139	1925	19	3	129
1912	9	4	149	1919	8	4	124	1926	20	4	118
1913	19	3, 4	160	1920	9	3	122	1927	19	3	129
1914	20	3	169	1921	20	3, 4	132	1928	9	3	124
1915	19	5	173	1922	20	4	144	1929	9	4	137
1916	20	4	151	1923	9	4	160	1930	9	3	163

It will be seen that the range has been considerably lower in most recent years than it was in the years 1911 to 1917. The high values in 1923 and 1930 are however conspicuous.

\* cf., *Observatories' Year Book*, 1926, p. 327.

† Estimates for the years 1898-1909 are given by Chree, *London, Phil. Trans. R. Soc. A.* 1915, p. 141. The change of the site of the electrograph in 1915 is discussed in *Hourly Values*, 1916.

If the inequalities for the year and the seasons are compared with the corresponding inequalities for atmospheric pollution given in Table 544, the remarkably close similarity in the hours of occurrence of the principal maxima and minima noted in previous years is not borne out. There is, however, the same marked double oscillation throughout the day in both elements, a principal maximum or minimum of one falling at the same time as the secondary maximum or minimum of the other.

*Conductivity and Air-earth Current.*—To determine the current flowing from air to earth, the conductivity of the atmosphere at one metre above the ground is measured by means of the Wilson apparatus.\* The apparatus was modified in January by replacing the Wilson gold leaf system with a Lindemann electrometer. This alteration increased the sensitivity about five fold. For calculating the conductivity at 15h four observations, each giving the leakage from a charged plate in five minutes, are averaged. The product of the conductivity so determined and the potential gradient at 15h (as given in Table 541) is taken as the measure of the air-earth current. The conductivity is not observed during rain nor when the potential gradient is negative. Data are available for about one-third of the days of the year 1930, but the number of observations in January and April are smaller than usual owing to the apparatus being out of action.

In Table 539 we have ventured to use  $\lambda_+$  as the symbol for the Wilsonian conductivity, so implying that the conductivity measured is that due to positive ions. This interpretation of the observations is not accepted by all physicists.

The conditions under which the air-earth current is measured are maintained as uniform as possible, but they differ from the conditions under which the vertical current passes from the air to the earth in the absence of the apparatus. The presumption is that the results obtained would require to be multiplied by a factor to represent the true air-earth current.† The monthly mean of the observed values of the current varied from 35 in December to 126 in August in terms of the unit  $1 \times 10^{-18}$  ampere per square centimetre. Allowing equal weight to each month we find that the mean for the year in terms of the above unit is 74. The mean derived directly from the 144 observations is 84. There is very little difference from the corresponding values for other years.

There is some doubt as to the comparability of observations made with the Wilson apparatus and other estimates of the air-earth current. Determinations based on separate measurements of the conductivity for positive and negative electricity have yielded on the continent averages of about  $2 \times 10^{-16}$  amperes per square centimetre. On the hypothesis that it is only  $\lambda_+$  that governs the transport of electricity from air to ground this estimate must be reduced to  $1 \times 10^{-16}$  amperes per square centimetre.

*Ionic Charges.*—In the tables for the years 1911 to 1929 were also included estimates of the volume-charges carried by such positive and negative ions as are caught by the Ebert apparatus.‡ These observations have been discontinued as it has been found that the results cannot be definitely interpreted in terms of the number of small ions present in the atmosphere. New apparatus is being developed which, it is hoped, will give accurately the number of small ions present.

\* *Cambridge, Proc. Phil. Soc.*, **13**, 1906, p. 184.

† When the current passing into a metal plate at ground level is taken as the standard the factor is found to be about 1.2. A discussion of this question has been published in a memoir by Dr. R. E. Watson, *Geophysical Memoirs*, No. 45, 1928.

‡ *Physik. Zs., Leipzig*, **8**, 1907, p. 246.

## ATMOSPHERIC POLLUTION.

The Owens atmospheric pollution recorder or air filter No. 1\* is situated in the Clinical House, and the level of the intake is about 1½ m. above that of the adjacent ground. The weight of the pollution is not obtained directly but is deduced from shade numbers 0, 1, 2, etc., assigned to the deposit left on the filter paper through which the air is drawn. The equivalents of the shade numbers are allotted in accordance with the results of an investigation carried out for the Atmospheric Pollution Committee by Mr. J. G. Clark.† When the normal volume of air, 2 litres, is aspirated (it is drawn through a hole 3·2 mm. in diameter) shade number 1 answers to 0·32 milligrams per cubic metre. The Owens apparatus was designed in the first place for dealing with the air of cities and the amount of pollution at the Observatory is usually so small that the shade recorded when the 2 litres are aspirated is either 0 or 1.

Preliminary experiments with a spare recorder having justified the assumption that increasing the volume of air would increase the shade number in proportion an auxiliary tank was brought into use at the beginning of July, 1928. With this tank in operation each spot on the filter paper corresponds with 6·4 litres of air. The unit shade is therefore equivalent to 0·1 mg./m<sup>3</sup>. When fog prevails the auxiliary tank is put out of action and the unit shade reverts to the value 0·32 mg/m<sup>3</sup>.

This improvement in the recording system must of itself introduce a discontinuity in the published data. It is anticipated however that the results will be much more reliable.

In this connection it is to be noted that new scales of shades were taken into use on the following dates:—

June 7, 1925; July 1, 1926; (retrospectively) January 1, 1928; and August 1, 1930.

The highest estimate of pollution was 3·2 mg/m<sup>3</sup> on December 22nd at 20h. There were 25 days on which the pollution reached 1·0 mg/m<sup>3</sup>; the number of hours credited with 1·0 mg/m<sup>3</sup> or more being 137. The months in which these days and hours occurred are given in the accompanying table.

	days	hours
Jan.	4	19
Feb.	4	17
Apr.	1	1
Nov.	6	21
Dec.	10	79
Year 25		137

Table 543 gives mean hourly values derived from all the days of the month for which complete records were obtained. There were 362 such days in the year. The highest and lowest of these hourly values are in heavy type.

Table 544 gives diurnal inequalities derived from the data in Table 543 after the application of non-cyclic corrections. The principal reason for computing the diurnal inequalities was to facilitate comparison with the corresponding diurnal variations in barometric pressure and the potential gradient of atmospheric electricity.

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\* A description of the instrument is given in the *Report of the Advisory Committee for Atmospheric Pollution*, 4th Report, 1917-1918, p. 20.

† *Report of the Advisory Committee for Atmospheric Pollution*, 3rd Report, 1916-1917, p. 20.

The mean values computed for the several years since the recorder has been in operation are given in the following table, together with the means for the summer months (May to August) for the equinoctial months (March, April, September, October) and for the winter months. The unit is  $\mu\text{g}/\text{m}^3$ .

	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
Summer .. ..	.13	.27	.27	.25	.15	.08	.06	.07	.06	.06
Equinox .. ..	.27	.45	.30	.50	.24	.25	.13	.15	.18	.13
Winter .. ..	.53	.46	.35	.39	.39	.27	.24	.23	.30	.23
Year .. ..	.31	.39	.31	.32	.26	.20	.14	.15	.18	.14

In any discussion of these mean values it should be borne in mind that before the introduction of the auxiliary tank the great majority of estimates were shade 0 or shade 1. To discriminate between these two shades is difficult, and the decision depends on the "personal equation" of the observer as well as on the colour of the scale of shades. Some change in standard from year to year has been inevitable.

The nature of the diurnal variation is most easily recognised in Table 544. There is always a well defined minimum during the night and another in the early afternoon. The first maximum of the day usually occurs about 9h and the second one follows about 12 hours later. This double oscillation is apparently due to two causes, the variation in human activity in producing pollution and the variation in the wind which disperses it. In 1930 the principal maximum was in the evening from February to April and in October and December; in the forenoon in the remaining months. The principal minimum occurred in the afternoon from May to August; in the early morning in the remaining months. Curves illustrating the diurnal variation of atmospheric pollution will be found in the Annual Reports of the Advisory Committee on Atmospheric Pollution and in a paper by Dr. F. J. W. Whipple in the Quarterly Journal of the Royal Meteorological Society, Volume 55 (1929), No. 231.

#### SEISMOLOGY.

**Notes on Instruments.**—The seismographs, three Galitzin pendulums with galvanometric registration, were transferred from Eskadelmuir Observatory during the latter part of 1925 and have been in regular operation since the beginning of 1926. Earth movements in the north, east and vertical directions are recorded. The pendulums, which are in the old magnetograph room, are mounted on a massive concrete pillar, separated from the floor. The galvanometers and recording apparatus are accommodated on slate slabs in the old seismograph room, which housed the Milne instrument until it was put out of action on June 17th, 1925. To eliminate temperature variation as far as possible, the windows of the pendulum room are provided with triple glass and also shielded by louvered screens from direct sunshine which might fall on them morning and evening. The annual range of temperature variation is about  $10^\circ\text{C}$ . and the mean daily range about  $0.2^\circ\text{C}$ . To diminish the sensitivity of the vertical pendulum to temperature changes the steel controlling spring was replaced in May, 1928, by one made of elinvar, an alloy which has a temperature coefficient of elasticity about one-tenth that of steel.\* A detailed report on the behaviour of the spring has been published in a paper† by F. J. Scrase. The difficulties usually associated with the operation of the vertical pendulum have been greatly diminished.

\* Y. Dammann. "Contribution à l'étude des propriétés élastiques de l'élinvar. Son utilisation dans les séismographes," *Publ. Bur. Cent. Seis. Int., Strasbourg*, Ser. A, Fasc. No. 5, 1927, pp. 122-129.

† *London, Inst. Physics, J. Sci. Instr.*, 6, 1929, p. 385.

The concrete pillar rests on gravel. The underlying geological strata are shown in the diagram on this page. The diagram is based on the results obtained \* in sinking a well near Richmond Bridge. The Richmond boring terminated at a depth of 440 metres in Old Red Sandstone. At Stonebridge Park, 8 km. to the north, a boring was carried down † to a depth of 600 metres, the last 280 metres being in Old Red Sandstone. There is no information as to deeper strata near Richmond. It may be noted, however, that the sandstone beds dip at about 30° and that a boring at Little Missenden, Bucks, entered Silurian rocks at a depth of 370 metres with no evidence of the presence of Old Red Sandstone.

For detailed description of the Galitzin seismograph and for particulars of interpretation of the records, reference may be made to Fürst B. Galitzin's "Vorlesungen über Seismometrie" (Leipzig, 1914), or to G. W. Walker's "Modern Seismology" (London, 1913). ††

Timing is controlled by a half-seconds clock (Morrison 8587) which is rated daily by comparison with the Greenwich wireless time-signal relayed from Daventry. Time breaks are made electro-magnetically every minute and seismometric readings can be determined to the nearest second.

The free periods of the galvanometers ( $T_1$ ), were determined in November, 1925, and were found to have suffered very little change since the original determinations at Eskdalemuir were made. The lengths of the simple equivalent pendulums ( $l$ ), are assumed to have remained unaltered.

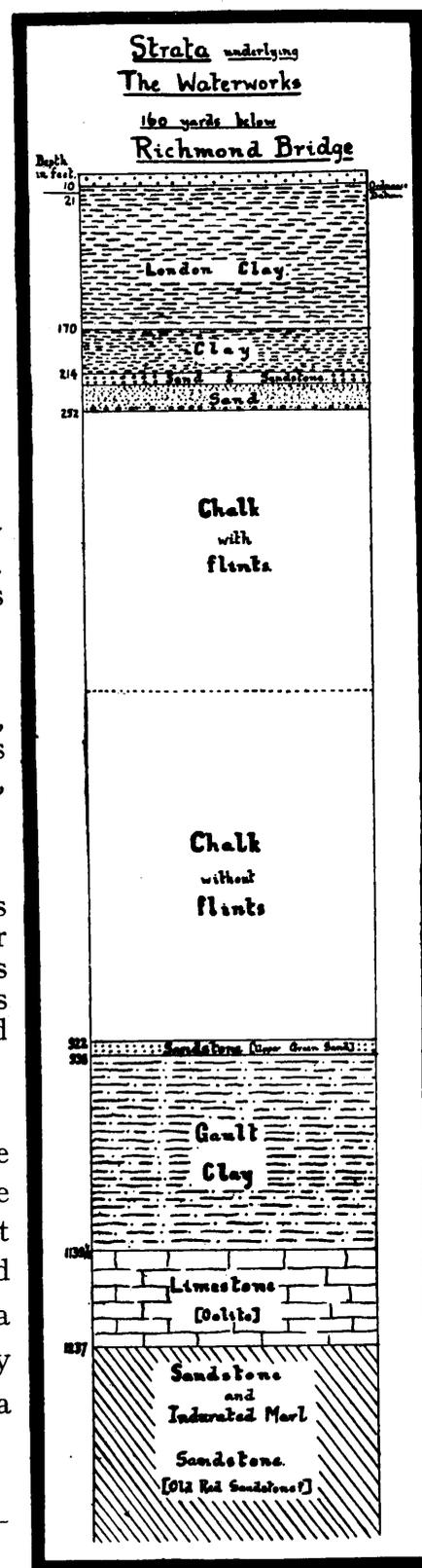
The values of the other constants which are used for deriving the scale values were determined in March and September for the vertical pendulum, and in September for the horizontal instruments. In the case of the horizontal instruments it was found that the magnifications agreed closely with those obtained from the previous tests in September 1929. Some adjustments to the vertical pendulum were carried out on March 27th and September 10th.

The table given below summarises the values of the constants.  $T$  is the free period of the pendulum,  $\mu$  is a damping coefficient which vanishes when the free movement of the pendulum is just aperiodic,  $A$  is the length of the beam of light from the galvanometer mirror to the recording drum (usually about 1100 mm), and  $k$  is the "transmission" factor. The quantity  $\frac{kA}{\pi l}$  may be regarded as a relative measure of the nominal magnification. With the instrument properly adjusted  $\frac{kAT}{4\pi l}$  is the magnification factor for regular earth movements with a period equal to that of the pendulum.

\* London. *J. Geol. Soc.*, 40, 1884, 41, 1885, p. 523.

† Records of London Wells, *Mem. Geol. Surv. Eng., London*, 1913.

†† The graphical method adopted at Kew for determining the constants of the pendulums is explained in a memoir by F. J. Scrase, *Geophysical Memoirs*, No. 49, 1930.



A. Strahan  
Prof. Paper No. 19, Survey of India.

Component	$l$	$T_1$	1930	T	$\mu^2$	$\frac{kA}{\pi l}$	$\frac{kAT}{4\pi l}$
N	mm. 118	sec. 24.68	Jan. 1 to Sept. 9	sec. 25.5	0.00	sec. <sup>-1</sup> 46.8	298
			Sept. 9 to Dec. 31	25.2	-0.01	47.3	298
E	118	24.80	Jan. 1 to Sept. 10	24.7	+0.09	43.5	269
			Sept. 10 to Dec. 31	25.2	-0.04	44.2	278
Z	360	13.04	Jan. 1 to Mar. 20	12.9	+0.10	113	364
			Mar. 20 to Sept. 10	13.0	0.00	109	354
			Sept. 10 to Dec. 31	13.5	+0.12	106	358

In windy weather the seismographs, especially the horizontal components, are affected by slow oscillations, which are attributed to the tilting of the ground, the movement being conveyed through the foundations of the Observatory. On occasions the reading of an earthquake record is rendered very difficult, if not impossible, by these irregular disturbances.

**Notes on Tables.**—The *Seismological Diary*, Table 545, contains the particulars of the earthquakes recorded at the Observatory. The notation employed is as follows:—

P is the normal first phase (longitudinal waves). Special cases of P occur when the waves are reflected from (P<sub>c</sub>P) or penetrate (P') the earth's central core.

PR<sub>1</sub>, PR<sub>2</sub> . . . are longitudinal waves reflected once, twice . . . near the earth's surface.

S is the normal second phase (transverse waves). S<sub>c</sub>P<sub>c</sub>S is a special case of S in which the waves penetrate the central core and pass through it as longitudinal vibrations.

PS and PPS are waves which suffer a change or changes from longitudinal to transverse oscillation or vice versa, on reflection near the surface.

SR<sub>1</sub>, SR<sub>2</sub> . . . are transverse waves reflected once, twice . . . near the surface.

L indicates long waves (surface waves).

*i* is the sudden commencement of a phase. *e* means a gradual or indistinct commencement. These letters are used as prefixes to the phase symbols, but where the character of the phase is not assignable the letters are used as independent symbols. When the commencement of a phase is moderately clear the prefixes are not used.

The suffixes N, E, Z indicate that the estimates refer to the records from the north-south, east-west and vertical seismographs respectively. The absence of all these suffixes indicates that the estimates refer to all three records.

All times entered against the above phases are the times of arrival of the phases at the station.

m<sub>1</sub>, m<sub>2</sub> . . . are successive prominent maxima of sinusoidal waves occurring in the preliminary phases. M<sub>1</sub>, M<sub>2</sub> . . . are successive prominent maxima occurring during the principal or surface phase.

The period is the duration of a double oscillation (to and fro movement).

A<sub>N</sub>, A<sub>E</sub>, A<sub>Z</sub> are the amplitudes, in microns ( $\mu=0.001$  mm.), of the components of the true displacement of the ground from the position of rest. Displacements to the north, east and upwards are regarded as being positive. When successive positive and negative displacements have the same magnitude the time of occurrence is given for the positive one. When no sign is given the measurement refers to a long group of waves the amplitudes of which are the same.

The following formulæ due to Galitzin are employed for computing the times of the maxima and the amplitudes of sinusoidal waves :—

(1) Lag of the displacement shown by the galvanometer after the maximum displacement of the ground

$$\tau + \tau_1 = \frac{T_p}{2\pi} \left[ \tan^{-1} \frac{2u(1-\mu^2)^{\frac{1}{2}}}{u^2-1} + \tan^{-1} \frac{2u_1}{u_1^2-1} + \frac{\pi}{2} \right]$$

each inverse tangent being taken as between 0 and  $\pi$ .

(2) Magnification of record =

$$\frac{k A T_p}{\pi l} \cdot \frac{1}{(1+u^2)(1+u_1^2)\{1-\mu^2 f(u)\}^{\frac{1}{2}}}$$

where  $T_p$  is the period of the earth wave considered,

$$u = \frac{T}{T_p}, \quad u_1 = \frac{T_1}{T_p}, \quad \text{and } f(u) = \left[ \frac{2u}{1+u^2} \right]^2.$$

$\Delta$  is the distance in kilometres of the epicentre measured along the arc of the great circle passing through the station. This distance is derived from the interval between P and S, by the tables, due to Zeissig, given in Klotz's "Seismological Tables" (Publication of the Dominion Observatory, Ottawa, Vol. III, No. 2). The azimuth of the epicentre ( $0^\circ$  to  $360^\circ$ ) is measured from north through east. When an estimation of the azimuth is possible, it is used, together with  $\Delta$ , for provisional determination of the co-ordinates of the epicentre. In other cases where co-ordinates are given, the information has been obtained from other sources; the origin of the determination is inserted in brackets.

Brackets enclosing figures or phase symbols indicate that the information is uncertain.

The total number of shocks recorded during the year was 301. The phases being sufficiently well defined, estimates of the epicentral distances were obtained for 56 shocks, whilst in 6 cases the records of the initial impulses were sufficiently sharp to allow of computations of azimuth and so of estimates of the co-ordinates of the epicentres. There were 8 earthquakes which produced a disturbance at the observatory with an amplitude exceeding 0.1 mm. in a horizontal component. These earthquakes originated in Burma (May 5th, December 3rd), in north-west Persia (May 6th), in Assam (July 2nd), in southern Italy (July 23rd), in Kachin (September 21st), in the Pacific Ocean north of Marianne Islands (October 24th), and in Japan (November 25th).

For comparison the statistics for all the years in which the Galitzin seismographs have been in operation at Kew Observatory are given :—

YEAR.	Shocks recorded.	Epicentral distances.	Azimuths. estimated	Shocks exceeding 0.1 mm.
1926	306	55	—	10
1927	314	78	6	9
1928	339	97	19	18
1929	320	74	6	12
1930	301	56	6	8

*Microseisms.*—In Table 546 are given the amplitude (A) and period ( $T_p$ ) of the microseisms shown by the north component seismograph on each day at 0h, 6h, 12h, and 18h. On a few occasions (less than 2 per cent. of the total number) when the north component record was not available measurements of the east component record have been included. The group of waves of greatest amplitude occurring in the 30 minutes centring at the hour in question is selected, and the amplitude tabulated is the mean obtained from the three largest complete waves in that group. The period is derived from a measurement made on the same group\*, but the procedure adopted in 1926 and 1927 was slightly modified from January 1st, 1928, in order to diminish

\* F. J. W. Whipple and F. J. Scrase, "On the Frequency of Microseisms of Different Periods at Eskdalemuir and at Kew," *London, Mon. Not. R. Astr. Soc. Geophys. Supp.* 2, No. 2, 1928.

the tendency on the part of the tabulator to give preference to certain periods. The total time, to the nearest second, for a number of complete consecutive waves is measured, the number of waves being chosen so that the time is between 23 and 30 seconds. The period is then derived from the following division table:—

Number of Waves.	Time interval in seconds:							
	30	29	28	27	26	25	24	23
3	10	9.7	9.3	9.0	8.7	8.3	8.0	7.7
4	7.5	7.3	7.0	6.7	6.5	6.3		
5	6	5.8	5.6	5.4	5.2			
6	5	4.8	4.7	4.5				
7	4.3	4.1	4.0	3.9				
8	3.7	3.6	3.5					
9	3.3	3.2	3.1					
10	3.0	2.9	2.8					
11	2.7	2.6						
12	2.5							

In computing the mean period occasions of zero amplitude are omitted. The mean values of amplitude and period for each month of 1930 and for the year, together with the corresponding mean values for the period 1926 to 1929 are given below:—

#### MICROSEISMS—MONTHLY AND ANNUAL MEANS.

1926 to 1929.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Amplitude ( $\mu$ ) .. ..	2.4	2.0	1.5	1.0	0.5	0.6	0.5	0.7	0.7	1.2	1.9	2.2	1.3
Period (sec.) .. ..	6.6	6.3	6.0	5.4	4.7	4.5	4.3	4.5	5.1	5.3	6.1	6.3	5.4
1930.													
Amplitude ( $\mu$ ) .. ..	2.7	1.2	1.4	0.9	0.5	0.4	0.3	0.5	0.6	1.3	1.8	1.9	1.1
Period (sec.) .. ..	6.7	5.8	5.6	5.4	5.2	4.9	4.3	4.5	4.6	5.4	5.8	6.5	5.4

The means for the several hours are as follows:—

#### MICROSEISMS—MEANS AT SPECIFIED HOURS.

1926 to 1929.	(G.M.T.)			
	oh.	6h.	12h.	18h.
Amplitude ( $\mu$ ) .. ..	1.27	1.27	1.23	1.26
Period (sec.) .. ..	5.45	5.43	5.37	5.41
1930.				
Amplitude ( $\mu$ ) .. ..	1.15	1.11	1.12	1.15
Period (sec.) .. ..	5.33	5.42	5.39	5.45

These figures indicate that there is no regular diurnal variation in amplitude or period of the microseisms recorded at Kew Observatory.\*

\* F. J. W. Whipple and A. W. Lee, "Studies in Microseisms," *London, Mon. Not. R. Astr. Soc. Geophys. Supp.* 2, No. 7, 1931.

Readings in millibars at exact hours, Greenwich Mean Time.

440. Richmond (Kew Observatory) : H<sub>0</sub> (height of barometer cistern above M.S.L.) = 10.4 metres.

January, 1930.

Hour G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean		
Day.	mb.	mb.																									
1	021.4	021.1	021.3	021.2	021.0	020.3	020.0	019.8	019.1	018.8	016.5	014.7	013.1	012.2	011.1	010.7	009.9	009.5	008.2	007.9	006.7	005.6	005.0	004.5	004.5	014.5	
2	003.8	003.5	003.9	005.2	006.4	007.1	008.6	009.9	011.5	012.3	013.1	013.6	014.1	014.7	015.1	015.8	016.1	016.3	016.2	016.0	015.8	015.2	014.7	013.9	013.9	011.6	
3	013.4	013.1	012.5	011.9	011.4	011.0	010.9	010.7	010.4	010.2	009.3	008.3	007.4	007.0	006.4	006.1	006.1	006.8	007.2	007.3	007.5	007.3	006.8	006.7	006.7	009.1	
4	006.2	006.1	005.8	005.3	005.0	005.2	005.0	005.0	005.3	005.6	004.3	003.1	001.6	000.4	999.2	998.2	997.0	995.5	994.5	993.8	992.7	991.8	990.9	990.0	990.0	990.0	000.7
5	989.2	988.7	988.7	988.4	988.1	988.2	988.4	989.5	990.0	991.3	991.8	992.2	992.7	992.8	993.4	994.4	995.2	996.4	997.3	998.3	999.2	000.0	001.1	002.0	002.0	993.0	
6	003.0	004.3	005.1	006.2	007.1	008.2	009.2	010.7	012.2	013.5	014.7	015.2	015.8	016.4	017.0	018.1	018.6	019.1	019.7	019.8	020.0	020.6	020.6	020.4	020.4	013.6	
7	020.1	020.2	020.4	020.1	020.0	019.8	019.8	019.9	020.0	020.0	019.8	019.2	018.4	017.8	017.4	017.0	016.3	015.9	015.4	014.9	014.2	013.5	012.7	012.1	012.1	011.9	
8	011.2	010.4	009.7	008.7	008.1	007.7	007.8	008.4	008.8	009.3	009.1	008.7	008.4	008.4	008.4	008.5	008.6	008.6	009.0	009.1	009.2	009.2	009.4	009.6	009.6	009.0	
9	009.7	010.1	010.0	009.6	009.2	008.8	008.8	008.6	008.6	008.4	007.9	007.0	006.6	006.3	006.0	005.8	005.1	004.3	003.7	002.8	002.2	001.8	002.3	002.1	002.1	006.6	
10	001.7	001.5	001.3	001.5	001.6	002.3	003.1	003.8	004.8	005.3	005.1	004.6	003.7	003.6	003.1	002.0	001.3	000.2	999.8	997.9	996.0	994.3	992.7	991.0	991.0	001.1	
11	988.8	987.2	985.2	985.9	986.9	986.7	987.1	987.6	987.9	988.0	988.3	986.6	985.7	985.1	984.6	984.9	984.4	985.4	986.0	986.9	987.7	988.4	989.6	990.7	988.9	988.9	
12	991.6	992.8	994.0	994.6	995.4	995.4	996.0	996.7	996.9	997.0	995.5	993.4	991.4	989.7	987.7	983.8	981.4	977.8	977.0	977.7	980.9	986.5	990.3	993.3	993.3	989.8	
13	996.1	998.4	001.9	003.5	005.2	006.3	007.4	009.0	009.5	009.8	009.8	009.8	009.4	009.2	009.1	008.7	008.4	007.9	008.1	008.2	008.4	008.4	008.8	008.7	008.7	006.4	
14	008.5	008.6	008.5	008.2	007.9	008.0	008.1	008.2	008.3	008.2	007.7	007.2	006.2	005.9	005.3	005.1	004.8	004.2	003.8	003.4	002.9	002.2	001.6	001.0	001.0	006.2	
15	000.8	000.4	000.4	000.5	001.7	003.1	004.7	006.2	007.8	008.7	009.6	009.9	010.5	011.2	011.8	012.5	013.0	013.9	014.5	015.3	015.8	016.3	017.4	017.7	017.7	009.0	
16	017.9	019.2	019.8	020.3	020.7	021.5	022.3	023.0	023.2	023.8	024.0	024.3	024.3	024.0	024.0	024.2	024.1	024.5	024.6	024.8	024.6	024.7	025.3	024.8	024.8	022.9	
17	025.1	025.2	024.8	024.6	024.3	024.2	024.2	024.0	024.6	024.6	024.6	024.1	023.6	023.6	024.1	024.3	024.1	024.3	024.5	024.5	024.3	024.1	024.3	024.1	024.1	024.8	
18	024.3	023.9	023.7	023.4	023.4	023.6	023.8	024.6	024.6	024.6	024.6	024.1	023.1	023.2	022.9	022.4	022.1	021.9	021.8	021.3	020.6	019.9	019.3	018.5	018.5	022.9	
19	017.9	017.6	017.1	016.6	016.0	015.8	015.7	015.7	015.8	015.6	015.0	014.3	013.9	013.8	013.4	013.4	013.3	013.3	013.2	013.1	012.9	013.0	013.2	013.3	014.8		
20	012.9	013.2	013.4	013.5	013.5	014.0	014.5	015.5	016.1	016.4	016.7	016.8	016.8	017.0	017.4	017.8	017.9	018.4	018.7	019.3	019.3	019.4	019.9	020.1	016.5		
21	020.2	020.3	020.6	020.4	020.4	020.2	020.4	020.5	020.9	020.9	020.4	019.8	019.1	018.5	018.4	018.2	018.1	018.2	018.0	017.6	017.1	017.2	016.9	016.3	019.2		
22	015.9	015.8	015.9	015.6	015.7	015.6	015.8	015.9	016.1	016.2	015.8	015.4	014.9	014.2	014.1	013.9	013.7	013.7	013.7	013.4	013.2	013.1	013.0	012.7	014.8		
23	012.4	012.1	012.1	012.1	011.7	011.6	011.6	011.9	012.2	012.5	012.5	012.3	012.0	011.9	011.9	011.5	011.1	010.8	010.6	009.9	009.4	008.5	008.7	007.8	011.4		
24	006.9	005.9	005.5	004.9	004.2	003.4	003.1	002.8	002.9	002.7	002.1	001.0	000.1	999.3	998.9	998.4	998.3	998.3	998.1	997.7	997.4	996.9	996.7	997.2	001.2		
25	997.3	997.4	997.5	997.6	997.5	997.5	997.7	998.4	998.8	999.4	999.7	999.5	999.2	999.3	999.3	999.7	999.9	000.4	000.5	000.8	001.3	000.9	001.3	001.1	999.2		
26	000.9	001.0	001.1	000.9	000.2	000.8	000.3	999.9	000.0	999.9	000.2	997.6	997.0	995.8	995.5	995.6	995.4	995.6	995.6	995.7	995.6	995.6	995.5	995.4	998.0		
27	995.3	995.4	995.4	995.6	996.2	996.6	997.3	998.3	999.0	999.9	000.3	000.7	000.8	001.1	001.5	002.5	003.4	003.9	004.5	005.1	005.6	006.2	006.8	007.3	000.5		
28	007.4	007.5	007.6	007.9	008.0	007.8	007.8	008.2	009.0	009.1	009.6	009.7	009.2	008.4	008.6	008.9	009.3	009.2	009.1	009.0	008.9	008.7	008.5	008.4	008.6		
29	008.1	007.9	007.5	007.3	006.9	006.4	006.2	006.1	005.9	005.8	005.5	004.8	003.9	003.4	002.9	002.7	002.6	002.4	002.1	001.8	001.5	001.1	001.1	000.7	004.5		
30	000.2	999.9	999.5	999.1	999.1	999.2	999.2	999.2	999.5	999.6	999.7	999.5	999.2	998.8	998.9	999.1	999.3	999.2	999.1	998.9	998.8	998.4	998.1	998.2	999.2		
31	997.8	997.4	996.6	996.1	995.9	995.5	994.5	993.6	993.1	991.9	991.0	988.5	987.0	985.6	983.8	982.0	980.2	978.7	976.8	976.5	975.9	975.2	975.1	974.9	987.3		
Mean (Station level)	1007.29	1007.29	1007.27	1007.26	1007.32	1007.44	1007.68	1008.07	1008.46	1008.89	1009.50	1007.93	1007.39	1007.05	1006.81	1006.65	1006.43	1006.29	1006.15	1006.11	1006.00	1005.97	1005.05	1005.85	1007.12		
Mean (Sea level)	1008.57	1008.58	1008.55	1008.54	1008.61	1008.73	1008.97	1009.35	1009.75	1009.97	1009.78	1009.21	1008.66	1008.33	1008.09	1007.93	1007.71	1007.56	1007.42	1007.39	1007.28	1007.24	1007.32	1007.28	1008.40		

441. Richmond (Kew Observatory) : H<sub>0</sub> = 10.4 metres.

February, 1930.

Hour G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	mb.																									
1	977.9	975.0	975.3	975.3	974.9	974.9	975.2	975.2	975.4	975.5	975.5	975.2	975.0	975.1	975.7	976.2	975.4	975.5	975.7	976.0	976.1	976.4	976.8	977.5	975.5	
2	974.4	978.0	978.3	978.8	979.4	980.0	981.0	982.6	983.2	984.1	984.7	984.7	985.1	985.7	986.4	987.1	988.0	989.0	989.8	990.4	991.0	991.6	992.1	992.4	992.4	984.6
3	992.7	993.1	993.2	993.2	993.4	993.6	993.9	994.0	994.1	994.0	993.7	993.7	993.2	993.0	992.3	992.0	991.6	991.1	990.8	990.6	990.3	989.6	989.3	989.1	992.4	
4	989.0	989.1	988.8	988.8	988.8	988.9	989.1	989.3	989.4	989.5	989.4	989.4	989.5	989.5	989.9	990.4	990.9	991.6	992.0	992.4	992.6	993.1	993.4	993.6	990.2	
5	993.9	994.2	994.4	994.8	995.1	995.6	996.3																			

Readings in millibars at exact hours, Greenwich Mean Time.

442. Richmond (Kew Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 10.4 metres.

March, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day. 1	mb. 032.3	mb. 032.2	mb. 032.5	mb. 032.4	mb. 032.3	mb. 032.1	mb. 031.8	mb. 031.0	mb. 029.8	mb. 028.9	mb. 028.2	mb. 027.9	mb. 027.9	mb. 027.9	mb. 027.9	mb. 028.0	mb. 028.0	mb. 028.0	mb. 028.0	mb. 027.6	mb. 030.2				
Day. 2	mb. 027.2	mb. 026.5	mb. 025.8	mb. 025.5	mb. 025.0	mb. 025.1	mb. 024.7	mb. 023.7	mb. 023.8	mb. 023.9	mb. 024.0	mb. 023.6	mb. 023.3	mb. 022.2	mb. 022.0	mb. 022.1	mb. 022.1	mb. 022.2	mb. 022.2	mb. 022.4	mb. 022.8	mb. 022.8	mb. 022.6	mb. 022.2	mb. 023.8
Day. 3	mb. 022.2	mb. 021.8	mb. 021.6	mb. 021.4	mb. 021.6	mb. 021.7	mb. 021.8	mb. 022.3	mb. 022.6	mb. 023.1	mb. 023.4	mb. 023.5	mb. 023.5	mb. 023.3	mb. 023.3	mb. 024.1	mb. 024.8	mb. 025.5	mb. 026.1	mb. 026.7	mb. 027.0	mb. 027.2	mb. 027.7	mb. 028.0	mb. 023.8
Day. 4	mb. 028.3	mb. 028.5	mb. 028.7	mb. 029.4	mb. 029.5	mb. 029.7	mb. 029.8	mb. 030.4	mb. 031.2	mb. 031.8	mb. 031.8	mb. 031.5	mb. 031.3	mb. 030.7	mb. 030.3	mb. 030.2	mb. 030.2	mb. 030.6	mb. 030.8	mb. 031.0	mb. 031.3	mb. 031.4	mb. 031.4	mb. 031.5	mb. 030.4
Day. 5	mb. 031.3	mb. 031.2	mb. 031.1	mb. 031.0	mb. 031.0	mb. 030.9	mb. 031.0	mb. 031.5	mb. 031.7	mb. 032.1	mb. 031.9	mb. 031.7	mb. 031.2	mb. 030.7	mb. 030.4	mb. 030.1	mb. 029.9	mb. 029.6	mb. 029.5	mb. 029.2	mb. 029.4	mb. 029.7	mb. 029.3	mb. 029.1	mb. 030.7
Day. 6	mb. 028.6	mb. 028.0	mb. 027.0	mb. 026.7	mb. 025.8	mb. 025.4	mb. 025.5	mb. 025.5	mb. 024.6	mb. 024.0	mb. 023.9	mb. 023.2	mb. 021.7	mb. 020.1	mb. 018.7	mb. 017.9	mb. 017.0	mb. 015.7	mb. 015.0	mb. 014.7	mb. 013.7	mb. 012.9	mb. 012.3	mb. 011.7	mb. 021.2
Day. 7	mb. 011.4	mb. 010.9	mb. 010.6	mb. 010.5	mb. 010.9	mb. 011.0	mb. 011.4	mb. 011.9	mb. 012.8	mb. 013.5	mb. 014.2	mb. 014.9	mb. 015.0	mb. 015.4	mb. 015.6	mb. 016.0	mb. 016.2	mb. 016.7	mb. 017.5	mb. 017.9	mb. 018.3	mb. 019.0	mb. 019.1	mb. 018.9	mb. 014.4
Day. 8	mb. 018.9	mb. 018.4	mb. 018.1	mb. 018.0	mb. 018.0	mb. 018.0	mb. 018.3	mb. 018.4	mb. 018.5	mb. 018.4	mb. 017.9	mb. 017.2	mb. 016.4	mb. 015.7	mb. 014.8	mb. 014.7	mb. 014.7	mb. 014.6	mb. 014.3	mb. 014.0	mb. 013.6	mb. 013.2	mb. 012.9	mb. 012.2	mb. 016.4
Day. 9	mb. 011.7	mb. 010.9	mb. 010.0	mb. 009.4	mb. 008.6	mb. 007.9	mb. 007.6	mb. 007.1	mb. 006.6	mb. 006.3	mb. 005.8	mb. 005.0	mb. 004.0	mb. 002.6	mb. 001.4	mb. 000.5	mb. 000.2	mb. 000.0	mb. 999.5	mb. 999.4	mb. 998.5	mb. 997.7	mb. 996.7	mb. 995.6	mb. 004.2
Day. 10	mb. 995.2	mb. 994.5	mb. 993.5	mb. 993.1	mb. 993.1	mb. 993.8	mb. 995.2	mb. 996.4	mb. 997.8	mb. 998.7	mb. 999.7	mb. 000.4	mb. 001.1	mb. 001.7	mb. 002.3	mb. 002.8	mb. 003.1	mb. 003.7	mb. 004.7	mb. 005.1	mb. 005.3	mb. 005.5	mb. 005.1	mb. 004.6	mb. 999.7
Day. 11	mb. 004.4	mb. 002.3	mb. 000.5	mb. 999.4	mb. 998.5	mb. 998.4	mb. 998.7	mb. 999.3	mb. 999.4	mb. 999.7	mb. 000.1	mb. 000.5	mb. 000.5	mb. 000.7	mb. 001.0	mb. 001.1	mb. 001.4	mb. 001.9	mb. 002.0	mb. 001.9	mb. 001.3	mb. 000.7	mb. 000.2	mb. 999.9	mb. 000.7
Day. 12	mb. 999.3	mb. 998.7	mb. 998.0	mb. 998.2	mb. 998.4	mb. 998.8	mb. 999.3	mb. 999.7	mb. 000.1	mb. 000.3	mb. 000.3	mb. 000.1	mb. 999.8	mb. 999.8	mb. 999.7	mb. 999.7	mb. 999.8	mb. 000.0	mb. 000.2	mb. 000.3	mb. 000.3	mb. 000.3	mb. 000.5	mb. 999.5	mb. 999.5
Day. 13	mb. 000.5	mb. 000.3	mb. 000.2	mb. 000.3	mb. 000.7	mb. 001.0	mb. 001.5	mb. 001.7	mb. 001.6	mb. 001.5	mb. 001.2	mb. 000.7	mb. 999.9	mb. 998.6	mb. 997.7	mb. 996.7	mb. 995.4	mb. 994.7	mb. 994.1	mb. 993.2	mb. 992.6	mb. 991.7	mb. 990.7	mb. 990.1	mb. 998.0
Day. 14	mb. 989.6	mb. 989.0	mb. 988.8	mb. 988.8	mb. 989.2	mb. 989.5	mb. 990.0	mb. 990.8	mb. 991.4	mb. 992.0	mb. 991.9	mb. 992.3	mb. 992.0	mb. 992.0	mb. 991.7	mb. 991.7	mb. 991.4	mb. 991.7	mb. 991.9	mb. 991.8	mb. 991.9	mb. 991.6	mb. 991.4	mb. 991.5	mb. 991.0
Day. 15	mb. 991.1	mb. 990.6	mb. 990.0	mb. 989.7	mb. 989.6	mb. 989.7	mb. 989.5	mb. 989.4	mb. 989.4	mb. 989.6	mb. 989.3	mb. 988.7	mb. 988.2	mb. 988.0	mb. 987.9	mb. 987.8	mb. 987.9	mb. 988.0	mb. 988.0	mb. 988.0	mb. 988.2	mb. 988.4	mb. 988.3	mb. 988.3	mb. 988.0
Day. 16	mb. 988.1	mb. 987.4	mb. 986.7	mb. 986.2	mb. 985.9	mb. 985.9	mb. 985.7	mb. 985.8	mb. 985.9	mb. 986.1	mb. 986.1	mb. 986.3	mb. 986.6	mb. 987.4	mb. 988.4	mb. 989.9	mb. 991.0	mb. 992.1	mb. 993.4	mb. 994.7	mb. 995.5	mb. 996.4	mb. 997.6	mb. 998.0	mb. 989.3
Day. 17	mb. 998.3	mb. 998.1	mb. 998.1	mb. 998.1	mb. 998.5	mb. 998.8	mb. 998.8	mb. 999.0	mb. 998.8	mb. 998.3	mb. 997.7	mb. 996.9	mb. 996.0	mb. 995.2	mb. 994.2	mb. 993.0	mb. 992.4	mb. 991.9	mb. 991.3	mb. 990.9	mb. 990.4	mb. 990.0	mb. 989.9	mb. 989.6	mb. 995.3
Day. 18	mb. 989.5	mb. 989.4	mb. 989.6	mb. 990.3	mb. 990.6	mb. 991.0	mb. 991.4	mb. 991.8	mb. 991.8	mb. 991.8	mb. 992.0	mb. 992.3	mb. 992.7	mb. 992.8	mb. 992.9	mb. 993.0	mb. 993.2	mb. 994.0	mb. 994.7	mb. 995.2	mb. 995.7	mb. 996.1	mb. 996.3	mb. 996.5	mb. 992.6
Day. 19	mb. 996.5	mb. 996.3	mb. 996.0	mb. 995.6	mb. 995.3	mb. 995.0	mb. 994.9	mb. 995.1	mb. 995.2	mb. 995.1	mb. 995.2	mb. 995.8	mb. 994.7	mb. 994.3	mb. 994.0	mb. 994.4	mb. 994.8	mb. 994.9	mb. 996.7	mb. 997.6	mb. 998.7	mb. 999.4	mb. 999.9	mb. 000.4	mb. 996.0
Day. 20	mb. 001.0	mb. 001.3	mb. 002.1	mb. 002.9	mb. 003.4	mb. 004.0	mb. 004.7	mb. 005.2	mb. 005.5	mb. 005.4	mb. 005.1	mb. 004.9	mb. 005.1	mb. 005.2	mb. 005.3	mb. 005.6	mb. 005.8	mb. 006.1	mb. 006.5	mb. 006.7	mb. 004.6				
Day. 21	mb. 006.8	mb. 006.7	mb. 006.8	mb. 006.7	mb. 006.8	mb. 007.1	mb. 007.5	mb. 007.6	mb. 007.7	mb. 007.9	mb. 007.2	mb. 006.4	mb. 005.7	mb. 005.3	mb. 005.2	mb. 005.1	mb. 005.1	mb. 005.2	mb. 005.3	mb. 005.3	mb. 005.3	mb. 005.6	mb. 005.7	mb. 005.7	mb. 006.3
Day. 22	mb. 005.8	mb. 006.3	mb. 006.8	mb. 007.8	mb. 009.1	mb. 010.8	mb. 012.1	mb. 013.3	mb. 014.5	mb. 015.3	mb. 015.9	mb. 016.2	mb. 016.5	mb. 016.9	mb. 016.9	mb. 017.2	mb. 017.6	mb. 017.9	mb. 018.3	mb. 018.5	mb. 018.2	mb. 018.3	mb. 018.0	mb. 017.8	mb. 014.2
Day. 23	mb. 017.4	mb. 016.7	mb. 015.8	mb. 015.2	mb. 014.2	mb. 013.9	mb. 013.3	mb. 012.7	mb. 012.1	mb. 011.4	mb. 010.9	mb. 009.3	mb. 008.4	mb. 007.9	mb. 007.8	mb. 008.1	mb. 008.2	mb. 008.6	mb. 009.2	mb. 010.1	mb. 010.6	mb. 011.2	mb. 011.5	mb. 011.9	mb. 011.6
Day. 24	mb. 012.6	mb. 013.4	mb. 014.1	mb. 014.9	mb. 016.2	mb. 017.3	mb. 018.5	mb. 019.1	mb. 019.8	mb. 020.4	mb. 021.1	mb. 021.7	mb. 021.8	mb. 022.3	mb. 022.8	mb. 023.1	mb. 024.0	mb. 024.7	mb. 025.7	mb. 026.7	mb. 027.5	mb. 028.0	mb. 028.2	mb. 028.0	mb. 021.0
Day. 25	mb. 028.1	mb. 027.8	mb. 027.7	mb. 027.8	mb. 027.8	mb. 027.7	mb. 027.4	mb. 027.6	mb. 027.3	mb. 026.7	mb. 026.0	mb. 024.9	mb. 024.2	mb. 023.2	mb. 022.3	mb. 021.9	mb. 021.7	mb. 021.3	mb. 021.5	mb. 021.2	mb. 020.8	mb. 020.7	mb. 020.9	mb. 024.9	
Day. 26	mb. 020.9	mb. 021.0	mb. 021.0	mb. 021.4	mb. 021.8	mb. 022.1	mb. 022.9	mb. 023.4	mb. 023.7	mb. 023.9	mb. 024.3	mb. 024.3	mb. 024.3	mb. 024.3	mb. 024.1	mb. 023.7	mb. 023.6	mb. 023.9	mb. 024.1	mb. 024.1	mb. 024.3	mb. 024.3	mb. 024.4	mb. 024.3	mb. 023.3
Day. 27	mb. 024.4	mb. 024.1	mb. 023.9	mb. 023.9	mb. 023.7	mb. 023.8	mb. 023.9	mb. 023.8	mb. 023.7	mb. 023.2	mb. 022.6	mb. 022.2	mb. 021.4	mb. 020.9	mb. 020.2	mb. 019.9	mb. 019.5	mb. 019.3	mb. 019.3	mb. 019.0	mb. 018.4	mb. 017.9	mb. 017.4	mb. 021.8	
Day. 28	mb. 016.9	mb. 016.1	mb. 015.5	mb. 015.2	mb. 014.2	mb. 014.0	mb. 013.3	mb. 013.1	mb. 012.7	mb. 012.4	mb. 011.9	mb. 009.7	mb. 008.2	mb. 007.2	mb. 006.0	mb. 004.9	mb. 004.1	mb. 003.2	mb. 002.6	mb. 002.0	mb. 000.9	mb. 999.8	mb. 999.5	mb. 998.4	mb. 008.8
Day. 29	mb. 998.1	mb. 997.7	mb. 997.7	mb. 998.0	mb. 998.5	mb. 999.4	mb. 000.5	mb. 001.6	mb. 002.8	mb. 003.8	mb. 004.4	mb. 004.5	mb. 004.9	mb. 005.2	mb. 005.8	mb. 006.5	mb. 006.9	mb. 007.6	mb. 008.2	mb. 009.6	mb. 010.3	mb. 010.8	mb. 011.2	mb. 011.6	mb. 004.1
Day. 30	mb. 012.1	mb. 012.6	mb. 013.2	mb. 013.9	mb. 013.9	mb. 014.7	mb. 015.3	mb. 015.9	mb. 016.3	mb. 016.4	mb. 016.6	mb. 016.8	mb. 016.9	mb. 016.4	mb. 016.3	mb. 016.1	mb. 016.3	mb. 016.2	mb. 016.3	mb. 016.2	mb. 015.8	mb. 015.2	mb. 014.4	mb. 013.9	mb. 015.3
Day. 31	mb. 013.0	mb. 012.1	mb. 011.3	mb. 010.3	mb. 009.7	mb. 009.4	mb. 008.6	mb. 007.8	mb. 007.3	mb. 006.5	mb. 005.7	mb. 005.5	mb. 005.5	mb. 005.5	mb. 005.7	mb. 005.8	mb. 006.1	mb. 006.9	mb. 007.4	mb. 008.2	mb. 008.5	mb. 008.6	mb. 009.1	mb. 009.2	mb. 008.2
Mean (Station level)	1010.37	1010.03	1009.75	1009.73	1009.73	1009.93	1010.17	1010.41	1010.60	1010.78	1010.65	1010.42	1010.09	1009.75	1009.50	1009.40	1009.42	1009.56	1009.76	1009.97	1010.00	1009.97	1009.90	1009.74	1010.00
Mean (Sea level)	1011.67	1011.32	1011.05	1011.03	1011.03	1011.22	1011.47	1011.71	1011.89	1012.02	1011.93	1011.70	1011.37	1011.02	1010.77	1010.68	1010.70	1010.84	1011.04	1011.25	1011.28	1011.26	1011.19	1011.03	1011.30

443. Richmond (Kew Observatory) : H<sub>b</sub> = 10.4 metres.

April, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day. 1	mb. 009.0	mb. 008.9	mb. 008.5	mb. 008.3	mb. 008.5	mb. 008.3	mb. 008.5	mb. 008.5	mb. 007.9	mb. 007.8	mb. 007.3	mb. 006.8	mb. 006.2	mb. 005.3	mb. 004.8	mb. 004.5	mb. 004.0	mb. 003.0	mb. 003.0	mb. 002.9	mb. 003.5	mb. 003.0	mb. 002.4	mb. 001.6	mb.

Readings in millibars at exact hours, Greenwich Mean Time.

444. Richmond (Kew Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 10.4 metres.

May, 1930.

Table with 25 columns (1-24) and 25 rows (1-24). Columns 1-12 are labeled 'Station Level' and 'Hour. G.M.T.'. Columns 13-24 are labeled 'Mean (Station level)'. Rows 1-10 are labeled 'Day.' and 'Hour. G.M.T.'. Rows 11-24 are labeled 'Station Level' and 'Hour. G.M.T.'. Values are in millibars.

445. Richmond (Kew Observatory) : H<sub>b</sub> = 10.4 metres.

June, 1930.

Table with 25 columns (1-24) and 25 rows (1-24). Columns 1-12 are labeled 'Station Level' and 'Hour. G.M.T.'. Columns 13-24 are labeled 'Mean (Station level)'. Rows 1-10 are labeled 'Day.' and 'Hour. G.M.T.'. Rows 11-24 are labeled 'Station Level' and 'Hour. G.M.T.'. Values are in millibars.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

446. Richmond (Kew Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 10.4 metres.

July, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Station Level 1-31). Includes mean values for station and sea level.

447. Richmond (Kew Observatory) : H<sub>b</sub> = 10.4 metres.

August, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Station Level 1-31). Includes mean values for station and sea level.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

448. Richmond (Kew Observatory) : H<sub>0</sub> (height of barometer cistern above M.S.L.) = 10.4 metres. September, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-30 hours + Mean). Includes 'Station Level' and 'Mean (Sea level)' sub-headers.

449. Richmond (Kew Observatory) : H<sub>0</sub> = 10.4 metres.

October, 1930.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-30 hours + Mean). Includes 'Station Level' and 'Mean (Sea level)' sub-headers.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

450. Richmond (Kew Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 10.4 metres. November, 1930.

Table for Richmond (Kew Observatory) in November 1930. Columns include Hour G.M.T., Station Level (1-30), and Mean (Station level/Sea level). Rows show hourly pressure readings in millibars.

451. Richmond (Kew Observatory) : H<sub>b</sub> = 10.4 metres. December, 1930.

Table for Richmond (Kew Observatory) in December 1930. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level/Sea level). Rows show hourly pressure readings in millibars.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

PRESSURE AT STATION LEVEL AND AT SEA LEVEL.  
ANNUAL MEANS FROM HOURLY VALUES.

From readings in millibars at exact hours, Greenwich Mean Time.

452. Richmond (Kew Observatory) : H<sub>0</sub> = 10.4 metres.

1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Station Level.	mb. 011.57	mb. 011.43	mb. 011.29	mb. 011.22	mb. 011.27	mb. 011.39	mb. 011.59	mb. 011.77	mb. 011.88	mb. 011.94	mb. 011.82	mb. 011.58	mb. 011.32	mb. 011.14	mb. 011.02	mb. 010.97	mb. 011.00	mb. 011.13	mb. 011.29	mb. 011.47	mb. 011.60	mb. 011.66	mb. 011.67	mb. 011.61	mb. 011.45
Sea Level.	012.85	012.71	012.57	012.50	012.55	012.67	012.87	013.04	013.15	013.21	013.08	012.84	012.58	012.40	012.28	012.23	012.26	012.39	012.55	012.74	012.87	012.93	012.94	012.89	012.72

PRESSURE AT STATION LEVEL: MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

453. Richmond (Kew Observatory) : H<sub>0</sub> = 10.4 metres.

1930.

Month	Mean.	Hour. G.M.T. 1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	1007.12	mb. -0.51	mb. -0.44	mb. -0.40	mb. -0.35	mb. -0.23	mb. -0.05	mb. +0.26	mb. +0.70	mb. +1.16	mb. +1.45	mb. +1.32	mb. +0.81	mb. +0.33	mb. +0.06	mb. -0.12	mb. -0.22	mb. -0.37	mb. -0.46	mb. -0.54	mb. -0.51	mb. -0.56	mb. -0.53	mb. -0.39	mb. -0.42
Feb.	1017.91	+0.13	+0.03	-0.17	-0.35	-0.36	-0.35	-0.13	+0.14	+0.32	+0.42	+0.46	+0.25	-0.08	-0.34	-0.50	-0.49	-0.37	-0.07	+0.12	+0.20	+0.30	+0.33	+0.28	+0.24
Mar.	1010.00	+0.03	-0.29	-0.53	-0.52	-0.49	-0.26	+0.02	+0.29	+0.51	+0.67	+0.62	+0.42	+0.13	-0.19	-0.41	-0.47	-0.42	-0.25	-0.02	+0.22	+0.28	+0.28	+0.24	+0.12
April	1007.87	+0.19	+0.04	-0.13	-0.25	-0.15	0.00	+0.16	+0.20	+0.26	+0.30	+0.18	+0.02	-0.16	-0.37	-0.58	-0.62	-0.57	-0.42	-0.18	+0.18	+0.39	+0.49	+0.52	+0.50
May	1013.56	-0.19	-0.36	-0.43	-0.36	-0.20	+0.04	+0.26	+0.40	+0.37	+0.38	+0.31	+0.18	+0.08	-0.03	-0.17	-0.30	-0.38	-0.25	-0.12	+0.13	+0.27	+0.21	+0.16	+0.01
June	1014.99	+0.31	+0.13	-0.02	-0.04	+0.03	+0.18	+0.38	+0.48	+0.43	+0.39	+0.25	+0.11	-0.13	-0.32	-0.55	-0.74	-0.81	-0.72	-0.51	-0.24	+0.17	+0.35	+0.43	+0.43
July	1010.03	+0.29	+0.11	-0.06	-0.11	-0.05	+0.11	+0.24	+0.23	+0.22	+0.20	+0.06	-0.07	-0.21	-0.31	-0.36	-0.53	-0.55	-0.49	-0.28	-0.03	+0.29	+0.42	+0.46	+0.42
Aug.	1011.77	+0.39	+0.04	-0.28	-0.54	-0.52	-0.42	-0.26	-0.11	-0.02	-0.03	-0.08	-0.17	-0.24	-0.18	-0.21	-0.28	-0.28	-0.18	+0.08	+0.47	+0.64	+0.78	+0.74	+0.64
Sept.	1012.73	-0.17	-0.31	-0.41	-0.48	-0.40	-0.19	+0.08	+0.19	+0.34	+0.44	+0.25	-0.21	+0.11	-0.01	-0.16	-0.23	-0.17	-0.10	+0.10	+0.24	+0.30	+0.26	+0.13	-0.05
Oct.	1010.21	-0.47	-0.70	-0.81	-0.80	-0.64	-0.41	+0.01	+0.44	+0.72	+0.83	+0.83	+0.61	+0.27	+0.11	-0.05	-0.05	+0.05	+0.21	+0.21	+0.19	+0.10	-0.01	-0.21	-0.43
Nov.	1010.32	+0.44	+0.60	+0.55	+0.51	+0.51	+0.45	+0.54	+0.74	+0.66	+0.58	+0.41	-0.15	-0.54	-0.85	-0.93	-0.85	-0.75	-0.57	-0.57	-0.57	-0.43	-0.22	+0.02	+0.41
Dec.	1011.47	+0.57	+0.54	+0.44	+0.20	+0.01	-0.09	-0.11	+0.01	+0.05	+0.15	-0.12	-0.60	-0.98	-1.16	-0.97	-0.74	-0.45	-0.17	+0.16	+0.43	+0.55	+0.74	+0.82	+0.72
Year	1011.45	+0.08	-0.05	-0.19	-0.26	-0.21	-0.08	+0.12	+0.31	+0.42	+0.48	+0.37	+0.14	-0.12	-0.30	-0.42	-0.46	-0.42	-0.29	-0.13	+0.06	+0.19	+0.26	+0.27	+0.22

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY.

Maximum and Minimum for the interval 0h. to 24h., Greenwich Mean Time.

454. Richmond (Kew Observatory) : H<sub>0</sub> = 10.4 metres.

1930.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.		
Day.	Max.	Min.																							
1	mb. 021.5	mb. 004.5	mb. 977.5	mb. 974.8	mb. 082.5	mb. 027.6	mb. 009.2	mb. 001.6	mb. 019.0	mb. 017.1	mb. 012.3	mb. 011.1	mb. 007.1	mb. 004.6	mb. 015.1	mb. 003.0	mb. 027.7	mb. 024.9	mb. 027.1	mb. 023.9	mb. 013.5	mb. 000.3	mb. 027.7	mb. 021.4	
2	016.4	003.4	992.4	977.4	027.6	022.0	008.1	999.8	018.3	015.7	013.2	009.9	011.0	006.9	003.0	995.8	028.4	025.8	029.5	026.9	000.4	971.5	024.0	019.1	
3	013.9	006.0	994.1	989.1	028.0	021.2	006.9	994.5	020.3	018.3	018.2	012.9	015.5	010.3	999.6	995.7	027.7	025.9	029.2	018.1	992.4	976.6	030.0	023.8	
4	006.7	990.0	993.6	988.7	031.9	028.0	002.7	994.1	019.8	015.3	024.6	018.6	016.2	013.5	001.8	989.8	025.9	016.8	018.1	002.0	010.5	992.4	029.4	024.2	
5	002.0	988.0	007.3	993.6	032.2	029.1	008.0	002.5	015.4	007.6	024.3	019.6	015.3	013.1	001.8	998.4	017.3	011.7	003.9	996.4	010.3	001.8	024.2	018.8	
6	020.7	002.0	018.6	007.2	029.1	011.7	014.9	007.7	008.4	005.4	019.6	013.0	017.9	013.3	007.0	001.4	014.8	010.9	001.5	996.7	011.6	001.9	018.8	010.1	
7	020.5	012.1	028.5	018.6	019.2	010.3	023.8	014.9	012.4	008.4	023.3	013.6	023.8	017.9	014.0	006.9	011.9	010.5	005.5	999.2	018.1	011.5	010.1	003.2	
8	012.1	007.6	035.4	028.4	018.9	012.2	024.4	019.6	013.9	010.8	024.3	021.5	023.5	019.9	020.7	014.0	012.7	010.0	999.2	990.3	025.7	008.6	007.8	002.4	
9	010.2	001.7	087.2	035.3	012.2	995.6	019.6	010.5	012.5	002.5	022.2	014.1	023.0	020.7	020.5	017.6	010.1	007.7	015.2	994.3	026.8	024.7	010.1	001.7	
10	005.3	991.0	036.3	034.3	005.5	993.0	012.4	008.9	006.6	999.2	014.1	010.3	022.9	018.5	017.8	011.7	010.9	008.6	019.3	014.8	030.2	026.2	014.7	009.9	
11	991.0	984.4	034.4	030.3	004.6	998.3	013.6	008.4	005.1	994.6	016.4	011.1	018.5	011.8	011.8	008.6	010.1	008.7	014.8	005.2	038.6	030.0	010.2	988.9	
12	997.2	976.5	030.6	027.0	000.5	997.8	008.5	002.9	010.7	005.1	017.0	014.7	014.1	009.6	009.5	007.7	010.0	009.1	015.5	004.2	040.4	037.4	002.5	997.1	
13	009.9	993.3	027.2	022.8	001.7	990.1	004.5	992.4	010.4	007.1	022.2	016.8	014.4	010.0	009.1	002.7	009.1	999.6	018.1	015.4	037.4	030.7	994.6	990.2	
14	008.8	000.9	022.9	016.0	992.3	988.7	009.0	993.3	016.3	007.7	024.3	021.9	010.0	002.4	008.7	996.0	016.8	000.5	017.4	012.4	030.8	018.7	000.5	994.5	
15	017.7	000.3	020.3	012.7	991.5	987.8	015.7	009.0	018.2	015.7	024.6	022.0	006.1	002.2	015.3	008.4	020.5	016.8	020.5	016.8	012.7	004.3	018.7	009.9	000.5
16	025.4	017.7	027.1	020.3	998.0	985.6	015.9	013.2	022.9	018.1	023.4	018.8	002.2	995.5	019.7	015.3	020.3	012.0	012.9	005.0	026.3	017.3	013.6	003.6	
17	025.4	023.5	031.0	027.0	999.0	989.6	013.3	008.6	022.7	012.7	018.8	013.8	997.3	994.5	019.8	009.4	012.1	000.7	012.0	002.9	028.4	026.2	030.6	013.6	
18	025.1	018.5	031.6	027.9	996.5	989.3	013.5	007.9	020.1	011.9	014.2	012.2	998.2	988.4	013.7	006.3	008.1	998.5	016.0	003.4	028.0	003.4	033.0	030.5	
19	018.5	012.8	027.9	024.3	000.4	994.0	009.7	996.3	022.0	019.1	015.7	013.5	998.2	998.2	018.4	008.8	007.0	986.2	016.0	001.2	010.9	997.7	085.2	032.0	
20	020.1	012.9	025.8	024.2	006.7	000.4	009.6	003.4	020.2	018.1	017.8	014.9	008.5	999.5	019.0	006.2	994.1	000.0	005.9	005.9	010.8	992.3	034.7	031.4	
21	021.0	016.3	024.5	023.0	007.9	004.9	012.8	008.8	021.9	020.0	018.3	015.5	009.9	997.1	009.8	997.1	014.4	994.0	005.8	003.8	996.2	986.8	034.4	031.7	
22	016.4	012.7	025.4	023.9	018.6	005.7	012.9	006.0	021.1	017.2	015.6	009.6	010.6	008.7	017.5	009.8	016.9	014.4	011.1	005.0	996.7	982.7	034.4	030.1	
23	012.7	007.8	027.2	024.8	017.8	007.8	006.0	996.2	019.5	016.8	011.3	008.0	008.7	006.5	016.0	005.8	018.1	014.7	008.6	002.9	019.9	996.6	030.1	013.8	
24	007.8	997.2	027.2	019.1	028.3	011.9	999.																		

Readings in degrees absolute at exact hours, Greenwich Mean Time.

455. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulb above the ground) = 3.0 metres.

January, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day:	°A																									
1	74.4	74.1	73.8	74.1	74.5	75.0	75.2	76.3	77.0	77.3	78.0	78.7	79.9	80.6	81.3	81.7	82.0	81.9	82.3	82.0	82.7	82.8	82.8	83.0	83.0	78.6
2	84.3	84.3	83.9	83.1	81.9	81.0	80.6	80.5	80.3	80.7	80.9	81.3	81.5	81.4	81.4	80.7	80.1	80.2	80.3	80.4	80.7	80.9	81.3	81.6	81.6	81.4
3	82.1	82.6	83.0	82.6	82.6	83.1	83.1	83.1	83.0	83.3	83.4	83.5	83.8	84.0	84.0	83.9	83.8	83.7	83.0	82.2	82.0	81.9	81.6	81.5	81.5	83.0
4	81.5	81.6	81.2	81.1	80.8	80.5	80.8	80.7	80.6	81.2	82.1	82.8	83.1	83.0	82.8	82.1	82.3	82.3	82.8	82.4	82.5	82.2	82.1	82.1	82.1	81.8
5	82.4	82.6	82.3	81.7	81.3	81.0	80.6	80.1	79.8	80.0	80.6	81.0	81.2	81.2	81.1	80.4	79.9	79.4	78.7	78.5	78.3	78.1	77.9	77.4	77.4	80.3
6	76.3	76.7	75.7	75.8	75.7	75.1	75.1	75.0	75.3	76.2	77.0	78.6	79.6	80.2	79.9	79.1	78.4	78.0	77.3	77.6	77.6	77.4	78.4	78.9	77.3	
7	79.5	79.8	80.7	81.1	81.5	81.7	81.9	81.9	82.0	82.0	82.2	82.3	82.4	82.2	82.0	81.9	81.8	81.5	81.0	81.0	81.0	80.5	80.2	80.0	81.3	
8	79.1	79.1	79.2	79.1	79.1	79.4	79.9	79.6	79.5	79.7	79.8	80.3	80.4	80.6	80.1	79.6	79.0	78.8	78.0	77.5	76.8	76.0	75.8	75.3	78.9	
9	74.7	74.4	73.8	74.3	74.3	74.9	75.4	75.9	77.5	78.8	80.0	80.9	81.3	81.3	81.2	81.1	81.0	80.9	81.0	81.5	81.5	81.7	79.1	79.1	78.5	
10	79.4	79.7	79.8	79.4	78.2	77.6	77.5	76.9	76.7	77.3	78.0	78.9	79.3	79.6	79.6	79.0	78.8	78.5	79.4	80.1	80.5	80.8	80.9	80.9	80.9	79.0
11	81.0	81.4	81.5	80.6	78.1	78.1	78.0	77.9	77.5	77.0	77.4	78.3	79.1	79.3	78.1	74.7	74.8	75.0	75.1	75.3	74.8	74.5	74.2	74.2	74.2	77.5
12	74.3	74.1	74.0	73.7	73.9	74.2	74.4	74.9	75.5	76.4	77.2	78.2	79.0	78.7	78.5	78.8	80.0	82.0	83.4	82.9	82.4	81.3	80.7	80.5	80.5	77.7
13	80.3	79.6	79.2	79.0	78.0	77.9	77.5	77.6	78.0	79.2	80.7	81.9	82.5	82.4	82.1	81.9	82.0	82.3	82.8	83.6	83.4	83.9	83.8	83.6	83.6	80.9
14	83.5	83.6	83.8	83.7	83.7	83.6	83.8	83.4	83.7	83.8	84.8	85.0	85.5	85.4	85.0	84.4	83.5	83.3	83.9	84.3	84.4	84.0	83.9	84.1	84.1	84.1
15	84.4	83.9	83.8	83.2	81.0	80.7	80.4	79.9	80.2	80.9	81.5	81.7	81.7	81.9	80.8	80.0	79.1	78.1	78.0	78.8	79.0	79.1	79.0	79.0	79.0	80.8
16	77.2	77.7	78.0	78.6	78.2	78.0	77.8	78.3	78.0	78.6	79.1	79.8	80.5	81.5	81.6	81.5	80.4	80.1	79.8	79.5	79.7	79.6	79.3	79.2	79.2	
17	79.1	79.1	79.5	79.8	79.5	78.9	79.1	79.9	80.0	80.4	81.2	81.8	82.3	82.6	82.2	81.6	80.5	80.0	79.7	79.2	80.2	80.0	79.6	79.4	80.2	
18	79.4	79.8	79.6	79.1	79.6	80.2	81.2	81.6	82.2	83.1	83.2	84.0	84.5	84.5	84.6	84.2	83.8	83.7	83.1	82.1	81.6	81.3	81.7	81.2	82.0	
19	81.1	82.1	82.1	82.6	82.7	82.4	81.9	81.8	81.6	83.7	85.1	85.7	86.2	85.9	85.5	84.9	83.9	83.6	83.6	83.1	82.5	82.6	82.2	81.5	83.3	
20	81.2	81.2	81.4	81.5	81.2	81.1	81.0	80.7	80.5	80.7	81.0	81.6	81.7	81.7	81.5	81.0	80.0	79.4	78.0	77.5	77.2	77.0	75.5	73.7	80.1	
21	73.0	73.0	72.0	71.7	71.4	71.2	71.2	71.2	71.1	71.4	72.1	72.8	74.0	74.9	76.7	77.2	77.5	77.9	78.1	78.8	79.0	78.8	78.9	79.0	79.0	74.6
22	78.7	78.4	77.8	77.5	77.0	77.4	77.6	76.9	77.0	79.0	81.0	82.2	82.1	82.1	81.8	81.7	81.8	81.9	81.9	81.9	81.9	82.0	81.9	81.9	81.9	80.1
23	82.0	82.1	82.0	82.1	82.0	82.0	82.0	82.0	82.1	82.3	82.5	82.4	82.5	82.5	82.4	82.0	81.8	81.7	81.6	81.5	81.4	81.4	81.4	81.5	82.0	
24	81.7	81.5	81.9	81.8	81.7	81.6	81.7	81.9	82.1	82.2	82.4	82.5	82.7	82.9	82.7	82.4	82.1	82.0	82.0	82.3	82.8	82.5	82.0	81.5	82.1	
25	80.9	80.0	79.6	79.1	78.8	78.6	78.5	78.8	79.0	79.5	79.9	80.2	80.2	80.7	80.8	80.0	79.8	78.5	77.3	76.5	76.1	75.6	74.6	74.1	78.8	
26	74.3	74.4	73.7	74.0	75.4	75.0	75.6	76.5	77.1	77.8	78.7	79.1	79.4	79.2	79.3	79.2	79.6	79.7	80.0	80.0	80.0	80.0	80.0	80.0	80.0	77.7
27	80.0	80.0	80.0	79.9	79.8	79.7	79.8	79.7	79.9	80.1	80.8	80.7	81.3	82.4	82.4	82.4	80.4	80.1	80.0	79.9	79.7	79.5	79.1	78.9	80.3	
28	78.4	78.1	77.8	77.6	77.4	77.3	77.5	77.7	77.8	78.0	78.1	78.4	78.8	78.9	79.0	78.9	78.6	78.5	78.4	78.4	78.7	78.1	78.0	78.0	78.2	
29	77.8	77.5	77.5	77.5	77.6	77.7	77.8	78.0	78.8	79.6	80.3	80.8	81.4	81.3	81.4	81.2	80.0	79.3	78.6	77.8	77.5	76.9	74.5	73.0	78.6	
30	72.7	73.0	74.1	75.5	75.9	75.7	76.1	76.2	76.5	76.7	77.1	78.2	78.9	79.3	80.0	79.6	78.3	77.3	77.1	77.5	77.0	77.2	77.0	77.0	76.7	
31	76.4	75.3	74.2	74.7	74.8	75.6	75.7	76.0	77.1	78.3	78.3	78.8	78.5	78.3	78.1	78.4	78.5	78.0	77.5	77.2	77.1	77.9	78.2	78.1	77.1	
Mean ...	79.1	79.1	78.9	78.9	78.6	78.6	78.7	78.7	78.9	79.5	80.1	80.7	81.1	81.3	81.2	80.8	80.4	80.2	80.1	80.1	80.0	79.9	79.5	79.3	79.7	

456. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  = 3.0 metres.

February, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	78.0	77.3	76.0	75.8	76.2	75.9	76.9	77.1	77.9	79.3	79.4	80.0	80.0	80.3	80.4	80.0	79.4	79.5	79.5	79.0	79.0	79.1	79.2	79.1	78.5
2	79.1	79.2	79.2	79.4	79.2	78.9	79.0	78.9	79.0	79.1	79.6	79.2	79.4	79.4	79.2	79.1	79.1	79.1	79.3	79.1	79.0	79.0	79.0	78.7	79.1
3	78.4	78.0	77.8	77.7	77.6	77.7	78.0	78.0	78.0	78.2	78.6	78.9	79.2	79.1	80.0	78.9	79.0	79.0	79.0	78.9	77.7	77.4	77.7	77.8	78.3
4	77.7	77.8	76.8	76.7	76.9	76.8	77.1	77.2	77.7	78.2	79.0	80.0	79.7	79.7	79.6	79.4	79.2	79.0	78.9	78.6	78.5	78.3	78.2	78.0	78.3
5	78.0	78.0	78.1	78.0	78.1	78.2	78.1	77.8	78.1	78.0	78.2	79.1	79.1	79.1	79.4	78.9	78.1	77.1	76.6	76.1	75.6	75.4	75.7	76.1	77.7
6	76.1	76.3	76.2	76.1	76.0	75.9	75.9	76.0	76.1	76.3	76.7	77.3	78.1	77.9	78.1	77.6	76.5	76.1	75.9	75.3	75.0	74.3	74.5	74.8	76.2
7	74.7	74.2	74.0	74.0	73.7	74.0	74.1	74.0	74.5	75.5	75.8	76.1	76.2	76.1	75.9	75.7	75.3	75.0	74.6	74.6	74.5	74.7	74.9	75.0	74.9
8	75.2	75.4	75.4	75.5	75.4	75.3	75.2	75.2	75.4	75.5	75.5	75.6	76.0	76.0	76.0	75.9	75.5	75.5	75.4	75.2	75.3	75.0	74.6	74.2	75.4
9	74.0	74.1	74.2	74.1	73.7	73.0	72.8	72.5	73.0	74.5	75.3	76.0	76.3	76.7	76.5	76.4	76.1	75.7	75.3	75.0	74.7	74.6	74.6	74.0	74.7
10	73.6	73.8	74.1	74.6	74.7	74.9	75.1	76.0	76.9	77.5	77.8	78.0	77.9	77.9	77.8	77.7	77.3	76.8	76.5	76.2	76.5	76.1	75.7	75.8	76.1
11	75.8	76.3	76.2	75.4	75.5</																				

Readings in degrees absolute at exact hours, Greenwich Mean Time.

457. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulb above the ground) = 3.0 metres.

March, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	°A																									
1	75.7	74.6	73.9	74.0	73.8	74.1	74.4	74.6	74.7	75.4	76.5	78.1	80.3	81.5	81.9	81.8	81.0	80.2	79.2	78.2	77.4	76.6	75.8	75.3	77.1	
2	75.0	74.4	74.1	74.3	74.6	74.8	75.2	75.8	76.7	77.4	78.1	79.2	80.1	80.7	81.0	80.4	79.7	79.0	78.3	78.3	78.3	78.3	78.4	78.4	77.5	77.5
3	78.6	78.4	78.5	78.7	78.7	78.6	78.7	79.1	79.9	80.8	82.9	84.0	85.8	86.8	86.6	85.8	84.4	83.2	82.1	81.4	81.0	80.2	79.9	79.2	81.4	81.4
4	78.0	77.4	75.8	78.2	78.9	79.1	79.2	79.4	79.7	80.2	81.0	82.2	83.6	84.4	84.7	84.7	84.3	83.2	82.4	81.8	81.3	80.7	80.1	80.1	80.1	80.8
5	80.0	79.9	79.9	79.9	79.9	79.9	79.6	80.0	80.9	81.5	82.8	84.2	85.1	85.1	85.0	84.3	83.9	83.1	82.7	82.1	81.1	81.1	81.1	81.1	81.1	81.8
6	80.7	80.1	79.6	79.1	80.4	80.1	78.9	79.9	81.4	82.9	83.3	83.0	83.1	84.1	84.6	84.2	83.6	83.0	82.6	82.5	82.2	82.3	82.0	80.8	81.9	81.9
7	80.9	80.6	80.2	79.9	79.8	79.8	79.4	79.4	79.8	80.0	79.9	80.9	81.7	82.8	83.0	82.7	82.2	81.4	80.5	80.5	79.3	78.1	78.2	77.4	80.4	80.4
8	76.5	76.5	75.9	75.3	74.7	74.6	74.2	76.1	77.3	78.5	80.0	81.9	82.5	82.5	82.1	81.1	80.0	79.4	79.2	78.5	78.7	78.6	78.5	78.3	78.3	78.3
9	78.3	78.3	78.4	78.4	78.4	78.1	78.5	79.0	79.8	81.0	82.0	82.5	82.6	82.9	83.0	82.8	82.3	81.5	80.9	80.8	80.4	80.7	80.5	81.1	80.5	80.5
10	81.6	81.4	81.0	80.7	80.7	79.0	78.5	78.0	76.2	75.7	76.8	77.2	77.6	78.0	78.8	78.6	79.3	78.5	77.6	76.8	76.6	76.1	75.5	74.8	78.3	78.3
11	75.0	75.6	76.0	76.0	76.0	76.0	76.1	76.2	77.0	77.5	78.4	78.7	79.1	79.1	78.9	78.6	77.9	77.0	76.3	76.1	75.0	75.0	74.5	73.5	76.7	76.7
12	72.8	72.0	71.5	71.5	70.8	71.7	72.3	73.3	74.2	73.7	74.2	76.8	79.8	81.0	81.0	80.7	81.0	80.1	79.8	79.0	79.0	78.1	78.1	77.2	76.2	76.2
13	77.0	77.0	76.9	76.4	76.4	76.5	76.2	76.6	77.4	78.0	78.8	79.4	80.0	80.8	80.0	79.4	79.4	79.1	79.0	78.3	78.1	78.1	78.2	78.0	78.1	78.1
14	77.8	77.6	77.5	77.0	77.0	76.5	76.1	76.8	77.5	78.2	78.3	78.6	79.8	79.3	79.5	79.0	78.7	77.9	77.3	77.1	77.3	77.2	77.1	76.7	77.8	77.8
15	75.3	76.5	76.6	76.9	77.1	77.2	77.4	77.9	79.2	80.2	81.1	82.1	82.2	82.3	81.8	80.3	80.3	80.1	80.0	79.5	78.9	78.2	78.1	78.2	79.1	79.1
16	77.7	77.5	77.1	77.2	77.1	77.0	77.1	77.3	78.7	79.7	81.3	80.3	81.5	81.3	80.9	79.8	79.1	79.1	78.8	78.8	78.4	77.6	76.2	75.3	78.6	78.6
17	74.6	73.8	73.3	73.5	73.5	73.1	73.5	75.2	76.5	77.7	78.6	79.3	80.2	80.6	80.3	80.1	79.7	79.5	79.5	78.5	77.5	76.9	76.6	76.0	77.0	77.0
18	75.9	75.7	75.6	75.2	74.2	73.6	73.3	74.6	76.7	78.8	79.9	80.4	80.1	81.4	79.8	79.6	79.5	78.8	78.0	77.4	76.1	75.2	74.1	73.6	77.0	77.0
19	73.1	72.1	72.2	72.4	72.9	73.1	74.0	74.0	74.2	74.6	76.2	77.0	77.1	78.0	77.5	77.4	76.0	75.2	74.5	74.2	73.7	73.3	73.0	72.8	74.5	74.5
20	72.7	72.8	72.0	71.1	70.4	70.0	70.1	70.8	72.5	74.6	76.0	76.9	77.6	78.9	78.9	78.9	78.7	78.1	78.0	77.6	77.1	77.4	77.2	77.5	75.1	75.1
21	77.6	77.7	77.5	77.5	77.6	77.5	77.3	77.8	79.2	80.2	80.4	81.0	81.6	81.9	82.0	81.8	81.6	80.0	78.5	77.5	77.0	76.9	76.3	76.5	78.9	78.9
22	77.8	78.2	78.9	78.9	78.1	77.0	76.4	76.8	77.3	78.4	79.5	80.2	80.8	82.0	82.0	82.0	81.5	80.1	79.5	79.5	79.5	77.5	77.0	76.8	79.0	79.0
23	77.0	76.3	76.0	76.5	76.2	76.7	76.9	77.3	78.7	79.5	79.9	81.6	81.9	81.7	81.2	80.2	80.1	80.0	79.9	79.4	78.9	78.0	77.5	77.0	78.7	78.7
24	76.7	76.0	76.0	75.2	75.2	75.3	75.1	76.9	78.2	79.6	80.5	81.2	81.8	82.0	81.8	81.7	81.1	80.4	79.2	78.1	77.2	76.6	76.0	74.7	78.2	78.2
25	73.7	73.2	72.5	72.5	72.0	72.1	73.1	74.2	75.8	78.0	79.4	80.5	81.9	83.0	83.0	82.8	83.2	82.6	82.1	81.6	81.9	81.9	80.9	81.0	78.3	78.3
26	81.0	80.5	80.7	80.4	79.6	78.5	78.4	79.5	81.1	82.2	83.0	84.0	84.7	85.7	86.0	86.2	86.1	85.1	83.8	82.8	81.7	80.8	80.2	79.4	82.2	82.2
27	79.1	78.1	77.5	77.0	76.9	77.2	78.0	78.9	80.1	82.2	83.0	84.0	85.4	85.9	86.0	85.0	85.0	84.7	84.1	83.8	83.2	82.6	82.3	82.2	81.7	81.7
28	82.1	82.0	81.8	81.5	81.1	81.0	81.0	81.6	82.6	82.9	84.0	84.9	86.3	86.9	86.7	86.2	85.4	84.3	83.1	82.5	81.2	81.7	80.7	80.3	83.0	83.0
29	81.2	82.1	82.1	81.7	80.7	80.2	80.9	81.6	82.2	83.1	83.6	84.4	84.1	84.0	84.1	83.0	83.7	83.0	82.1	82.0	80.8	79.9	79.5	79.0	82.1	82.1
30	78.1	77.6	77.5	76.9	76.8	76.5	77.4	79.0	80.5	82.3	83.8	83.3	84.6	85.1	85.6	85.5	84.6	83.1	82.0	81.2	80.7	80.2	80.4	80.2	80.9	80.9
31	80.4	80.2	80.2	80.1	80.9	81.5	81.8	82.5	84.7	85.5	85.9	85.0	83.0	82.9	82.6	83.5	84.4	84.1	83.4	82.5	82.3	81.9	81.4	81.1	82.6	82.6
Mean ...	77.5	77.2	77.0	76.9	76.8	76.7	76.7	77.4	78.4	79.4	80.3	81.1	81.8	82.3	82.2	81.9	81.5	80.9	80.2	79.6	79.0	78.6	78.2	77.9	79.1	79.1

458. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  = 3.0 metres.

April, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
1	80.7	80.4	80.9	81.1	81.3	81.9	82.3	83.2	84.8	86.0	87.7	88.7	89.4	89.8	91.0	90.6	90.1	89.8	88.4	87.8	87.6	87.4	87.4	87.6	87.6	85.9
2	80.7	88.1	86.4	85.3	84.9	84.8	84.9	84.0	85.1	86.8	86.9	86.9	88.0	87.7	87.5	86.5	86.2	84.8	83.1	82.4	82.4	81.1	80.5	80.2	81.0	81.0
3	81.3	81.5	81.5	81.5	81.1	81.5	82.1	83.9	84.7	84.5	83.6	83.0	82.8	82.3	82.1	82.2	83.0	83.0	82.4	82.1	82.0	81.6	81.4	81.0	82.3	82.3
4	80.8	80.4	80.4	80.4	80.7	80.7	81.1	80.8	81.2	82.1	83.5	84.1	82.8	82.4	81.4	82.1	81.0	80.3	80.0	79.8	79.6	79.6	79.4	79.4	81.0	81.0
5	79.4	79.5	79.4	79.1	78.9	78.8	79.0	79.1	79.1	79.3	79.8	79.9	79.9	80.2	80.2	80.3	80.7	80.4	80.1	79.6	79.1	78.9	78.8	78.8	79.5	79.5
6	78.5	78.4	78.3	78.3	78.3	78.3	78.6	78.8	79.1	79.8	80.9	81.0	81.3	81.5	81.1	81.6	81.9	81.5	80.9	80.9	80.4	80.2	79.9	79.6	79.9	79.9
7	79.1	79.3	79.4	78.9	78.9	78.9	79.2	79.4	79.6	79.9	80.1	80.2	81.0	80.7	81.0	81.3	81.0	80.8	80.7	80.7	80.2	80.0	80.0	80.0	80.7	80.1
8	79.3	78.2	77.1	75.9	75.5	75.2	75.0	76.9	79.1	81.1	82.8	83.9	84.9	84.9	84.9	84.6	83.9	83.5	82.8	82.0	81.8	81.2	81.0	80.5	80.7	80.7
9	80.2	80.2	80.1	80.2	80.2	80.4	81.2	82.1	83.0	83.7	84.5	86.0	86.7	86.9	87.0	87.0	85.9	84.6	83.1	82.1	80.0	79.1	78.1	77.0	82.5	82.5
10	77.1	76.0	74.6	74.2	74.1																					

Readings in degrees absolute at exact hours, Greenwich Mean Time.

459. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulb above the ground) = 3.0 metres.

May, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	79.3	79.1	78.9	78.6	78.5	78.9	80.1	81.4	83.2	84.9	85.6	87.0	87.7	88.2	88.0	87.8	87.1	86.6	86.0	85.2	84.4	83.2	82.4	81.6	83.4
2	80.8	79.9	79.6	79.1	79.1	79.2	79.5	80.1	81.8	83.2	84.9	85.6	86.1	87.0	86.4	86.8	87.4	87.5	85.6	85.0	84.1	83.5	82.9	82.1	83.2
3	82.0	81.4	81.5	81.5	81.1	81.4	81.8	81.8	82.1	83.3	84.3	85.1	86.7	86.6	85.9	83.4	83.4	83.9	83.5	82.9	82.1	81.6	81.0	80.0	82.9
4	80.0	80.0	80.6	80.9	81.0	81.1	81.5	82.1	82.8	83.1	84.8	86.9	86.8	88.8	88.3	89.6	88.4	87.3	86.7	86.0	85.2	84.4	83.0	81.7	84.2
5	80.9	80.0	80.0	79.0	78.5	79.2	80.1	81.9	84.6	86.6	88.5	89.2	90.1	88.9	89.0	88.6	86.6	85.0	84.4	83.9	83.1	82.6	82.5	82.4	84.0
6	82.3	82.5	82.4	82.1	82.0	82.0	82.8	83.7	84.6	85.7	85.0	85.0	86.0	86.9	86.1	86.0	85.1	83.7	82.9	82.0	81.6	81.4	81.2	80.9	83.5
7	80.7	80.4	80.3	80.0	79.9	80.1	81.0	81.6	81.9	82.2	82.5	82.1	82.5	83.0	82.5	83.2	83.6	83.7	83.1	82.8	82.5	82.3	81.7	80.4	81.8
8	80.0	79.9	78.5	77.5	77.1	77.4	77.9	78.9	79.4	80.2	81.1	82.0	82.5	82.4	82.6	83.1	82.4	80.0	79.5	79.4	79.8	79.1	78.5	78.1	79.9
9	77.9	77.9	77.9	77.9	78.1	79.0	80.0	82.4	83.5	84.0	84.9	84.5	85.6	86.3	86.2	85.8	84.1	84.1	83.1	83.0	82.7	82.0	81.9	81.5	82.2
10	81.5	79.1	77.8	78.3	78.4	78.1	78.9	80.0	81.1	82.4	83.4	84.7	85.9	86.3	85.0	84.7	82.9	81.9	81.1	81.1	81.2	81.2	81.9	82.1	81.7
11	82.1	82.1	82.1	82.2	82.5	82.8	83.5	84.5	83.9	83.8	83.5	83.3	84.5	85.0	84.1	84.3	84.5	84.4	84.1	83.3	83.2	83.1	82.9	82.5	83.4
12	82.6	82.6	82.5	81.6	80.9	81.0	81.6	83.1	83.9	84.9	84.8	85.5	86.0	83.5	85.0	86.2	84.7	85.0	85.0	84.4	84.0	83.5	83.1	82.9	83.7
13	82.8	82.6	82.5	82.6	82.6	82.7	82.9	83.1	83.4	83.7	84.7	85.5	86.3	88.2	88.6	88.6	88.0	87.5	87.1	87.0	86.5	86.1	86.0	85.8	85.1
14	85.5	85.5	85.4	84.9	84.3	84.4	84.8	85.1	86.6	87.5	88.2	88.0	89.7	89.7	90.1	90.5	90.1	89.5	88.5	87.9	86.4	86.0	84.5	83.8	87.0
15	82.3	81.5	81.1	80.6	80.5	82.2	83.0	85.0	87.2	88.1	88.9	89.0	89.7	90.1	89.7	89.1	89.0	88.6	88.0	87.0	86.3	85.1	84.3	83.8	85.8
16	83.1	82.7	82.1	82.0	81.9	83.0	84.1	85.4	86.5	87.0	88.0	88.7	89.7	90.9	91.3	92.0	91.8	90.9	89.3	87.9	86.9	85.9	85.4	84.9	86.7
17	84.4	83.9	83.9	83.9	84.3	84.9	86.0	86.2	88.3	88.5	88.8	90.4	90.4	90.4	90.0	89.9	88.8	88.7	87.9	86.9	86.0	86.1	85.8	85.8	87.1
18	85.0	85.0	85.1	83.9	82.5	82.9	83.9	84.4	84.9	86.1	86.4	86.3	82.3	84.1	85.1	86.3	85.7	86.1	85.8	84.0	83.0	82.0	81.6	80.8	84.0
19	80.0	79.6	79.4	79.1	79.9	81.6	82.9	83.5	84.6	85.6	86.0	86.0	86.1	87.3	86.9	87.0	86.4	86.1	85.4	85.1	95.0	85.0	84.8	84.6	84.0
20	84.0	84.1	84.1	84.2	84.1	84.5	84.9	85.0	85.6	86.6	85.9	86.0	86.9	87.5	87.9	87.6	87.6	87.4	87.1	86.6	85.9	85.0	84.0	83.0	85.7
21	82.9	82.7	82.6	82.6	82.8	83.5	84.1	84.0	83.9	84.2	84.7	85.7	85.6	86.9	87.6	87.9	87.7	87.1	86.1	84.5	83.3	82.2	81.0	80.0	84.4
22	79.7	79.2	79.0	78.5	78.2	79.4	81.1	82.6	83.0	83.1	83.1	84.0	83.0	83.0	83.1	83.9	83.5	83.5	84.0	83.5	83.0	82.6	82.0	82.0	82.0
23	81.8	82.1	82.6	83.0	83.1	83.7	85.1	86.2	87.5	89.1	89.3	89.8	89.8	89.5	89.8	89.8	88.9	87.9	86.9	85.5	84.1	83.8	83.8	83.9	86.1
24	83.5	82.7	81.8	81.7	81.7	81.7	81.9	82.4	83.0	83.7	84.2	84.6	85.4	87.1	88.6	88.8	88.8	88.5	87.9	87.2	86.6	85.2	84.5	84.0	85.2
25	83.9	83.6	83.5	83.6	83.9	84.3	84.9	85.0	85.7	86.0	86.6	86.2	86.3	86.1	86.2	86.1	86.2	86.1	86.0	85.6	85.5	85.5	85.0	84.5	85.2
26	84.8	83.9	83.6	83.2	83.5	83.5	83.9	84.0	85.1	85.7	86.6	89.0	90.9	92.1	90.2	89.0	88.1	87.9	87.3	86.7	85.1	84.1	84.1	83.3	86.1
27	83.0	82.3	82.1	81.9	81.9	82.0	83.0	83.7	85.0	87.3	88.9	90.5	91.0	91.9	92.2	92.0	92.6	93.1	92.0	89.5	88.2	87.8	86.5	85.4	87.2
28	84.3	83.9	83.2	82.8	84.0	85.2	86.1	87.0	88.3	89.7	90.9	91.1	91.9	92.7	92.4	92.4	92.1	91.9	90.9	88.9	87.6	86.6	85.4	84.0	88.3
29	85.1	85.4	84.9	84.9	84.6	84.6	84.9	86.2	87.2	88.4	89.9	91.0	92.5	92.9	94.4	94.1	94.1	93.4	91.9	89.7	87.9	86.6	85.9	85.8	88.6
30	87.0	87.1	87.8	87.0	87.4	87.4	88.4	88.7	88.8	89.9	90.9	91.8	92.1	91.9	89.8	87.9	87.6	88.0	88.0	87.8	87.4	86.7	86.0	85.9	88.4
31	85.9	85.7	85.4	85.1	85.4	85.4	85.9	86.1	86.8	87.7	88.0	88.9	90.8	90.4	90.9	91.6	89.9	89.1	87.9	87.7	87.8	87.4	86.9	86.8	87.6
Mean ...	82.5	82.2	82.0	82.1	81.7	82.2	82.9	83.7	84.7	85.5	86.2	86.9	87.5	87.9	87.9	87.9	87.9	86.9	86.3	85.5	84.8	84.2	83.6	83.1	84.8

460. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  = 3.0 metres.

June, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	86.7	86.0	85.4	85.0	85.0	85.0	85.1	85.2	85.5	85.8	86.8	87.6	87.8	87.9	88.8	88.9	88.7	87.9	87.5	87.2	87.0	86.9	86.8	86.5	86.7
2	86.0	85.8	85.4	85.3	85.5	85.9	86.9	87.9	88.7	89.1	91.4	91.7	92.0	92.3	91.5	91.6	89.8	88.8	88.1	87.5	86.1	85.5	84.5	84.5	88.3
3	84.1	83.9	84.0	82.9	82.5	82.6	82.9	83.7	85.0	86.7	87.4	87.6	88.0	88.4	87.7	88.1	88.0	88.4	87.9	87.0	86.3	85.7	85.0	84.9	85.8
4	85.0	84.7	84.5	84.2	84.5	84.8	85.2	85.7	86.5	87.1	88.3	89.0	90.5	91.6	92.8	94.7	95.0	93.7	92.2	91.0	89.5	87.6	86.8	85.7	88.3
5	85.1	84.8	85.0	84.8	85.0	85.7	89.0	90.9	92.3	93.6	94.3	94.8	95.1	95.2	96.0	96.1	96.0	95.1	94.2	92.5	91.2	90.4	89.6	89.1	91.1
6	88.0	86.3	86.2	85.4	85.6	87.0	89.4	91.2	93.2	94.9	95.4	96.5	96.9	96.9	97.4	97.6	97.4	96.8	95.3	92.7	90.7	89.4	87.7	86.6	91.9
7	87.1	86.7	87.0	87.4	87.4	87.4	87.9	88.6	89.4	90.3	90.3	90.5	90.0	90.6	91.0	90.9	90.5	89.9	89.0	87.3	86.3	85.3	84.1	83.1	88.3
8	82.1	81.6	80.7	80.7	81.8	82.5	84.5	85.6	86.6	88.0	88.5	89.8	90.0	90.9	91.2	91.3	91.5	91.4	89.7	87.5	85.9	85.0	83.8	82.3	86.4
9	81.8	81.4	80.9	80.2	81.5	82.9	84.9	86.3	88.1	89.9	91.1	92.0	92.8	93.8	94.6	94.7	94.5	94.0	92.5	89.9	87.9	86.5	85.5	85.0	88.0
10	84.6	84.4	84.2	84.4	85.2	86.1	86.7	87.0	87.5	87.9	88.4	88.5	88.8	88.8	89.2	88.9	88.8	88.2	88.1	87.8	87.7	87.5	87.1	87.2	87.2
11	87.1	87.1	87.1	87.2	87.3	87.6	88.3	89.8	89.5	89.7	89.1	88.9	89.6	90.4	91.0	90.6	91.2	91.1	92.2</						

Readings in degrees absolute at exact hours, Greenwich Mean Time.

461. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulb above the ground) = 3.0 metres.

July, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	91.7	90.1	89.9	90.1	90.2	91.2	92.3	93.3	93.7	94.8	95.3	95.0	97.0	97.0	97.4	97.0	96.9	96.6	97.9	95.6	93.8	92.4	91.4	90.7	98.8
2	90.6	90.4	90.0	89.7	89.0	90.0	91.8	92.9	93.2	95.1	96.9	97.0	96.8	97.2	97.4	97.2	97.2	95.2	94.1	92.2	92.1	91.1	90.3	93.2	93.2
3	89.1	88.3	87.9	88.6	89.0	89.4	90.9	91.7	92.3	92.3	93.0	94.4	94.8	95.0	94.7	94.8	94.3	95.1	94.8	92.1	90.1	89.1	88.2	87.4	91.6
4	87.1	87.2	87.2	87.0	87.2	88.2	89.6	90.8	91.5	92.2	94.1	94.9	95.9	96.6	96.5	96.4	95.2	94.7	93.8	93.2	92.1	90.1	89.8	88.8	91.6
5	88.0	87.1	86.6	86.0	86.9	87.9	89.0	90.8	92.8	93.9	95.1	95.9	97.0	98.0	99.0	98.6	98.2	99.5	98.9	96.9	94.4	92.5	91.0	90.1	93.1
6	89.5	88.8	88.0	87.0	87.8	88.0	89.4	91.5	93.1	94.5	96.0	96.5	97.2	97.2	97.8	98.0	97.0	95.1	94.3	93.4	92.6	91.6	91.6	90.2	92.7
7	89.8	88.9	87.5	86.1	87.3	87.5	88.6	89.8	90.5	90.8	92.0	92.3	92.9	93.9	94.0	94.9	94.9	94.4	94.0	92.0	90.4	89.6	88.6	87.3	90.8
8	88.0	87.6	87.5	87.1	87.9	88.0	89.7	91.1	91.6	92.1	92.1	91.9	92.0	92.5	93.4	93.6	94.4	94.4	94.2	93.9	92.0	90.8	90.8	89.5	91.0
9	88.8	88.2	88.7	88.0	89.1	89.9	91.3	92.6	94.2	94.6	95.5	95.7	96.1	96.0	95.9	96.4	96.2	95.9	95.1	94.5	92.9	91.6	90.5	89.6	92.8
10	88.9	88.0	86.6	86.2	86.0	86.5	88.1	89.0	89.4	90.9	91.8	92.6	93.0	93.5	94.0	94.6	93.6	92.7	91.1	90.0	88.4	87.6	87.0	86.8	89.9
11	86.7	86.5	86.1	86.0	86.1	86.5	87.1	88.0	88.6	89.6	90.5	91.4	91.4	91.7	91.0	89.2	90.7	89.9	89.8	88.8	87.6	86.5	85.0	83.0	88.3
12	84.1	84.0	83.0	82.1	82.0	83.2	85.0	86.2	86.8	87.1	88.0	89.1	89.7	90.0	90.5	90.9	92.3	91.9	90.5	90.1	89.4	88.7	87.4	87.0	87.4
13	86.9	86.5	86.0	85.9	85.8	86.1	86.6	88.3	89.6	91.0	92.8	93.0	94.1	94.1	94.0	94.1	93.9	92.5	91.7	90.1	89.7	89.6	88.4	88.0	89.9
14	87.6	87.6	87.5	87.7	88.0	88.5	89.6	88.9	90.7	91.8	90.5	90.7	91.0	91.0	91.1	91.6	90.9	88.6	87.7	87.2	87.1	87.1	87.0	86.8	89.0
15	86.9	86.6	86.5	86.5	86.7	86.9	86.9	86.9	87.4	87.5	88.5	88.9	89.9	90.0	90.2	91.0	91.4	90.5	89.8	88.9	88.0	87.1	87.0	86.5	88.2
16	86.6	86.9	87.5	87.7	88.0	88.3	89.0	89.2	89.4	90.4	91.3	92.0	91.1	91.6	91.3	91.9	90.8	90.8	90.6	89.2	88.3	88.0	87.7	87.2	89.4
17	86.7	86.5	86.2	86.0	86.4	87.0	88.3	89.3	90.9	91.0	91.5	91.9	91.8	92.5	92.1	91.5	88.4	89.4	88.7	88.0	86.6	85.4	85.1	84.7	88.9
18	84.2	83.9	82.9	82.9	83.3	85.3	86.7	87.7	88.7	89.8	91.0	89.4	91.8	90.1	91.6	90.6	89.7	90.3	89.8	89.6	89.2	88.7	87.8	87.8	88.0
19	87.7	87.6	87.6	87.4	87.3	87.3	87.3	87.6	87.7	88.9	89.3	89.5	89.9	91.1	91.7	91.2	91.7	92.3	90.8	89.5	87.9	87.1	85.8	85.0	88.8
20	84.6	84.4	84.1	83.7	84.8	86.2	87.7	88.7	89.2	91.1	91.0	90.2	90.4	90.9	90.3	89.2	89.3	88.9	88.9	88.9	89.0	89.2	89.2	89.3	88.2
21	89.3	89.3	89.1	88.9	87.7	86.9	86.7	87.4	87.2	87.4	86.3	86.2	85.7	85.7	85.7	87.2	87.7	87.6	86.6	86.2	85.7	85.1	85.2	84.7	87.0
22	83.9	83.4	83.5	83.9	84.3	84.8	85.2	85.6	86.2	86.4	87.6	88.0	88.2	88.3	88.3	87.8	87.3	86.5	86.2	86.2	85.7	85.6	85.6	85.3	86.6
23	85.2	84.8	84.2	84.1	84.8	85.0	85.0	85.6	86.1	86.7	87.7	87.7	87.0	87.4	86.8	86.7	86.6	86.2	85.9	85.8	85.7	85.6	85.6	85.6	85.8
24	85.4	85.4	85.6	85.4	85.3	85.6	85.8	86.4	86.6	87.4	87.9	88.8	90.7	90.8	90.9	90.9	89.3	89.4	87.4	87.1	87.2	86.7	86.4	86.4	87.4
25	86.3	86.0	86.0	86.1	85.9	86.3	86.7	87.2	88.3	89.5	90.6	91.8	92.0	91.9	92.2	91.1	91.0	92.0	90.7	89.3	87.8	86.9	85.8	85.1	88.6
26	85.0	85.3	85.4	85.9	86.2	87.3	89.5	90.2	90.7	91.3	91.0	89.9	90.0	89.7	89.9	90.4	91.8	90.9	90.8	90.2	88.8	88.2	87.4	86.7	88.8
27	85.9	86.0	85.7	85.1	85.6	86.5	87.3	88.8	90.2	90.9	92.0	92.7	93.4	93.8	94.0	94.0	92.3	91.3	90.1	89.4	88.9	88.2	87.5	87.1	89.4
28	87.1	86.9	86.0	85.5	86.0	87.0	88.8	89.7	90.3	90.9	91.6	92.1	92.0	92.5	93.0	92.0	90.6	93.1	93.5	90.9	89.6	88.8	88.2	88.0	89.8
29	87.3	87.1	87.0	86.9	87.0	87.2	88.8	89.5	90.0	90.8	92.0	92.2	85.9	90.6	90.0	90.6	90.8	90.1	89.9	88.9	88.6	88.0	87.6	87.6	88.9
30	87.3	87.1	86.9	87.1	87.0	87.1	87.5	87.8	88.3	88.5	88.6	89.0	92.0	91.8	88.5	89.9	89.1	88.9	88.5	87.9	87.4	87.1	87.0	86.1	88.2
31	85.4	84.9	84.9	84.1	83.9	84.7	85.9	87.3	87.5	89.2	90.2	91.9	92.9	92.5	93.3	93.1	93.6	92.5	91.6	90.9	89.9	88.5	87.9	87.9	89.0
Mean ...	87.1	86.8	86.5	86.3	86.5	87.1	88.1	89.0	89.7	90.5	91.3	91.7	92.1	92.4	92.5	92.4	92.3	91.9	91.3	90.3	89.3	88.6	87.9	87.3	89.5

462. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  = 3.0 metres.

August, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	87.1	86.9	86.9	86.5	86.9	87.0	88.5	89.6	91.2	92.1	93.1	93.5	94.2	94.2	95.9	96.1	94.1	94.6	93.2	92.6	91.3	90.6	90.1	90.1	91.1
2	90.5	90.1	90.1	89.5	89.6	90.2	91.0	92.5	92.1	92.0	93.0	93.5	93.8	93.2	93.4	93.1	93.0	94.1	91.5	89.2	88.5	87.3	86.5	85.5	91.1
3	85.8	84.5	84.9	83.5	84.0	85.9	86.1	86.0	86.9	88.5	88.5	89.0	90.0	91.5	92.2	93.4	92.1	90.9	90.3	89.5	89.0	88.6	88.0	87.7	88.2
4	87.1	86.9	86.5	86.1	85.9	85.5	85.2	85.5	86.8	88.1	89.1	89.5	90.0	91.5	90.8	92.4	92.5	92.0	91.9	89.0	87.6	86.6	86.0	85.5	88.2
5	85.6	85.1	85.1	84.5	84.0	85.4	87.0	88.9	89.1	89.1	88.6	88.9	89.1	87.5	88.4	90.8	88.9	88.9	89.2	87.2	87.0	86.0	85.1	84.9	87.3
6	84.1	84.9	85.1	85.1	85.7	86.9	87.9	89.1	89.2	90.3	89.4	85.9	89.0	91.7	91.8	91.5	91.5	90.9	89.8	88.3	87.2	86.2	85.6	85.1	88.0
7	85.0	85.0	84.8	84.4	84.9	85.5	86.4	87.5	88.0	89.8	88.8	89.8	91.4	90.8	89.9	88.7	89.8	88.9	88.8	88.0	87.0	86.9	86.8	86.4	87.6
8	86.0	85.9	84.9	84.1	83.8	84.6	85.8	86.8	88.7	89.6	90.2	91.0	91.5	91.1	91.3	92.0	92.0	91.0	90.8	89.0	87.9	86.9	86.1	85.6	88.2
9	85.9	86.0	86.0	86.0	86.1	86.5	87.9	88.0	88.5	89.9	89.6	89.6	90.5	91.5	92.9	93.0	93.2	92.8	91.0	89.2	88.1	87.4	87.7	87.4	88.9
10	87.1	87.6	87.6	87.5	87.5	87.2	88.4	88.9	90.3	92.2	92.3	93.0	92.8	93.1	93.1	93.1	93.6	93.2	92.9	92.0	91.5	91.1	91.0	91.0	90.7
11	90.8	90.1	89.8	90.0	90.0	90.0	90.5	91.0	91.7	92.5	93.2	93.7	94.4	94.9	94.5	95.0	94.2	92.5	91.8						

Readings in degrees absolute at exact hours, Greenwich Mean Time.

463. Richmond (Kew Observatory) : North Wall Screen :  $h_1$  (height of thermometer bulb above the ground) = 3.0 metres.

September, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
1	86.8	86.2	85.2	84.8	84.2	83.9	84.9	86.4	87.6	88.8	89.9	90.9	91.9	92.5	93.0	92.5	92.3	91.5	89.0	86.8	86.3	85.6	85.3	83.9	88.0
2	83.1	82.7	82.4	81.8	81.3	81.9	83.0	85.0	87.0	88.8	90.4	91.6	92.4	93.6	94.2	94.2	94.5	94.0	90.5	88.6	87.0	87.1	86.1	85.4	87.7
3	85.0	84.7	84.5	83.3	83.2	83.4	84.4	86.1	88.5	90.1	91.5	92.8	93.1	93.7	92.8	92.2	91.4	89.9	88.7	88.0	87.5	87.1	86.5	86.0	88.1
4	85.6	85.2	85.6	86.1	86.0	85.7	86.8	88.2	89.4	90.9	92.1	93.4	94.5	95.2	94.3	93.6	92.5	90.9	89.5	88.8	88.7	88.5	88.2	88.0	89.4
5	88.3	88.0	87.8	87.6	87.5	88.3	88.7	90.8	91.9	93.7	95.1	95.8	97.2	96.0	95.7	94.5	92.0	93.2	92.0	90.4	90.2	89.7	89.6	88.6	91.4
6	88.0	88.0	87.5	87.1	87.1	87.4	88.4	89.4	90.0	91.0	92.1	92.4	93.4	93.0	92.9	92.1	91.1	90.4	90.1	89.7	87.5	87.6	87.7	87.1	89.7
7	86.7	86.3	86.0	85.6	85.6	86.1	86.8	88.2	88.8	89.9	90.9	91.6	91.9	91.7	91.7	91.4	90.3	89.6	88.9	87.9	86.9	86.5	86.1	85.7	88.4
8	85.1	84.8	84.4	84.1	83.7	84.0	84.3	85.7	87.7	88.9	90.7	91.4	91.6	92.1	92.8	92.1	92.0	91.1	89.5	88.2	87.4	86.6	85.9	85.0	87.9
9	85.3	84.7	85.0	85.0	85.2	85.5	86.3	87.1	88.5	89.0	90.3	90.9	90.3	90.9	90.8	90.0	89.9	89.9	89.5	89.0	89.0	89.0	89.0	88.7	88.1
10	88.6	88.6	88.5	88.1	87.8	87.5	87.8	88.0	88.8	90.0	91.1	90.8	91.9	92.9	93.0	92.5	92.6	92.0	90.0	90.1	89.6	88.9	88.5	88.6	89.8
11	88.4	88.0	88.0	88.2	88.2	87.9	87.8	88.6	89.8	90.2	91.8	91.5	91.9	92.4	93.4	92.5	92.7	91.5	90.2	89.2	89.1	89.1	88.6	87.6	89.9
12	87.0	86.5	86.9	87.7	87.9	88.1	88.3	88.4	88.5	88.2	88.7	88.3	90.0	89.7	89.1	88.6	88.2	87.6	87.7	87.3	87.4	87.3	87.3	87.3	88.0
13	87.2	87.1	86.9	86.6	85.9	85.1	85.5	86.1	87.6	89.7	90.4	90.0	88.7	87.7	88.0	88.5	90.1	89.1	88.5	88.0	87.6	87.0	86.3	85.7	87.7
14	85.6	85.9	86.3	86.9	86.5	85.8	85.9	86.1	86.6	86.9	87.5	87.2	87.8	88.2	88.7	88.1	87.9	87.6	87.2	87.0	86.9	86.8	86.0	84.9	86.9
15	84.1	83.9	83.1	82.8	82.8	82.9	83.9	84.9	86.6	87.2	88.5	89.7	89.8	88.0	88.0	89.0	90.7	89.6	87.6	85.0	84.6	84.0	83.8	83.1	86.3
16	82.2	82.0	81.9	80.8	80.4	81.5	82.4	83.7	85.8	87.2	88.1	88.2	88.8	87.9	87.0	86.8	86.7	87.3	87.4	87.6	87.9	88.0	88.1	87.7	85.5
17	87.0	86.6	86.4	85.7	85.1	84.5	85.0	86.8	87.7	89.0	90.0	90.6	90.9	90.9	90.1	89.0	87.9	87.1	87.1	87.5	88.0	89.1	89.8	89.1	87.9
18	88.1	88.7	88.7	88.0	87.1	86.2	86.3	86.9	87.1	88.1	88.9	90.0	90.4	90.5	90.0	90.8	90.5	89.4	88.5	87.2	86.5	86.0	85.1	83.9	88.1
19	84.1	83.9	83.4	84.5	85.1	86.0	87.0	87.7	88.0	88.8	89.1	89.7	90.5	90.6	90.8	90.1	89.8	87.9	87.4	87.5	87.4	88.0	88.0	87.5	87.5
20	87.4	87.0	87.0	86.9	87.0	87.1	87.0	87.1	87.9	88.7	89.2	88.5	88.9	88.6	88.6	87.5	87.1	86.9	86.8	86.1	86.4	85.9	85.6	85.5	87.3
21	85.6	85.7	85.8	85.6	85.9	86.0	86.4	87.0	88.1	88.9	89.4	89.9	90.4	90.5	91.1	90.8	89.6	88.9	88.1	87.1	86.8	86.1	85.9	85.3	87.7
22	84.9	84.9	84.5	84.4	84.5	84.8	85.1	86.0	86.5	87.0	87.9	87.9	88.8	89.6	89.7	89.7	89.9	89.8	89.8	89.8	89.8	89.7	89.6	89.6	87.5
23	89.6	89.6	89.6	89.5	89.5	89.4	89.7	90.4	90.9	91.4	91.6	91.9	91.8	91.8	91.7	91.0	90.8	90.2	89.9	89.4	89.7	89.5	89.7	90.0	90.3
24	90.0	90.0	89.8	89.5	89.3	89.0	88.9	89.4	89.9	90.1	90.8	90.8	91.3	91.7	91.1	91.1	90.4	89.4	88.1	87.2	86.6	86.1	85.1	84.8	89.2
25	84.2	84.0	83.6	83.6	83.6	83.3	84.1	85.6	86.9	87.5	88.6	88.6	90.1	88.9	89.0	89.1	87.9	86.6	85.6	84.7	84.5	84.5	84.1	83.3	85.9
26	82.3	82.1	82.0	82.0	81.9	82.1	81.7	82.4	82.6	83.0	83.4	84.4	84.6	84.1	83.9	84.1	83.5	83.3	83.6	83.6	84.1	84.6	85.0	85.0	83.8
27	84.5	84.1	84.3	84.9	84.7	84.7	84.9	85.0	85.7	86.1	86.7	87.0	87.9	86.9	86.9	87.4	86.8	86.1	86.0	84.8	84.4	84.6	84.2	83.4	85.5
28	83.0	82.9	82.9	82.7	83.0	83.1	83.3	84.0	84.6	86.0	86.8	86.7	87.3	87.4	87.2	87.0	86.4	85.5	85.2	84.9	84.6	84.4	83.9	83.8	84.9
29	83.6	83.5	83.1	82.9	82.4	82.4	82.7	83.1	83.9	84.5	85.2	85.4	87.0	86.9	86.9	86.1	86.0	86.0	86.0	85.6	85.3	85.2	85.2	85.0	86.7
30	85.0	85.1	84.8	84.5	84.8	84.5	84.9	85.1	85.3	86.4	87.4	87.6	88.2	88.8	88.9	88.8	88.2	87.3	85.1	86.7	86.8	86.0	85.2	84.7	84.3
Mean ...	85.9	85.7	85.5	85.4	85.2	85.3	85.7	86.0	87.6	88.5	89.4	89.8	90.4	90.4	90.4	90.1	89.7	89.0	88.1	87.5	87.1	86.9	86.6	86.1	87.6

464. Richmond (Kew Observatory) : North Wall Screen :  $h_1$  = 3.0 metres.

October, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	83.8	83.1	82.1	81.9	81.5	82.0	82.8	83.4	83.6	84.5	85.0	85.8	85.4	85.6	85.5	85.5	85.1	85.2	85.1	84.9	84.6	84.5	84.4	84.2	84.2
2	84.1	84.0	84.0	83.9	83.9	83.7	83.9	84.5	85.3	86.1	87.2	88.1	89.3	89.4	89.1	88.5	88.0	86.6	85.9	85.5	84.5	83.9	83.2	83.8	85.7
3	83.5	83.3	83.1	83.0	82.8	82.8	82.8	83.5	85.8	87.8	89.1	90.1	90.2	90.3	90.0	89.8	89.0	88.1	87.1	86.7	86.1	86.1	86.0	86.9	86.4
4	86.6	86.9	86.9	87.7	88.0	88.1	88.2	88.5	88.3	88.3	88.7	88.9	90.4	90.9	91.0	90.3	89.0	88.5	88.2	87.6	87.1	87.1	87.5	87.9	88.3
5	87.9	87.7	87.9	87.8	87.5	86.5	85.9	86.0	86.6	86.6	86.6	86.6	86.5	86.1	85.8	85.5	85.0	84.5	84.4	83.9	83.6	83.1	82.9	82.5	85.8
6	82.0	82.1	81.7	81.1	81.1	81.1	81.2	82.5	83.5	84.8	85.3	85.9	86.8	87.4	85.0	86.0	85.5	84.4	83.6	82.0	82.3	82.0	81.8	81.1	83.4
7	80.9	81.3	81.0	80.9	80.3	80.0	80.7	82.3	83.5	84.6	85.8	86.0	86.5	86.6	86.2	85.9	85.2	84.9	84.3	83.6	83.6	83.9	84.1	84.8	83.5
8	85.0	86.0	87.0	87.4	87.5	87.5	87.0	86.2	86.9	86.5	86.0	88.1	88.5	89.1	87.7	87.5	86.4	86.3	86.1	85.8	85.1	85.0	84.8	86.7	
9	84.0	83.1	83.0	82.9	82.8	82.1	81.9	82.0	82.8	83.8	84.9	85.5	86.3	86.5	86.0	86.0	84.9	82.0	80.3	80.0	79.4	78.7	77.5	77.5	82.8
10	77.0	76.9	76.1	75.7	75.5	75.2	76.0	77.7	80.1	82.1	83.9	85.0	86.0	85.5	85.9	85.5	84.4	83.0	82.0	81.2	80.9	80.5	80.5	81.0	80.7
11	80.9	80.0	79.8	79.7	79.8	79.7	80.0	80.5	82.0	84.8	86.0	86.8	86.8	86.2	85.7	85.8	84.7	84.1	83.0	82.3	81.8	81.1	81.0	80.9	82.6
12	80.6	81.9	82.8	82.4	82.3	81.9	82.0	82.5	83.1	84.1	85.7	86.7	87.4	87.1	87.3	87.0	85.6	84.0	82.3</						

Readings in degrees absolute at exact hours, Greenwich Mean Time.

465. Richmond (Kew Observatory) : North Wall Screen : h, (height of thermometer bulb above the ground) = 3.0 metres.

November, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	°A																									
1	82.9	82.8	82.8	82.3	82.1	82.1	82.2	82.6	83.0	83.1	84.0	84.1	84.5	84.5	84.5	84.1	84.0	84.0	83.9	83.9	83.0	82.0	81.6	81.5	83.2	
2	81.4	81.1	81.1	82.1	82.6	83.1	83.1	83.3	84.5	85.3	83.0	83.6	84.6	85.8	84.0	82.9	82.1	82.3	82.3	82.6	82.2	81.8	81.9	81.9	81.9	82.9
3	81.2	81.5	81.1	81.3	81.1	81.6	82.0	82.1	82.1	82.3	82.4	82.9	82.9	82.9	82.8	82.0	81.2	80.0	79.0	78.7	78.0	78.1	79.0	78.6	81.1	
4	78.9	78.9	79.0	78.9	77.8	76.9	76.1	76.0	76.9	77.8	78.5	79.1	79.6	80.0	80.0	79.1	78.2	77.1	75.7	74.6	75.0	74.1	73.1	72.0	77.4	
5	72.5	71.9	71.6	71.5	71.9	72.0	72.9	73.6	74.6	76.8	78.0	78.5	79.1	79.9	79.9	79.6	78.6	78.3	78.1	78.0	77.6	77.1	77.0	76.9	75.9	
6	77.5	77.8	78.0	77.0	76.9	76.9	76.3	76.7	77.6	79.0	81.0	81.5	81.9	81.9	81.6	81.0	80.2	79.1	78.2	77.5	77.2	76.9	76.3	75.8	78.5	
7	75.1	75.0	74.5	74.3	73.2	72.6	72.9	72.9	73.6	75.8	78.7	81.8	83.1	82.9	82.8	82.0	81.8	82.0	82.1	82.4	82.9	82.8	82.4	82.4	78.6	
8	82.1	82.8	83.0	83.7	84.0	83.9	83.9	83.8	84.8	86.0	85.9	86.1	86.6	86.1	85.9	85.5	83.1	81.0	79.9	80.0	80.0	79.9	79.5	79.9	83.2	
9	80.0	80.5	81.5	81.9	82.0	82.1	82.2	82.4	82.7	83.1	83.9	84.5	85.1	85.8	85.9	85.8	85.4	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	83.6
10	84.8	84.8	84.6	84.4	84.1	83.8	83.3	83.3	82.0	82.9	83.8	84.0	84.5	84.5	84.5	83.5	83.0	82.4	81.5	80.9	80.0	79.5	79.0	78.1	82.8	
11	78.0	77.9	77.7	77.3	77.0	76.9	76.9	78.0	78.9	80.3	81.0	81.9	82.3	82.1	81.9	81.0	80.1	79.5	79.1	78.9	78.1	77.1	76.5	76.1	79.0	
12	75.6	75.0	74.4	74.0	73.9	73.0	73.3	73.1	74.2	75.9	77.9	79.8	81.7	82.3	82.0	81.1	80.0	79.6	79.0	78.9	78.8	79.0	79.1	79.1	77.5	
13	79.0	78.6	78.1	78.1	78.4	78.3	78.5	79.0	79.0	81.4	82.4	82.9	83.3	83.2	82.9	82.1	82.0	81.9	81.5	80.9	80.9	79.5	79.0	78.6	80.5	
14	77.9	77.6	77.1	77.8	78.2	78.9	79.0	79.5	79.0	79.5	81.8	83.9	85.0	85.5	85.0	83.9	82.6	82.1	82.3	82.5	82.8	82.7	83.0	83.1	81.2	
15	83.2	83.6	83.4	83.5	83.6	83.7	83.9	84.4	84.4	83.9	85.4	86.1	86.5	86.2	86.1	86.6	86.3	83.2	82.0	80.9	80.5	80.4	79.5	78.3	83.7	
16	78.0	77.6	77.1	77.1	76.9	76.6	76.6	76.5	76.7	77.2	78.0	78.2	78.0	77.8	77.2	76.8	76.0	75.1	74.3	74.1	73.3	72.7	72.1	71.7	76.2	
17	71.4	71.3	70.9	70.3	69.9	69.9	69.8	69.2	70.2	71.1	72.4	73.5	74.2	75.9	76.0	75.8	75.1	74.9	74.5	74.5	74.9	74.7	74.2	74.1	72.8	
18	74.5	73.9	73.6	73.3	73.5	73.4	73.5	73.9	74.5	75.6	77.9	79.1	79.2	79.5	79.4	79.2	78.9	78.8	78.1	78.1	78.9	79.5	80.5	81.1	76.9	
19	81.9	82.9	83.4	83.7	83.9	84.0	84.1	83.8	83.8	84.4	84.7	84.9	84.8	84.6	84.6	84.1	83.8	82.7	82.1	82.0	82.0	81.6	81.5	81.0	83.4	
20	80.9	81.0	80.7	80.9	81.1	81.1	80.9	81.6	82.9	83.9	85.8	86.8	86.9	86.6	86.3	85.9	85.5	85.6	85.6	85.0	84.9	84.4	84.0	83.9	83.8	
21	83.9	84.1	84.1	84.0	84.0	84.1	84.4	84.4	84.4	84.1	84.0	84.1	84.4	84.6	86.0	86.6	86.2	86.0	86.0	85.9	85.3	84.9	84.4	84.2	84.7	
22	84.1	84.1	84.8	84.1	84.0	84.1	84.1	84.8	85.1	85.6	85.9	85.9	86.1	85.8	84.5	83.9	82.9	83.5	82.9	82.1	79.9	79.5	78.0	78.1	83.6	
23	78.5	77.9	77.9	77.4	77.5	77.1	77.1	77.7	78.3	79.3	80.1	80.5	80.5	80.1	80.4	79.7	79.1	77.4	76.9	76.5	76.0	76.0	76.0	75.5	78.1	
24	76.4	77.2	77.4	77.9	79.0	80.1	80.6	81.7	81.7	81.9	82.5	83.2	84.1	85.4	85.3	84.7	84.0	83.3	82.9	83.6	83.6	83.1	83.6	83.0	81.8	
25	82.6	81.5	81.9	82.4	83.0	82.9	82.0	81.7	82.1	82.5	83.4	83.4	84.1	84.1	84.3	84.4	84.8	84.0	83.3	82.8	82.3	81.8	81.1	80.5	82.8	
26	79.7	79.1	79.7	79.2	80.3	79.9	79.1	79.4	81.1	81.7	81.6	81.9	82.3	82.5	81.1	80.6	80.5	80.1	79.0	80.0	80.0	78.7	78.1	77.5	80.2	
27	77.1	76.9	76.5	76.0	74.6	74.6	73.9	73.6	74.2	75.0	76.6	77.9	78.0	78.2	78.0	77.9	78.0	78.6	78.6	78.1	78.8	78.2	78.2	78.9	76.9	
28	79.3	78.8	78.6	78.7	78.3	78.4	78.9	78.7	78.7	79.4	79.6	79.7	79.9	80.0	80.1	80.2	80.4	80.8	80.9	80.9	81.0	81.0	81.0	80.7	79.7	
29	80.4	80.4	80.7	80.7	80.8	80.8	80.9	81.3	81.8	82.4	83.1	83.5	83.1	83.0	82.6	82.5	82.5	82.1	82.0	81.9	82.0	82.0	82.0	82.0	81.8	
30	81.9	81.8	81.4	81.2	81.4	81.3	81.1	81.1	81.2	81.2	81.3	81.4	81.5	81.5	81.6	81.4	81.2	81.2	81.2	81.1	81.4	81.2	81.0	80.9	81.3	
Mean ...	79.4	79.3	79.2	79.2	79.2	79.1	79.1	79.3	79.8	80.6	81.5	82.2	82.6	82.8	82.5	82.1	81.6	81.1	80.6	80.4	80.2	79.8	79.6	79.3	80.4	

466. Richmond (Kew Observatory) : North Wall Screen : h, = 3.0 metres.

December, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	80.8	80.6	80.6	80.8	80.7	80.5	80.5	80.6	81.1	81.6	82.0	82.1	82.3	82.7	82.6	81.8	81.9	81.9	81.7	81.6	81.5	80.6	80.2	80.7	81.3
2	81.1	81.1	80.9	81.0	81.1	80.8	80.6	80.7	81.0	81.2	81.2	81.6	82.3	82.2	81.8	81.5	81.2	81.1	81.0	81.2	81.5	81.3	81.3	81.3	81.2
3	81.2	81.1	81.0	81.0	81.0	80.9	80.6	80.6	80.6	80.5	80.9	80.8	80.4	80.2	80.1	79.7	79.5	79.3	79.6	79.6	79.5	79.6	79.6	79.7	80.3
4	79.8	79.8	79.9	78.7	78.7	78.7	78.6	78.4	78.3	78.3	78.5	78.5	78.8	78.7	78.4	78.2	77.0	77.1	77.8	78.0	77.7	76.5	76.0	75.4	78.2
5	75.1	75.2	75.2	75.3	75.2	75.1	74.0	72.1	72.8	72.6	73.1	73.1	74.0	74.1	74.5	74.4	74.2	73.9	73.7	73.7	73.3	73.2	73.0	72.5	73.9
6	72.3	72.1	71.7	71.2	71.1	71.2	71.0	71.2	71.3	71.3	72.0	72.5	73.0	73.2	73.8	74.1	74.3	74.6	75.0	75.7	75.7	75.9	76.9	76.6	73.1
7	76.5	76.2	76.7	76.8	76.7	76.7	76.7	76.9	77.3	77.8	78.6	78.9	79.0	78.7	78.7	78.2	78.3	78.4	78.8	78.1	77.9	77.7	78.1	78.1	77.7
8	78.0	78.0	77.6	77.2	75.1	74.1	73.6	73.5	75.0	77.2	79.1	80.2	81.2	80.9	79.8	79.8	79.1	78.2	77.6	77.0	76.6	76.7	75.8	75.1	77.4
9	75.0	74.6	73.6	72.0	72.9	72.2	71.5	71.9	71.8	72.1	72.4	74.4	75.9	76.1	76.3	76.1	75.1	75.1	75.0	74.6	74.6	74.2	74.1	74.1	74.0
10	73.9	73.9	73.6	73.4	73.0	73.0	73.1	72.9	72.6	72.9	73.0	73.4	73.1	73.7	73.6	73.2	73.0	73.6	73.5	73.4	73.9	74.0	74.4	76.6	73.5
11	77.1	77.9	78.5	78.6	78.5	78.1	77.6	77.0	76.9	76.9	76.9	77.1	78.0	78.1	78.0	78.0	78.2	78.4	78.7	78.9	79.0	79.0	80.1	81.0	78.1
12	80.9	80.2	79.9	78.9	78.1	78.6	78.0	77.7	78.1	79.0	81.1	81.9	82.5	82.0	81.8	80.4	79.7	79.0</							

TEMPERATURE: ANNUAL MEANS OF HOURLY VALUES.

From readings in degrees absolute at exact hours, Greenwich Mean Time.

467. Richmond (Kew Observatory): North Wall Screen:  $h_s = 3.0$  metres.

1930.

Hour.	G.M.T.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1.	2.																							
°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
81.83	81.65	81.45	81.30	81.27	81.43	81.85	82.44	83.22	84.08	84.85	85.43	85.91	86.18	86.11	85.91	85.53	85.01	84.41	83.76	83.24	82.81	82.44	82.07	83.50

TEMPERATURE: MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-periodic change.

468. Richmond (Kew Observatory): North Wall Screen:  $h_s = 3.0$  metres.

1930.

Month	Mean.	Hour.	GMT.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
		1.	2.																						
°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A	°A
Jan.	279.74	-0.62	-0.65	-0.77	-0.81	-1.08	-1.12	-1.05	-0.98	-0.78	-0.21	+0.40	+0.98	+1.40	+1.56	+1.49	+1.05	+0.67	+0.46	+0.35	+0.27	+0.20	+0.07	-0.25	-0.47
Feb.	276.65	-0.72	-0.85	-1.03	-1.12	-1.14	-1.17	-1.08	-0.98	-0.53	+0.03	+0.63	+1.06	+1.46	+1.79	+1.76	+1.59	+1.17	+0.64	+0.23	-0.02	-0.18	-0.36	-0.46	-0.62
Mar.	279.15	-1.60	-1.85	-2.10	-2.20	-2.31	-2.46	-2.38	-1.70	-0.72	+0.22	+1.16	+1.93	+2.64	+3.18	+3.07	+2.73	+2.37	+1.66	+0.96	+0.42	-0.17	-0.61	-0.98	-1.38
April	281.94	-1.88	-2.02	-2.28	-2.52	-2.62	-2.51	-1.82	-0.93	-0.16	+0.80	+1.65	+2.30	+2.62	+2.70	+2.82	+2.61	+2.35	+1.86	+0.99	+0.23	-0.41	-0.82	-1.25	-1.72
May	284.80	-2.14	-2.49	-2.67	-2.65	-3.00	-2.58	-1.83	-1.05	-0.12	+0.77	+1.43	+2.08	+2.64	+3.06	+3.04	+3.04	+2.49	+2.09	+1.38	+0.57	-0.11	-0.74	-1.27	-1.83
June	289.58	-3.22	-3.65	-3.92	-4.22	-3.72	-3.00	-1.94	-0.95	+0.13	+1.15	+2.13	+2.80	+3.26	+3.44	+3.69	+3.80	+3.76	+3.07	+2.42	+0.95	-0.26	-1.18	-1.98	-2.67
July	289.54	-2.46	-2.78	-3.10	-3.31	-3.07	-2.48	-1.49	-0.60	+0.18	+1.00	+1.70	+2.15	+2.53	+2.87	+2.96	+2.93	+2.77	+2.42	+1.79	+0.82	-0.16	-0.92	-1.55	-2.15
Aug.	289.99	-2.67	-2.90	-3.19	-3.58	-3.50	-3.05	-2.08	-1.03	+0.18	+1.35	+2.02	+2.49	+3.03	+3.43	+3.65	+3.81	+3.48	+2.90	+1.65	+0.23	-0.65	-0.30	-1.89	-2.41
Sept.	287.64	-1.78	-1.96	-2.12	-2.26	-2.40	-2.36	-1.89	-1.65	-0.03	+1.01	+1.80	+2.22	+2.83	+2.84	+2.83	+2.50	+2.13	+1.39	+0.54	-0.11	-0.43	-0.62	-0.91	-1.42
Oct.	284.22	-1.49	-1.52	-1.70	-1.87	-1.88	-2.01	-1.93	-1.27	-0.10	+1.03	+1.98	+2.60	+3.02	+3.01	+2.64	+2.21	+1.37	+0.60	-0.07	-0.51	-0.71	-1.08	-1.18	-1.23
Nov.	280.44	-1.11	-1.19	-1.25	-1.29	-1.29	-1.33	-1.37	-1.20	-0.62	+0.17	+1.05	+1.72	+2.15	+2.34	+2.12	+1.70	+1.16	+0.63	+0.19	-0.01	-0.20	-0.60	-0.82	-1.07
Dec.	277.88	-0.26	-0.31	-0.47	-0.62	-0.72	-0.78	-0.90	-1.06	-0.80	-0.32	+0.21	+0.78	+1.24	+1.29	+1.15	+0.85	+0.53	+0.36	+0.34	+0.14	-0.02	-0.18	-0.21	-0.23
Year	283.50	-1.66	-1.85	-2.05	-2.20	-2.23	-2.07	-1.65	-1.12	-0.28	+0.57	+1.35	+1.93	+2.40	+2.63	+2.60	+2.40	+2.02	+1.51	+0.90	+0.25	-0.26	-0.61	-1.06	-1.43

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

Maximum and Minimum for the interval 0h. to 24h., Greenwich Mean Time.

469. Richmond (Kew Observatory): North Wall Screen:  $h_s = 3.0$  metres.

Month	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	83.1	73.7	80.5	75.0	82.0	73.8	91.3	80.4	88.3	78.5	89.1	84.9	98.2	89.3	96.1	86.3	93.1	83.5	85.8	81.4	84.6	81.2	82.8	80.2
2	84.6	80.0	79.6	78.4	81.0	74.1	88.2	80.0	87.7	79.0	92.5	84.5	98.2	89.4	94.2	85.5	94.5	81.1	89.7	83.2	85.9	81.0	82.5	80.5
3	84.1	81.5	80.0	77.8	87.5	78.3	84.8	80.2	87.1	80.0	88.6	82.5	95.2	87.4	93.5	83.8	93.8	82.9	90.8	82.4	83.0	77.2	81.3	79.1
4	83.3	80.4	80.5	76.5	85.0	75.8	84.2	79.4	89.6	79.1	95.0	84.1	97.4	86.7	92.5	85.1	95.4	85.1	91.2	86.5	80.1	71.9	80.0	75.2
5	82.7	77.3	79.8	75.4	85.2	79.6	80.8	78.7	90.2	78.1	96.2	84.1	100.0	85.9	90.9	83.8	97.6	87.2	88.0	82.5	79.9	70.9	75.5	72.1
6	80.3	74.8	78.4	74.3	84.6	78.7	82.0	78.2	87.0	80.9	97.6	84.9	98.0	87.0	91.9	84.0	93.6	86.9	87.4	81.0	82.0	75.8	76.9	70.8
7	82.4	78.9	76.3	73.7	83.1	77.4	81.3	78.8	84.0	79.8	91.6	86.1	95.0	86.1	91.4	84.3	92.1	85.3	86.7	79.9	83.7	72.5	79.1	76.2
8	80.7	75.2	76.1	74.2	82.9	74.2	85.1	74.8	83.2	77.1	92.0	80.4	95.5	87.0	92.5	83.7	93.2	83.4	89.1	84.7	86.7	78.5	81.2	73.3
9	81.7	73.7	76.8	72.5	83.1	78.0	87.4	77.0	87.0	77.8	94.9	79.9	97.4	88.0	93.9	85.5	91.0	84.6	86.6	77.5	80.7	79.9	76.6	71.2
10	81.1	76.5	78.0	73.5	79.5	74.8	88.3	73.9	85.9	78.0	89.8	84.2	94.9	85.9	93.7	87.1	93.2	87.7	86.4	75.0	84.9	78.0	76.6	72.5
11	81.5	74.2	79.7	75.1	79.5	73.5	88.1	76.0	85.1	82.0	92.2	85.6	92.2	83.0	95.3	87.2	93.5	87.6	87.2	79.1	82.3	76.0	81.0	76.7
12	83.9	73.7	79.8	76.1	81.3	70.6	85.1	78.0	86.7	80.7	97.5	83.6	92.5	81.9	92.0	86.6	90.1	86.5	87.6	78.4	82.5	72.8	82.5	77.4
13	84.0	77.4	77.1	73.7	81.2	76.2	80.9	75.6	89.0	82.4	96.9	86.3	95.0	85.3	90.0	86.0	90.7	85.0	88.7	75.7	83.3	78.0	83.0	77.2
14	85.6	83.2	81.2	74.0	79.8	76.1	80.2	76.0	90.9	83.6	95.6	85.8	92.1	86.7	92.1	86.1	89.2	84.9	90.5	82.5	85.6	77.0	79.7	75.0
15	84.5	78.0	80.1	74.1	82.5	75.3	80.0	76.8	90.1	81.5	96.1	84.4	91.6	86.4	90.6	84.5	91.0	82.5	92.2	87.4	86.6	78.3	75.5	72.1
16	81.7	77.0	77.4	72.2	81.7	75.3	79.9	76.4	92.1	81.7	91.5	83.5	92.3	86.4	93.5	82.4	89.0	80.1	91.2	86.5	78.3	71.7	79.0	73.1
17	82.6	78.7	78.1	72.7	80.8	73.0	79.8	77.2	90.9	83.9	98.6	85.9	93.3	85.1	94.6	81.8	91.1	83.6	98.1	84.0	76.1	69.1	77.3	72.2
18	84.6	78.5	76.2	74.1	81.4	73.1	79.5	74.7	87.6	80.8	97.6	88.2	92.4	82.6	95.0	86.2	90.9	83.6	89.1	82.2	81.1	73.0	83.0	72.0
19	86.4	81.0	77.0	74.2	78.1	72.0	87.4	74.1	87.3	79.1	95.6	87.3	92.5	85.0	91.1	83.9	90.9	83.4	89.0	79.7	85.0	81.0	83.1	81.0
20	81.8	73.5	78.7	73.9	79.2	69.9	80.9	76.5	88.0	83.0	92.8	87.1	91.3	83.5	92.7	82.1	89.3	85.5	86.2	79.0	87.0	80.6	81.2	80.0
21	79.1	70.9	76.8	73.8	82.1	76.0	82.0	72.5	88.1	80.0	96.1	89.6	89.4	84.7	92.9	85.6	91.1	85.3	85.1	76.9	86.7	83.5	80.3	72.8
22	82.4	76.7	78.7	75.0	82.7	76.4	86.0	74.9	84.1	78.1	96.0	86.9	88.6	83.3	92.6	83.8	89.9	84.1	86.0	79.4	86.3	77.5	75.1	71.2
23	82.6	81.3	77.0	74.2	82.3	75.8	86.9	78.6	90.3	81.6	93.1	85.0	87.9	84.0	93.6	85.8	92.0	89.3	86.6	80.1	80.8	78.0	78.9	73.9
24	83.0	81.5	78.4	73.4	82.2	74.7	80.1	82.8	89.6	81.6	92.8	84.6	91.2	85.3	93.1	84.0	91.5	84.8	84.9	78.0	85.5	75.5	79.7	77.9
25	81.5	74.1	79.4	71.8	83.2	72.0	98.0	80.0	86.6	83.5	93.0	83.1	92.7	85.1	95.7	82.2	90.6	83.2	84.0	77.7	84.8	80.5	80.6	73.0
26	80.1	73.5	82.4	77.5	86.5	78.0	87.6	82.6	93.0															

Percentages at exact hours, Greenwich Mean Time.

470. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above the ground) = 3.0 metres.

January, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	93	98	94	96	93	94	96	92	90	90	89	88	90	96	96	92	92	95	89	96	89	89	91	95	92.6	8.4	
2	82	74	72	73	58	63	64	64	65	62	64	65	62	66	66	73	78	80	77	80	79	82	87	91	72.0	7.9	
3	95	94	88	87	88	86	84	86	87	89	91	92	90	85	87	89	90	83	82	86	87	87	87	91	88.0	10.8	
4	87	86	83	83	85	83	82	80	83	82	80	78	75	75	78	88	91	95	91	89	89	91	89	89	84.7	9.6	
5	87	84	86	91	93	89	91	87	90	88	80	81	72	71	71	74	81	81	80	82	82	86	87	89	83.5	8.5	
6	92	90	93	93	93	94	94	93	94	92	88	83	80	76	79	84	87	86	90	90	90	92	91	88	88.9	7.4	
7	87	87	85	85	86	87	87	88	88	89	89	88	88	86	86	81	81	81	83	83	83	82	83	82	82	85.3	9.3
8	86	83	82	84	87	91	91	91	91	94	93	93	91	91	90	91	93	91	97	94	95	98	96	96	91.1	8.5	
9	98	96	98	96	94	91	91	100	92	88	87	82	79	79	78	79	81	82	83	79	81	80	93	97	87.6	7.9	
10	96	98	99	96	98	98	96	95	93	93	87	84	78	70	70	76	75	79	75	71	79	78	82	88	85.8	8.0	
11	88	88	89	90	88	92	89	89	78	82	79	77	68	66	83	91	95	93	91	84	95	83	83	83	84.9	7.2	
12	82	85	85	87	85	83	83	82	84	78	79	75	78	85	88	88	88	92	78	62	57	59	58	62	78.9	6.7	
13	62	58	60	62	75	73	78	79	81	76	77	78	78	82	84	88	93	93	95	93	94	89	89	93	79.8	8.5	
14	94	92	90	91	91	92	89	88	87	89	83	86	83	85	85	83	90	90	89	87	86	87	87	87	88.1	11.6	
15	86	89	90	97	94	93	94	96	98	93	89	89	87	88	88	85	91	97	97	91	91	88	91	93	91.3	9.7	
16	97	96	97	97	98	100	98	96	97	97	97	94	91	86	86	84	88	87	88	90	90	86	87	84	92.3	8.7	
17	86	86	84	84	84	87	87	80	78	77	71	71	70	67	71	76	79	82	83	84	83	84	87	88	80.3	8.2	
18	88	87	88	90	91	90	91	91	91	87	90	87	85	86	86	88	90	90	87	91	92	94	91	93	89.2	10.2	
19	93	89	88	83	83	83	87	86	84	74	67	66	64	62	60	62	64	68	65	66	69	69	75	78	74.7	9.4	
20	83	85	89	92	92	91	88	88	88	86	88	79	77	73	67	79	84	83	87	92	92	93	98	98	85.9	8.7	
21	98	98	98	98	98	98	98	98	98	99	99	98	98	98	97	97	96	97	94	90	90	90	93	93	96.8	6.6	
22	94	96	98	100	100	96	92	93	98	94	89	87	83	83	86	87	89	89	89	88	91	93	95	95	92.0	9.3	
23	92	89	91	92	92	91	91	92	93	91	89	91	82	82	80	82	84	84	87	84	82	87	92	93	92.8	10.7	
24	92	92	88	91	92	92	91	88	87	88	84	84	82	82	80	82	84	84	87	84	82	87	92	93	87.0	10.1	
25	89	87	90	94	91	93	93	94	91	91	90	90	90	86	71	74	77	85	87	93	91	94	100	100	89.1	8.2	
26	100	98	100	100	94	96	93	93	95	89	85	81	83	83	84	90	88	90	90	93	93	94	94	94	91.8	7.8	
27	94	94	93	91	93	93	91	93	91	94	89	90	91	84	84	88	90	88	88	88	90	86	86	86	90.0	9.2	
28	86	86	87	87	89	92	90	89	87	86	85	82	79	79	82	84	83	85	86	86	87	88	86	86	85.7	7.6	
29	87	90	90	92	90	92	92	94	94	91	93	89	89	89	88	89	91	94	91	96	96	97	98	100	91.9	8.4	
30	100	100	98	98	96	96	96	97	93	93	95	92	87	87	89	73	78	79	82	78	85	89	90	93	89.9	7.2	
31	93	96	96	96	95	93	93	93	88	82	80	78	77	80	78	77	79	86	87	87	90	87	89	95	87.3	7.1	
Mean ...	89.9	89.4	89.3	90.2	89.9	90.1	89.7	89.5	88.9	87.2	85.5	83.8	81.8	81.5	81.4	83.5	85.8	87.1	86.5	86.1	86.5	87.0	88.6	90.1	87.0	†8.6	
Vapour Pressure* ...	mb. 8.5	mb. 8.4	mb. 8.3	mb. 8.4	mb. 8.2	mb. 8.2	mb. 8.2	mb. 8.2	mb. 8.3	mb. 8.4	mb. 8.6	mb. 8.8	mb. 8.8	mb. 8.9	mb. 8.9	mb. 8.8	mb. 8.8	mb. 8.8	mb. 8.7	mb. 8.7	mb. 8.7	mb. 8.7	mb. 8.6	mb. 8.6	mb. 8.6	†8.6	

471. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  = 3.0 metres.

February, 1930.

1	% 94	% 100	% 98	% 96	% 97	% 94	% 98	% 98	% 94	% 90	% 94	% 88	% 88	% 86	% 83	% 87	% 87	% 88	% 90	% 90	% 91	% 88	% 93	% 94	% 92.0	mb. 8.3
2	% 93	% 97	% 96	% 94	% 90	% 88	% 87	% 88	% 91	% 90	% 87	% 91	% 81	% 84	% 86	% 93	% 91	% 90	% 94	% 94	% 94	% 93	% 90	% 94	% 91.1	mb. 8.6
3	% 96	% 97	% 97	% 96	% 96	% 95	% 95	% 95	% 97	% 97	% 93	% 88	% 84	% 84	% 75	% 86	% 85	% 87	% 92	% 90	% 90	% 89	% 94	% 94	% 91.0	mb. 8.1
4	% 92	% 96	% 95	% 95	% 95	% 95	% 97	% 97	% 97	% 97	% 90	% 85	% 83	% 84	% 87	% 88	% 91	% 88	% 88	% 91	% 93	% 94	% 94	% 92	% 91.9	mb. 8.2
5	% 90	% 87	% 90	% 90	% 90	% 87	% 86	% 89	% 83	% 84	% 81	% 76	% 75	% 71	% 68	% 71	% 75	% 79	% 80	% 81	% 85	% 84	% 85	% 81	% 82.2	mb. 7.0
6	% 83	% 80	% 80	% 79	% 81	% 82	% 82	% 81	% 81	% 80	% 73	% 71	% 68	% 65	% 66	% 71	% 75	% 79	% 78	% 80	% 82	% 83	% 74	% 67	% 77.0	mb. 5.9
7	% 68	% 72	% 74	% 74	% 78	% 76	% 77	% 79	% 76	% 67	% 67	% 64	% 63	% 64	% 68	% 70	% 70	% 68	% 68	% 68	% 69	% 68	% 70	% 71	% 70.3	mb. 4.9
8	% 72	% 74	% 74	% 65	% 63	% 59	% 63	% 63	% 57	% 58	% 56	% 55	% 53	% 54	% 51	% 51	% 50	% 58	% 61	% 65	% 66	% 66	% 65	% 63	% 61.5	mb. 4.5
9	% 61	% 60	% 59	% 57	% 60	% 62	% 65	% 64	% 59	% 55	% 51	% 51	% 47	% 46	% 47	% 50	% 54	% 58	% 65	% 68	% 71	% 71	% 73	% 77	% 59.6	mb. 4.1
10	% 82	% 89	% 90	% 89	% 85	% 77	% 73	% 71	% 61	% 56	% 56	% 55	% 54	% 56	% 56	% 57	% 63	% 70	% 75	% 80	% 70	% 71	% 72	% 72	% 70.1	mb. 5.3
11	% 72	% 66	% 70	% 75	% 75	% 74	% 74	% 71	% 58	% 63	% 65	% 63	% 63	% 63	% 64	% 62	% 78	% 78	% 79	% 77	% 87	% 85	% 85	% 85	% 71.9	mb. 6.1
12	% 84	% 85	% 84	% 88	% 87	% 87	% 90	% 90	% 84	% 80	% 73	% 69	% 67	% 64	% 70	% 69	% 73	% 76	% 78	% 80	% 80	% 84	% 84	% 87	% 79.7	mb. 6.7
13	% 91	% 85	% 91	% 90	% 90	% 89	% 94	% 92	% 91	% 92	% 91	% 89	% 86	% 75	% 78	% 81	% 85	% 89	% 93	% 94	% 93	% 94	% 93	% 93	% 88.6	mb. 6.3
14	% 94	% 94	% 93	% 94	% 96	% 94	% 98	% 96	% 94	% 97	% 87	% 87	% 86	% 82	% 81	% 84	% 87	% 92	% 97	% 90	% 94	% 96	% 94	% 96	% 92.1	mb. 7.4
15	% 96	% 90	% 89	% 90	% 94	% 92	% 93	% 93	% 94	% 79	% 65	% 59	% 58	% 56	% 54	% 56	% 68	% 88	% 91	% 79	% 77	% 80	% 82	% 83	% 79.7	mb. 6.7
16	% 81	% 77	% 75	% 73	% 72	% 74	% 75	% 74	% 70	% 63	% 58	% 55	% 55													

Percentages at exact hours, Greenwich Mean Time.

472. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above the ground) = 3.0 metres.

March, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	87	89	92	90	90	89	87	82	85	84	78	72	62	56	52	49	50	52	54	55	60	68	76	81	72.5	5.9	
2	81	84	84	84	85	87	88	87	85	83	82	77	73	69	68	69	73	81	85	85	86	87	87	87	87	81.4	6.9
3	87	87	87	86	87	87	87	86	83	79	75	74	71	66	60	64	71	74	81	84	86	89	87	93	80.3	8.9	
4	97	96	96	97	96	97	97	96	93	93	89	84	73	64	60	61	60	71	76	84	89	90	96	98	85.4	9.0	
5	96	98	96	94	96	96	97	98	90	91	83	73	71	69	73	74	76	74	74	79	85	85	81	79	84.8	9.6	
6	79	84	84	86	83	86	93	87	82	73	71	74	73	63	58	54	60	63	67	71	72	72	78	93	75.0	8.5	
7	95	95	95	96	94	94	91	89	90	90	91	88	84	75	74	74	80	87	89	83	90	90	89	92	88.2	9.1	
8	93	93	93	96	94	98	98	96	92	89	87	76	71	78	76	78	82	86	84	91	88	89	89	87	87.8	7.8	
9	87	87	87	87	87	90	91	88	81	74	74	74	76	73	69	70	71	73	78	82	80	88	89	89	80.9	8.4	
10	88	88	83	98	87	94	93	87	90	91	88	87	84	83	72	70	66	62	60	70	80	85	89	88	83.5	7.4	
11	85	84	87	95	95	93	91	90	77	71	65	61	63	57	60	68	73	82	82	85	87	93	94	98	80.5	6.4	
12	97	100	100	100	100	100	100	100	100	100	96	85	61	48	51	59	59	66	68	75	76	85	83	85	83.4	6.4	
13	84	84	82	85	80	75	66	67	60	57	57	59	61	62	79	84	87	93	94	94	94	95	95	98	78.5	6.9	
14	96	92	92	92	90	92	91	88	86	81	77	75	70	69	64	69	73	73	79	79	79	79	80	83	81.4	7.0	
15	93	90	88	87	90	90	92	90	88	89	83	76	72	72	74	81	90	91	93	94	97	97	97	97	87.5	8.2	
16	96	96	98	98	100	97	97	96	90	83	77	72	67	67	64	63	68	69	73	69	69	73	73	79	81.0	7.4	
17	82	87	87	85	85	85	89	79	72	68	62	55	54	48	45	46	53	57	57	59	73	77	80	85	69.5	5.6	
18	85	87	84	74	78	87	91	84	72	64	57	53	54	54	61	65	70	64	71	71	79	87	87	92	73.7	6.0	
19	98	98	100	99	98	95	83	85	87	82	78	67	68	61	68	62	76	79	76	78	75	77	78	80	81.4	5.5	
20	76	73	71	70	70	75	71	67	55	51	40	40	45	50	50	53	58	61	63	65	66	63	65	62	62.6	4.4	
21	60	59	62	60	65	78	80	79	67	58	53	54	48	40	37	48	54	59	68	76	80	78	82	85	63.3	5.9	
22	87	89	86	81	71	69	70	70	65	53	53	52	50	45	48	42	45	50	59	63	66	78	73	75	64.4	6.0	
23	78	83	85	80	80	77	73	76	66	64	65	59	54	59	58	62	64	62	59	65	67	68	71	78	68.8	6.3	
24	77	83	83	84	87	87	84	73	66	50	52	44	45	44	45	43	44	45	52	54	62	63	68	78	63.0	5.6	
25	82	87	92	94	94	94	95	89	82	75	64	52	37	42	48	56	59	60	71	73	74	85	88	88	74.0	6.6	
26	89	91	86	77	77	83	82	77	70	65	63	60	56	54	52	54	55	64	68	70	77	78	84	86	71.6	8.3	
27	87	92	94	97	95	94	90	86	79	74	73	73	66	68	68	69	66	75	78	82	84	87	89	91	82.5	9.3	
28	92	93	92	94	96	92	90	88	79	76	75	73	66	62	62	66	68	73	78	79	87	80	85	89	80.7	9.9	
29	87	84	89	86	86	89	86	71	66	59	57	50	63	64	63	76	69	75	83	77	81	88	87	87	76.0	8.8	
30	89	90	90	90	92	93	93	90	85	76	62	60	58	58	55	52	55	69	74	81	80	84	80	79	76.6	8.2	
31	77	79	76	77	73	69	69	69	58	54	57	59	87	86	91	88	79	80	82	87	87	88	89	92	76.9	9.2	
Mean ...	86.7	87.8	88.1	87.7	87.5	88.1	87.5	84.5	79.6	74.6	70.8	66.4	64.0	61.5	61.5	63.5	66.2	69.9	73.3	76.0	79.1	81.8	83.5	86.3	77.3	†7.4	
Vapour Pressure* ...	mb. 7.3	mb. 7.2	mb. 7.2	mb. 7.1	mb. 7.0	mb. 7.0	mb. 7.0	mb. 7.1	mb. 7.1	mb. 7.2	mb. 7.2	mb. 7.2	mb. 7.3	mb. 7.2	mb. 7.1	mb. 7.2	mb. 7.3	mb. 7.5	mb. 7.4	mb. 7.5	mb. 7.5	†7.2					

473. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  = 3.0 metres.

April, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*
1	91	94	92	91	89	88	87	86	78	76	61	58	51	53	52	54	59	63	66	70	68	66	65	63	72.3	mb. 10.8
2	62	61	64	81	89	93	93	91	87	80	68	62	57	55	62	60	61	64	72	79	83	89	88	90	74.1	10.7
3	87	84	81	79	83	79	75	64	61	64	79	86	91	93	96	98	94	95	96	99	97	99	96	94	86.2	10.1
4	96	96	96	96	91	91	93	96	98	95	93	87	91	93	96	91	90	94	91	91	93	94	96	96	93.5	10.0
5	96	93	93	93	91	93	91	91	98	90	84	84	86	84	84	83	80	80	77	77	81	81	77	78	86.2	8.3
6	83	87	87	87	87	87	86	84	84	76	72	65	65	65	62	60	61	66	68	67	70	73	74	80	74.8	7.4
7	86	83	83	90	91	96	91	91	91	88	87	86	82	86	83	83	82	85	85	88	86	86	85	86	86.5	8.7
8	90	97	98	96	98	98	98	98	96	82	75	67	60	64	67	70	71	73	79	87	86	89	89	93	84.1	8.8
9	94	96	98	94	93	91	89	86	78	79	75	64	52	53	48	53	57	65	72	77	82	94	95	95	78.3	9.3
10	97	91	98	96	98	96	94	93	97	89	57	56	52	50	49	52	55	57	65	72	71	71	79	87	76.1	8.3
11	91	92	89	88	85	84	81	73	76	74	64	45	45	46	48	49	51	56	67	72	73	75	76	77	70.1	8.3
12	77	78	76	79	80	80	82	88	85	79	81	87	91	87	79	68	51	52	49	60	68	80	88	87	76.1	8.5
13	90	92	95	92	93	96	87	84	81	67	59	65	60	64	71	70	81	88	87	88	92	92	94	89	82.3	8.0
14	92	88	86	85	87	87	86	79	72	65	63	61	63	62	62	62	67	69	65	65	73	80	90	96	75.1	7.4
15	90	89	85	85	82	81	84	76	70	69	57	59	63	66	63	62	61	61	61	63	64	71	75	80	71.9	7.4
16	78	78	85	73	70	72	69	59	70	61	67	62	60	60	56	53	58	63	68	70	73	76	82	82	68.5	7.2
17	82	75	73	72	73	73	73	64	60	53	54	46														

Percentages at exact hours, Greenwich Mean Time.

474. Richmond (Kew Observatory) : North Wall Screen : h<sub>t</sub> (height of thermometer bulbs above the ground) = 3.0 metres.

May, 1930.

Table with 26 columns (hours 1-24, Mean, Vapour Pressure\*) and 31 rows (hours 1-31, Mean). Columns 1-24 show relative humidity percentages. Column 25 shows Mean percentage. Column 26 shows Vapour Pressure in mb. Rows 1-31 show hourly data. Row 31 shows the Mean for the month.

475. Richmond (Kew Observatory) : North Wall Screen : h<sub>t</sub> = 3.0 metres.

June, 1930.

Table with 26 columns (hours 1-24, Mean, Vapour Pressure\*) and 31 rows (hours 1-30, Mean). Columns 1-24 show relative humidity percentages. Column 25 shows Mean percentage. Column 26 shows Vapour Pressure in mb. Rows 1-30 show hourly data. Row 30 shows the Mean for the month.

\* Computed from the mean temperatures and mean relative humidities.

† Mean of the column.

‡ Mean of the row.

Percentages at exact hours, Greenwich Mean Time.

476. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above the ground) = 3.0 metres.

July, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	74	85	80	81	87	81	82	75	74	72	71	67	60	60	55	59	57	58	54	58	65	68	73	76	76	69.5	17.1
2	75	77	80	81	88	79	68	56	61	51	47	46	46	42	45	43	46	45	50	52	60	61	69	76	76	61.5	14.6
3	87	91	91	91	88	86	80	74	69	63	57	54	46	50	48	47	54	44	47	59	68	73	77	84	84	67.7	14.5
4	84	87	87	87	87	80	77	72	68	60	56	54	53	49	49	48	53	59	62	62	67	77	76	79	79	68.2	14.6
5	78	85	85	88	87	83	78	70	61	55	50	46	45	45	42	38	35	35	38	47	61	67	72	78	78	61.3	14.4
6	76	79	80	85	82	80	76	70	67	60	53	42	41	42	37	42	48	56	61	62	68	74	75	78	78	63.9	14.7
7	63	60	65	74	70	63	63	55	48	48	44	41	41	42	42	40	40	42	49	56	59	61	69	73	73	53.4	10.9
8	68	69	71	77	70	68	65	61	59	61	63	72	72	72	67	72	64	68	73	65	75	78	77	84	84	69.4	14.3
9	86	90	88	90	89	86	82	76	67	65	61	60	59	59	60	58	56	55	57	54	52	57	63	67	67	68.6	15.8
10	65	69	76	81	83	75	66	59	58	49	47	44	47	44	38	37	41	49	54	54	59	62	67	69	69	58.0	11.2
11	70	70	74	76	77	76	72	61	55	51	45	39	40	48	52	68	42	54	45	51	62	65	76	86	86	60.3	10.5
12	74	70	79	86	88	90	84	71	65	61	59	59	59	60	57	55	49	48	58	60	57	62	69	73	73	66.7	10.9
13	73	80	80	80	81	77	70	66	64	62	55	53	52	52	54	56	53	53	57	69	76	79	86	88	88	67.0	12.9
14	89	90	90	89	88	86	77	89	77	64	66	74	63	72	62	57	62	83	91	88	90	90	90	90	90	79.8	14.5
15	87	92	91	91	92	91	91	91	87	85	76	75	71	70	68	62	55	61	69	73	83	88	91	94	94	80.5	13.9
16	94	93	94	94	92	91	86	86	81	76	71	63	66	62	66	63	67	66	67	74	78	78	81	84	84	78.3	14.6
17	85	83	85	88	86	81	79	71	62	63	57	53	57	61	60	73	67	67	69	67	72	80	88	87	87	72.5	13.1
18	89	92	94	94	95	87	80	71	64	55	53	60	48	69	55	63	74	73	72	73	74	79	84	84	84	74.3	12.7
19	84	81	78	78	77	77	76	74	75	66	68	63	63	55	51	53	46	46	52	52	62	70	77	82	82	67.0	12.0
20	84	84	85	87	85	77	71	62	67	67	70	74	79	78	81	91	90	93	93	94	95	94	95	95	95	82.7	14.3
21	95	94	95	94	93	93	92	88	85	82	91	85	90	87	88	74	69	69	72	69	66	65	65	67	67	82.6	13.2
22	70	76	75	72	73	68	65	62	63	63	59	56	57	57	56	58	61	63	74	73	67	71	72	77	77	66.0	10.0
23	78	86	94	95	95	94	89	90	85	82	81	75	80	74	75	77	78	79	80	82	82	83	85	86	86	88.3	12.3
24	88	88	86	87	86	83	83	81	79	76	75	69	62	60	63	60	69	69	92	94	88	89	91	88	88	79.4	13.0
25	87	89	89	87	86	83	80	76	68	66	59	60	58	58	61	66	68	66	70	69	73	75	81	84	84	73.4	13.0
26	84	82	86	86	83	79	76	75	72	68	73	81	83	86	88	88	81	80	82	85	91	92	95	96	96	82.7	14.8
27	94	95	95	97	96	91	90	83	76	71	63	57	60	59	59	60	65	67	72	77	80	88	94	95	95	78.5	14.7
28	92	93	94	94	93	91	81	78	71	63	61	63	63	67	65	60	70	68	69	72	75	81	87	84	84	77.5	14.8
29	87	91	88	86	86	87	78	74	70	66	63	62	91	84	80	69	73	76	78	82	85	88	88	88	88	79.9	14.4
30	90	90	91	88	88	86	82	80	79	76	79	79	58	63	78	73	73	80	83	85	91	91	90	94	94	81.8	14.1
31	95	96	95	98	95	94	89	82	78	72	68	60	54	49	44	51	44	54	67	68	75	78	83	85	85	74.1	13.5
Mean ...	82.1	84.1	85.2	85.8	86.0	82.7	78.7	73.9	69.3	65.5	62.7	60.9	60.1	60.5	59.5	60.7	59.5	62.2	66.1	68.3	72.7	76.2	79.9	82.9	82.9	71.9	†13.5
Vapour Pressure* ...	mb. 13.3	mb. 13.3	mb. 13.2	mb. 13.2	mb. 13.3	mb. 13.3	mb. 13.5	mb. 13.4	mb. 13.2	mb. 13.1	mb. 13.1	mb. 13.1	mb. 13.3	mb. 13.6	mb. 13.5	mb. 13.7	mb. 13.3	mb. 13.6	mb. 13.9	mb. 13.5	mb. 13.5	mb. 13.5	mb. 13.6	mb. 13.5	mb. 13.5	mb. 13.4	†13.4

477. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  = 3.0 metres.

August, 1930.

1	90	90	88	90	82	88	84	74	69	63	59	59	55	55	45	48	55	54	59	62	70	72	76	78	78	69.5	14.4
2	74	78	78	81	80	80	79	71	72	75	71	62	61	65	65	66	66	63	70	84	76	76	80	85	85	73.1	15.2
3	83	87	86	91	89	85	89	91	90	80	83	75	67	56	54	52	52	69	77	81	85	84	86	88	88	78.3	13.5
4	95	96	96	94	93	96	97	90	88	75	70	73	80	70	64	41	44	46	56	72	81	85	89	91	91	78.4	13.5
5	90	91	93	95	94	90	85	72	64	69	77	71	78	83	79	68	77	77	75	88	90	89	90	91	91	82.3	13.4
6	93	91	91	91	92	91	84	79	70	70	77	90	80	65	68	69	63	64	66	76	79	85	86	90	90	79.6	13.6
7	90	90	90	91	91	89	80	75	74	68	82	72	63	65	80	74	69	76	73	70	81	82	84	87	87	79.0	13.1
8	90	90	91	94	93	94	87	81	75	67	69	61	58	62	60	57	55	65	66	72	77	82	87	86	86	75.8	13.1
9	83	85	88	89	89	87	82	84	87	81	81	84	80	77	73	72	72	79	87	91	94	92	95	92	92	83.3	15.1
10	97	93	93	93	90	88	85	84	83	79	79	78	81	81	81	83	83	84	87	90	91	94	94	92	92	86.8	17.6
11	92	94	94	94	95	95	93	89	86	83	71	63	57	55	53	53	55	59	57	64	67	73	80	84	84	75.4	16.0
12	86	88	86	86	86	86	81	68	64	57	61	56	51	68	73	57	60	60	60	72	78	78	84	88	88	72.2	13.0
13	85	83	83	86	86	83	82	83	78	67	66	67	73	66	63	63	66	66	67	73	78	79	81	82	82	75.4	12.7
14	93	95	94	97	90	76	70	60	59	52	48	48	49	50	46	48	49	52	51	56	58	47	62	64	64	68.5	11.6
15	68	68	73	79	83	79	67	68	71	66	60	63	61	59	57	63	63	63	67	71	75	61	67	67	67	67.5	11.2
16	74	73	79	79	82	83	76	66	66	63	58	52															

Percentages at exact hours, Greenwich Mean Time.

478. Richmond (Kew Observatory) : North Wall Screen : h<sub>t</sub> (height of thermometer bulbs above the ground) = 3.0 metres.

September, 1930.

Table for Richmond (Kew Observatory) in September 1930. Columns include Hour G.M.T., Day, and relative humidity percentages (1-24, Mean, Vapour Pressure\*). Rows are numbered 1 to 30.

479. Richmond (Kew Observatory) : North Wall Screen : h<sub>t</sub> = 3.0 metres.

October, 1930.

Table for Richmond (Kew Observatory) in October 1930. Columns include Hour G.M.T., Day, and relative humidity percentages (1-24, Mean, Vapour Pressure\*). Rows are numbered 1 to 31.

\* Computed from the mean temperature and mean relative humidity.

† Mean of the column.

‡ Mean of the row.

Percentages at exact hours, Greenwich Mean Time.

480. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above the ground) = 3.0 metres.

November, 1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	74	76	78	88	93	98	98	94	98	99	97	95	96	96	95	95	95	94	94	93	91	93	93	93	92.0	11.5	
2	94	94	94	93	92	89	89	94	95	95	91	94	87	60	65	70	80	78	78	82	91	84	88	78	85.3	10.4	
3	81	79	77	75	74	71	73	73	77	76	72	67	65	64	64	71	53	82	85	82	86	85	85	85	75.8	8.2	
4	86	87	85	79	74	70	81	76	69	78	71	68	49	44	44	46	46	68	79	84	84	90	93	93	72.8	6.1	
5	94	95	96	96	96	96	93	88	71	57	55	58	68	65	54	65	67	68	69	68	71	74	75	77	76.0	5.7	
6	74	71	69	70	70	70	76	72	68	65	55	54	45	46	49	51	58	65	68	73	76	75	78	77	65.6	5.9	
7	82	82	89	91	96	94	92	92	92	88	82	74	68	69	75	80	83	83	84	82	79	84	93	95	84.2	7.7	
8	98	91	95	92	94	95	94	97	91	77	69	66	60	64	65	67	83	88	91	93	94	97	96	96	85.5	10.6	
9	96	94	93	89	88	92	92	93	91	92	89	91	89	87	88	89	91	91	91	91	95	93	90	90	91.2	11.7	
10	91	91	92	95	84	60	65	75	70	67	64	58	58	58	61	68	74	75	79	79	82	80	81	86	74.8	9.1	
11	86	86	87	92	90	88	87	83	77	77	62	61	56	58	59	65	70	71	76	75	82	90	92	90	77.4	7.2	
12	91	93	93	92	94	96	96	98	96	88	86	78	69	66	62	71	79	78	85	84	82	84	84	84	84	84.7	7.1
13	84	83	86	86	86	87	86	85	86	76	70	68	65	67	68	73	76	76	76	79	85	90	91	91	79.8	8.3	
14	96	97	96	97	98	97	99	96	100	98	89	76	64	50	65	72	80	86	84	86	83	79	78	76	76	85.5	9.3
15	79	79	76	75	79	80	80	81	82	81	86	87	87	90	94	93	95	87	87	86	88	86	80	77	83.9	10.8	
16	69	74	80	79	80	83	82	82	80	80	72	68	68	65	71	69	73	80	83	79	85	90	91	94	77.8	6.0	
17	94	94	95	93	94	95	95	96	94	94	94	92	88	66	64	62	66	67	72	74	67	71	71	69	82.5	5.0	
18	64	71	75	79	81	84	82	80	80	79	73	69	69	70	69	69	72	73	85	89	88	93	94	99	78.0	6.3	
19	98	96	94	91	89	87	85	85	82	82	79	77	70	80	80	79	77	76	83	79	76	81	83	89	83.9	10.6	
20	89	88	90	88	86	86	94	98	95	100	96	91	92	92	89	90	89	89	91	95	93	95	93	92	91.6	11.9	
21	92	89	87	87	87	87	87	88	93	97	99	98	97	96	98	85	86	89	88	85	87	89	84	85	90.1	12.4	
22	86	86	84	90	89	93	89	84	88	83	86	81	75	78	64	74	82	80	79	87	73	68	83	74	81.7	10.5	
23	61	58	62	70	74	77	79	73	71	66	65	61	60	58	59	60	71	76	78	80	83	85	87	89	70.7	6.2	
24	78	76	76	76	78	78	82	84	91	89	92	95	95	91	90	86	87	85	87	85	89	87	81	80	85.1	9.6	
25	78	78	77	82	79	82	87	89	87	92	79	84	75	83	82	81	78	89	90	91	95	88	89	90	84.2	10.2	
26	88	93	93	96	96	93	97	94	92	91	89	88	82	80	85	89	85	84	94	85	93	88	94	94	90.0	9.1	
27	97	92	93	98	96	100	94	96	98	92	94	94	92	94	97	96	98	93	93	97	96	90	86	86	94.5	7.6	
28	79	87	91	91	96	94	90	91	93	91	91	91	91	93	98	98	96	96	99	100	99	99	99	99	93.5	9.2	
29	100	100	100	99	98	96	98	96	93	92	87	84	87	87	91	91	94	93	93	93	92	92	93	93	93.5	10.6	
30	95	91	93	96	94	96	98	99	98	98	96	94	92	92	91	93	96	96	96	98	91	93	94	94	94.7	10.4	
Mean ...	85.8	85.7	86.6	87.5	87.5	87.0	88.2	87.7	86.6	84.9	80.9	78.7	75.5	73.6	74.5	76.6	80.2	81.9	84.6	85.1	85.9	86.4	87.2	87.2	83.5	†8.8	
Vapour Pressure* ...	mb. 8.3	mb. 8.2	mb. 8.2	mb. 8.3	mb. 8.3	mb. 8.2	mb. 8.3	mb. 8.4	mb. 8.6	mb. 8.9	mb. 9.0	mb. 9.2	mb. 9.0	mb. 8.9	mb. 8.9	mb. 8.8	mb. 9.0	mb. 8.8	mb. 8.8	mb. 8.8	mb. 8.7	mb. 8.5	mb. 8.5	mb. 8.3	mb. 8.3	†8.6	

481. Richmond (Kew Observatory) : North Wall Screen :  $h_t$  = 3.0 metres.

December, 1930.

1	96	96	94	90	90	93	93	93	92	91	87	88	89	83	87	88	81	81	83	87	84	86	87	89	88.8	9.7
2	86	86	88	88	88	89	91	89	86	91	89	86	83	84	84	83	87	86	86	85	86	86	84	84	86.6	9.4
3	83	83	83	85	83	82	82	79	79	80	75	76	80	82	81	81	83	80	83	81	84	84	84	86	81.5	8.3
4	88	87	87	90	91	90	91	87	92	89	91	91	88	90	94	95	100	97	96	95	97	93	95	96	91.9	8.1
5	98	96	96	96	96	94	92	93	94	94	94	93	92	92	91	91	89	89	89	90	90	90	90	90	92.6	6.0
6	91	91	91	91	91	91	92	93	94	94	94	94	93	92	90	90	92	91	98	89	94	93	87	90	91.9	5.7
7	92	97	88	87	85	87	88	85	89	86	85	86	87	91	90	97	96	96	96	98	94	92	97	97	91.0	7.8
8	94	94	89	74	93	94	94	92	82	80	86	84	82	86	94	93	99	97	95	95	98	93	100	97	91.0	7.6
9	100	100	100	100	100	100	100	100	100	97	93	90	86	85	90	85	91	89	91	89	89	94	96	94	94.3	6.2
10	92	92	92	94	94	95	96	97	98	99	100	100	100	96	94	98	100	98	98	94	94	96	93	80	95.7	6.1
11	82	73	72	74	72	80	82	85	85	85	87	92	87	90	97	98	98	96	97	100	100	100	98	85	88.0	7.7
12	78	83	86	87	92	91	89	90	92	88	83	76	72	77	76	90	91	99	94	98	94	91	94	93	87.5	8.6
13	88	92	94	94	96	89	86	88	90	87	83	74	74	71	72	83	85	86	88	91	90	90	99	96	86.5	9.2
14	89	88	84	92	91	90	91	94	96	91	86	75	74	73	74	81	87	89	89	90	95	91	91	96	87.4	7.1
15	94	93	93	89	91	94	94	92	92	92	93	91	88	89	93	93	98	100	98	98	98	98	98	98	94.0	6.3
16	98	96	98	94	93	91	84	90	79	81	76	77	77	72	80	82	81	82	82	79	82	82	79	87	84.5	6.8
17	87	85	87	85	87	90	92	96	95	96	95	88	92	93	93	92	98	96	96	98	96	98	98	98	92.7	7.0
18	98	98	98	98	98	98	98	99	99	99	91	94	98	92	99	99	96	99	99	98	98	99	99	96	97.2	8.2
19	95	96	98	98	95	93	93	99</																		

For exact hours, Greenwich Mean Time.

482. Richmond (Kew Observatory): North Wall Screen:  $h_s = 3.0$  metres.

1930.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Relative Humidity ...	% 86.8	% 87.4	% 88.3	% 88.7	% 88.6	% 87.8	% 86.1	% 83.6	% 80.2	% 76.2	% 73.0	% 70.4	% 68.6	% 67.7	% 67.9	% 69.1	% 71.2	% 73.8	% 76.7	% 79.3	% 81.6	% 83.3	% 84.8	% 86.3	% 79.5
Vapour Pressure in Millibars* ...	mb. 9.9	mb. 9.8	mb. 9.8	mb. 9.7	mb. 9.7	mb. 9.7	mb. 9.8	mb. 9.9	mb. 10.0	mb. 10.1	mb. 10.1	mb. 10.2	mb. 10.2	mb. 10.2	mb. 10.2	mb. 10.3	mb. 10.3	mb. 10.4	mb. 10.3	mb. 10.3	mb. 10.2	mb. 10.1	mb. 10.0	mb. 10.0	mb. 10.1

\* Computed from the mean temperature and mean relative humidity.

RELATIVE HUMIDITY: MONTHLY MEANS AND DIURNAL INEQUALITIES.

The departures from the mean of the day are adjusted for non-cyclic change.

483. Richmond (Kew Observatory): North Wall Screen:  $h_s = 3.0$  metres.

1930.

Month.	Mean.	Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	% 87.0	%	+ 4.1	+ 3.5	+ 3.3	+ 4.1	+ 3.7	+ 3.7	+ 3.2	+ 3.0	+ 2.9	+ 0.4	- 1.4	- 3.2	- 5.3	- 5.8	- 5.9	- 3.9	- 1.7	- 0.5	- 1.2	- 1.8	- 1.5	- 1.1	+ 0.4	+ 1.8
Feb.	% 78.3	%	+ 3.7	+ 4.1	+ 5.2	+ 5.3	+ 5.1	+ 4.6	+ 4.8	+ 4.8	+ 2.3	- 0.3	- 3.2	- 5.7	- 7.9	- 9.9	- 9.2	- 8.3	- 5.1	- 2.3	+ 0.1	+ 1.2	+ 2.1	+ 2.9	+ 2.3	+ 3.4
Mar.	% 77.3	%	+ 9.5	+ 10.6	+ 10.9	+ 10.5	+ 10.3	+ 10.8	+ 10.2	+ 7.3	+ 2.3	- 2.7	- 6.5	- 10.9	- 13.3	- 15.9	- 15.9	- 13.9	- 11.2	- 7.5	- 4.2	- 1.4	+ 1.7	+ 4.3	+ 6.0	+ 8.8
April	% 77.4	%	+ 8.8	+ 9.3	+ 9.9	+ 10.3	+ 10.7	+ 10.7	+ 8.7	+ 5.2	+ 2.7	- 3.0	- 7.4	- 10.9	- 12.5	- 12.4	- 13.2	- 10.9	- 10.3	- 8.0	- 5.2	- 1.6	+ 1.5	+ 4.2	+ 5.6	+ 7.7
May	% 76.2	%	+ 11.0	+ 12.3	+ 13.5	+ 13.3	+ 13.3	+ 10.9	+ 6.7	+ 2.8	- 2.1	- 6.7	- 9.3	- 11.2	- 13.6	- 15.6	- 15.4	- 13.6	- 10.5	- 8.2	- 4.8	- 0.8	+ 3.2	+ 6.3	+ 8.3	+ 10.0
June	% 72.1	%	+ 12.4	+ 14.1	+ 15.1	+ 16.4	+ 15.3	+ 12.8	+ 8.0	+ 3.7	- 0.9	- 5.9	- 9.9	- 12.3	- 13.1	- 13.5	- 14.7	- 15.5	- 15.0	- 10.3	- 7.9	- 2.9	+ 1.4	+ 4.7	+ 7.7	+ 10.1
July	% 71.9	%	+ 10.4	+ 12.4	+ 13.4	+ 14.7	+ 14.2	+ 10.9	+ 6.9	+ 2.1	- 2.5	- 6.4	- 9.2	- 11.1	- 11.8	- 11.5	- 12.4	- 11.3	- 12.5	- 9.9	- 5.9	- 3.7	+ 0.6	+ 4.1	+ 7.8	+ 10.8
Aug.	% 76.2	%	+ 10.9	+ 11.1	+ 12.3	+ 14.1	+ 14.0	+ 12.7	+ 9.5	+ 4.0	- 0.3	- 5.5	- 7.7	- 10.9	- 12.0	- 13.6	- 14.6	- 16.8	- 14.9	- 11.6	- 6.7	- 0.3	+ 3.4	+ 5.0	+ 7.7	+ 10.1
Sept.	% 82.1	%	+ 9.1	+ 9.4	+ 9.9	+ 9.9	+ 10.3	+ 9.9	+ 8.5	+ 4.9	- 0.0	- 5.2	- 10.0	- 10.6	- 14.5	- 14.6	- 14.0	- 12.7	- 10.2	- 6.1	- 0.9	+ 2.7	+ 4.7	+ 5.3	+ 6.5	+ 7.6
Oct.	% 81.4	%	+ 6.4	+ 6.5	+ 8.3	+ 8.5	+ 8.4	+ 8.3	+ 8.4	+ 6.5	+ 1.3	- 5.1	- 8.7	- 14.3	- 15.7	- 15.3	- 12.3	- 10.1	- 5.8	- 2.7	+ 1.3	+ 3.5	+ 4.4	+ 5.7	+ 6.3	+ 6.1
Nov.	% 83.5	%	+ 2.5	+ 2.4	+ 3.3	+ 4.1	+ 4.1	+ 3.6	+ 4.8	+ 4.2	+ 3.1	+ 1.4	- 2.6	- 4.8	- 8.1	- 10.0	- 9.1	- 7.1	- 3.5	- 1.9	+ 0.8	+ 1.4	+ 2.1	+ 2.6	+ 3.4	+ 3.3
Dec.	% 90.1	%	+ 0.3	+ 0.5	+ 1.3	+ 0.4	+ 1.1	+ 1.1	+ 0.6	+ 1.5	+ 1.2	+ 0.3	- 0.4	- 2.4	- 3.4	- 3.5	- 2.7	- 0.7	+ 0.4	+ 0.6	+ 0.5	+ 0.5	+ 0.9	+ 0.4	+ 0.7	+ 0.7
Year	% 79.5	%	+ 7.4	+ 8.0	+ 8.9	+ 9.3	+ 9.2	+ 8.3	+ 6.7	+ 4.2	+ 0.8	- 3.2	- 6.4	- 9.0	- 10.9	- 11.8	- 11.6	- 10.4	- 8.4	- 5.7	- 2.8	- 0.3	+ 2.0	+ 3.7	+ 5.2	+ 6.7

RAINFALL: ANNUAL TOTALS OF HOURLY VALUES.

Amounts, in millimetres; durations, in hours for periods of sixty minutes between the exact hours, Greenwich Mean Time.

484. Richmond (Kew Observatory):  $H_s$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_s$  (height of receiving surface above ground) = 5.5 metres + 0.53 metres. 1930.

Hour. G.M.T.	0 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	21 to 22.	22 to 23.	23 to 24.	0 to 24.
Amount ...	mm. 30.2	mm. 22.7	mm. 22.0	mm. 27.5	mm. 22.9	mm. 23.7	mm. 22.0	mm. 23.9	mm. 18.0	mm. 14.6	mm. 24.4	mm. 28.2	mm. 29.4	mm. 38.9	mm. 27.8	mm. 45.7	mm. 30.7	mm. 22.4	mm. 25.2	mm. 27.3	mm. 36.8	mm. 17.6	mm. 19.2	mm. 42.7	mm. 643.8
Duration ...	hr. 23.2	hr. 18.2	hr. 16.9	hr. 21.4	hr. 21.9	hr. 21.8	hr. 22.2	hr. 22.0	hr. 17.2	hr. 11.5	hr. 15.7	hr. 14.0	hr. 16.5	hr. 15.8	hr. 17.6	hr. 17.7	hr. 15.4	hr. 16.1	hr. 14.3	hr. 19.6	hr. 21.9	hr. 20.1	hr. 17.7	hr. 23.1	hr. 441.8

485. Richmond (Kew Observatory).

NOTES ON RAINFALL.

1930.

Dry Periods.

The following definitions are given in British Rainfall:—

- An "absolute drought" is a period of at least 15 consecutive days to none of which is credited 0.2 mm. of rain or more.
- A "partial drought" is a period of at least 29 consecutive days, the mean daily rainfall of which does not exceed 0.2 mm.
- A "dry spell" is a period of at least 15 consecutive days to none of which is credited 1.0 mm. of rain or more.
- Partial droughts: February 4th–March 5th.
- Dry Spells: March 17th–April 1st; June 2nd–17th.

Wet Periods.

The following definitions are given in British Rainfall:—

- A "rain spell" is a period of at least 15 consecutive days to each of which is credited 0.2 mm. of rain or more.
- A "wet spell" is a period of at least 15 consecutive days to each of which is credited 1.0 mm. of rain or more.
- There were no notable wet periods.

Rainfall Duration.

Hours:	0.1–1.0	1.1–2.0	2.1–6.0	6.1–12	>12
Number of days:	61	29	61	24	9

Continuous Falls.

The fall of longest duration was 9 mm. in 7h. 6m. on March 15th.

Heavy Falls in Short Periods.

The largest fall of the year was 22 mm. in 96 minutes on May 3rd during a thunderstorm.



Amounts, in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

488. Richmond (Kew Observatory) : H, (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h, (height of receiving surface above ground) = 5.5 metres + 0.53 metres. March, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
Day.	mm.	mm.	hr.																									
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	4.3	1.0	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
10	...	...	...	...	2	2	2	1	...	3	3	5	2	2	...	...	...	...	...	...	...	...	...	4	...	0.4	0.8	
11	...	...	...	1.4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	0.8	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1.6	9	4	...	...	...	1	1	3.3	2.5	
15	4.1	5	1	...	1	2	1	3	...	...	1	...	...	...	...	1	4	1.0	2.5	6	2.4	1.7	7	...	14.9	10.7		
16	...	...	...	3	2	4.4	2.5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.6	3.0	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	3.4
18	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	0.4	0.9
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.7
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	1	5	...	3	...	...	...	...	...	...	...	...	...	...	0.9	0.8
31	...	...	...	...	...	...	...	...	...	...	...	...	5	1	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.8
Sum.	4.5	0.6	0.1	1.9	0.6	4.8	2.7	0.5	0.3	0.3	0.6	0.2	0.8	0.6	0.2	0.4	0.6	2.6	3.4	1.0	2.6	2.0	1.4	4.8	37.5	31.8		
Total Duration.	hr. 2.1	hr. 1.4	hr. 0.2	hr. 1.2	hr. 1.6	hr. 2.1	hr. 1.4	hr. 0.7	hr. 0.5	hr. 1.0	hr. 1.3	hr. 0.7	hr. 1.3	hr. 0.4	hr. 0.3	hr. 0.4	hr. 1.1	hr. 1.9	hr. 1.5	hr. 1.5	hr. 1.8	hr. 1.9	hr. 2.6	hr. 2.9	hr. 31.8			

489. Richmond (Kew Observatory) : H, = 5.5 metres + 0.53 metres.

April, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	1	6	1.0	1	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	3	2	1.9	1.0	...	5	2.9	1.4	2.5	1.8	...	...	...	...	...	...	...	...	...	...	...	4.3
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.7
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	5	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	1.4	6	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9
13	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2.5
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	0.1
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	3	...	...	...	...	1	2	4	...	...	...	...	...	...	...	4	...	3	...	...	1	2	3	3	...	1.6	3.7
19	...	...	...	...	...	2	...	1	3	...	...	1.6	1.7	7	...	...	...	...	...	...	...	...	...	...	...	...	2.6
20	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	2	3	...	...	...	...	...	...	...	...	3.3
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	2	1	2	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.6
24	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	1.9	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	0.8	0.5	0.1	0.1	0.7	1.7	2.6	4.4	2.4	0.4	0.8	5.0	3.2	4.8	9.5	1.6	0.4	2.7	0.6	1.0	2.6	0.2	0.6	0.7	47.4	35.7	
Total Duration.	hr. 1.7	hr. 1.0	hr. 0.3	hr. 0.1	hr. 0.5	hr. 1.5	hr. 2.8	hr. 4.4	hr. 3.6	hr. 0.4	hr. 1.2	hr. 2.1	hr. 1.7	hr. 2.1	hr. 2.2	hr. 1.2	hr. 0.8	hr. 1.5	hr. 0.4	hr. 0.5	hr. 0.9	hr. 0.9	hr. 1.7	hr. 2.2	hr. 35.7		



Amounts, in millimetres, for periods of sixty minutes between the exact hours, Greenwich Mean Time.

492. Richmond (Kew Observatory) :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 5.5 metres + 0.53 metres. July, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24			
Day.	mm.	hr.																											
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
3	1.2	.7	...	.9	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	1.7			
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	...	...	...	...	...	...	...	...	...	1.8	0.4		
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	0.5		
14	...	...	...	...	...	...	...	2.0	...	...	...	1.7	.2	.3	...	...	...	.8	3.2	...	...	(...)	.9	...	8.3	2.2			
15	...	...	.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(.1)	.4	2.6	3.9	2.5		
16	.2	...	.1	.3	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	1.2		
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	0.1	0.2		
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.2	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	...	...	.1	.2	.1	.3	.6	1.6	1.1	.4	.2	.3	1.3	.1	6.3	5.1			
21	...	.6	1.1	.5	.3	.5	.5	.1	...	...	...	...	.2	.5	1.2	.2	...	...	...	...	...	...	...	...	...	5.7	6.9		
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.3		
23	...	.2	.4	.5	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	2.9	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.9	.7	...	...	...	...	...	3.7	1.5	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	...	...	...	...	...	...	...	...	...	...	...	...	5.0	2.2	1.1	.3	.5	.1	...	...	...	...	...	...	...	...	1.2	0.9	
30	...	...	...	...	.1	...	...	...	.1	.1	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.5	1.1	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	1.3
Sum.	1.4	1.5	2.2	2.2	0.9	0.6	0.5	2.3	0.1	0.1	0.1	1.9	5.5	3.2	2.5	2.7	1.6	2.7	7.3	1.1	0.2	0.5	2.9	2.8	46.8	28.9			
Total Duration.	hr. 0.9	hr. 1.1	hr. 2.7	hr. 2.3	hr. 1.5	hr. 1.2	hr. 1.0	hr. 1.0	hr. 0.1	hr. 0.2	hr. 0.2	hr. 0.7	hr. 0.6	hr. 1.8	hr. 1.4	hr. 1.6	hr. 1.1	hr. 1.7	hr. 2.5	hr. 0.9	hr. 0.2	hr. 0.9	hr. 2.2	hr. 1.1	hr. 28.9				

493. Richmond (Kew Observatory) :  $H_r$  = 5.5 metres + 0.53 metres. August, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24				
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
4	3.4	.8	1.5	1.3	1.2	1.5	.9	.3	.2	...	...	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	2.9	1.8			
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.8	7.8		
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.0	2.5		
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
11	...	.7	1.8	.4	...	...	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.3	2.1		
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	0.8	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.6	
14	1.1	1.9	.4	1.2	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.9	3.7	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.6	1.2
21	...	...	...	.9	1.2	1.8	.9	.2	.1	...	...	.6	1.5	1.5	...	...	.4	...	...	...	...	...	...	...	...	...	...	9.1	6.9	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	...	...	...	...																										

Amounts, in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

494. Richmond (Kew Observatory) :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 5.5 metres + 0.53 metres. September, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	1.7	...	.1	1.2	.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	1.2
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18.1	1.6
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.1	1.3
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	0.8
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	.4	...	.5	...	...	...	...	...	...	1.7	2.8	1.1	...	...	...	...	...	...	...	...	...	...	5.9	2.9
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	0.8
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	3.2
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	5.9
19	...	.7	.1	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	1.2
20	...	...	.6	.2	.3	...	.1	.2	.1	...	...	...	1.6	...	...	...	...	...	...	...	...	...	...	...	...	5.0	3.2
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.2	5.4
22	...	1.3	.3	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	2.0
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	1.0
24	...	...	...	(...)	(.1)	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.4
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	.3	...	...	.1	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.3	2.9
28	...	...	...	...	.6	.4	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	1.0
29	...	...	...	...	.1	.2	.1	.5	.3	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	2.0
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	6.6
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	2.3	2.7	0.5	1.1	2.3	2.0	1.0	0.4	1.3	0.5	1.7	1.2	3.5	3.1	1.6	0.9	2.1	1.4	1.8	8.5	14.9	4.4	2.2	2.9	64.3	43.7	
Total Duration.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.
	2.2	1.7	0.7	1.6	1.5	2.5	1.7	0.9	1.0	0.4	1.3	1.3	2.1	1.1	2.1	1.3	2.5	1.9	1.3	3.6	4.0	3.1	1.5	2.4	43.7	43.7	

495. Richmond (Kew Observatory) :  $H_r = 5.5$  metres +  $0.53$  metres. October, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	0.4	1.6	3.7	4.1	0.8	0.3	0.4	0.1	...	...	0.1	...	...	0.2	1.9	8.5	0.4	...	0.1	2.0	1.4	0.8	0.4	0.1	27.3	18.9	
Total Duration.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.
	0.9	1.0	2.3	3.2	1.5	1.0	0.7	0.3	...	...	0.4	...	...	0.2	0.6	1.0	0.9	...	...	1.4	1.6	1.2	0.4	0.3	18.9	18.9	

Amounts, in millimetres, for periods of sixty minutes, between the exact hours, Greenwich Mean Time.

496. Richmond (Kew Observatory) :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 5.5 metres + 0.53 metres. November, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24		
Day.	mm.	mm.	hr.																									
1	...	...	...	.3	.3	.1	...	.2	.3	.4	.5	.8	.8	...	...	...	...	...	...	...	...	...	...	...	...	3.7	6.2	
2	...	...	...	.1	...	.2	.3	.2	1.6	.5	3.4	1.2	...	...	...	...	...	...	...	...	...	...	...	...	...	9.3	5.8	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	3.5	1.4	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.0	2.5	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.0	2.2
10	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	.1	.3	.4	.3	.8	.5	.5	.5	.2	...	...	...	...	3.6	5.7	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	2.4	5.5	2.9	6.0	.1	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	19.1	6.1	
21	...	...	...	...	...	...	...	...	...	1.3	1.9	2.6	.9	.9	.3	...	...	...	...	...	...	...	...	...	...	7.9	5.3	
22	...	...	...	1.2	...	1.0	.4	...	.2	.3	1.6	2.8	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	3.3	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	1.1	.4	1.2	.4	.2	...	.2	...	...	...	...	...	...	...	...	...	4.3	3.9	
25	...	...	...	...	...	...	...	...	...	...	...	.2	.4	...	...	...	...	...	...	...	...	...	...	...	...	1.1	1.5	
26	...	...	.1	...	.1	...	...	...	...	.5	1.6	.3	...	...	.2	...	...	...	...	...	...	...	...	...	...	7.5	3.6	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	.7	1.0	.8	.6	1.0	.3	.8	.7	.7	.2	1.0	.3	...	2.1	3.5	.4	.2	.6	...	...	...	...	...	...	14.9	12.9	
29	...	...	...	.5	1.2	.2	1.6	.4	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.3	5.1
30	...	...	...	...	...	...	...	...	...	(...)	(.1)	(.1)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	0.2	...	
Sum.	3.5	2.2	1.2	3.0	2.2	2.5	5.0	7.1	7.0	10.1	10.6	9.4	2.7	1.3	1.1	2.6	4.3	1.4	2.7	2.8	6.6	2.7	1.6	4.2	97.8	68.3		
Total Duration.	hr. 1.0	hr. 1.7	hr. 1.3	hr. 2.6	hr. 2.8	hr. 2.2	hr. 2.8	hr. 3.6	hr. 5.2	hr. 5.4	hr. 5.5	hr. 4.5	hr. 3.0	hr. 2.0	hr. 1.7	hr. 1.5	hr. 1.7	hr. 1.8	hr. 2.8	hr. 3.2	hr. 4.8	hr. 3.2	hr. 1.5	hr. 2.5	hr. 68.3			

497. Richmond (Kew Observatory) :  $H_r$  = 5.5 metres + 0.53 metres.

December, 1930.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24		
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	1.9
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.8	1.7
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.5
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.8	6.9
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	2.0
15	...	...	(...)	(...)	(.1)	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	0.6
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.3
18	(...)	(...)	(.1)	(...)	(...)	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.5
19	(...)	(.1)	(...)	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...
20	(...)	(.1)	(...)	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	.3	.4	.3	.3	1.0	.3	.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.9	7.0
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	3.2
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	1.1
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.7	2.8
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	2.9
31	...	...	...	...	...	.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	3.0
Sum.	...	0.1	0.2	0.6	2.6	2.4	0.7	3.1	4.7	2.4	5.4	3.6	4.2	3.9	3.9	4.6	1.2	...	...	1.9	0.7	...	0.1	...	46.3	34.4		
Total Duration.	hr. ...	hr. ...	hr. ...	hr. 0.9	hr. 1.9	hr. 1.7	hr. 2.0	hr. 2.3	hr. 2.7	hr. 2.3	hr. 2.8	hr. 2.4	hr. 2.5	hr. 2.3	hr. 2.9	hr. 3.9	hr. 1.6	hr. ...	hr. ...	hr. 1.3	hr. 0.9	hr. ...	hr. ...	hr. ...	hr. ...	hr. 34.4		

NOTE.—For Annual Totals, see table 484.

For periods of sixty minutes, between the exact hours of Local Apparent Time.

498. Richmond (Kew Observatory) :  $h_s$  (Height of recorder above ground) = 13.3 metres.

January, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.			
																					Sky.	Total.	Vertical.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%		mw/cm <sup>2</sup>	mw/cm <sup>2</sup>							
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2	—	—	—	—	—	—	·3	·5	·6	·8	·4	—	—	—	—	—	—	—	—	2·6	33	Cirrus	48	13
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	·5	1·0	1·0	·8	·5	—	—	—	—	—	—	—	—	3·8	48	Clear	49	13
5	—	—	—	—	—	—	—	·2	·9	·4	·2	·7	·1	—	—	—	—	—	—	2·5	32	—	—	—
6	—	—	—	—	—	—	·9	1·0	1·0	1·0	1·0	·3	—	—	—	—	—	—	—	6·2	78	Clear	53	15
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9	—	—	—	—	—	—	·9	1·0	·7	·5	·1	—	—	—	—	—	—	—	—	3·2	40	—	—	—
10	—	—	—	—	—	—	—	1·0	1·0	1·0	·8	·3	·1	—	—	—	—	—	—	5·2	64	Clear	54	15
11	—	—	—	—	—	—	—	·3	1·0	·7	·1	—	—	—	—	—	—	—	—	2·1	26	Clear	53	15
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
13	—	—	—	—	—	·3	·9	·7	—	—	—	—	—	—	—	—	—	—	—	1·9	23	—	—	—
14	—	—	—	—	—	·3	·4	·5	·1	·4	—	·6	·1	—	—	—	—	—	—	2·4	29	—	—	—
15	—	—	—	—	—	—	—	—	—	—	·1	—	—	—	—	—	—	—	—	0·1	1	—	—	—
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
17	—	—	—	—	—	·1	—	—	—	—	—	—	—	—	—	—	—	—	—	0·1	1	—	—	—
18	—	—	—	—	—	—	—	—	—	·3	—	—	—	—	—	—	—	—	—	0·3	4	—	—	—
19	—	—	—	—	—	·1	1·0	1·0	·8	1·0	1·0	·2	—	—	—	—	—	—	—	6·1	72	—	—	—
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
22	—	—	—	—	—	—	—	—	—	—	·1	—	—	—	—	—	—	—	—	0·1	1	—	—	—
23	—	—	—	—	—	—	—	—	—	—	—	·5	·4	—	—	—	—	—	—	1·0	12	—	—	—
24	—	—	—	—	—	—	—	—	—	—	·3	·8	·1	—	—	—	—	—	—	1·2	14	—	—	—
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
27	—	—	—	—	—	—	—	—	—	—	·2	·1	—	—	—	—	—	—	—	0·3	3	—	—	—
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
30	—	—	—	—	—	—	—	·1	·8	1·0	·2	·6	·3	—	—	—	—	—	—	3·0	33	—	—	—
31	—	—	—	—	—	·2	—	—	—	—	—	—	—	—	—	—	—	—	—	0·2	2	—	—	—
Sum.	—	—	—	—	—	1·0	5·9	7·3	7·9	7·9	5·1	5·6	1·6	—	—	—	—	—	—	42·3	—	—	—	—
Mean	—	—	—	—	—	·03	·19	·24	·25	·25	·16	·18	·05	—	—	—	—	—	—	1·36	16	—	—	—

499. Richmond (Kew Observatory) :  $h_s$  = 13.3 metres.

February, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.			
																					Sky.	Total.	Vertical.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%		mw/cm <sup>2</sup>	mw/cm <sup>2</sup>							
1	—	—	—	—	—	—	—	—	—	—	—	·1	—	—	—	—	—	—	—	0·1	1	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
3	—	—	—	—	—	—	—	—	—	—	—	·2	—	—	—	—	—	—	—	0·2	2	—	—	—
4	—	—	—	—	—	—	—	—	·4	—	—	—	—	—	—	—	—	—	—	0·4	4	—	—	—
5	—	—	—	—	—	—	—	—	·6	·1	·3	·1	—	—	—	—	—	—	—	1·1	12	—	—	—
6	—	—	—	—	—	—	·1	·3	·7	·8	·4	·3	·1	—	—	—	—	—	—	2·7	29	—	—	—
7	—	—	—	—	—	·2	·8	·8	·8	·4	—	—	—	—	—	—	—	—	—	3·0	32	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9	—	—	—	—	—	·4	·7	·9	1·0	1·0	1·0	1·0	·4	—	—	—	—	—	—	6·4	67	—	—	—
10	—	—	—	—	—	·3	·8	·4	—	—	—	—	—	—	—	—	—	—	—	1·5	16	—	—	—
11	—	—	—	—	—	·2	·6	·4	·5	·4	—	—	—	—	—	—	—	—	—	2·1	22	—	—	—
12	—	—	—	—	—	—	—	—	—	·5	·4	—	—	—	—	—	—	—	—	0·9	9	—	—	—
13	—	—	—	—	—	—	—	—	·2	·1	—	—	—	—	—	—	—	—	—	0·3	3	—	—	—
14	—	—	—	—	—	—	—	—	·1	—	·1	·1	·1	—	—	—	—	—	—	0·4	4	—	—	—
15	—	—	—	—	—	—	·6	·9	·5	·5	·8	·5	·5	—	—	—	—	—	—	4·3	43	—	—	—
16	—	—	—	—	·3	1·0	1·0	1·0	1·0	·9	·4	·3	·4	—	—	—	—	—	—	6·3	63	—	—	—
17	—	—	—	—	·3	1·0	1·0	·7	—	·2	·3	·5	·3	—	—	—	—	—	—	4·3	43	—	—	—
18	—	—	—	—	—	—	—	·1	·3	·1	—	—	—	—	—	—	—	—	—	0·5	5	—	—	—
19	—	—	—	—	—	—	—	—	—	·3	·6	—	—	—	—	—	—	—	—	0·9	9	—	—	—
20	—	—	—	—	—	—	—	·2	·4	·7	·1	—	—	—	—	—	—	—	—	1·4	14	—	—	—
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
22	—	—	—	—	—	—	—	—	·1	·1	—	—	—	—	—	—	—	—	—	2·2	21	—	—	—
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
24	—	—	—	—	—	—	—	·4	·4	·6	·3	—	—	—	—	—	—	—	—	1·7	16	—	—	—
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
26	—	—	—	—	—	—	—	—	—	—	—	·1	·4	·2	—	—	—	—	—	0·7	7	—	—	—
27	—	—	—	—	—	—	—	—	·1	·4	·9	·7	·1	—	—	—	—	—	—	2·2	21	—	—	—
28	—	—	—	—	—	—	—	—	·5	·9	1·0	1·0	·1	—	—	—	—	—	—	3·5	33	—	—	—
Sum.	—	—	—	—	0·3	2·4	5·6	6·5	8·8	7·7	7·1	5·5	3·2	0·5	—	—	—	—	—	47·1	—	—	—	—
Mean	—	—	—	—	·01	·09	·20	·23	·30	·27	·25	·20	·11	·02	—	—	—	—	—	1·68	17	—	—	—
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Sky.	Total.	Vertical.	
																						Radiation at Noon. Ångström Pyrheliometer.		

For periods of sixty minutes, between the exact hours of Local Apparent Time.

500. Richmond (Kew Observatory) :  $h_s$  (Height of recorder above ground) = 13.3 metres.

March, 1930.

Hour. L.A.T.	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	11 to	Noon to 13	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.			
	4.	5.	6.	7.	8.	9.	10.	11.	14.		15.	16.	17.	18.	19.	20.	21.	hr.			%	Sky.	Total. mw/cm <sup>2</sup>	Vertical. mw/cm <sup>2</sup>
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	Sky.	Total.	Vertical.
1	—	—	—	...	...	...	...	...	...	4	1.0	1.0	.9	.9	...	...	...	...	...	4.2	39	...	...	...
2	—	—	—	...	...	...	...	...	...	...	.5	.1	...	...	...	...	...	...	...	0.6	6	...	...	...
3	—	—	—	...	...	...	...	...	...	...	.1	.6	.9	.7	...	...	...	...	...	2.8	26	...	...	...
4	—	—	—	...	...	...	...	...	...	...	.8	.5	.2	...	...	...	...	...	...	1.5	14	Haze	50	27
5	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	—	—	—	...	...	...	...	...	...	...	1.0	1.0	1.0	.9	...	...	...	...	...	7.1	63	Clear	71	39
10	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.2	37	...	...	...
11	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	5	...	...	...
12	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.2	37	...	...	...
13	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.0	35	Haze	46	26
14	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	16	...	...	...
15	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	30	...	...	...
16	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	3	...	...	...
17	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2	27	...	...	...
18	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	26	...	...	...
19	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.5	54	...	...	...
20	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.8	40	Haze	59	36
21	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	49	...	...	...
22	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.4	61	Clear	73	45
23	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.6	70	Clear	75	47
24	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	4	...	...	...
25	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.8	88	Clear	79	50
26	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	28	...	...	...
27	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.0	72	...	...	...
28	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	4	...	...	...
29	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.7	61	Clear	72	48
30	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.4	58	...	...	...
31	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.8	53	...	...	...
Sum.	—	—	—	0.8	7.9	10.8	11.9	15.2	14.1	16.8	16.2	12.0	9.5	5.7	1.2	...	...	...	122.1	—	—	—	—	
Mean	—	—	—	.03	.25	.35	.38	.49	.45	.54	.52	.39	.31	.18	.04	...	...	...	3.94	33	—	—	—	

501. Richmond (Kew Observatory) :  $h_s$  = 13.3 metres.

April, 1930.

Hour. L.A.T.	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	11 to	Noon to 13	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.			
	4.	5.	6.	7.	8.	9.	10.	11.	14.		15.	16.	17.	18.	19.	20.	21.	hr.			%	Sky.	Total. mw/cm <sup>2</sup>	Vertical. mw/cm <sup>2</sup>
1	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.8	45	...	...	...
2	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.8	45	...	...	...
3	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	3	...	...	...
5	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	2	...	...	...
7	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...
9	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	7	...	...	...
10	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.1	45	...	...	...
11	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.3	69	Haze	43	31
12	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	6	...	...	...
13	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	26	...	...	...
14	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.7	34	...	...	...
15	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1	37	...	...	...
16	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	3	...	...	...
17	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.8	35	...	...	...
18	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	16	...	...	...
19	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	10	...	...	...
20	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...
21	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	8	...	...	...
22	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.1	64	...	...	...
23	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	9	...	...	...
25	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	56	...	...	...
26	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	41	...	...	...
28	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.2	90	Haze	70	56
30	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.8	88	Clear	83	66
Sum.	—	—	—	1.3	4.7	6.7	7.7	10.1	10.5	11.0	9.7	9.7	9.4	7.9	7.3	6.0	2.0	...	104.0	—	—	—	—	
Mean	—	—	—	.04	.16	.22	.26	.34	.35	.37	.32	.32	.31	.26	.24	.20	.07	...	3.47	25	—	—	—	
Hour. L.A.T.	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	11 to	Noon to 13	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	Total for Day.	Per cent. of Possible.	Sky.	Total. mw/cm <sup>2</sup>	Vertical. mw/cm <sup>2</sup>	

For periods of sixty minutes, between the exact hours of Local Apparent Time.

502. Richmond (Kew Observatory) :  $h_s$  (Height of recorder above ground) = 13.3 metres.

May, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.		
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	Sky.						
1	—	...	4	1.0	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.8	...	...	...	...	11.1	75	...	...	...
2	—	...	...	...	4	1.0	1.0	1.0	.9	.2	.5	.3	...	.9	...	...	...	...	5.9	40	...	...	...
3	—	...	...	...	...	...	...	...	.1	.5	.9	.4	...	...	...	...	...	...	1.9	13	...	...	...
4	—	...	...	...	...	...	...	...	.4	1.0	.4	.8	.2	.8	.4	...	...	...	4.0	27	...	...	...
5	—	...	...	6	1.0	1.0	1.0	1.0	.9	.8	.5	.2	.2	.5	...	...	...	...	6.7	45	...	...	...
6	—	...	...	...	.4	.6	.8	.2	.3	.8	1.0	.3	.2	...	...	...	...	...	4.6	31	...	...	...
7	—	...	...	...	.1	.1	...	...	...	...	...	...	.4	.2	.2	...	...	...	1.0	7	...	...	...
8	—	...	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	.5	.3	.8	.2	...	.2	...	9.6	63	Clear	85	70
9	—	...	7	.4	.5	.4	...	.1	.1	.1	.7	.9	...	.4	.1	...	...	...	4.4	29	...	...	...
10	—	...	7	1.0	1.0	1.0	.9	.8	1.0	.2	...	...	...	...	...	...	...	...	6.6	43	...	...	...
11	—	...	...	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	2	...	...	...
12	—	...	...	.3	1.0	.5	.6	.6	.3	.3	.4	.3	.3	...	...	...	...	...	4.6	30	...	...	...
13	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	—	...	...	.2	.9	1.0	1.0	1.0	.7	.9	.7	1.0	1.0	.9	.4	...	...	...	9.7	63	...	...	...
15	—	...	8	.5	.4	.3	...	...	...	...	...	...	...	...	...	...	...	...	2.0	13	...	...	...
16	—	...	.3	1.0	.8	1.0	.7	.9	.9	1.0	1.0	.9	.9	.6	...	...	...	...	10.0	64	...	...	...
17	—	...	...	.2	...	...	.4	.8	.2	...	.1	.1	...	...	...	...	...	...	1.8	12	...	...	...
18	—	.1	1.0	1.0	1.0	.7	.9	.8	.8	...	.5	.3	.8	.6	.8	.8	.4	...	10.5	67	...	...	...
19	—	...	.6	.9	.1	.5	.9	.4	...	...	...	.1	.2	...	...	...	...	...	3.7	24	...	...	...
20	—	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	0.1	1	...	...	...
21	—	...	...	...	...	...	...	...	...	.1	.4	.7	.5	.9	1.0	1.0	.5	...	5.1	32	...	...	...
22	—	...	...	...	.6	.4	...	...	...	...	...	...	...	...	...	...	...	...	1.0	6	...	...	...
23	—	...	...	7	.5	.5	1.0	1.0	.9	.9	1.0	1.0	1.0	.6	.9	1.0	.3	...	11.3	71	...	...	...
24	—	...	...	...	...	...	...	...	...	...	.4	.6	.4	.2	...	...	...	...	1.6	10	...	...	...
25	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	.4	.9	.9	.6	...	...	...	...	...	...	2.8	17	...	...	...
27	...	...	...	...	...	.1	1.0	1.0	1.0	1.0	1.0	.8	.2	1.0	1.0	.8	.2	...	9.1	57	Clear	81	70
28	...	.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	.9	1.0	1.0	.7	...	...	13.6	84	Clear	76	66
29	...	...	.9	...	...	.2	.8	1.0	.9	.9	1.0	1.0	.9	.6	...	...	...	...	8.2	51	...	...	...
30	...	...	...	...	...	...	...	...	.2	...	...	...	...	...	...	...	...	...	0.2	1	...	...	...
31	...	...	...	...	...	...	...	...	.1	.1	...	...	.4	...	.2	...	...	...	0.8	5	...	...	...
Sum.	...	0.2	7.1	9.9	11.9	12.2	14.0	14.1	13.1	12.4	13.3	11.3	11.2	9.3	6.3	4.5	1.4	...	152.2	—	—	—	—
Mean	...	.01	.23	.32	.38	.39	.45	.45	.42	.40	.43	.36	.36	.30	.20	.15	.05	...	4.91	32	—	—	—

503. Richmond (Kew Observatory) :  $h_s$  = 13.3 metres.

June, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.		
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	Sky.						
1	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	0.1	1	...	...	...
2	...	...	...	.1	...	...	.5	1.0	1.0	.9	.1	.2	...	...	...	...	...	...	3.8	23	Haze	67	59
3	...	...	...	...	...	...	.8	.2	.7	.6	.1	...	...	...	.1	...	...	...	2.5	15	...	...	...
4	...	...	...	...	...	...	...	...	...	...	.1	.6	1.0	.7	.3	...	...	...	2.7	16	...	...	...
5	...	.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.6	...	14.8	91	Clear	75	66
6	...	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.2	...	13.9	85	Clear	74	65
7	...	...	...	.7	.5	1.0	.9	.3	...	.4	.7	1.0	1.0	1.0	1.0	1.0	.6	...	10.1	62	...	...	...
8	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	1.0	1.0	1.0	1.0	.9	1.0	.3	...	14.8	90	...	...	...
9	...	...	.9	1.0	1.0	1.0	1.0	1.0	.9	.9	1.0	1.0	1.0	1.0	.9	.8	.4	...	13.8	84	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.3	1.0	.3	...	1.6	10	...	...	...
12	...	...	...	...	...	...	.5	1.0	1.0	.9	1.0	.9	.2	.3	.1	...	...	...	5.9	36	...	...	...
13	...	...	.6	.7	.7	.7	.5	1.0	.6	.5	1.0	1.0	...	.2	...	...	...	...	7.5	45	...	...	...
14	...	...	...	.2	.2	.7	.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.5	...	...	9.9	60	...	...	...
15	...	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.6	...	14.3	87	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	0.1	1	...	...	...
17	...	...	...	...	...	...	.5	1.0	1.0	1.0	1.0	1.0	1.0	.8	...	...	...	...	7.3	44	...	...	...
18	...	...	...	...	...	...	.3	.9	.7	.3	...	.1	.1	.8	1.0	.6	...	...	4.8	29	...	...	...
19	...	...	1.0	1.0	1.0	.9	1.0	1.0	.9	.6	.4	1.0	1.0	1.0	1.0	.9	...	...	13.7	83	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	0.1	1	...	...	...
21	...	...	...	...	...	...	.2	...	.1	.1	.1	.2	.2	.3	.8	.1	...	...	2.1	13	...	...	...
22	...	...	...	.5	.4	.2	.1	...	.1	.2	.1	.1	.3	.1	.1	.3	.7	...	3.2	19	...	...	...
23	...	.1	.5	1.0	1.0	.9	1.0	1.0	.9	.8	.1	.8	1.0	.4	.4	.4	.4	...	10.7	65	...	...	...
24	...	...	...	...	...	...	.1	1.0	1.0	.9	.9	.8	1.0	.8	.9	.9	.8	...	9.1	55	...	...	...
25	...	.6	.5	1.0	1.0	1.0	.9	.9	.5	.9	.3	.2	.2	.4	...	...	...	...	9.4	57	...	...	...
26	...	...	.7	.9	1.0	.6	.7	1.0	1.0	.9	.1	.4	...	...	...	...	...	...	7.3	44	...	...	...
27	...	...	...	.2	...	.2	.6	.4	.6	.2	.5	.9	.4	.3	.1	.1	.1	...	4.6	28	...	...	...
28	...	.7	1.0	1.0	1.0	1.0	.9	.8	1.0	1.0	1.0	.9	.9	.8	.8	.9	.6	...	14.3	87	...	...	...
29	...	.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.4	...	14.8	90	...	...	...
30	...	.7	.3	...	.5	1.0	1.0	1.0	1.0	1.0	1.0	.8	.1	.5	1.0	.6	...	...	9.5	58	...	...	...
Sum.	...	3.4	9.9	13.3	13.3	14.2	16.7	19.5	19.0	18.0	15.3	17.2	15.9	16.1	14.2	13.6	7.1	...	226.7	—	—	—	—
Mean	...	.11	.33	.44	.44	.47	.56	.65	.63	.60	.51	.57	.53	.54	.47	.45	.24	...	7.56	46	—	—	—



For periods of sixty minutes, between the exact hours of Local Apparent Time.

506. Richmond (Kew Observatory) :  $h_s$  (Height of recorder above ground) = 13.3 metres.

September, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Angström Pyrheliometer.			
																					Sky.	Total. mw/cm <sup>2</sup>	Vertical. mw/cm <sup>2</sup>	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%			
1	—	—	...	...	·6	1·0	·9	1·0	·9	1·0	·8	·9	·6	·6	...	—	—	—	—	8·9	66	...	...	...
2	—	—	...	·3	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·9	...	—	—	—	11·2	83	Clear	69	50
3	—	—	...	...	·1	·7	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·4	...	—	—	—	9·2	68	Clear	45	33
4	—	—	...	·7	1·0	1·0	1·0	1·0	1·0	1·0	·9	·4	·9	·8	·3	...	—	—	—	10·0	75	Clear	67	48
5	—	—	...	...	·7	·8	1·0	1·0	1·0	1·0	·9	·9	·6	·5	...	—	—	—	—	8·4	63	...	...	...
6	—	—	...	...	...	·1	...	·6	·4	...	...	·1	·2	...	...	—	—	—	—	1·4	11	...	...	...
7	—	—	...	·1	1·0	·9	1·0	·9	·9	·9	·4	·3	·1	·2	·1	...	—	—	—	6·8	52	...	...	...
8	—	—	...	...	...	·5	·9	·9	·7	·3	·2	·5	·1	·1	·3	...	—	—	—	4·5	34	...	...	...
9	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...	...	...	...
10	—	—	...	...	...	...	·7	·2	·5	·7	·6	·6	·7	·5	·1	...	—	—	—	4·6	35	...	...	...
11	—	—	...	...	...	·6	·2	·5	·2	...	...	·4	...	...	...	—	—	—	—	1·9	15	...	...	...
12	—	—	...	...	...	...	...	...	...	·1	·1	...	...	...	...	—	—	—	—	0·2	2	...	...	...
13	—	—	...	...	...	...	·2	...	...	...	...	...	...	·5	...	—	—	—	—	0·7	5	...	...	...
14	—	—	...	...	...	...	...	...	...	...	...	...	·4	...	...	—	—	—	—	0·4	3	...	...	...
15	—	—	...	...	...	·4	·9	·8	1·0	·9	·5	1·0	1·0	1·0	·8	...	—	—	—	8·3	66	...	...	...
16	—	—	...	...	...	...	·1	...	...	...	...	...	...	...	...	—	—	—	—	0·1	1	...	...	...
17	—	—	...	...	...	·9	·3	...	...	...	...	...	...	...	...	—	—	—	—	1·2	10	...	...	...
18	—	—	...	·4	1·0	1·0	1·0	1·0	·9	·9	·7	·1	·9	·8	·2	...	—	—	—	8·9	71	...	...	...
19	—	—	...	...	...	...	...	...	...	...	·7	·9	·8	·5	...	—	—	—	—	2·9	24	...	...	...
20	—	—	...	...	...	...	·3	·5	...	·1	...	...	·2	...	...	—	—	—	—	1·1	9	...	...	...
21	—	—	...	...	...	·2	·1	·4	·3	·5	·5	·6	·3	·4	...	—	—	—	—	3·3	27	...	...	...
22	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...	...	...
23	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	—	...	...	...	...	...
24	—	—	...	...	...	·1	·8	·9	·8	1·0	1·0	1·0	·8	·8	...	—	—	—	—	7·2	60	Clear	85	53
25	—	—	...	·3	·9	·7	·8	·6	·7	·8	·6	·4	·8	·7	·1	...	—	—	—	7·4	62	...	...	...
26	—	—	...	...	...	...	...	...	·1	...	...	...	...	...	...	—	—	—	—	0·1	1	...	...	...
27	—	—	...	...	...	·1	...	·5	·4	·7	·8	·2	·5	·3	...	—	—	—	—	3·5	29	...	...	...
28	—	—	...	...	...	...	...	·6	·4	...	·1	...	...	...	...	—	—	—	—	1·1	9	...	...	...
29	—	—	...	...	...	...	...	...	...	·1	·1	...	...	...	...	—	—	—	—	0·2	2	...	...	...
30	—	—	...	...	...	...	...	·5	·4	·6	·8	·7	·4	·3	...	—	—	—	—	3·7	32	...	...	...
Sum.	—	—	...	1·8	7·2	9·1	12·2	13·9	12·6	12·6	11·7	11·0	11·3	10·0	3·8	...	—	—	—	117·2	—	—	—	—
Mean	—	—	...	·06	·24	·30	·41	·46	·42	·42	·39	·37	·38	·33	·13	...	—	—	—	3·91	31	—	—	—

507. Richmond (Kew Observatory) :  $h_s$  = 13.3 metres.

October, 1930.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Angström Pyrheliometer.			
																					Sky.	Total. mw/cm <sup>2</sup>	Vertical. mw/cm <sup>2</sup>	
1	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%			
2	—	—	...	...	...	...	...	·6	·6	·2	·5	...	...	...	...	—	—	—	—	1·9	16	...	...	...
3	—	—	...	...	...	·3	·8	1·0	·8	·8	·5	...	...	...	...	—	—	—	—	4·2	37	...	...	...
4	—	—	...	...	...	...	...	...	...	·5	·8	·8	...	...	...	—	—	—	—	2·1	18	...	...	...
5	—	—	...	...	·1	·1	...	...	...	...	...	...	...	...	...	—	—	—	—	0·2	2	...	...	...
6	—	—	...	·1	1·0	1·0	1·0	1·0	·5	·3	·8	·7	·9	·3	...	—	—	—	—	7·6	67	...	...	...
7	—	—	...	·1	1·0	·6	·2	1·0	·9	·6	·2	·1	...	...	...	—	—	—	—	4·7	42	...	...	...
8	—	—	...	...	...	...	...	...	·1	·3	·5	·2	·4	...	...	—	—	—	—	1·5	13	...	...	...
9	—	—	...	...	...	·7	·4	·8	·9	1·0	1·0	1·0	1·0	1·0	...	—	—	—	—	7·8	70	Clear	78	42
10	—	—	...	...	·7	·9	·1	...	·2	·7	·8	·3	·6	·1	...	—	—	—	—	4·4	40	...	...	...
11	—	—	...	...	...	...	·6	1·0	1·0	·3	·4	...	·2	...	...	—	—	—	—	3·5	32	...	...	...
12	—	—	...	...	...	...	·8	1·0	1·0	·9	·9	·9	1·0	·8	...	—	—	—	—	7·3	67	...	...	...
13	—	—	...	...	·1	·6	·9	·6	·6	·1	·3	·4	·8	·2	...	—	—	—	—	4·6	42	...	...	...
14	—	—	...	...	...	...	...	...	·4	·4	...	...	...	...	...	—	—	—	—	0·8	7	...	...	...
15	—	—	...	...	...	...	...	...	·2	·2	·1	·6	·3	·1	...	—	—	—	—	1·5	14	...	...	...
16	—	—	...	...	·5	1·0	·9	1·0	·7	·9	·6	·6	·7	·6	...	—	—	—	—	7·5	70	...	...	...
17	—	—	...	...	·6	·7	·4	·4	...	·1	·7	·8	...	...	...	—	—	—	—	3·7	35	...	...	...
18	—	—	...	...	·9	1·0	1·0	1·0	1·0	·9	·8	·7	·6	·2	...	—	—	—	—	8·1	77	...	...	...
19	—	—	...	...	·1	·7	1·0	1·0	1·0	1·0	·3	...	...	...	...	—	—	—	—	4·8	46	...	...	...
20	—	—	...	...	...	·8	1·0	1·0	1·0	1·0	·4	·7	...	...	...	—	—	—	—	5·9	57	Clear	77	36
21	—	—	...	...	·4	1·0	·7	·5	·8	·6	·4	1·0	·6	·2	...	—	—	—	—	6·2	60	...	...	...
22	—	—	...	...	...	·3	·7	·9	·4	·6	·4	·1	·9	·1	...	—	—	—	—	4·4	43	...	...	...
23	—	—	...	...	...	·2	...	...	...	...	...	...	...	...	...	—	—	—	—	0·2	2	...	...	...
24	—	—	...	...	...	·6	1·0	1·0	1·0	·4	·7	·4	·4	·4	...	—	—	—	—	6·7	66	...	...	...
25	—	—	...	...	...	·2	·8	...	·2	·6	·3	·5	·6	...	...	—	—	—	—	3·2	32	...	...	...
26	—	—	...	...	·4	·6	·8	1·0	·9	1·0	·8	·8	·8	...	...	—	—	—	—	7·1	71	...	...	...
27	—	—	...	...	...	...	·1	...	...	...	...	...	...	...	...	—	—	—	—	0·1	1	...	...	...
28	—	—	...	...	...	...	·1	·6	·3	·5	...	...	...	...	...	—	—	—	—	1·5	15	...	...	...
29	—	—	...	...	...	...	...	...	...	·6	·3	...	...	...	...	—	—	—	—	0·9	9	...	...	...
30	—	—	...	...	...	...	...	·1	·2	·6	·2	·5	·6	...	...	—	—	—	—	2·2	23	...	...	...
31	—	—	...	...	...	...	...	·4	...	...	·3	...	...	...	...	—	—	—	—	0·7	7	...	...	...
Sum.	—	—	...	0·2	6·4	11·7	13·0	15·9	14·5	15·1	13·0	11·1	10·4	4·0	...	—	—	—	—	115·3	—	—	—	—
Mean	—	—	...	·01	·21	·38	·42	·51	·47	·49	·42	·36	·34	·13	...	—	—	—	—	3·72	35	—	—	—
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Sky.	Total. mw/cm <sup>2</sup>	Vertical. mw/cm <sup>2</sup>	



Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 360°). Speed in metres per second.

510. Richmond (Kew Observatory) :

H<sub>a</sub> (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	230	2.2	220	2.5	205	2.5	225	3.0	215	3.0	215	3.1	220	2.5	215	4.6	220	5.0	220	4.8	210	6.4	210	7.2
2	250	7.1	260	9.2	265	9.6	270	8.3	275	7.6	265	8.1	265	6.8	265	7.2	265	7.0	270	6.0	265	6.1	255	5.9
3	220	7.1	230	5.4	230	6.4	220	6.4	220	7.2	220	8.1	225	8.0	220	8.1	220	7.8	215	10.0	215	8.9	215	10.1
4	215	6.5	225	5.7	220	5.8	220	6.4	220	6.3	215	6.3	215	6.1	210	5.5	215	4.5	205	4.1	200	5.5	195	6.6
5	180	10.0	185	10.4	185	10.0	190	7.9	190	6.2	205	7.1	210	6.0	230	5.0	205	4.0	210	5.1	210	5.5	205	5.8
6	210	2.0	210	2.0	—	0.5	220	2.1	220	2.5	210	2.4	230	2.5	220	2.5	215	3.0	225	3.0	220	2.6	230	3.2
7	210	6.1	210	5.6	210	6.4	210	6.5	215	6.5	215	7.5	210	7.9	210	6.9	210	6.7	210	7.0	210	6.7	205	6.6
8	190	7.1	190	7.5	190	6.8	200	8.0	200	6.9	200	5.6	220	5.1	235	2.9	200	2.6	210	2.6	210	2.4	230	3.1
9	225	2.0	230	1.8	225	2.2	205	3.1	195	3.8	195	4.3	200	4.2	200	6.4	205	6.4	210	7.1	210	7.6	205	8.0
10	205	3.6	220	2.9	230	3.2	250	3.0	240	2.4	235	2.4	235	3.1	230	2.0	220	3.3	215	4.5	215	4.2	215	4.5
11	185	11.2	190	12.2	185	11.8	230	7.9	245	5.8	210	3.6	205	4.6	210	4.9	215	5.3	225	5.1	220	5.3	215	6.1
12	230	4.9	230	4.5	230	3.8	215	4.0	225	4.5	225	5.2	210	5.6	210	4.5	210	5.5	200	4.9	190	4.4	200	5.5
13	270	10.2	270	9.8	270	8.9	265	7.5	240	6.1	240	6.1	230	5.6	240	6.2	240	5.5	240	5.6	230	6.6	220	6.9
14	220	7.8	220	7.5	220	8.6	220	7.5	215	8.5	215	8.2	210	7.5	215	7.8	210	6.6	210	6.8	210	8.2	210	6.9
15	205	7.1	200	5.6	200	5.2	225	4.9	310	3.5	280	2.4	260	2.2	250	2.4	220	2.3	240	3.1	220	3.5	250	2.8
16	—	0.4	—	0.1	—	0.6	80	2.1	80	3.0	90	3.0	100	3.2	105	3.2	—	1.4	100	4.8	110	4.0	120	2.5
17	145	4.4	140	3.2	145	4.0	145	4.5	135	4.6	130	3.5	155	5.6	155	7.1	170	4.6	165	4.5	175	2.6	180	4.5
18	185	2.1	180	3.0	—	1.4	200	1.6	220	2.5	220	2.0	200	4.1	205	4.2	205	5.5	220	5.0	220	5.1	225	5.6
19	185	2.6	205	4.8	205	3.1	200	5.7	200	5.8	190	4.0	195	4.3	190	3.0	200	1.6	195	5.4	205	6.5	200	6.4
20	190	2.5	—	0.8	—	1.0	215	1.8	—	1.1	250	1.7	250	1.7	—	1.5	—	1.5	250	2.1	240	2.0	265	2.8
21	—	0.5	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0
22	165	1.7	—	1.4	—	1.4	—	1.5	175	1.8	175	1.6	—	1.5	—	0.6	—	0.3	—	1.5	180	3.0	185	5.0
23	195	5.2	195	5.5	195	5.9	195	6.2	195	5.8	195	6.3	195	6.4	200	6.5	200	6.5	200	6.6	200	6.1	210	6.0
24	180	5.6	175	6.0	175	5.6	175	4.7	175	4.9	170	5.4	170	5.5	175	5.4	180	5.9	180	6.3	180	7.0	180	8.0
25	225	3.9	220	3.0	—	1.5	—	1.3	—	1.2	—	0.6	—	0.5	—	1.5	195	1.9	210	1.7	215	2.3	230	1.9
26	—	0.0	—	0.0	—	0.0	—	1.4	55	2.9	—	1.0	55	3.6	60	4.8	80	4.1	70	5.5	65	6.9	65	9.0
27	75	5.0	80	5.4	80	5.1	80	4.9	80	4.0	80	3.0	—	0.9	85	2.5	—	1.5	—	0.8	—	1.0	—	0.4
28	360	4.0	5	4.1	10	5.5	5	4.0	360	4.0	5	3.5	10	2.3	10	2.0	5	2.0	10	1.7	340	2.0	325	1.8
29	170	2.5	170	2.5	—	0.9	—	0.5	—	0.9	—	0.9	—	0.9	—	0.6	160	2.0	180	2.9	175	3.1	175	3.5
30	—	0.0	—	0.0	—	0.0	—	0.5	—	0.5	—	0.3	—	0.0	—	0.0	—	1.4	240	1.8	235	1.9	240	1.9
31	—	0.5	—	0.6	—	0.9	—	1.0	165	2.3	165	2.0	150	2.2	145	3.0	145	4.3	160	6.2	155	7.5	150	7.6
Mean ...	—	4.4	—	4.3	—	4.1	—	4.1	—	4.1	—	3.8	—	3.9	—	4.0	—	3.9	—	4.4	—	4.7	—	5.0

511. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	175	2.2	—	1.5	—	0.7	—	0.3	—	1.5	100	2.8	90	4.1	90	5.0	105	4.8	120	4.5	120	4.9	110	5.5
2	90	4.9	90	3.9	80	2.5	80	3.5	85	3.9	90	2.8	80	4.0	80	3.8	80	4.0	75	3.8	80	4.0	80	4.1
3	—	1.0	—	0.6	—	0.0	—	0.0	—	0.5	—	0.8	—	0.7	—	0.7	—	0.3	—	0.0	—	0.3	195	1.8
4	—	0.1	—	0.0	—	0.5	—	0.5	—	0.1	—	0.2	—	0.2	—	0.5	—	0.0	—	0.0	—	0.4	—	1.1
5	—	0.7	—	1.0	—	0.0	—	0.9	—	0.6	5	2.5	15	1.8	20	3.3	20	4.0	20	3.5	15	5.2	15	5.2
6	360	4.0	5	4.2	360	4.9	360	4.8	360	4.4	360	5.0	360	5.5	360	5.5	360	4.8	5	5.1	10	6.2	10	6.8
7	5	5.5	15	6.4	15	6.7	10	6.1	5	6.2	10	7.0	10	6.6	20	6.1	20	5.5	35	8.3	30	8.8	40	10.9
8	30	8.0	35	8.0	40	8.0	40	8.9	40	8.7	40	8.4	40	8.2	40	8.0	45	8.2	45	8.1	50	8.2	50	7.8
9	50	6.0	45	5.4	50	6.3	50	6.3	50	5.8	45	5.0	50	5.0	40	5.1	50	4.6	80	7.8	80	11.4	90	12.0
10	40	5.0	45	5.0	40	6.0	45	6.6	50	6.1	40	5.1	50	3.9	45	5.6	45	6.7	50	9.0	55	8.8	60	10.5
11	40	5.5	50	6.0	45	5.8	50	3.7	40	4.4	55	5.3	60	4.9	50	5.6	55	6.0	50	7.6	65	7.5	60	7.5
12	40	5.1	35	4.0	35	5.1	35	4.0	40	4.3	30	4.1	20	3.6	30	1.7	45	4.7	50	5.5	60	6.5	65	7.7
13	110	5.3	125	4.1	125	2.5	130	3.5	105	3.3	105	3.0	130	2.7	110	2.6	105	3.3	105	3.6	110	3.0	95	2.3
14	—	1.5	—	1.2	125	1.7	110	2.0	—	0.9	—	0.5	—	0.0	—	0.0	—	0.0	—	0.2	—	0.0	—	0.0
15	230	4.2	235	4.5	230	4.0	230	4.1	220	4.7	235	5.0	235	5.4	245	4.5	270	4.0	300	5.0	305	6.3	310	7.1
16	330	2.6	320	3.0	330	2.4	330	3.1	335	3.7	325	2.9	325	3.0	330	2.8	330	4.0	340	5.5	350	5.9	350	6.7
17	360	3.8	10	4.0	360	3.5	360	3.4	360	3.1	360	3.0	10	1.9	20	3.0	10	3.0	15	4.5	15	5.0	15	5.5
18	30	6.0	20	5.4	25	5.5	25	5.5	30	5.4	20	5.5	20	5.2	30	5.9	35	6.7	40	8.3	50	8.8	55	9.0
19	50	7.6	55	7.3	50	7.0	50	7.4	50	7.0	50	6.0	50	7.0	55	6.8	60	7.0	60	6.0	60	6.4	50	6.3
20	355	1.7	340	1.6	—	1.2	—	1.5	15	1.9	20	2.6	15	3.0	30	2.9	40	4.4	60	6.0	60	4.9	55	4.2
21	—	1.5	360	1.9	5	2.0	15	2.8	10	2.9	360	2.4	25	3.1	25	4.5	40	5.0	35	4.5	35	5.6	40	5.7
22	10	3.5	360	3.6	360	4.0	360	4.1	360	3.5	5	3.1	15	4.1	20	4.4	20	4.1	35	5.9	40	5.8	40	5.2
23	5	3.0	10	2.8	5	3.0	15	2.4	15	2.1	40	4.0	50	5.3	50	4.9	50	6.1	45	5.9	50	5.4	50	4.9
24	45	5.3	40	4.9	30	4.9	40	6.0	45	6.3	40	6.0	50	6.1	50	6.7	60	5.2	80	7.2	90	8.0	90	6.6
25	—	0.0	—	0.0	—	0.0	—	0.0	—	0.6	—	1.0	85	1.6	—	1.5	—	1.4	130	2.0	155	3.5	165	3.6
26	100	3.9	100	4.5	100	4.0	100	3.9	110	4.1	110	3.6	100	4.1										



Direction expressed in degrees from North (E=90°, S=180°, W=270°, N=360°) : Speed in metres per second.

512. Richmond (Kew Observatory) :

H<sub>a</sub> (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	25	3.8	20	5.2	20	5.1	20	4.4	20	4.0	35	4.5	40	5.3	40	5.5	35	6.4	35	5.9	35	5.6	40	4.5
2	50	5.5	45	5.6	50	5.4	45	6.1	45	6.4	45	5.5	45	4.8	50	6.5	60	7.0	75	8.9	70	9.0	80	8.9
3	65	2.7	65	2.7	60	2.1	60	2.4	80	3.3	75	2.3	80	2.5	90	2.6	90	2.5	—	1.1	160	2.7	180	2.7
4	—	0.7	—	0.5	205	1.6	215	2.2	210	2.1	210	2.3	205	2.9	205	3.2	225	3.5	230	3.3	220	3.3	220	3.7
5	225	2.5	220	2.3	225	2.3	235	2.0	230	1.7	—	1.5	—	0.3	—	0.2	—	0.3	—	1.5	—	0.5	—	1.1
6	—	1.0	—	0.4	—	0.7	—	1.0	140	3.1	—	1.1	—	0.7	—	1.4	130	2.6	135	3.1	155	4.0	140	4.8
7	260	1.9	270	2.5	275	2.0	265	2.1	260	2.1	260	2.7	280	2.9	300	3.0	300	3.2	325	4.1	330	3.7	340	3.6
8	245	1.6	230	1.8	—	1.4	—	1.2	—	0.8	—	0.7	—	1.1	—	1.3	230	2.0	225	1.8	225	3.1	225	3.9
9	220	4.0	210	4.1	215	3.5	230	3.0	220	2.7	190	1.7	210	2.7	210	3.5	205	3.9	205	4.3	200	4.8	200	5.1
10	190	4.6	200	5.3	200	3.9	200	2.7	220	2.7	330	5.1	320	4.1	310	5.5	335	6.0	330	5.2	335	6.0	335	6.5
11	210	3.5	210	4.0	205	3.5	215	5.5	225	3.9	270	2.7	270	2.6	290	3.0	295	4.7	310	5.6	320	5.8	325	5.6
12	—	0.0	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.4	245	1.7	270	2.2	—	1.4	—	0.9
13	270	2.8	290	2.6	290	2.4	285	1.9	300	2.0	325	2.4	310	2.6	300	2.2	310	3.0	295	3.0	280	2.5	290	2.8
14	225	1.9	250	2.8	250	3.1	250	3.1	265	2.5	245	2.5	255	3.0	265	3.0	295	2.5	330	2.4	320	2.1	20	2.1
15	70	5.1	95	6.5	100	5.8	100	5.0	100	5.0	100	4.9	95	4.0	100	4.0	110	4.0	120	3.6	125	4.4	130	5.2
16	205	1.8	—	1.5	—	0.0	—	0.3	—	0.0	—	1.5	155	3.2	170	1.9	190	1.9	230	2.4	240	2.3	280	2.5
17	235	2.5	220	2.4	210	2.9	235	2.5	235	2.2	225	2.3	225	3.0	245	2.6	270	2.5	285	2.7	270	2.3	—	1.4
18	25	2.8	—	1.2	330	2.7	300	2.8	280	2.5	240	2.4	220	3.0	230	3.5	230	5.8	250	6.9	250	8.0	255	7.9
19	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.7	65	2.1	70	1.8	—	0.7	—	1.5	10	2.0	10	3.0
20	330	3.1	325	3.7	320	3.8	320	3.1	310	1.8	295	2.0	—	0.2	—	0.8	245	2.9	255	4.6	260	5.7	260	6.0
21	220	6.1	220	6.9	225	4.6	210	6.0	210	5.5	210	6.0	220	5.0	225	4.0	215	7.6	205	8.0	210	8.5	210	7.5
22	230	5.1	240	4.4	250	4.5	275	4.0	295	4.5	300	5.2	300	3.9	310	3.6	310	3.8	320	3.4	325	2.8	290	3.2
23	—	1.0	—	0.0	—	0.2	—	0.1	—	1.1	95	3.5	90	4.5	100	5.1	90	5.8	90	6.2	80	6.3	85	7.0
24	25	5.0	25	5.4	30	4.9	30	4.5	25	5.6	25	5.0	25	4.9	30	6.3	40	8.0	40	8.5	35	8.2	25	8.0
25	—	0.3	—	1.0	—	0.2	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	0.9	220	3.0	230	4.4	230	5.5	
26	250	2.5	260	2.0	—	1.2	310	2.8	320	2.2	—	0.8	—	0.8	335	1.9	360	3.1	10	3.0	355	2.1	360	2.0
27	240	2.3	—	1.4	—	1.1	235	1.7	230	1.7	225	1.6	230	1.6	230	1.8	—	1.3	260	2.0	275	2.0	255	2.5
28	230	2.1	—	1.4	—	0.9	—	1.3	195	3.7	220	4.0	220	4.0	220	4.4	235	5.0	225	5.4	205	5.6	200	5.6
29	210	4.6	215	6.7	220	6.5	235	5.4	225	4.3	220	5.0	235	5.4	255	6.9	255	7.4	255	8.1	255	7.8	260	7.5
30	225	3.5	215	3.5	230	3.0	215	2.5	210	2.0	210	2.0	215	1.8	225	3.1	230	3.8	220	4.4	215	5.1	230	5.0
31	155	4.5	145	5.0	130	3.5	135	3.4	140	3.8	160	5.8	150	6.5	155	5.8	170	8.5	170	8.8	170	8.0	185	9.2
Mean ...	—	2.9	—	3.0	—	2.7	—	2.7	—	2.7	—	2.8	—	2.9	—	3.2	—	3.9	—	4.4	—	4.5	—	4.7

513. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	170	3.4	170	2.8	160	3.9	160	4.0	170	3.6	160	4.6	160	4.5	170	4.5	170	5.5	180	5.9	170	6.5	170	7.1
2	145	7.5	160	6.4	170	5.5	200	4.5	200	3.3	190	3.0	185	3.2	190	5.4	230	6.2	230	6.2	220	7.2	220	7.5
3	120	2.0	—	1.1	100	3.6	90	3.9	90	5.5	90	5.6	90	5.5	90	6.6	95	8.4	90	9.0	90	8.8	90	9.3
4	90	4.9	90	5.3	90	5.4	95	4.9	95	4.0	90	4.6	90	5.5	90	5.4	100	4.5	110	3.0	—	1.5	90	1.9
5	80	5.5	75	4.5	80	5.1	80	5.8	80	6.5	80	6.0	80	4.5	80	5.0	70	4.0	70	2.7	70	3.2	90	3.2
6	—	1.3	15	2.0	5	2.6	360	2.9	350	3.0	350	2.0	340	2.0	350	3.3	350	3.4	335	3.5	320	3.2	320	3.5
7	290	2.4	290	2.6	310	2.5	310	2.5	320	2.0	310	2.2	330	2.3	330	4.0	340	3.9	360	4.5	360	4.4	360	4.1
8	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.5	220	2.0	—	1.5
9	190	2.1	190	1.7	180	2.0	175	2.2	170	2.4	175	2.3	180	1.6	180	2.1	190	1.9	—	1.3	180	2.4	195	4.5
10	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	1.0	100	4.5	100	4.4
11	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	0.6	—	1.5
12	220	3.3	210	2.9	230	3.3	215	3.7	215	3.6	215	3.0	230	2.4	220	3.6	210	6.4	220	7.0	225	6.4	225	5.7
13	230	2.5	230	2.4	230	2.0	220	2.2	220	3.0	225	3.1	240	4.2	230	4.0	250	4.7	250	5.1	255	5.3	230	5.7
14	330	2.5	340	3.7	330	4.0	330	3.7	310	2.5	310	1.7	315	2.0	325	3.7	320	4.3	360	4.9	350	5.0	360	4.7
15	340	2.0	340	2.6	350	3.6	350	4.0	355	4.5	360	5.5	350	5.6	350	6.8	350	6.4	345	6.3	360	6.3	350	6.9
16	335	2.9	330	3.6	340	3.6	350	4.0	320	2.5	315	3.0	330	3.2	340	5.0	340	4.2	340	5.2	330	5.0	340	5.7
17	345	1.8	325	2.4	325	3.1	330	3.4	350	4.9	350	3.9	350	3.4	360	5.4	345	5.6	355	6.2	350	6.1	360	6.6
18	345	4.7	10	6.9	10	7.0	10	6.9	10	7.3	15	7.6	15	9.0	15	9.3	20	8.9	20	10.0	20	8.2	20	8.6
19	300	4.2	305	4.5	300	5.2	295	6.5	300	6.4	295	7.0	315	7.3	315	6.7	315	6.6	330	5.8	335	5.6	340	5.7
20	60	4.7	55	4.1	50	3.1	45	2.9	50	3.0	40	2.4	65	3.6	120	2.1	75	1.6	45	6.2	45	6.9	45	7.9
21	30	2.1	—	0.9	—	1.1	—	1.4	—	0.2	—	0.0	—	0.0	—	0.1	—	0.7	—	1.0	285	2.4	260	2.4
22	—	1.0	—	0.6	—	0.6	—	0.2	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	0.5	—	1.5	170	1.9
23	75	5.0	80	5.0	75	4.3	80	4.1	85	4.5	90	4.7	90	4.2	90	3.9	115	3.7	125	4.5	140	6.4	145	6.3
24	145	2.8	160	2.5	—	1.5	190	2.0	200	1.9	220	2.8	220	3.6	—	1.0	—	1.3	—	0.3	—	0.1	155	2.5
25	—	0.5	—	0.2	—	1.0	—	0.5	—	1.2	—	1.1	—	1.2	—	1.3	180	2.8	185	3.7	170	4.0	170	4.8
26	—	1.1	—	0.8	—	0.2	—	0.7	—	1.0	200	2.5	210											

Averages for periods of sixty minutes, centred at the exact hours, Greenwich Mean Time.

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 5 metres + 20 metres.

March, 1930.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
55	6.2	60	7.6	60	7.9	65	8.6	60	7.0	60	7.5	50	6.9	60	5.7	60	6.5	50	5.9	50	6.0	50	6.5	5.9	1
70	8.5	80	8.5	80	8.9	85	8.9	80	7.1	75	7.3	75	8.5	75	6.0	70	4.5	75	4.4	75	4.0	70	3.9	6.7	2
175	3.1	185	3.5	205	4.5	210	5.7	200	3.8	200	3.0	190	3.1	190	2.5	190	2.2	—	0.6	—	1.0	190	1.9	2.7	3
225	3.6	255	5.0	250	4.3	245	4.1	250	2.7	250	2.0	230	2.2	215	2.8	210	2.9	220	2.5	220	3.4	225	3.0	2.8	4
—	1.5	180	2.1	180	2.0	180	1.9	180	1.6	—	1.5	—	1.2	—	1.5	—	0.6	—	0.0	—	0.0	—	0.8	1.8	5
130	4.9	120	5.6	135	5.5	150	4.1	145	3.5	115	4.4	110	4.0	160	2.1	—	1.4	125	2.0	—	1.1	—	1.5	2.7	6
340	3.5	350	3.8	340	3.5	330	2.0	—	1.2	—	1.0	275	1.8	310	1.8	—	0.2	—	0.3	—	1.5	—	0.1	2.3	7
255	4.5	285	4.7	280	4.2	275	4.5	255	4.5	235	4.1	245	3.3	225	3.5	240	4.2	225	3.9	210	4.2	215	4.8	2.9	8
195	5.0	195	4.9	200	3.9	190	4.0	185	4.0	180	3.2	170	2.2	—	0.5	—	0.5	130	2.1	120	2.7	160	2.6	3.3	9
340	6.4	320	4.5	335	4.6	320	1.8	300	2.9	290	3.3	285	3.6	265	3.5	255	2.8	235	2.9	225	3.3	215	3.5	4.2	10
320	4.8	310	5.5	325	4.1	335	3.3	340	2.8	340	1.9	—	1.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	3.2	11
285	2.5	320	3.9	325	3.5	305	2.5	290	1.9	280	1.9	280	2.5	275	2.5	280	4.0	280	3.3	285	2.6	270	2.5	1.6	12
—	1.3	220	3.0	190	3.6	160	2.5	180	2.9	220	1.8	250	2.0	—	1.5	210	1.7	—	1.5	—	1.1	—	0.9	2.3	13
20	3.0	20	2.7	40	2.8	70	4.0	95	5.0	100	6.9	95	6.5	95	6.9	100	6.0	90	6.6	95	7.0	110	5.9	3.8	14
145	5.3	140	5.6	130	5.0	130	5.5	125	3.4	120	2.3	115	2.5	140	1.6	—	1.2	—	1.0	—	0.2	205	1.9	4.0	15
300	3.1	280	4.2	280	5.5	285	6.8	260	5.9	260	4.8	255	3.8	270	5.5	270	3.9	265	4.3	255	4.0	240	3.0	3.1	16
—	0.1	—	0.0	—	0.0	—	0.1	—	0.1	—	0.7	50	3.0	55	5.4	60	4.3	45	4.0	15	3.0	10	3.2	2.2	17
265	7.1	255	6.5	280	4.3	230	4.9	230	3.5	320	2.5	330	1.6	—	1.1	—	0.1	—	0.1	—	0.0	—	0.0	3.5	18
360	3.2	360	2.5	15	4.5	355	3.3	360	6.7	360	6.5	360	6.5	360	6.0	360	5.9	350	4.5	340	4.0	335	3.5	2.8	19
250	7.1	240	7.3	240	8.0	240	8.7	235	7.3	225	7.6	220	7.9	220	9.0	220	8.4	230	7.7	230	7.1	225	6.9	5.4	20
200	6.8	200	6.9	205	7.2	215	6.5	215	6.2	200	5.5	205	4.3	210	3.8	210	4.7	210	5.3	205	3.4	215	3.0	5.9	21
290	2.5	310	2.0	—	1.2	290	1.8	—	1.5	—	0.1	—	0.0	—	0.1	—	0.0	—	0.0	—	0.2	—	1.0	2.5	22
85	7.0	85	7.1	80	7.6	85	7.5	80	7.0	70	6.5	65	6.9	55	6.1	45	6.5	45	6.4	45	6.0	40	4.9	4.9	23
30	7.5	30	7.5	30	7.6	25	7.2	20	6.3	20	5.4	15	4.2	25	3.6	25	2.6	20	1.6	—	1.5	—	1.4	5.5	24
240	5.6	240	5.7	240	5.6	240	5.2	245	5.0	235	5.2	225	4.9	240	4.5	255	3.6	260	3.5	240	2.5	240	3.0	2.9	25
—	1.5	350	1.7	—	1.2	240	2.5	240	2.4	250	1.6	—	1.4	—	1.5	—	1.2	230	2.0	220	2.0	225	2.0	1.9	26
250	2.0	250	3.4	250	3.5	260	3.4	260	3.4	—	1.5	—	1.5	240	2.1	240	2.7	240	2.4	240	1.8	—	1.5	2.1	27
205	6.6	200	7.6	215	7.5	200	5.7	180	5.2	190	3.8	190	1.7	—	0.8	—	0.1	—	1.4	245	2.9	190	2.1	3.7	28
260	7.1	250	6.0	255	6.6	250	7.5	220	6.5	220	4.3	225	4.8	250	3.5	230	3.5	220	4.5	225	4.0	225	3.6	5.7	29
220	5.3	220	5.7	220	4.9	220	5.7	220	6.6	190	4.8	175	4.5	170	4.1	170	3.2	160	2.5	160	3.4	150	4.1	3.9	30
180	6.4	180	6.5	180	5.5	175	4.3	175	5.4	210	5.5	205	5.1	210	4.8	200	4.5	205	3.9	195	3.5	190	3.0	5.5	31
—	4.6	—	4.9	—	4.8	—	4.7	—	4.3	—	3.8	—	3.7	—	3.4	—	3.0	—	2.9	—	2.8	—	2.8	3.6	—

April, 1930.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
160	8.0	160	7.9	170	8.5	170	7.6	170	6.9	180	6.0	170	4.6	165	4.9	160	5.4	160	5.2	150	5.0	150	6.5	5.5	1
215	9.4	210	9.5	210	7.6	210	8.7	220	7.0	210	5.0	190	3.5	180	2.5	170	2.5	—	1.4	—	0.6	—	1.1	5.3	2
90	9.5	100	7.0	95	5.7	90	4.3	90	3.8	85	3.6	85	4.5	90	5.6	90	5.4	95	5.2	100	3.8	90	4.0	5.4	3
60	4.0	50	4.0	60	5.2	80	6.7	85	8.0	90	7.4	90	7.0	80	6.1	80	5.8	80	5.2	80	5.0	80	5.4	5.0	4
80	2.5	70	2.5	95	2.5	—	1.3	—	0.4	45	2.5	40	4.5	40	4.7	25	4.5	30	3.5	25	2.5	20	2.0	3.8	5
320	3.5	330	3.2	330	2.5	320	2.5	330	3.3	340	3.6	330	2.6	310	2.6	300	2.8	310	3.4	305	2.6	290	2.1	2.8	6
350	4.0	355	3.1	330	2.2	340	3.4	10	3.9	20	3.1	25	2.5	—	1.0	40	1.9	45	2.4	60	2.6	—	1.0	2.9	7
210	2.5	205	4.0	205	5.0	205	4.8	210	4.6	210	4.8	200	4.3	195	3.9	195	3.6	190	2.6	190	2.6	190	2.5	2.0	8
200	5.5	205	6.0	220	5.9	200	4.4	210	3.0	230	2.1	215	1.9	—	0.9	—	0.0	—	0.1	—	0.0	—	0.0	2.4	9
100	4.5	90	5.1	100	5.0	100	4.1	110	2.9	110	3.5	105	4.0	95	4.5	100	2.9	—	1.5	—	0.2	—	0.0	2.0	10
—	1.0	—	0.6	—	0.4	—	0.0	—	0.0	—	0.0	—	0.9	190	2.8	205	3.0	220	2.5	210	2.7	210	2.9	0.7	11
220	5.0	220	4.9	260	4.3	—	0.5	310	3.4	310	3.1	300	3.0	290	2.0	265	3.0	280	3.5	260	2.5	250	2.1	3.7	12
235	6.0	270	3.7	230	5.8	225	6.5	245	3.1	—	1.5	190	2.0	250	2.9	25	1.9	355	1.7	340	1.6	330	2.6	3.5	13
350	5.8	15	5.9	10	3.8	25	5.4	20	5.2	20	5.0	25	4.6	25	4.0	10	3.5	5	3.3	350	3.0	340	3.0	4.0	14
350	7.1	350	7.0	10	6.1	360	5.9	10	5.1	10	4.7	5	3.5	340	3.1	355	5.3	360	5.5	350	4.3	340	3.1	5.0	15
330	6.5	350	7.0	345	6.5	345	5.5	350	4.5	345	2.8	325	1.6	315	3.0	330	2.6	330	2.5	325	2.0	320	2.0	4.0	16
345	6.4	350	6.0	350	5.8	360	5.8	325	4.8	335	4.5	325	3.1	325	3.8	335	3.0	330	3.5	335	4.3	335	4.4	4.5	17
20	8.3	10	8.1	10	8.5	15	7.5	10	7.0	5	6.9	5	4.9	340	2.9	330	2.4	320	2.8	315	2.7	315	3.8	6.7	18
360	4.1	75	4.3	65	4.4	80	6.7	125	5.9	100	5.4	80	7.2	80	8.0	85	7.0	70	6.9	70	6.3	60	5.0	5.9	19
40	6.3	50	7.7	50	7.1	65	5.0	55	5.4	65	5.0	60	4.7	65	4.1	55	3.8	50	3.0	65	2.9	45	2.5	4.5	20
250	2.4	280	2.1	270	3.2	285	2.7	325	2.4	350	2.8	10	3.0	25	2.5	25	1.6	—	0.8	—	0.1	—	0.6	1.6	21
175	2.7	180	2.9	165	4.5	160	3.5	165	2.9	180	2.0	175	2.3	165	2.3	—	0.4	135	2.0	90	3.1	75	4.4	1.6	22
145	5.7	150	6.3	150	5.9	150	6.1	140	5.3	140	4.6														

Directions expressed in degrees from North (E=90°, S=180°, W=270°, N=360°) : Speed in metres per second.

514. Richmond (Kew Observatory) :

H<sub>a</sub> (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
1	45	4.8	50	4.0	50	3.5	45	2.9	45	2.5	30	3.0	50	3.5	40	3.7	45	4.7	60	5.5	55	6.1	50	6.5	
2	20	2.3	20	2.8	20	2.5	15	2.5	15	3.5	20	3.6	25	3.0	30	3.1	30	2.5	70	3.1	60	2.4	60	2.0	
3	—	0.5	—	0.2	—	1.1	—	1.5	—	1.1	—	0.5	—	1.0	15	1.6	—	1.0	—	0.8	—	1.4	335	2.0	
4	—	0.5	—	0.0	—	0.0	—	0.1	—	0.5	—	0.9	—	0.3	—	0.3	—	0.6	—	0.6	—	0.4	—	0.6	
5	—	1.3	—	0.9	—	0.5	—	0.0	—	0.0	—	0.5	—	0.1	—	0.9	195	2.0	170	2.1	175	3.2	180	3.6	
6	—	0.0	—	0.0	—	0.0	—	0.7	—	0.8	—	1.0	—	1.0	255	1.9	255	1.9	270	2.5	300	2.3	310	3.0	
7	20	5.5	20	5.0	10	4.5	360	4.1	360	3.6	360	3.1	350	4.2	360	4.5	5	5.0	360	5.3	10	5.3	10	4.3	
8	285	4.0	305	4.5	360	5.5	355	4.5	355	3.9	360	4.5	340	4.5	340	4.8	350	4.8	350	4.9	330	4.6	330	4.5	
9	240	1.6	240	1.9	220	2.1	220	2.7	220	2.6	220	3.6	240	3.9	225	5.0	240	6.0	250	5.1	250	5.9	250	5.6	
10	—	1.0	5	4.0	45	3.9	360	2.9	330	1.6	330	2.1	—	1.5	—	1.5	—	1.5	—	1.2	240	2.0	235	2.9	
11	190	4.4	200	4.9	210	3.2	220	3.6	230	3.5	250	4.1	250	5.0	250	5.9	245	6.7	235	5.8	240	4.7	260	4.5	
12	255	3.7	260	3.5	260	3.3	310	3.0	330	1.8	290	1.8	300	2.7	305	3.7	285	4.3	280	4.7	280	4.6	270	2.6	
13	—	1.5	—	1.3	—	0.5	—	1.5	—	1.4	—	1.4	—	1.75	2.0	180	2.1	180	2.6	190	3.6	205	4.1	210	4.2
14	240	3.3	250	2.5	250	3.5	270	3.6	265	2.6	270	3.0	270	4.0	280	4.7	290	4.7	270	6.0	275	5.6	280	5.0	
15	—	0.6	220	2.0	—	1.5	—	0.9	—	0.9	—	0.4	—	0.5	—	0.6	220	3.0	210	3.7	205	4.1	200	4.0	
16	—	1.5	230	2.0	—	1.5	230	2.0	230	2.2	230	2.0	260	2.5	270	3.6	280	4.0	270	3.6	275	3.0	280	3.0	
17	—	1.0	—	0.6	—	1.4	—	1.1	—	1.2	205	2.0	210	2.0	—	1.0	205	3.6	200	4.6	220	5.0	225	5.7	
18	230	5.9	220	4.9	240	4.9	260	4.5	260	4.0	260	4.9	260	4.9	260	5.4	260	4.6	240	5.7	255	5.7	255	6.5	
19	210	3.5	215	3.0	225	3.0	225	2.1	220	2.1	245	2.8	255	4.1	255	3.9	265	3.9	270	4.9	260	5.0	260	4.9	
20	235	2.0	240	1.6	—	1.5	235	1.7	—	1.5	—	1.5	—	1.5	—	1.5	—	0.6	—	1.4	325	2.9	310	1.8	
21	—	0.6	—	0.6	—	0.3	—	0.1	—	0.1	—	1.3	50	3.4	45	3.5	45	4.1	25	3.9	35	3.8	20	3.9	
22	15	1.8	—	1.4	—	1.3	335	1.8	335	2.1	—	1.0	360	3.5	20	5.1	15	5.4	15	5.1	10	5.2	10	3.7	
23	5	4.0	15	4.0	15	3.9	20	3.9	20	4.0	20	4.9	30	6.6	30	6.4	30	6.9	35	7.9	30	8.0	25	7.9	
24	360	3.0	350	3.5	330	2.7	325	1.7	320	1.7	—	1.5	320	1.6	325	1.8	330	2.4	340	3.1	335	2.7	340	2.3	
25	10	2.5	20	3.1	5	3.0	10	2.6	10	2.0	360	2.0	10	3.0	5	3.5	5	3.4	10	4.1	5	4.1	10	4.4	
26	—	1.5	—	1.5	20	2.0	—	1.1	—	1.4	—	1.3	—	1.5	30	1.6	—	1.1	—	1.5	40	1.6	—	1.3	
27	—	0.2	—	0.2	—	0.3	—	0.3	—	0.5	—	0.5	—	0.2	—	0.2	—	0.1	—	0.1	—	1.0	—	1.5	
28	—	1.5	—	1.4	—	1.5	—	1.5	—	1.5	—	1.5	220	2.9	235	3.6	245	3.3	240	4.0	245	4.8	240	5.3	
29	—	1.5	—	1.4	—	1.5	230	2.0	—	1.4	235	2.5	215	3.1	220	2.5	240	1.6	220	1.8	225	2.0	240	2.3	
30	—	0.6	—	1.0	85	3.2	75	4.1	60	3.7	65	4.1	70	5.0	80	5.8	70	5.6	75	6.5	85	8.5	85	8.4	
31	80	5.3	80	6.1	60	4.5	60	4.4	50	4.0	45	3.8	55	4.4	55	5.0	60	5.1	50	4.2	50	4.6	45	5.1	
Mean ...	—	2.3	—	2.4	—	2.3	—	2.2	—	2.1	—	2.4	—	2.8	—	3.2	—	3.5	—	3.8	—	4.0	—	4.0	

515. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	350	2.3	340	2.1	335	3.0	325	2.0	305	1.7	280	2.3	270	2.4	265	2.5	260	3.0	265	2.7	260	3.1	275	2.5
2	—	1.0	—	0.8	215	1.9	225	2.5	—	1.1	—	0.9	—	0.7	—	1.5	—	0.9	—	0.5	—	0.6	—	1.0
3	25	4.1	40	3.9	35	3.9	10	3.6	15	4.0	15	3.6	10	3.9	30	3.5	25	3.0	25	4.5	20	4.5	30	4.5
4	15	2.8	25	4.1	30	3.0	20	2.2	20	2.0	25	2.8	35	3.1	20	3.4	20	2.9	30	3.6	30	3.8	30	3.5
5	—	0.0	—	0.0	—	0.0	—	0.0	55	1.8	—	1.0	80	1.6	70	4.1	65	5.1	85	6.2	90	6.5	95	6.0
6	—	0.8	—	0.5	—	1.0	—	0.1	—	0.0	—	0.1	—	0.8	—	1.1	—	1.2	85	4.0	80	5.5	95	5.0
7	—	0.6	—	0.7	—	1.1	350	2.4	5	4.5	350	2.9	5	4.0	5	4.7	10	5.0	10	5.2	15	5.6	20	6.5
8	15	3.0	15	3.5	10	2.2	10	3.0	10	3.1	15	4.0	30	4.6	35	4.5	35	5.6	60	6.1	40	6.0	40	5.5
9	—	0.2	—	0.0	—	0.0	—	0.0	—	0.6	—	0.2	—	0.3	—	0.6	—	0.7	—	1.5	180	2.0	200	1.6
10	205	3.5	210	4.2	210	4.5	210	3.8	215	5.5	215	6.0	220	6.0	220	6.0	215	6.5	215	7.0	220	7.1	220	6.7
11	225	5.2	220	6.0	220	5.0	220	5.1	220	4.9	210	5.0	210	6.0	215	6.5	220	6.3	225	5.6	220	5.5	225	5.7
12	—	0.2	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	1.0	120	2.3	—	1.3	—	1.5
13	95	2.1	—	0.6	—	0.6	—	1.5	—	1.2	—	0.1	50	1.8	50	2.1	80	3.1	85	3.0	85	5.0	95	4.1
14	65	1.7	45	2.6	40	3.0	30	2.4	25	3.0	30	3.5	30	3.0	50	3.3	50	3.5	65	4.5	70	5.0	60	4.0
15	50	4.0	50	4.0	50	3.6	50	4.0	55	4.2	50	4.0	50	5.0	40	4.7	45	5.5	50	6.2	55	6.9	60	6.2
16	20	3.5	25	4.4	40	4.6	40	4.0	20	3.6	20	3.4	20	3.7	20	4.0	20	4.2	40	3.8	40	4.3	55	4.8
17	10	2.0	30	2.0	—	1.5	5	2.1	10	1.9	—	1.3	—	1.1	—	0.9	—	0.1	—	0.5	—	0.6	—	0.5
18	—	0.0	—	0.0	—	0.1	—	0.2	—	0.5	—	0.0	—	0.0	—	0.0	—	0.0	—	0.4	—	1.0	—	1.5
19	220	2.4	220	2.3	220	2.0	220	2.4	220	2.4	235	1.8	240	2.3	240	2.4	230	3.0	225	3.8	225	4.0	230	3.6
20	210	4.4	200	4.5	210	4.9	210	5.1	205	5.5	200	4.0	200	4.3	200	3.5	210	5.0	210	5.1	210	4.5	205	6.0
21	210	4.1	225	3.5	215	4.0	210	4.0	215	4.2	220	4.7	220	4.4	200	3.0	210	4.5	210	4.8	220	5.6	215	4.7
22	170	1.6	—	1.1	—	1.0	—	1.3	200	2.1	210	2.5	205	3.4	220	3.8	210	3.5	215	2.9	205	4.4	210	4.2
23	220	2.1	215	2.7	220	2.7	220	2.5	230	2.5	225	2.6	230	3.1	225	3.3	225	4.1	215	5.7	205	6.1	205	7.4
24	210	3.5	220	2.0	—	1.3	—	1.4	—	1.4	—	1.4	205	1.6	220	2.1	215	3.5	225	3.0	—	1.5	245	2.8
25	220	2.9	225	3.1	225	2.1	220	2.2	220	2.1	225	3.1	230	3.6	235	3.4	230	4.0	235	4.1	230	4.5	300	3.0
26	—	0.3	—	0.3	—	0.1	—	0.0	—	0.0	—	0.0	—	0.1	—	0.5	120	2.0	140	2.5	—	1.2	—	1.5
27	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—													



Direction expressed in degrees from North (E=90°, S=180°, W=270°, N=360°) : Speed in metres per second.

516. Richmond (Kew Observatory) :

H<sub>a</sub> (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	1.0	—	0.1	—	0.4	—	0.2	—	0.5	—	0.6	—	0.9	—	0.1	—	1.0	190	1.8	215	3.5	225	3.8
2	—	1.2	—	1.2	—	1.0	—	1.0	—	1.5	230	1.6	—	1.1	—	1.5	235	1.7	230	3.6	205	3.8	195	4.7
3	185	2.0	—	1.0	—	0.2	175	3.0	185	3.1	195	3.0	200	3.2	200	3.5	210	4.5	225	4.5	215	4.5	210	5.7
4	190	2.0	205	2.3	215	1.7	—	1.5	—	1.4	—	1.2	210	2.0	230	1.9	—	1.2	—	1.5	220	1.7	215	1.6
5	—	0.7	—	0.5	—	1.2	—	0.5	—	0.5	—	0.1	—	0.0	—	0.2	—	0.5	—	0.6	—	0.5	—	0.6
6	—	1.0	—	0.9	—	0.6	—	0.5	—	1.0	—	1.0	—	0.5	—	0.7	—	0.7	240	2.4	260	3.0	240	4.0
7	350	2.6	360	2.3	—	0.7	—	0.5	—	0.4	—	1.0	340	1.8	330	2.5	330	2.8	345	3.0	330	3.0	315	3.4
8	—	0.4	—	1.0	—	0.2	—	0.0	—	0.5	—	1.2	—	0.6	225	1.7	240	2.7	235	3.6	250	3.3	255	3.4
9	—	0.9	—	1.4	230	2.0	—	0.9	—	0.5	—	1.1	305	2.5	310	2.5	315	2.7	305	2.6	315	3.0	340	3.3
10	—	1.0	—	1.4	—	1.0	—	0.5	—	0.4	310	1.6	345	2.7	330	3.5	335	3.7	330	3.2	330	4.0	330	3.8
11	315	2.5	305	2.8	305	2.3	315	2.0	315	2.4	325	2.4	340	3.2	340	4.1	345	3.7	325	3.8	320	4.2	320	4.5
12	—	0.1	—	0.6	—	0.5	270	1.6	285	2.5	—	1.5	290	2.3	310	3.4	320	3.4	320	3.6	310	3.7	300	4.1
13	25	1.8	—	1.1	—	1.0	—	0.2	—	0.1	—	0.5	—	1.0	—	1.4	240	1.7	240	1.7	220	3.0	235	3.3
14	205	2.5	—	1.5	200	2.4	205	3.3	210	3.5	215	4.5	220	4.3	215	3.0	230	3.8	250	4.3	260	4.1	235	4.4
15	260	3.5	255	3.0	260	2.7	260	2.5	265	2.5	270	2.6	270	2.0	275	2.1	270	2.6	265	2.6	280	3.5	270	3.0
16	165	4.9	170	4.8	185	4.4	185	4.0	205	3.5	185	3.0	200	4.4	200	5.0	210	5.8	215	7.3	215	8.8	220	9.2
17	225	4.0	230	3.5	220	2.0	210	1.7	210	3.0	220	3.6	225	4.8	220	5.6	220	4.9	210	5.1	225	5.2	225	5.3
18	—	0.7	—	1.0	—	0.1	—	0.2	200	1.6	225	1.8	230	1.8	255	2.2	255	3.8	260	3.8	250	4.1	260	3.6
19	250	4.0	250	3.9	255	4.5	255	4.8	255	4.1	250	4.6	250	5.2	260	5.1	270	5.0	270	4.5	270	4.1	250	5.0
20	225	2.6	225	2.6	225	3.0	225	2.5	225	2.1	220	2.4	220	3.6	225	4.9	230	3.8	225	3.6	210	3.5	180	4.0
21	200	5.5	200	5.1	195	3.5	195	3.5	255	2.7	260	2.9	255	2.7	255	3.4	260	4.2	260	5.5	265	6.2	285	6.2
22	270	3.5	255	3.2	265	3.0	260	3.5	260	3.1	265	3.7	265	5.0	265	5.4	280	5.5	275	5.5	275	6.4	285	6.5
23	275	3.4	280	3.9	275	3.0	270	2.9	270	2.5	300	2.6	305	2.5	305	2.5	310	3.0	300	3.5	285	3.4	300	3.1
24	310	2.9	320	3.1	310	2.7	320	3.8	320	4.0	320	3.5	315	3.8	320	3.8	325	4.3	325	4.9	320	4.9	330	5.3
25	320	1.7	—	1.5	—	1.0	—	0.7	—	0.8	—	0.5	—	1.1	—	1.0	—	0.6	—	0.5	—	0.4	—	1.1
26	—	1.5	—	1.0	185	1.7	175	1.6	160	2.1	175	2.3	185	3.9	200	5.0	195	5.1	195	5.9	205	6.0	195	5.0
27	—	1.3	—	1.5	220	3.0	220	3.1	225	1.9	230	2.2	230	2.5	235	3.3	230	4.6	240	3.9	240	3.9	240	5.1
28	210	1.6	200	1.8	200	1.9	195	1.6	—	1.5	—	0.6	200	3.4	210	4.9	210	5.6	200	5.3	195	5.1	200	5.9
29	220	3.6	215	4.1	215	4.6	220	4.1	215	4.0	220	5.6	225	6.4	230	6.5	230	6.4	235	6.9	215	8.2	220	9.1
30	235	3.9	240	3.4	245	3.0	250	3.4	245	3.4	255	4.0	250	3.9	255	4.1	270	3.8	290	4.5	280	3.4	265	3.2
31	—	0.8	—	0.9	—	1.1	—	1.0	—	1.0	—	0.5	—	1.0	—	1.5	270	2.5	—	1.1	235	1.6	255	2.0
Mean ...	—	2.2	—	2.1	—	1.9	—	2.0	—	2.0	—	2.2	—	2.7	—	3.1	—	3.4	—	3.7	—	4.0	—	4.3

517. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.0	—	0.9	—	0.1	—	0.1	—	0.7	—	0.0	—	0.9	165	2.0	165	2.6	170	2.4	170	3.1	175	3.9
2	120	2.1	130	2.4	140	2.5	165	3.1	170	3.4	170	4.1	185	4.5	190	6.0	190	5.7	200	5.6	200	7.9	200	7.0
3	200	2.5	165	2.0	170	2.2	—	1.0	—	1.5	130	2.7	130	2.5	110	3.0	120	2.5	—	1.5	245	1.7	260	2.3
4	—	0.6	70	2.1	85	4.6	55	4.2	20	3.8	350	4.1	310	4.4	285	4.5	265	4.1	260	4.4	250	5.6	240	6.1
5	—	1.0	—	1.1	—	1.0	—	1.0	—	1.1	200	2.1	215	2.5	195	3.0	200	4.1	220	3.7	190	3.8	180	3.9
6	220	2.0	—	1.1	205	1.6	205	2.7	210	3.0	220	3.7	230	3.8	240	5.3	240	5.4	235	6.4	240	4.1	265	3.4
7	220	3.6	220	3.5	230	3.1	220	1.9	225	2.5	230	2.8	245	3.6	245	4.0	250	4.6	230	5.0	225	3.4	230	4.7
8	—	1.5	—	1.3	—	1.3	230	1.6	230	2.0	—	0.5	—	1.4	—	1.5	280	2.0	275	2.9	265	2.6	270	3.0
9	225	1.9	225	2.0	—	1.2	—	1.0	—	1.5	210	2.0	220	3.0	220	4.0	215	2.9	200	4.0	205	3.1	220	3.8
10	—	1.5	220	3.0	220	3.1	210	3.5	210	2.8	220	2.5	210	2.3	210	2.5	220	3.0	215	2.9	215	4.0	210	4.4
11	215	4.0	205	4.0	200	3.0	220	4.8	220	4.6	220	4.3	235	4.6	235	5.0	230	5.2	250	5.0	265	5.6	260	5.5
12	225	2.1	—	1.5	230	2.5	235	2.9	240	2.5	235	3.2	255	4.0	265	4.9	275	4.7	280	4.5	270	3.9	260	4.1
13	245	2.9	245	2.1	255	2.8	255	2.5	265	2.8	260	3.0	265	3.2	280	3.7	280	3.9	290	4.5	295	4.7	290	3.9
14	215	5.9	210	5.4	230	4.8	250	4.5	260	4.5	285	6.0	290	6.6	300	6.5	300	7.0	300	7.2	295	8.0	290	8.4
15	265	3.5	265	3.1	250	3.3	245	3.0	240	2.6	255	3.9	270	4.9	265	4.9	260	4.6	260	4.8	265	5.5	265	4.0
16	295	2.0	275	1.6	270	2.2	255	2.0	275	2.5	—	1.0	—	1.5	315	4.1	320	4.0	300	3.5	295	3.3	285	3.8
17	—	0.9	—	0.7	—	0.6	—	0.5	—	0.4	—	0.5	—	0.1	—	0.4	—	0.6	200	2.6	235	2.8	215	2.3
18	115	2.6	85	4.2	80	1.7	—	1.4	80	1.6	—	0.9	170	3.2	195	3.4	210	4.8	205	3.6	215	4.4	215	4.5
19	225	6.0	240	6.5	235	6.0	225	5.3	225	5.0	225	4.9	230	5.1	240	6.0	240	6.5	240	6.6	240	6.3	260	5.2
20	—	1.2	—	1.1	—	1.3	—	1.1	200	1.6	—	0.9	190	2.0	185	3.2	190	4.3	195	5.4	195	6.6	200	6.5
21	160	5.5	160	5.5	165	4.9	155	5.0	145	6.4	160	6.3	165	6.6	185	6.2	200	5.7	190	5.4	190	4.4	180	3.6
22	220	5.1	225	4.1	225	4.0	225	3.6	220	3.1	220	2.9	230	3.5	240	4.0	235	4.0	235	4.5	230	4.4	245	3.9
23	150	2.4	140	2.9	150	3.5	155	3.9	135	4.1	140	4.5	145	5.1	150	5.8	170	4.7	205	4.9	220	5.9	220	7.3
24	230	3.6	230	2.9	230	3.1	235	2.5	235	2.1	230	2.2	235	2.5	240	3.5	245	4.5	250	4.7	260	4.7	260	4.5
25	—	0.7	—	0.0	—	0.0	—	0.2	—	0.0	—	0.0	—	0.0	—	0.2	—	1.5	160	2.8	180	2.9	170	2.7
26	85																							



Direction expressed in degrees from North (E=90°, S=180°, W=270°, N=360°) : Speed in metres per second.

518. Richmond (Kew Observatory) :

H<sub>a</sub> (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	25	2.6	15	2.4	20	3.5	20	2.5	15	2.1	5	2.1	20	2.6	35	3.3	30	3.0	50	2.6	60	2.0	80	2.3
2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	0.1	—	0.1	—	0.2	—	0.4	—	0.4	—	0.5
3	—	0.0	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	100	1.9	90	3.7	95	4.0	95	4.5
4	95	1.8	—	1.2	90	2.3	90	3.2	80	3.0	90	2.5	95	2.5	105	3.9	100	5.0	115	4.8	125	4.5	120	4.9
5	100	2.1	—	1.5	—	1.5	—	0.9	130	2.5	—	0.9	—	0.0	—	1.5	—	1.5	195	3.2	205	3.5	220	4.3
6	—	1.2	—	1.4	225	1.9	—	1.5	—	0.5	—	1.2	215	1.8	225	2.5	230	2.8	220	3.0	230	3.5	245	4.1
7	240	3.0	235	3.4	230	4.0	225	3.6	225	4.9	230	3.8	240	4.4	255	5.1	250	5.3	250	5.8	260	6.1	260	5.2
8	235	2.4	235	2.0	225	2.0	230	2.0	220	1.8	—	1.0	—	1.5	—	1.5	260	1.8	275	2.2	240	3.0	230	3.0
9	—	0.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.5	—	0.0	—	0.0	—	1.0	110	2.2	—	1.4	150	1.8
10	—	1.0	—	0.7	—	1.0	—	1.3	—	0.7	—	1.1	—	0.7	—	0.4	—	0.7	—	0.6	225	2.0	250	2.0
11	50	2.0	65	1.9	—	0.4	—	1.0	—	1.4	50	1.8	—	1.4	—	1.0	—	0.5	—	0.3	—	0.3	—	0.7
12	—	0.8	355	2.5	340	1.6	355	1.6	—	1.2	345	2.0	360	2.5	5	2.7	355	3.4	360	4.0	360	4.4	360	3.9
13	—	1.5	255	2.3	240	2.3	240	1.7	220	1.8	210	1.6	—	1.5	—	0.8	—	1.2	190	3.6	190	4.5	185	4.5
14	230	2.1	245	2.0	265	2.4	305	3.4	325	4.1	320	3.2	295	3.1	300	3.1	305	3.4	300	3.5	310	3.8	300	3.5
15	—	1.5	280	2.0	275	2.0	270	1.7	280	1.6	265	2.3	280	1.9	—	1.2	320	2.7	325	2.4	320	2.6	325	2.5
16	—	1.2	220	1.7	—	0.3	—	0.0	—	0.0	—	0.2	—	0.0	—	0.1	—	0.4	—	0.3	200	2.2	220	2.6
17	220	2.1	235	1.8	—	1.0	225	1.8	—	0.5	—	0.2	220	1.9	235	2.1	240	2.4	260	2.1	245	2.1	225	2.1
18	185	6.3	205	7.9	225	7.4	245	6.1	235	6.0	240	5.5	240	5.5	250	6.4	260	7.0	260	7.7	255	7.3	250	7.7
19	170	1.7	—	0.5	—	0.5	115	2.0	120	3.0	105	3.6	120	4.2	130	5.6	135	6.4	150	8.5	170	6.9	190	6.0
20	180	8.5	190	9.0	200	8.0	205	8.5	210	8.9	215	10.5	220	10.9	220	10.9	220	11.5	225	10.7	225	12.0	230	10.6
21	235	7.5	245	4.9	245	3.9	245	3.8	255	4.0	255	4.6	260	5.0	260	4.8	265	4.8	265	5.1	270	5.1	270	6.0
22	—	1.5	225	1.8	—	0.8	—	1.1	225	2.4	220	2.0	—	1.5	210	2.1	195	1.9	205	2.6	180	1.9	190	2.1
23	230	2.4	230	2.9	230	3.1	225	2.7	230	1.6	225	2.0	220	3.3	220	3.7	220	4.9	210	4.5	220	4.4	220	5.9
24	200	4.4	205	4.5	205	3.2	205	4.0	205	3.7	225	3.6	235	2.1	235	2.9	255	3.6	255	3.5	260	3.7	260	4.0
25	225	4.1	230	3.2	220	3.5	220	3.4	225	3.0	230	3.5	230	3.5	240	3.9	255	5.5	250	5.2	240	4.6	260	3.9
26	255	2.1	270	2.5	275	2.5	280	2.0	285	2.5	285	2.1	315	2.4	290	2.1	305	3.1	310	3.5	300	4.5	310	4.5
27	355	6.0	360	5.6	15	4.9	20	6.0	25	6.2	30	6.3	40	5.1	50	5.6	60	6.5	65	7.2	80	8.4	80	8.7
28	35	2.1	45	1.7	—	0.8	—	0.6	—	1.1	—	1.0	—	1.1	35	2.0	40	2.9	45	3.6	45	5.1	50	5.1
29	25	3.5	20	3.2	20	2.5	10	2.5	360	2.7	360	2.5	10	2.7	20	3.9	30	6.0	30	5.6	35	5.1	30	4.5
30	—	1.5	45	1.6	—	1.1	—	1.0	35	2.0	45	2.4	60	1.7	55	1.7	—	1.5	40	1.8	30	3.0	40	3.0
Mean ...	—	2.6	—	2.5	—	2.3	—	2.3	—	2.4	—	2.5	—	2.5	—	2.8	—	3.4	—	3.8	—	4.1	—	4.1

519. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

1	35	2.3	—	1.5	30	1.6	40	2.1	45	2.0	50	1.8	60	3.5	70	4.2	55	3.5	65	2.8	50	3.4	55	3.1
2	50	2.0	50	2.4	55	1.9	50	2.3	50	1.9	40	1.9	50	2.6	50	2.1	55	2.6	75	4.1	90	5.1	90	4.9
3	—	0.5	—	0.7	—	0.3	—	0.6	—	0.5	—	0.4	—	0.5	—	0.5	—	1.5	110	2.5	155	3.4	135	3.1
4	170	2.5	—	0.8	—	1.1	195	2.9	205	2.5	215	3.0	240	2.1	260	2.5	260	2.1	260	3.0	265	3.0	255	3.4
5	220	8.8	230	7.2	245	6.3	250	6.0	260	6.1	265	3.6	250	3.2	250	4.5	265	5.0	270	4.8	265	5.2	260	4.1
6	255	4.1	255	3.9	245	3.6	245	3.6	245	4.4	250	4.1	245	4.2	250	5.1	250	6.0	265	6.0	255	5.5	260	5.6
7	235	3.2	250	4.0	250	3.8	240	3.1	235	3.0	240	2.6	235	3.0	250	4.0	255	5.0	270	4.9	275	5.1	265	5.2
8	180	3.8	200	4.5	210	6.4	215	7.7	220	8.0	220	7.6	235	5.9	230	6.5	225	7.8	230	8.5	230	9.8	235	10.5
9	255	4.7	255	4.1	265	4.1	270	3.5	290	2.5	290	1.6	260	2.0	255	2.4	275	3.1	290	2.8	290	3.9	285	4.8
10	—	0.8	—	1.0	—	1.0	—	1.2	—	1.1	—	0.8	—	1.5	220	1.8	235	1.8	230	3.0	235	3.6	230	4.5
11	—	1.1	—	0.4	—	0.0	—	0.0	—	0.0	—	0.1	—	0.4	—	0.1	—	0.2	165	2.0	195	2.9	205	2.4
12	—	1.0	205	2.0	205	4.5	205	3.2	210	3.0	220	2.6	225	2.2	220	2.1	225	3.0	250	3.0	270	3.9	265	4.0
13	—	0.5	—	0.1	—	0.0	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	1.5	200	4.1	210	5.3	205	4.9
14	170	3.0	165	2.3	165	2.1	—	1.5	170	1.6	170	2.8	165	3.1	170	3.5	180	3.1	180	5.3	185	5.1	185	6.0
15	170	2.4	160	2.0	160	2.5	135	2.5	140	2.6	150	2.9	120	1.8	160	3.1	165	4.0	155	2.9	180	4.0	190	5.1
16	215	6.0	215	4.5	210	4.2	200	2.8	205	3.2	210	3.8	210	3.3	205	4.2	225	5.4	215	6.8	220	6.5	220	6.1
17	175	3.2	180	3.5	180	3.7	190	3.0	—	1.0	—	0.8	160	2.5	165	2.5	140	2.8	130	4.0	140	4.2	135	5.5
18	210	7.0	210	8.1	220	8.5	240	6.5	255	4.1	220	3.0	215	4.1	220	4.6	220	5.2	215	6.3	215	7.5	215	7.0
19	—	0.4	—	0.1	—	0.0	—	0.0	—	0.3	—	0.1	—	0.1	—	1.0	160	3.0	165	3.8	165	5.2	155	5.6
20	180	4.5	180	3.5	215	4.6	220	3.4	210	3.1	210	3.4	215	4.1	220	4.0	230	4.5	235	4.6	225	5.1	230	5.5
21	—	0.5	—	1.0	—	1.1	—	0.6	—	1.0	215	2.1	205	2.9	205	2.2	215	4.0	215	5.0	220	5.7	220	5.9
22	220	2.9	220	2.8	215	2.6	230	2.0	250	3.0	250	3.0	260	3.0	260	3.9	260	3.9	280	4.6	295	4.0	295	5.0
23	200	3.2	—	1.5	200	2.4	205	2.7	220	2.5	235	2.3	245	2.3	250	2.3	260	2.5	270	2.8	270	2.6	315	2.0
24	250	2.0	250	1.9	260	2.5	255	2.5	260	2.5	265	2.6	255	2.5	240	2.3	250	3.2	260	5.5	270	5.0	260	4.4
25	250	4.3	245	4.0	235	3.2	250	3.9	265	4.9	280	5.2	280	4.9	280	4.6	295	6.5	295	6.6	290	6.5	300	6.5
26	260	3.5	270	3.6	270	3.1	280	3.8	275	3.0	275	3.1	270	2.9	275	3.1	295	3.2	305	4.9	310	4.5	315	5.0
27	—	0.8	—	0.7	—	1.0	—	0.8	—	1.0	—	0.1	—	0.5	—	0.0	—	0.9	—	0.6	—	1.1	220	2.2
28	—	1.0	—	0.2	—	0.2	—	0.1	—	0.6	—	1.4	—	1.5	235	1.8	225	2.1	230	2.9	225	3.6	235	3.6
29	245	1.8	—																					



Direction expressed in degrees from North (E=90°, S=180°, W=270°, N=360°). Speed in metres per second.

520. Richmond (Kew Observatory) :

H<sub>a</sub> (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
1	105	1.6	—	0.4	—	0.7	—	0.8	—	1.5	—	1.3	—	0.5	—	0.0	—	0.0	—	0.9	—	1.3	—	1.5	
2	220	4.8	220	3.6	205	4.1	215	5.9	210	5.5	210	7.5	205	8.4	205	8.8	205	9.5	215	11.5	225	5.0	215	5.0	
3	280	6.0	280	6.2	275	6.0	270	6.5	275	6.0	280	6.5	275	6.4	285	7.0	280	5.8	280	6.0	275	4.9	280	4.8	
4	340	2.1	335	2.5	335	3.6	335	4.3	325	2.6	310	2.5	300	3.0	305	3.1	315	3.4	335	5.2	330	4.7	335	5.9	
5	—	0.1	—	0.0	—	0.0	—	0.6	—	1.0	—	1.0	—	1.9	—	85	3.7	90	3.8	105	4.7	100	4.8	95	5.0
6	80	7.8	80	7.6	70	7.7	55	5.3	55	5.1	45	5.3	50	5.0	50	5.1	50	4.9	50	5.3	70	8.2	75	8.0	
7	335	2.6	335	2.5	—	1.3	—	1.0	—	0.6	—	1.5	—	1.5	—	210	1.9	—	1.4	220	1.7	235	1.8	270	4.3
8	215	8.9	220	10.6	225	9.0	230	6.8	250	4.8	240	3.5	235	2.5	240	2.0	270	2.1	320	3.0	320	4.5	320	3.5	
9	230	3.8	225	3.3	235	4.4	235	4.5	230	4.1	230	4.0	230	4.1	225	4.5	235	4.8	230	5.1	230	5.5	235	4.9	
10	235	2.5	245	2.5	245	2.6	250	2.5	275	2.5	305	3.0	275	1.8	—	1.4	260	2.8	275	3.4	285	4.4	280	4.5	
11	260	2.9	250	2.5	260	2.7	265	1.6	270	2.0	270	2.5	265	2.5	270	3.5	270	3.4	290	4.1	295	4.9	300	4.5	
12	—	0.8	—	0.9	—	0.9	—	0.9	—	0.7	—	1.0	—	0.9	—	0.8	—	0.8	—	1.3	220	2.0	225	2.1	
13	230	3.4	230	3.5	225	3.3	230	3.5	230	4.4	225	4.1	220	3.6	220	3.5	230	3.4	240	4.5	250	5.8	260	6.2	
14	220	2.0	220	2.9	220	2.5	235	2.5	240	2.6	235	2.3	220	2.0	225	2.0	—	0.9	—	0.6	230	3.1	225	5.1	
15	230	4.9	235	5.2	230	4.8	235	5.0	230	5.3	235	6.2	230	6.3	235	7.2	235	5.6	235	6.6	225	6.8	230	6.8	
16	310	1.6	—	1.1	—	0.9	—	1.4	—	1.0	—	1.0	—	1.3	—	0.8	—	0.9	—	1.0	335	2.0	335	2.5	
17	—	0.2	—	0.1	—	0.1	—	0.5	—	0.0	—	0.1	—	0.0	—	0.1	—	0.1	—	0.2	—	0.5	—	0.5	
18	—	1.0	—	0.0	—	0.1	—	0.0	—	0.0	—	0.3	—	0.8	—	0.5	—	0.1	—	0.5	135	2.0	150	3.9	
19	195	2.7	220	4.2	215	6.0	220	7.3	220	8.1	225	9.5	235	8.8	230	8.9	235	7.5	250	8.0	250	8.8	260	8.7	
20	—	0.3	—	0.6	—	0.7	125	2.5	120	3.3	115	3.0	100	3.6	125	4.7	150	5.2	190	4.0	215	5.8	220	7.0	
21	220	6.0	220	5.8	225	6.0	225	6.6	220	5.3	210	5.6	215	6.5	210	5.3	205	4.6	205	3.9	—	1.5	145	2.1	
22	220	7.0	220	6.2	220	5.6	230	5.0	225	4.6	220	6.6	215	6.4	210	7.5	215	9.0	210	8.9	210	9.0	215	12.0	
23	305	8.5	295	6.9	280	5.5	265	5.0	265	5.0	255	4.4	255	4.9	255	4.0	260	4.1	260	5.0	270	6.0	275	4.9	
24	—	0.5	130	2.1	—	1.5	110	2.1	130	3.1	140	6.2	140	6.1	155	6.6	155	7.6	150	8.5	160	8.8	175	8.4	
25	235	6.9	230	6.0	225	6.5	230	6.1	240	6.6	235	6.1	230	4.9	230	4.7	225	5.0	225	5.0	215	5.4	210	4.7	
26	190	2.6	185	1.9	—	1.5	—	1.5	200	3.5	195	2.9	200	1.9	190	2.5	195	3.5	195	3.6	200	4.0	200	3.6	
27	230	2.3	230	1.9	—	1.0	—	0.8	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	
28	35	4.0	55	3.0	50	4.0	45	4.0	35	3.5	20	3.9	20	4.5	30	5.9	25	5.9	45	7.0	40	7.6	45	8.0	
29	20	2.0	10	2.5	25	3.1	30	3.5	25	4.1	25	4.5	35	4.4	40	5.5	35	4.9	50	4.4	50	4.9	40	4.6	
30	325	3.5	320	4.5	330	4.6	340	3.1	345	2.5	330	2.6	320	2.1	—	1.0	—	1.5	—	1.5	320	1.8	—	1.4	
Mean ...	—	3.4	—	3.4	—	3.4	—	3.4	—	3.3	—	3.7	—	3.6	—	3.7	—	3.7	—	4.2	—	4.5	—	4.8	

521. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

Hour.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
1	—	0.1	—	0.1	—	0.3	—	1.4	100	2.5	105	1.9	—	0.8	—	1.3	—	1.2	100	2.9	100	3.0	95	2.9	
2	90	5.7	85	5.5	75	6.8	80	5.9	75	5.3	70	4.9	70	4.8	75	5.1	65	4.7	60	5.2	65	6.0	70	4.5	
3	70	4.6	60	4.9	60	5.5	55	3.9	60	4.2	50	4.0	50	4.6	60	4.5	55	5.1	50	3.8	50	4.4	45	3.9	
4	45	2.6	50	2.1	50	3.8	45	4.5	60	3.5	65	3.3	75	2.8	50	2.1	55	2.4	50	2.0	—	1.0	—	0.1	
5	355	1.6	—	0.9	—	0.9	—	0.1	—	0.1	—	0.0	—	1.5	—	1.1	—	0.1	—	1.0	—	0.5	—	0.5	
6	—	0.5	—	1.0	—	1.0	—	1.0	—	1.0	—	0.1	—	0.5	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	
7	—	1.0	—	0.6	—	1.5	160	1.6	170	2.4	155	1.6	—	1.1	—	1.5	175	3.0	170	2.7	170	3.5	170	3.1	
8	265	3.0	270	3.1	260	2.5	245	2.4	220	2.5	—	1.1	—	1.2	180	1.6	175	2.8	175	4.5	180	4.6	190	5.6	
9	—	0.1	—	0.1	—	0.0	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	0.1	—	0.0	—	0.9	—	1.0	
10	—	1.5	—	1.5	—	1.3	—	0.5	—	0.5	—	0.1	—	0.1	—	0.4	—	0.5	—	0.6	—	0.6	—	0.5	
11	150	3.0	170	5.0	170	6.3	165	6.9	160	7.1	165	8.2	160	8.9	160	9.1	155	8.5	155	9.0	155	8.9	160	7.5	
12	260	3.7	255	4.0	255	4.0	250	3.0	235	2.5	235	2.0	240	3.0	230	2.5	—	1.4	250	2.0	260	3.6	260	3.5	
13	180	3.8	180	6.3	180	6.0	185	6.2	215	6.0	250	3.1	240	2.6	235	3.5	225	3.9	225	5.1	215	5.2	230	6.0	
14	255	3.0	255	2.5	250	2.5	245	2.5	240	2.5	250	2.5	240	3.0	230	2.5	235	2.4	220	2.2	250	2.8	260	3.8	
15	—	0.0	—	0.3	325	1.9	—	1.5	—	0.0	—	1.0	—	1.1	—	320	1.8	330	1.8	—	1.1	—	1.4	—	0.8
16	—	1.3	120	2.0	120	1.7	105	2.4	95	2.6	110	2.1	110	3.3	110	3.5	125	4.5	130	5.1	130	5.0	130	4.5	
17	—	1.0	—	0.9	—	1.1	—	1.0	—	0.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	
18	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	0.2	—	0.4	—	0.1	—	0.0	—	0.4	—	0.8	—	1.5	
19	255	2.5	260	3.0	270	3.1	270	2.6	265	2.1	265	2.5	270	2.8	270	2.5	275	2.0	—	1.1	—	0.5	—	1.0	
20	—	1.0	—	1.5	—	1.1	265	1.9	275	1.8	270	2.0	305	2.3	—	1.3	—	1.4	315	2.0	335	1.6	—	0.0	
21	330	2.2	330	2.1	—	1.5	335	2.0	—	1.1	—	1.5	330	1.6	—	1.3	—	0.4	—	0.7	—	1.2	35	2.5	
22	—	0.5	—	1.0	—	0.5	—	1.0	—	0.4	—	1.0	—	0.9	—	0.5	—	0.2	—	0.5	—	0.7	—	0.9	
23	—	0.1	—	0.0	—	0.0	—	0.1	—	0.0	—	0.0	—	0.1	—	0.1	—	0.1	—	0.6	—	0.7	180	2.0	
24	210	4.4	220	3.6	230	3.1	220	2.2	—	1.5	—	1.3	280	1.6	—	0.3	215	1.9	—	1.2	—	1.4	—	0.9	
25	—	0.6	80	2.7	90	2.4	85	2.8	85	2.6	85	2.1	—	1.5	95	2.0	130	2.0	135	2.3	145	2.7	150	3.3	
26	115	2.7	110	1.7	—	0.6	115	2.4	130	2.8	130	2.7	140	4.6	150	4.3	160	4.9	185	5.1	180	5.3	175	5.2	
27	220	2.2	225	1.8	—	0.8	—	0.4	—	1.1	170	2.7	170	3.2	170	3.5	180	4.2	195	5.9	180	6.3	205	6.8	
28	225	5.2																							



522. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

1930.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.
Day.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.
1	14	13 15	11	18 20	13	16 0	15	15 25	13	14 50	6	11 5	8	15 5	10	15 55	5	15 20	9	19 5	6	20 20	10	20 40
2	18	2 45	7	1 15	15	10 20	16	12 45	6	6 5	8	21 55	10	14 45	15	14 0	3	12 5	10	13 10	29	10 20	12	19 50
3	19	12 40	7	22 0	9	15 50	14	12 40	7	16 25	8	10 10	12	15 15	10	17 10	9	16 45	6	11 35	12	7 55	9	2 50
4	19	22 20	3	18 20	9	13 55	11	16 30	7	16 25	7	2 25	5	16 10	13	12 35	9	18 15	15	24 0	10	12 20	7	4 0
5	19	2 55	9	14 50	5	2 30	9	5 25	13	17 30	11	13 55	6	15 10	8	8 45	8	12 20	15	0 45	12	21 35	3	10 0
6	8	23 50	12	12 40	9	13 40	8	14 20	11	22 40	9	12 5	9	13 10	14	12 35	11	14 15	16	13 45	14	12 25	5	23 15
7	15	21 45	17	16 0	8	10 25	9	10 25	9	0 40	13	17 50	7	15 35	13	13 55	11	13 55	11	10 25	16	21 20	7	12 30
8	14	3 50	14	9 35	8	24 0	8	16 25	10	3 10	10	10 15	8	11 15	8	17 0	7	17 25	23	14 0	18	1 50	13	13 55
9	18	20 15	19	12 0	9	14 30	10	12 55	14	17 0	11	18 45	7	14 0	10	11 50	5	9 35	10	0 35	10	13 20	7	16 10
10	20	22 45	17	12 0	12	13 10	9	14 15	12	16 0	14	14 40	9	18 45	8	13 15	5	20 50	10	12 35	9	13 35	6	23 50
11	22	1 35	15	11 20	11	9 50	5	20 40	18	14 0	12	7 55	13	15 20	12	11 35	6	18 30	7	20 0	11	14 45	15	9 55
12	29	21 45	15	17 20	8	21 0	12	10 20	9	12 35	6	19 15	10	13 35	12	13 5	9	10 55	8	3 0	6	13 15	7	13 15
13	19	1 10	9	0 15	8	19 20	12	12 30	11	15 40	10	19 55	10	17 30	10	23 50	9	18 45	10	13 55	12	12 40	13	5 10
14	14	5 0	6	22 40	11	18 0	12	13 55	11	10 55	10	15 30	11	14 30	16	11 0	11	15 25	11	9 45	11	13 55	8	13 45
15	13	1 5	17	17 15	10	0 10	14	14 40	9	16 55	11	18 30	10	20 15	11	17 10	7	8 30	12	23 50	13	9 45	4	3 25
16	10	22 5	10	12 30	12	15 50	12	14 45	7	9 50	7	12 10	15	13 50	8	15 25	7	13 40	13	11 0	5	13 20	9	10 15
17	12	8 0	15	14 25	11	20 5	16	15 25	10	9 35	7	17 15	10	13 25	8	14 40	12	23 50	14	21 20	3	21 5	3	3 40
18	11	12 50	16	12 30	14	10 35	17	9 45	15	16 5	6	16 20	12	16 50	14	20 35	14	2 30	15	2 30	11	20 55	10	13 25
19	12	15 5	13	0 5	12	18 40	14	7 35	9	12 5	11	17 10	11	18 15	15	14 40	20	23 45	10	11 25	16	11 35	7	3 30
20	6	12 55	9	9 40	15	16 20	12	14 10	8	15 20	11	15 35	10	16 55	12	10 20	23	6 20	15	15 15	13	13 10	5	10 50
21	4	20 35	9	11 10	14	10 55	6	14 55	9	19 5	10	13 0	14	11 35	15	15 5	13	0 45	13	12 40	16	15 45	6	12 55
22	9	13 25	10	22 45	10	1 0	7	15 5	9	8 0	9	15 25	12	11 0	10	11 40	6	12 45	9	12 5	22	12 55	3	11 50
23	11	6 50	11	18 45	11	14 25	11	11 0	13	10 25	14	15 35	9	17 35	15	15 15	12	15 45	6	10 30	17	1 0	7	24 0
24	15	12 5	12	9 45	13	9 25	9	15 55	8	21 20	10	17 0	10	12 35	9	9 35	9	13 5	11	15 20	16	11 55	8	0 35
25	7	0 40	9	20 10	9	15 30	9	14 15	7	9 50	9	11 40	7	19 35	8	16 55	10	9 55	14	11 30	17	17 25	6	12 5
26	18	13 30	8	12 35	6	9 45	7	11 15	7	14 55	6	17 50	11	10 50	7	14 45	10	17 35	9	12 20	9	21 5	11	10 15
27	9	0 15	8	18 40	5	16 10	7	19 40	7	15 20	8	14 30	11	16 20	10	12 45	15	15 20	7	13 10	6	23 30	12	14 20
28	9	2 40	7	17 15	12	13 40	12	17 10	10	10 45	10	13 45	11	15 25	5	17 5	11	13 30	9	14 30	13	11 0	19	21 50
29	6	15 25	—	—	15	12 30	16	16 45	6	15 30	8	15 5	17	12 25	23	23 25	10	8 35	11	23 15	11	19 45	21	5 45
30	6	15 20	—	—	11	16 50	13	10 55	13	16 55	12	12 50	9	9 45	7	0 40	8	20 45	15	14 40	8	2 45	13	12 5
31	17	18 10	—	—	16	12 10	—	—	11	1 0	—	—	7	14 55	9	17 50	—	—	9	0 5	—	—	13	15 30

DISTRIBUTION OF WIND SPEED : EXTREME VELOCITIES AS RECORDED BY THE DINES TUBE ANEMOGRAPH.

523. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

1930.

Month.	DISTRIBUTION OF WIND.								EXTREME VELOCITIES.					
	More than 17.1 m/s.		10.8 to 17.1 m/s.		5.5 to 10.7 m/s.	1.6 to 5.4 m/s.	Less than 1.6 m/s.	No Record.	Highest Hourly Wind.			Highest Gust.		
	Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid. Time.	Speed.	Date.	
Jan. ...	—	hr. 0	5	hr. 15	hr. 267	hr. 344	hr. 118	hr. 0	265	m/s. 15	day. 12	hour. 21	m/s. 29	d. h. m. 12 21 45
Feb. ...	—	0	2	5	205	381	81	0	90	12	9	12	19	9 12 0
Mar. ...	—	0	0	0	163	440	141	0	185	9	31	12	16	31 12 10
April ...	—	0	0	0	185	407	128	0	20	10	18	10	17	18 9 45
May ...	—	0	0	0	82	483	179	0	75	9	1	15	16	11 14 0
June ...	—	0	0	0	105	442	173	0	200	9	23	15	14	23 15 35
July ...	—	0	0	0	77	508	159	0	220	9	16	12	17	29 12 25
Aug. ...	—	0	0	0	83	497	164	0	215	10	21	15	23	29 23 25
Sept. ...	—	0	1	4	97	453	166	0	225	12	20	11	23	20 6 20
Oct. ...	—	0	1	2	102	472	148	0	235	11	8	14	23	8 14 0
Nov. ...	—	0	2	4	181	373	162	0	220	13	22	13	29	2 10 20
Dec. ...	—	0	1	1	79	358	306	0	200	11	28	22	21	29 5 45
Year ...	—	0	12	31	1626	5178	1925	0	265	15	Jan. 12	21	29	Jan. 12 21 45 Nov. 2 10 20

TEMPERATURE IN THE GROUND AT DEPTHS OF 30 CM. (1 foot) AND 122 CM. (4 feet).  
**524. Richmond (Kew Observatory).** *Readings, in degrees absolute, at 9h., Greenwich Mean Time.*

405  
1930.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Day.	30 cm	122 cm	30 cm																				
1	77.0	80.7	77.6	80.6	77.0	79.0	81.0	80.4	83.4	82.2	87.9	85.1	91.7	87.7	89.9	88.0	91.7	88.9	86.1	87.5	83.8	84.9	80.7	82.3
2	78.5	80.7	78.3	80.5	76.7	79.1	81.5	80.5	83.5	82.4	87.8	85.2	91.9	87.7	90.3	88.1	90.4	89.0	85.8	87.3	84.1	84.9	80.7	82.2
3	78.9	80.4	78.5	80.2	77.1	79.1	81.5	80.7	83.8	82.4	88.3	85.2	92.0	87.8	89.5	88.0	90.3	89.1	85.6	87.3	82.9	84.9	80.7	82.2
4	79.3	80.3	78.4	80.2	78.0	79.1	81.5	80.9	83.8	82.6	87.8	85.3	91.4	87.9	89.3	88.1	90.0	89.1	86.6	87.1	81.7	84.9	80.7	82.2
5	79.9	80.4	78.6	80.3	78.7	79.1	81.5	81.1	84.1	82.7	88.0	85.3	91.8	88.1	89.7	88.1	90.3	89.0	87.0	87.1	79.8	84.9	79.6	82.3
6	78.7	80.8	78.0	80.2	79.0	79.2	81.0	81.2	84.9	82.8	88.9	85.4	92.5	88.1	89.2	88.2	90.8	89.0	85.8	87.1	79.2	84.6	78.6	82.2
7	78.2	80.7	77.2	80.1	79.2	79.2	80.9	81.2	85.0	82.8	89.5	85.6	92.7	88.1	89.4	88.1	90.0	89.0	84.8	87.1	78.5	84.4	78.3	82.2
8	79.0	80.7	76.8	80.2	78.8	79.4	80.5	81.2	84.0	83.1	88.6	85.7	92.1	88.2	89.4	88.2	89.3	88.9	85.6	87.0	80.0	84.2	78.3	82.1
9	78.0	80.7	76.2	80.1	79.0	79.5	81.1	81.2	83.8	83.1	88.5	85.8	91.9	88.4	89.3	88.1	89.3	88.9	85.3	86.9	80.6	83.8	77.7	82.0
10	78.4	80.6	75.9	80.1	79.6	79.4	81.0	81.2	83.9	83.1	89.1	85.9	91.7	88.5	89.6	88.2	89.8	89.0	84.0	86.8	81.8	83.9	77.3	81.9
11	78.5	80.6	76.0	80.0	78.6	79.7	81.0	81.2	84.3	83.1	88.4	86.0	91.8	88.6	90.2	88.1	90.2	88.8	83.6	86.6	80.9	83.8	77.3	81.7
12	77.3	80.6	76.5	79.7	77.9	79.7	81.3	81.2	83.9	83.1	88.2	86.1	90.5	88.6	90.5	88.1	90.0	88.8	83.9	86.5	79.6	83.7	77.8	81.4
13	77.6	80.3	76.3	79.6	78.1	79.7	81.2	81.2	84.5	83.1	89.6	86.1	90.3	88.7	89.9	88.3	89.4	88.8	83.2	86.4	79.5	83.4	78.2	81.3
14	79.0	80.3	76.4	79.6	78.6	79.7	81.0	81.2	85.0	83.3	89.7	86.1	90.5	88.6	89.6	88.4	88.9	88.7	83.6	86.2	79.8	83.4	78.0	81.2
15	80.0	80.2	76.9	79.5	78.7	79.7	81.0	81.3	85.4	83.2	90.0	86.2	90.0	88.6	89.0	88.3	88.0	88.8	84.8	86.1	80.6	83.3	77.3	81.2
16	79.3	80.6	76.6	79.5	79.1	79.8	81.0	81.3	85.8	83.5	88.9	86.3	89.9	88.4	88.1	88.4	87.6	88.6	86.1	86.1	80.6	83.2	77.1	81.2
17	79.0	80.4	75.9	79.3	78.8	79.9	81.0	81.3	86.7	83.5	89.2	86.4	89.5	88.3	88.9	88.2	87.8	88.5	85.9	86.0	78.7	83.2	77.2	81.0
18	78.6	80.3	75.5	79.2	78.5	80.0	81.1	81.5	86.7	83.7	90.5	86.6	89.2	88.3	89.7	88.2	88.3	88.4	86.2	86.1	77.4	83.1	76.9	80.9
19	79.5	80.7	75.2	79.1	78.0	80.0	80.2	81.3	85.9	83.8	90.9	86.8	89.6	88.5	89.4	88.2	87.9	88.3	85.0	86.1	78.8	83.0	78.2	80.9
20	79.2	80.6	75.9	79.1	77.5	80.0	80.1	81.5	85.9	84.1	90.6	86.8	88.9	88.3	88.5	88.2	87.8	88.3	85.0	86.1	79.8	82.9	79.2	80.8
21	78.1	80.4	75.5	79.1	77.8	79.9	79.7	81.3	85.9	84.1	90.3	87.0	89.2	88.2	89.2	88.1	87.6	88.1	83.6	86.1	81.2	82.7	79.0	80.8
22	78.0	80.4	75.6	79.1	78.4	79.9	80.1	81.2	85.1	84.2	90.5	87.1	87.9	88.2	88.5	88.1	87.4	88.1	82.8	86.0	81.8	82.6	77.4	80.8
23	79.0	80.4	75.8	79.0	78.9	79.9	81.0	81.2	85.6	84.2	90.3	87.1	87.6	88.1	88.4	88.1	88.1	88.1	83.2	85.9	81.0	82.7	76.9	80.7
24	79.7	80.5	75.9	79.0	78.5	79.9	82.0	81.2	85.6	84.2	89.8	87.2	87.6	88.1	88.3	88.0	88.7	88.0	83.0	85.7	79.8	82.7	77.5	80.8
25	79.9	80.5	75.7	79.0	78.0	79.9	83.0	81.3	86.0	84.2	89.8	87.3	88.4	88.0	88.4	88.0	88.0	88.0	82.2	85.6	80.7	82.7	77.9	80.6
26	78.6	80.8	76.0	78.9	79.0	80.0	84.0	81.3	85.9	84.3	89.4	87.4	89.0	87.9	89.5	88.0	87.2	88.0	81.4	85.5	80.7	82.6	77.3	80.6
27	78.9	80.7	76.9	78.9	79.5	79.9	83.9	81.5	86.3	84.4	90.2	87.4	88.7	88.0	91.3	88.1	86.9	87.9	80.3	85.2	79.7	82.6	77.2	80.5
28	79.0	80.7	77.1	79.0	80.6	80.1	84.3	81.8	87.5	84.3	90.2	87.3	89.3	87.8	92.0	88.1	86.4	87.9	81.2	85.1	79.1	82.5	77.8	80.4
29	79.0	80.8	—	—	81.1	80.2	83.7	82.1	88.1	84.5	90.2	87.6	89.3	87.8	92.6	88.3	86.3	87.7	82.8	84.9	79.8	82.4	78.9	80.5
30	78.5	80.7	—	—	80.7	80.3	83.8	82.2	89.0	84.7	90.9	87.6	89.3	87.9	93.3	88.4	86.4	87.6	84.2	84.8	80.5	82.2	78.0	80.3
31	77.9	80.7	—	—	80.8	80.3	—	—	87.9	84.9	—	—	89.2	87.9	93.0	88.7	—	—	84.0	84.8	—	—	78.5	80.3
Mean	78.7	80.6	76.6	79.6	78.7	79.7	81.5	81.3	85.4	83.5	89.4	86.4	90.2	88.2	89.8	88.2	88.7	88.5	84.3	86.2	80.4	83.5	78.3	81.3

The initial 2 or 3 of the readings is omitted; i.e., 275.0 degrees absolute is written 75.0.

Year 83.5 | 83.9

MINIMUM TEMPERATURE "ON THE GRASS" DURING THE INTERVAL 18H. TO 7H. G.M.T.  
*Readings in degrees absolute.*

**525. Richmond (Kew Observatory).** 1930.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	69.4	68.8	71.4	75.6	74.8	84.8	84.4	84.3	81.9	78.6	80.6	79.9
2	78.3	77.2	71.8	83.4	76.6	83.6	85.8	86.9	75.6	83.0	79.5	79.5
3	78.9	74.5	76.9	72.7	75.6	82.7	85.8	80.4	78.4	78.7	78.6	80.0
4	78.8	71.8	69.9	77.6	76.1	83.3	82.9	85.3	81.2	84.4	71.4	76.8
5	78.9	75.2	75.8	78.4	71.9	78.4	81.3	79.1	84.0	84.1	65.3	73.5
6	69.1	71.0	72.1	76.8	80.9	79.4	80.4	81.3	85.0	78.0	73.9	70.7
7	73.0	71.2	77.8	76.8	78.5	80.7	79.6	82.4	83.3	76.7	68.2	75.4
8	77.7	72.3	67.3	68.8	75.0	76.5	81.1	80.4	79.8	82.5	81.0	67.8
9	67.9	70.0	75.5	79.3	72.5	74.5	83.6	81.9	81.1	78.0	72.9	69.2
10	74.0	71.0	77.4	70.0	77.5	81.1	80.4	84.1	86.7	69.4	78.0	71.8
11	75.6	71.6	70.7	68.4	80.1	85.2	84.1	89.3	87.0	76.0	72.3	71.4
12	70.2	73.8	66.8	74.9	80.1	79.2	76.3	84.5	84.7	76.2	67.4	74.0
13	74.7	69.8	71.8	69.6	81.3	83.3	83.4	83.5	82.2	70.6	75.3	73.1
14	81.2	72.0	72.5	72.0	82.9	83.8	85.2	85.1	82.2	76.1	72.2	71.9
15	78.0	72.0	74.0	72.3	74.6	82.9	85.5	81.1	77.9	82.4	79.7	70.2
16	72.0	67.0	70.5	74.7	77.6	82.0	85.7	78.5	75.5	86.0	71.8	72.3
17	75.1	69.9	67.3	75.7	81.1	84.8	83.1	75.4	79.4	78.6	68.9	73.5
18	73.2	71.0	68.6	74.4	79.6	86.1	76.8	81.3	83.6	79.4	69.4	69.8
19	76.4	74.6	65.1	70.6	75.1	85.5	85.7	81.4	78.8	75.2	76.8	81.1
20	75.0	70.6	65.2	73.2	83.3	84.5	80.3	77.4	83.3	79.4	78.8	80.0
21	68.3	67.8	74.6	66.3	77.2	88.2	86.2	86.8	83.3	71.6	81.5	71.4
22	71.1	74.0	71.3	68.8	72.9	85.7	80.3	80.9	80.9	76.2	81.7	67.4
23	79.9	71.1	70.9	70.6	80.3	82.0	83.5	82.8	88.5	77.7	74.0	71.4
24	79.7	73.2	72.4	83.1	80.7	83.8	84.8	81.7	86.4	76.0	70.4	76.1
25	76.9	65.6	64.0	74.6	83.3	79.7	84.1	77.7	80.1	74.8	78.5	73.6
26	67.8	74.5	70.4	77.3	83.3	75.5	81.7	83.8	77.7	73.9	73.2	68.2
27	78.0	71.0	71.7	74.5	78.0	85.1	79.9	85.6	82.6	68.0	68.5	72.9
28	76.8	72.0	79.2	79.3	78.0	79.7	81.3	85.7	77.3	79.8	74.5	73.2
29	75.6	—	73.8	78.9	81.2	76.7	84.5	85.5	81.4	82.4	79.4	80.3
30	69.2	—	70.4	77.4	81.4	80.8	85.2	90.0	81.3	85.2	80.8	72.2
31	68.0	—	75.1	—	84.5	—	80.5	84.7	—	79.8	—	78.0
Mean	74.5	71.6	71.7	74.5	78.6	82.0	82.7	82.9	81.7	78.0	74.7	73.7

Year 77.2

HEIGHT IN CM. ABOVE M.S.L. OF SURFACE OF UNDERGROUND WATER.  
*Daily Means and Extremes for Months.*

**526. Richmond (Kew Observatory).** 1930.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	312	337	254									

527. Richmond (Kew Observatory).

Table for Richmond (Kew Observatory) in January 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility, Precipitation, and Remarks on the Weather of the Day. Rows 1-31 show daily observations with cloud types like St-Cu, Nb, and Ci, and weather remarks such as 'early a' and 'f a'.

528. Richmond (Kew Observatory).

Table for Richmond (Kew Observatory) in February 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility, Precipitation, and Remarks on the weather of the Day. Rows 1-28 show daily observations with cloud types like St-Cu, Nb, and Ci, and weather remarks such as 'f a, late p' and 'early a'.

Note.—Observations are not taken at 15h. on Sundays, Good Friday and Christmas Day. \* Mean of 27 days. † Mean of 24 days.

529. Richmond (Kew Observatory).

March, 1930.

Table for Richmond (Kew Observatory) in March 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day. Rows 1-31 show daily observations with various cloud codes and weather notes.

530. Richmond (Kew Observatory).

April, 1930.

Table for Richmond (Kew Observatory) in April 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day. Rows 1-31 show daily observations with various cloud codes and weather notes.

\* Mean of 26 days.

† Mean of 25 days.

Day.	Cloud Forms.			Cloud Amount (All Forms).					Visibility.					Precipitation.					Remarks on the Weather of the Day.				
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>		15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	
1	Fr-Cu: A-Cu: Ci-St.	A-Cu: Ci.	Ci.	4	0	8	6	3	3	i	i	J	K	K	J	...	...	...	...	...	...	...	⊕ 12 <sup>h</sup> -18 <sup>h</sup> : mock suns 17 <sup>h</sup> 30 <sup>m</sup> .
2	St: St-Cu: A-Cu: A-St.	A-Cu.	Cu: Fr-Cu.	8	6	8	9	4	1	G	G	H	G	G	G	...	...	...	...	...	...	...	T 18 <sup>h</sup> 25 <sup>m</sup> , 59 <sup>m</sup> .
3	Nb: A-St.	Cu: A-Cu.	St: A-Cu.	10	9	3	10	9	0	F	D	F	G	F	E	...	...	...	...	...	...	...	f a. n.: ● a: K ● <sup>2</sup> p.
4	St.	Cu-Nb: St-Cu: Ci.	Cu-Nb: St-Cu: A-Cu: Ci-St.	10	10	9	10	8	9	D	E	F	G	J	J	...	...	...	...	...	...	...	early a: p ● <sup>0</sup> 14 <sup>h</sup> 40 <sup>m</sup> .
5	Ci.	Cu: A-Cu: Ci.	Nb: A-St.	3	7	9	9	10	10	G	H	J	J	i	i	...	...	...	...	...	...	...	p early a: ⊕ 9 <sup>h</sup> : p ● <sup>2</sup> ▲ 16 <sup>h</sup> 5 <sup>m</sup> : [● till 24 <sup>h</sup> .
6	St: St-Cu.	Cu: A-Cu: Ci.	Cu: Nb: A-St.	8	9	8	8	10	10	G	i	K	K	i	i	...	...	...	...	...	...	...	● early a: ⊕ 14 <sup>h</sup> : ● ● <sup>0</sup> n.
7	Cu: St-Cu: A-Cu.	St-Cu: St: A-St.	St-Cu: A-Cu.	9	10	10	9	9	10	i	i	i	i	i	G	...	...	...	...	...	...	...	● <sup>0</sup> early a.
8	Cu: Ci.	Cu.	Nb: A-St.	3	7	6	7	10	9	i	J	K	J	K	J	...	...	...	...	...	...	...	● early a: p ● <sup>0</sup> p: ● n.
9	St: St-Cu: A-Cu: A-St.	Cu: Cu-Nb: A-Cu: Ci.	Nb: Cu: A-Cu: Ci: St.	8	9	9	9	8	10	i	J	K	K	K	J	...	...	...	...	...	...	...	● <sup>0</sup> 0 <sup>h</sup> -2 <sup>h</sup> : ● <sup>0</sup> p, n.
10	Fr-Cu: Ci: Ci-St.	Cu: A-St.	Nb: A-St.	4	3	10	10	10	10	i	H	J	J	i	J	...	...	...	...	...	...	...	p early a: p ● <sup>0</sup> p: ● n.
11	Fr-Cu: St-Cu: A-St.	St-Cu: Fr-Nb: A-St.	St-Cu: Fr-St: A-Cu.	10	10	10	-	9	9	K	i	J	-	K	J	...	...	...	...	...	...	...	p ● <sup>0</sup> early a, a: q p.
12	A-Cu: A-St: Ci.	Cu: St-Cu: A-Cu.	St: St-Cu: A-St.	4	9	8	9	10	10	i	K	K	K	K	i	...	...	...	...	...	...	...	● early a: p ● <sup>0</sup> p: u 18 <sup>h</sup> .
13	A-St.	Nb: Fr-Nb: A-St.	St-Cu: A-St.	10	10	10	10	10	10	G	H	H	K	i	i	...	...	...	...	...	...	...	● <sup>0</sup> early a, a: ● n.
14	Cu: St-Cu: Ci.	Cu: Ci.	St-Cu: A-Cu: Ci.	9	4	9	3	5	3	i	K	K	K	K	G	...	...	...	...	...	...	...	● <sup>0</sup> 0 <sup>h</sup> -0 <sup>h</sup> 30 <sup>m</sup> .
15	A-Cu.	St-Cu: A-St.	St-Cu: A-St.	6	10	10	10	10	3	G	J	K	J	J	J	...	...	...	...	...	...	...	p early a: p ● <sup>0</sup> 8 <sup>h</sup> 40 <sup>m</sup> .
16	Fr-Cu: Ci.	Cu: Ci-St: Ci.	Cu: A-Cu: Ci.	1	8	8	6	8	10	i	K	K	K	K	K	...	...	...	...	...	...	...	ppp early a: ⊕ 11 <sup>h</sup> 30 <sup>m</sup> -18 <sup>h</sup> .
17	A-St: Ci-St.	St-Cu: A-St: A-Cu.	A-St.	9	9	10	10	9	8	J	K	K	K	J	J	...	...	...	...	...	...	...	early a.
18	Cu: A-St.	Nb: A-St: Ci.	Cu: A-Cu: Ci.	2	8	9	-	6	2	K	K	K	-	-	-	...	...	...	...	...	...	...	p ● <sup>2</sup> Δ 12 <sup>h</sup> 15 <sup>m</sup> : q 18 <sup>h</sup> .
19	Cu: Fr-Cu: A-Cu.	St-Cu.	St-Cu.	9	8	9	10	10	10	K	K	K	K	K	J	...	...	...	...	...	...	...	pp early a.
20	St: St-Cu.	St-Cu: A-St.	Cu: St-Cu: A-St.	10	10	10	9	9	9	G	H	J	J	i	i	...	...	...	...	...	...	...	p ● early a, a.
21	St-Cu: St.	St-Cu.	Cu.	10	10	9	5	1	0	G	i	J	J	K	i	...	...	...	...	...	...	...	ppp early a.
22	St-Cu: A-Cu.	Cu: Nb: A-St.	Nb: Cu: A-Cu: Ci.	8	10	10	10	7	10	i	J	H	G	i	G	...	...	...	...	...	...	...	early a: ● ● <sup>0</sup> a, p: ● n.
23	Fr-Cu: A-Cu.	Cu: A-Cu: Ci.	Cu: Ci.	3	3	7	6	4	4	i	i	K	K	i	K	...	...	...	...	...	...	...	p ● early a.
24	Nb.	Nb: St-Cu: A-St.	Nb: St-Cu: A-St.	10	10	9	8	9	10	G	H	i	i	i	G	...	...	...	...	...	...	...	● <sup>0</sup> ● early a: p ● <sup>0</sup> n.
25	St.	St.	Cu-Nb: A-St: Ci-Cu.	10	10	10	-	10	10	i	i	i	-	-	G	...	...	...	...	...	...	...	● early a, p, n.
26	St.	Cu: A-Cu: Ci.	Nb: A-St.	10	10	9	9	9	7	F	F	H	H	H	G	...	...	...	...	...	...	...	● m early a: K 14 <sup>h</sup> -15 <sup>h</sup> 45 <sup>m</sup> : f n.
27	St.	Cu.	A-St.	10	9	1	8	1	8	E	H	J	K	J	J	...	...	...	...	...	...	...	f early a.
28	—	Cu.	Cu: Fr-Cu: A-Cu.	0	0	4	7	3	7	i	J	J	J	J	J	...	...	...	...	...	...	...	ppp early a.
29	St.	Cu: Fr-Cu.	Cu: Ci: Ci-St.	10	9	7	5	6	7	F	i	K	K	K	i	...	...	...	...	...	...	...	m early a.
30	A-Cu: Ci-Cu: Ci.	St-Cu.	A-Cu.	9	10	10	10	9	9	G	H	i	G	G	i	...	...	...	...	...	...	...	● 14 <sup>h</sup> 50 <sup>m</sup> -17 <sup>h</sup> 10 <sup>m</sup> .
31	St.	Cu-Nb: St-Cu.	St-Cu: Nb: A-St.	10	10	9	9	9	9	G	G	K	K	i	G	...	...	...	...	...	...	...	p ● n: p ● <sup>2</sup> 18 <sup>h</sup> 30 <sup>m</sup> .
Mean Cloud Am't.				7.3	8.0	8.3	8.2	7.6	7.3														

532. Richmond (Kew Observatory).

Day.	Cloud Forms.			Cloud Amount (All Forms).					Visibility.					Precipitation.					Remarks on the Weather of the Day.				
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>		15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	
1	Nb.	St.	Nb: St: A-St.	10	10	10	-	10	10	i	i	J	-	G	G	...	...	...	...	...	...	...	● ● <sup>0</sup> a, p, n.
2	St: St-Cu: A-Cu.	Cu: Fr-Cu.	Cu-Nb: A-Cu.	8	9	9	10	9	9	G	i	J	-	J	G	...	...	...	...	...	...	...	p ● <sup>0</sup> p.
3	St: Nb: A-St.	St-Cu.	St-Cu: A-St.	10	9	9	10	10	1	G	i	J	J	i	G	...	...	...	...	...	...	...	● <sup>0</sup> a: ⊕ 18 <sup>h</sup> 15 <sup>m</sup> .
4	St.	St.	Cu.	10	10	10	2	7	2	i	i	i	J	J	G	...	...	...	...	...	...	...	pp early a.
5	Ci-St.	Ci.	Ci.	<1	0	<1	<1	0	0	G	i	K	K	J	i	...	...	...	...	...	...	...	pp early a.
6	—	—	—	0	0	0	0	0	0	G	F	K	K	K	K	...	...	...	...	...	...	...	pp early a, n: ∞ 9 <sup>h</sup> .
7	Cu: Fr-Cu: A-Cu.	St-Cu.	Fr-Cu.	1	7	8	3	1	3	K	J	K	K	K	K	...	...	...	...	...	...	...	pp early a.
8	Fr-Cu: Ci.	Cu: St-Cu.	Cu: St-Cu.	1	<1	6	-	3	1	K	K	J	-	K	K	...	...	...	...	...	...	...	pp early a.
9	Ci.	Ci.	Ci.	<1	<1	6	2	7	4	i	K	m	m	K	K	...	...	...	...	...	...	...	pp early a: () a and p.
10	St: Fr-St: A-St.	St-Cu: Fr-St: A-St.	St-Cu	10	10	10	10	10	10	J	J	K	K	K	K	...	...	...	...	...	...	...	● <sup>0</sup> p.
11	St: St-Cu: A-St: A-Cu.	St-Cu: A-St.	St-Cu: A-St: A-Cu.	9	10	9	9	9	4	K	K	K	K	K	J	...	...	...	...	...	...	...	pp early a: ⊕ a.
12	St: St-Cu.	Cu: Ci.	Ci-St.	9	10	7	7	5	4	G	H	J	J	J	J	...	...	...	...	...	...	...	pp early a.
13	A-Cu: Ci-Cu: Ci.	Cu: A-Cu: Ci.	St: A-Cu.	7	7	7	4	3	1	G	H	J	J	J	J	...	...	...	...	...	...	...	pp early a.
14	St: St-Cu: A-Cu.	—	Cu.	7	5	0	0	<1	5	i	i	i	J	J	G	...	...	...	...	...	...	...	pp early a.
15	Fr-Cu: Ci.	—	Ci.	<1	0	0	-	<1	1	J	J	K	-	l	K	...	...	...	...	...	...	...	pp early a.
16	St.	Nb: St.	A-Cu.	10	10	10	5	3	3	i	i	i	i	J	G	...	...	...	...	...	...	...	● ● <sup>0</sup> p. [18 <sup>h</sup> 30 <sup>m</sup> : m n.
17	St.	Cu: Ci.	Cu: Cu-Nb.	10	10	3	7	9	1	F	G	G	J	i	H	...	...	...	...	...	...	...	pp early a: K 16 <sup>h</sup> 30 <sup>m</sup> -18 <sup>h</sup> 30 <sup>m</sup> ● <sup>0</sup>
18	A-St: A-Cu.	Cu-Nb: Nb.	Cu.	9	10	9	8	1	9	G	J	J	J	J	H	...	...	...	...	...	...	...	T p ● a: K ● p: ● <sup>2</sup> 15 <sup>h</sup> 40 <sup>m</sup> -16 <sup>h</sup> [25 <sup>m</sup> .
19	A-Cu.	Cu: A-Cu: Ci-Cu: Ci.	Cu: Ci.	1	8	8	5	2	7	i	J	K	l	l	l	...	...	...	...	...	...	...	p ● <sup>0</sup> 9 <sup>h</sup> 20 <sup>m</sup> .
20	St: St-Cu: A-St.	St-Cu: A-St.	St-Cu: Fr-Cu: A-St.	10	10	10	10	10	10	K	K	K	J	J	J	...	...	...	...	...	...	...	p ● <sup>0</sup> 9 <sup>h</sup> 20 <sup>m</sup> .
21	St: St-Cu.	St-Cu: Ci.	Cu: Cu-Nb.	10	9	9	9	8	4	J	K	l	l	l	K	...	...	...	...	...	...	...	pp ● 7 <sup>h</sup> 40 <sup>m</sup> : p ● <sup>0</sup> p.
22	St-Cu: A-Cu: Ci-Cu.	Cu: A-Cu: Ci-Cu: Ci-St.	Cu-Nb: A-Cu: Ci-Cu.	9	9	9	-	7	3	K	K	l	l	-	K	...	...	...	...	...	...	...	pp early a: p ● <sup>0</sup> p, n: () p.
23	Cu: Fr-Cu: A-Cu.	Cu: Fr-Cu.	Nb: Cu: St-Cu.	3	6	8	6	7	8	K	K	l	m	l	K	...	...	...	...	...	...	...	● early a: p ● <sup>0</sup> 9 <sup>h</sup> 50 <sup>m</sup> : () p.
24	St: Cu: A-St.	Cu: Fr-Cu.	Cu: Ci.	10	9	7	6	4	1	J	K	l	m	m	K	...	...	...	...	...	...	...	pp early a: p ● <sup>0</sup> 11 <sup>h</sup> 55 <sup>m</sup> -12 <sup>h</sup> 05 <sup>m</sup> .
25	Cu: A-Cu.	Cu: St-Cu.	Cu: A-Cu: Ci-St.	1	9	7	7	7	4	K	K	K	l	l	K	...	...	...	...	...	...	...	pp early a: p ● <sup>0</sup> 11 <sup>h</sup> 55 <sup>m</sup> -12 <sup>h</sup> 05 <sup>m</sup> .
26	Ci: Ci-St.	Cu: Fr-Cu: Ci.	St-Cu: A-St.	7	8	9	9	10	10	G	J	K	K	J	i	...	...						

533. Richmond (Kew Observatory).

Table for 533. Richmond (Kew Observatory) covering July 1-31, 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

534. Richmond (Kew Observatory).

August, 1930.

Table for 534. Richmond (Kew Observatory) covering August 1-31, 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

\* Mean of 27 days.

† Mean of 26 days.

Day.	Cloud Forms.			Cloud Amount (All Forms).							Visibility.						Precipitation.						Remarks on the Weather of the Day.
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>		
1	St : St-Cu.	Cu.	Cu : A-Cu : Ci-St.	9	7	7	6	7	1	G	i	i	J	J	K	J	...	...	...	...	...	...	p early a.
2	—	—	—	0	0	0	0	0	0	E	i	i	J	J	K	J	...	...	...	...	...	...	f early a : p n.
3	—	Cu : Ci.	Ci.	0	0	5	3	4	3	D	E	i	J	J	K	J	...	...	...	...	...	...	p early a.
4	—	A-Cu : A-St.	Cu : A-Cu.	0	1	3	6	5	6	G	J	K	K	K	H	H	...	...	...	...	...	...	p early a.
5	St-Cu : Cu-Nb : A-Cu : Ci.	Cu : St-Cu : A-St.	St-Cu : Cu : Ci-Cu : Ci.	9	8	4	5	4	3	G	i	J	J	H	H	H	...	...	...	...	...	...	1 <sup>h</sup> 40 <sup>m</sup> -2 <sup>h</sup> 30 <sup>m</sup> : 2 <sup>h</sup> 1 <sup>h</sup> 15 <sup>m</sup> -25 <sup>m</sup> : [ 0 <sup>h</sup> 45 <sup>m</sup> -5 <sup>h</sup> 30 <sup>m</sup> : [ 2 <sup>h</sup> 1 <sup>h</sup> 10 <sup>m</sup> -30 <sup>m</sup> : [ 2 <sup>h</sup> 20 <sup>m</sup> 15 <sup>m</sup> -21 <sup>h</sup> .
6	A-Cu : Ci.	St-Cu : Cu : A-Cu.	St-Cu : A-St.	9	9	9	9	10	10	J	J	l	l	l	K	i	...	...	...	...	...	...	2 <sup>h</sup> 19 <sup>h</sup> 55 <sup>m</sup> -21 <sup>h</sup> 30 <sup>m</sup> : [ 2 <sup>h</sup> 21 <sup>h</sup> 10 <sup>m</sup> -30 <sup>m</sup> : [ 2 <sup>h</sup> 20 <sup>m</sup> 15 <sup>m</sup> -21 <sup>h</sup> .
7	St-Cu : A-Cu : Ci.	Cu : St-Cu : Ci-St.	St-Cu : A-Cu.	7	7	8	—	9	1	K	l	l	l	l	K	K	...	...	...	...	...	...	p 0 <sup>h</sup> 0 <sup>h</sup> p ~.
8	St.	Cu : St-Cu : A-Cu.	St : A-Cu : Ci.	10	7	7	9	7	4	D	i	J	K	K	K	K	...	...	...	...	...	...	f early a.
9	St : A-Cu : Ci-Cu.	St-Cu : A-St.	St-Cu : A-St.	8	10	10	10	9	10	G	G	i	G	F	G	G	...	...	...	...	...	...	p early a : d 0 <sup>h</sup> a : 0 <sup>h</sup> a : d 0 <sup>h</sup> n.
10	St.	Cu : A-Cu : Ci-St.	Cu : Nb : A-Cu.	10	9	9	5	7	10	G	i	J	J	J	J	J	...	...	...	...	...	...	1 <sup>h</sup> 19 <sup>h</sup> 5 <sup>m</sup> : 2 <sup>h</sup> 21 <sup>h</sup> 50 <sup>m</sup> -22 <sup>h</sup> 45 <sup>m</sup> .
11	St.	Cu-Nb : A-Cu.	Cu-Nb.	10	8	9	8	9	9	E	H	H	i	H	H	G	0 <sup>h</sup>	...	...	...	...	...	f d 0 <sup>h</sup> early a.
12	St : A-St.	Cu-Nb : St-Cu.	St : St-Cu.	10	10	7	10	10	10	i	H	H	J	H	H	H	...	...	...	...	...	...	0 <sup>h</sup> 0 <sup>h</sup> early a.
13	A-St : A-Cu : Ci-St.	Nb : A-St.	Nb : Cu-Nb : A-Cu.	8	10	10	10	8	7	G	H	G	G	K	K	K	...	...	...	...	...	...	p early a.
14	Nb.	St : St-Cu.	St-Cu : St : A-St.	10	10	10	—	9	7	J	J	J	J	J	J	J	...	...	...	...	...	...	0 <sup>h</sup> 0 <sup>h</sup> early a.
15	St : St-Cu : A-St.	Cu : St-Cu.	Cu : A-St : Ci.	9	4	7	7	3	1	G	i	J	J	J	J	J	...	...	...	...	...	...	p early a, n.
16	St : St-Cu.	Fr-Cu : A-St.	Nb.	9	9	10	10	10	10	G	H	K	G	H	G	...	...	...	...	...	...	...	p early a : 0 <sup>h</sup> a, p.
17	Ci : Ci-Cu.	Fr-Cu : A-St.	Nb.	4	9	10	10	10	10	F	i	J	K	H	H	...	...	...	...	...	...	...	f early a : 0 <sup>h</sup> n.
18	St-Cu : Cu.	St-Cu.	Cu : Ci.	6	7	9	7	6	4	K	K	K	l	K	J	...	...	...	...	...	...	...	0 <sup>h</sup> early a : p n. [ (gusts) 23 <sup>h</sup> 45 <sup>m</sup> .
19	St : St-Cu : A-Cu : Ci-St.	St : St-Cu.	Cu : St-Cu : Cu-Nb.	9	10	9	7	4	2	G	i	K	K	K	K	...	...	...	...	...	...	...	p early a : 0 <sup>h</sup> a : p 0 <sup>h</sup> p : 17 <sup>h</sup> 30 <sup>m</sup>
20	Nb : St-Cu : A-St.	St-Cu : A-St : Ci-St.	St : A-St : Ci.	9	9	9	9	9	9	K	K	K	K	K	K	...	...	...	...	...	...	...	0 <sup>h</sup> early a : p 0 <sup>h</sup> p : 0 <sup>h</sup> n : (gusts) [4 <sup>h</sup> -13 <sup>h</sup>
21	St-Cu.	Cu : St-Cu : A-Cu.	St-Cu : A-Cu : A-St.	9	9	7	—	9	7	K	K	K	—	K	K	...	...	...	...	...	...	...	0 <sup>h</sup> early a.
22	St : A-St : A-Cu.	Fr-St : A-St.	Nb : A-St.	10	10	10	10	10	10	G	i	J	l	G	K	...	...	...	...	...	...	...	0 <sup>h</sup> early a : d 0 <sup>h</sup> a : 0 <sup>h</sup> p.
23	St-Cu.	St-Cu : Fr-St : A-St.	St-Cu.	9	10	10	10	9	9	i	J	l	l	K	K	...	...	...	...	...	...	...	p early a.
24	St-Cu : St.	Cu : Fr-Cu : Ci-St.	Cu : St-Cu.	9	7	5	3	4	2	K	J	l	K	K	J	...	...	...	...	...	...	...	0 <sup>h</sup> early a : p n.
25	Cu : St-Cu.	Cu : St-Cu : Ci : Ci-Cu.	Cu : St : A-Cu.	2	7	7	7	4	9	J	J	K	K	K	J	...	...	...	...	...	...	...	p early a : p 0 <sup>h</sup> 13 <sup>h</sup> 10 <sup>m</sup> .
26	Nb : A-St.	Fr-St : A-St.	Nb : Fr-Nb : A-St.	10	10	10	10	10	9	J	i	J	H	G	H	...	...	...	...	...	...	...	0 <sup>h</sup> a, p, n.
27	St-Cu : Fr-St : A-Cu.	Cu.	St-Cu.	9	9	8	8	2	2	i	H	i	—	H	H	...	...	...	...	...	...	...	p 0 <sup>h</sup> early a.
28	Fr-St : A-St : Ci-St.	Cu : St-Cu : A-Cu.	Nb : A-St : A-Cu.	9	9	7	—	9	10	i	G	i	—	—	—	...	...	...	...	...	...	...	0 <sup>h</sup> early a : 0 <sup>h</sup> 7 <sup>h</sup> : p 0 <sup>h</sup> p, n.
29	Nb.	Fr-St : St : A-St.	St : Fr-St : A-St.	10	10	9	10	10	10	G	H	i	—	G	G	...	...	...	...	...	...	...	0 <sup>h</sup> 0 <sup>h</sup> early a : 0 <sup>h</sup> a, p, n.
30	St : St-Cu : A-St.	Cu : A-St : A-Cu.	A-St.	10	9	7	3	3	10	G	H	i	H	F	i	...	...	...	...	...	...	...	m 18 <sup>h</sup> .
Mean Cloud Am't.				7	7	7	7	7	6														

536. Richmond (Kew Observatory).

Day.	Cloud Forms.			Cloud Amount (All Forms).							Visibility.						Precipitation.						Remarks on the Weather of the Day.
	7 <sup>h</sup>	13 <sup>h</sup>	18 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>	7 <sup>h</sup>	9 <sup>h</sup>	13 <sup>h</sup>	15 <sup>h</sup>	18 <sup>h</sup>	21 <sup>h</sup>		
1	St : St-Cu.	St : St-Cu.	St : St-Cu : A-St.	9	10	10	10	10	10	G	H	G	G	G	G	...	...	...	...	...	...	...	p early a.
2	St-Cu.	Cu : St-Cu.	A-Cu : Ci.	9	9	8	9	1	1	E	F	H	H	F	G	...	...	...	...	...	...	...	0 <sup>h</sup> 9 <sup>h</sup> , 18 <sup>h</sup> : p n.
3	St : A-Cu : Ci.	A-Cu : Ci : Ci-St.	St-Cu : A-St.	6	8	7	9	10	10	G	G	J	J	H	J	...	...	...	...	...	...	...	f early a : 0 <sup>h</sup> n.
4	Nb.	St-Cu : Cu.	St-Cu : A-St : Ci-St.	10	10	7	7	10	10	G	G	J	J	H	J	...	...	...	...	...	...	...	0 <sup>h</sup> a : 0 <sup>h</sup> 15 <sup>h</sup> : 0 <sup>h</sup> n.
5	St-Cu : A-Cu : Ci.	Cu : St-Cu : A-St.	St-Cu : St : A-Cu.	9	10	10	—	6	7	m	K	K	—	i	J	...	...	...	...	...	...	...	0 <sup>h</sup> early a : ( ) 7 <sup>h</sup> : u 13 <sup>h</sup> : 0 <sup>h</sup> n.
6	A-Cu.	St-Cu.	St-Cu : A-Cu : Ci.	1	1	9	5	7	4	K	K	K	J	J	J	...	...	...	...	...	...	...	p early a : p 0 <sup>h</sup> q p.
7	A-Cu : A-St.	Cu : St-Cu : Ci-St.	St-Cu : A-St.	3	8	9	10	10	10	K	K	K	K	J	F	...	...	...	...	...	...	...	0 <sup>h</sup> 14 <sup>h</sup> : m 18 <sup>h</sup> : 0 <sup>h</sup> n.
8	Cu : St-Cu : A-St.	St-Cu : A-Cu.	Fr-Cu : A-Cu : A-St.	9	10	9	8	10	8	J	K	K	K	K	J	...	...	...	...	...	...	...	0 <sup>h</sup> 0 <sup>h</sup> early a : p 0 <sup>h</sup> (gusts) a, p : 0 <sup>h</sup> 17 <sup>h</sup> .
9	St-Cu : Ci-St.	Cu : Fr-Cu.	—	8	6	3	1	0	0	G	i	K	K	F	E	...	...	...	...	...	...	...	p 0 <sup>h</sup> 4 <sup>h</sup> 40 <sup>m</sup> : 0 <sup>h</sup> 18 <sup>h</sup> : f p n.
10	St-Cu.	Cu : St-Cu : A-Cu.	A-St : Ci.	1	8	5	6	5	10	G	i	K	K	G	G	...	...	...	...	...	...	...	l early a : p a, n : U n.
11	A-Cu : A-St : Ci-St.	Cu : St-Cu.	St-Cu : A-Cu.	9	8	7	9	8	4	G	E	J	H	H	G	...	...	...	...	...	...	...	p early a : f 9 <sup>h</sup> : u p : p n.
12	St-Cu : A-Cu : Ci-St.	Cu : St-Cu : Ci.	Cu.	9	7	7	—	1	0	K	i	K	—	G	G	...	...	...	...	...	...	...	p early a, n.
13	A-Cu : Ci : Ci-St.	Cu : St-Cu : A-Cu.	St-Cu : A-Cu : Ci.	4	3	8	8	4	0	C	F	K	K	K	G	...	...	...	...	...	...	...	f early a : p n.
14	St-Cu : A-Cu : Ci-Cu.	St-Cu : A-Cu : Ci.	St-Cu : A-Cu : A-St.	8	8	8	10	5	8	i	K	K	H	G	i	...	...	...	...	...	...	...	p early a : 16 <sup>h</sup> 45 <sup>m</sup> .
15	A-St : A-Cu.	St-Cu : A-Cu : Ci.	St : A-Cu : Ci-St.	9	9	9	9	9	7	K	J	K	J	J	J	...	...	...	...	...	...	...	0 <sup>h</sup> early a : 16 <sup>h</sup> 45 <sup>m</sup> .
16	St-Cu : Cu : A-Cu.	Fr-Cu.	Fr-Cu : Cu.	5	2	3	5	1	0	K	K	K	K	K	J	...	...	...	...	...	...	...	0 <sup>h</sup> 3 <sup>h</sup> -3 <sup>h</sup> 40 <sup>m</sup> : p n.
17	St-Cu : Cu.	Fr-Cu : St-Cu.	St-Cu.	1	9	8	9	5	9	J	J	K	J	J	J	...	...	...	...	...	...	...	p early a : p 0 <sup>h</sup> 16 <sup>h</sup> 20 <sup>m</sup> .
18	A-Cu : Ci.	Cu : Ci : Ci-St.	St-Cu : A-St : Ci-St.	1	2	6	7	6	1	J	K	K	K	J	J	...	...	...	...	...	...	...	p early a, n.
19	Cu : Ci.	Cu : Ci.	St-Cu : St : A-Cu.	9	9	6	—	8	0	J	K	K	—	—	—	...	...	...	...	...	...	...	p early a, n : 0 <sup>h</sup> 7 <sup>h</sup> 45 <sup>m</sup> .
20	St-Cu.	Cu : St-Cu : Ci.	St : St-Cu : A-Cu.	8	1	7	8	8	6	K	J	K	J	J	G	...	...	...	...	...	...	...	0 <sup>h</sup> 2 <sup>h</sup> 30 <sup>m</sup> -4 <sup>h</sup> 15 <sup>m</sup> : p 0 <sup>h</sup> 2 <sup>h</sup> 15 <sup>m</sup> 5 <sup>m</sup> [-20 <sup>m</sup> .
21	Cu : St-Cu : Ci.	Cu : Cu-Nb : Ci.	St-Cu.	2	7	9	7	3	1	K	J	K	K	F	i	...	...	...	...	...	...	...	p early a, n : 13 <sup>h</sup> .
22	A-Cu.	St-Cu.	St-Cu : A-Cu.	7	7	5	7	8	0	J	J	K	J	G	G	...	...	...	...	...	...	...	p 0 <sup>h</sup> 6 <sup>h</sup> 10 <sup>m</sup> : p n.
23	Fr-St : A-Cu.	St-Cu.	St-Cu : A-Cu : A-St.	8	9	10	10	5	3	J	J	J	H	G	F	...	...	...	...	...	...	...	p early a : m p n.
24	St-Cu : Cu.	Cu : A-Cu.	Cu : A-Cu.	1	1	6	7	6	3	J	J	J	J	J	J	...	...	...	...	...	...	...	p early a : u 15 <sup>h</sup> .
25	Nb : A-Cu : Ci-St.																						

537. Richmond (Kew Observatory).

November, 1930.

Table for station 537, Richmond (Kew Observatory), November 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

538. Richmond (Kew Observatory).

December, 1930.

Table for station 538, Richmond (Kew Observatory), December 1930. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

\* Mean of 25 days.

† Mean of 26 days.

539. Richmond (Kew Observatory).

1930.

Month.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
Day.	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$
	ohm.^{-1} cm.^{-1}	amp. cm.^{-2}	ohm.^{-1} cm.^{-1}	amp. cm.^{-2}	ohm.^{-1} cm.^{-1}	amp. cm.^{-2}	ohm.^{-1} cm.^{-1}	amp. cm.^{-2}	ohm. <sup>-1</sup> cm. <sup>-1</sup>	amp. cm. <sup>-2</sup>	ohm. <sup>-1</sup> cm. <sup>-1</sup>	amp. cm. <sup>-2</sup>
1	...	...	...	...	...	...	38	123	30	102	...	...
2	...	...	...	...	...	...	40	115	...	...	31	113
3	...	...	...	...	33	121	...	...	...	...	39	105
4	...	...	4	14	21	47	...	...	...	...	27	101
5	...	...	17	78	17	65	...	...	27	39	10	47
6	...	...	12	57	17	51	...	...	26	53	...	...
7	...	...	...	...	...	...	21	61	...	...	...	...
8	...	...	...	...	...	...	29	67	22	40	...	...
9	...	...	...	...	...	...	47	...	37	59	...	...
10	...	...	10	50	...	...	19	111	...	...	46	28
11	...	...	7	42	19	38	15	79	...	...	49	93
12	...	...	6	40	34	86	...	...	...	...	26	49
13	...	...	3	27	...	...	...	...	...	...	30	127
14	...	...	7	31	10	74	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	37	50	...	...
17	...	...	...	...	14	56	...	...	...	...	18	34
18	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	11	69	...	...	...	...	27	32	45	74
20	...	...	5	35	27	60	...	...	29	42	...	...
21	...	...	...	...	32	85	...	...	40	78	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	83	137
24	...	...	...	...	37	131	...	...	...	...	48	62
25	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	14	69	21	60	...	...	...	...	31	43
27	...	...	6	43	22	63	...	...	17	31	44	51
28	...	...	10	70	38	131	28	125	33	40	...	...
29	...	...	...	...	...	...	...	...	43	58	...	...
30	13	63	...	...	...	...	23	89	...	...	83	79
31	9	26	...	...	...	...	...	...	...	...	...	...
Mean ...	11	45	9	48	24	76	29	96	31	52	41	76
No. of Days used.	2	2	13	13	14	14	9	8	12	12	15	15
Month.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
Day.	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$	$\lambda +$ $\times 10^{18}$	$i$ $\times 10^{18}$
	ohm.^{-1} cm.^{-1}	amp. cm.^{-2}	ohm.^{-1} cm.^{-1}	amp. cm.^{-2}	ohm.^{-1} cm.^{-1}	amp. cm.^{-2}	ohm.^{-1} cm.^{-1}	amp. cm.^{-2}	ohm. <sup>-1</sup> cm. <sup>-1</sup>	amp. cm. <sup>-2</sup>	ohm. <sup>-1</sup> cm. <sup>-1</sup>	amp. cm. <sup>-2</sup>
1	66	119	...	...	...	...	...	...	...	...	7	37
4	83	149	...	...	30	66	12	46	...	...	5	29
3	54	78	...	...	30	107	27	81	...	...	8	58
4	74	118	48	89	45	133	...	...	17	57	6	25
5	...	...	...	...	...	...	...	...	13	53	...	...
6	...	...	40	94	...	...	...	...	10	52	...	...
7	63	85	...	...	...	...	19	50	19	43	...	...
8	72	97	...	...	75	146	...	...	...	...	...	...
9	51	99	...	...	...	...	35	102	...	...	7	36
10	31	50	...	...	44	103	...	...	22	63	...	...
11	...	...	41	68	20	59	...	...	16	65	...	...
12	...	...	...	...	50	97	...	...	21	67	7	39
13	...	...	38	76	...	...	30	84	25	86	...	...
14	...	...	52	96	...	...	...	...	16	80	...	...
15	36	65	35	61	38	61	44	143	...	...	9	55
16	...	...	...	...	...	...	53	148	...	...	5	21
17	...	...	...	...	...	...	35	77	6	53	...	...
18	...	...	71	131	44	81	...	...	11	52	...	...
19	...	...	...	...	47	...	...	...	...	...	9	23
20	...	...	91	182	...	...	...	...	...	...	...	...
21	...	...	70	178	...	...	28	111	...	...	...	...
22	...	...	54	113	...	...	17	69	...	...	6	26
23	...	...	...	...	45	110	...	...	...	...	6	40
24	24	53	...	...	37	85	24	101	...	...	...	...
25	49	88	56	137	34	88	...	...	...	...	...	...
26	...	...	75	184	...	...	...	...	17	53	...	...
27	...	...	72	151	...	...	...	...	5	45	...	...
28	58	119	81	150	...	...	...	...	...	...	...	...
29	...	...	96	178	...	...	...	...	...	...	...	...
30	...	...	...	...	20	95	36	85	...	...	...	...
31	70	119	...	...	...	...	9	21	...	...	...	...
Mean ...	56	95	61	126	40	95	28	86	15	59	7	35
No. of Days used.	13	13	15	15	14	13	13	13	13	13	11	11
THE YEAR										Mean ... No. of days used	32	84
											144	142

Month.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	Character	Duration Negative Pot. Grad.										
Day.		hours.										
1	I	1.4	2	3.1	0	...	0	...	0	...	I	0.1
2	0	...	2	8.6	0	...	I	1.6	I	0.1	I	1.1
3	I	0.5	2	5.0	0	...	I	2.8	2	6.6	0	...
4	2	7.0	0	...	0	...	I	2.3	0	...	I	0.7
5	2	8.1	0	...	0	...	0	...	2	6.1	0	...
6	0	...	I	0.4	I	1.1	0	...	2	3.5	0	...
7	0	...	0	...	I	0.3	I	0.2	I	0.4	0	...
8	I	0.5	0	...	0	...	0	...	I	1.5	0	...
9	I	1.9	0	...	I	0.6	0	...	I	2.6	0	...
10	2	3.5	0	...	2	5.0	0	...	2	4.6	0	...
11	2	7.0	0	...	I	1.6	0	...	I	1.2	0	...
12	2	3.0	I	0.5	I	0.1	I	2.3	I	2.9	I	0.2
13	I	0.3	0	...	I	2.7	2	4.3	0	...	0	...
14	I	0.3	0	...	I	0.6	I	0.8	0	...	0	...
15	I	2.2	I	(2.8)	2	8.1	I	0.1	0	...	0	...
16	0	...	0	...	I	2.8	I	0.3	0	...	I	0.6
17	0	...	I	1.1	I	1.2	2	4.0	0	...	I	2.2
18	0	...	0	...	I	0.8	I	2.2	I	0.7	2	(4.3)
19	0	...	0	...	0	...	2	6.6	I	0.1	0	...
20	0	...	0	...	0	...	2	5.0	I	1.0	I	0.1
21	0	...	0	...	I	0.1	0	...	0	...	0	...
22	0	...	0	...	I	1.1	0	...	2	4.1	I	0.7
23	2	4.9	0	...	0	...	2	3.7	I	1.3	I	0.3
24	I	2.6	0	...	0	...	0	...	2	3.1	2	3.6
25	2	4.1	0	...	0	...	0	...	2	5.1	I	0.3
26	2	4.7	I	1.8	0	...	I	0.3	2	3.6	0	...
27	I	1.2	0	...	0	...	0	...	0	...	0	...
28	0	...	0	...	0	...	0	...	0	...	0	...
29	I	1.1	—	—	2	3.3	0	...	0	...	0	...
30	I	2.7	—	—	0	...	0	...	I	2.5	0	...
31	2	5.4	—	—	I	0.7	—	—	I	2.3	—	—
Total ...	—	62.4	—	23.3	—	30.1	—	36.5	—	53.3	—	14.2
No. of days used	—	31	—	28	—	31	—	30	—	31	—	30
Mean ...	—	2.0	—	0.8	—	1.0	—	1.2	—	1.7	—	0.5

Month.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.
Day.		hours.		hours.		hours.		hours.		hours.		hours.
1	0	...	0	...	0	...	0	...	2	3.3	0	...
2	0	...	I	0.8	0	...	0	...	2	4.8	0	...
3	I	1.2	I	2.1	0	...	I	0.6	I	0.2	0	...
4	0	...	2	4.1	0	...	I	0.5	I	0.9	I	1.3
5	0	...	I	1.6	I	2.3	I	0.9	0	...	I	2.7
6	0	...	I	1.9	I	1.1	I	0.7	0	...	0	...
7	0	...	I	2.5	I	0.3	0	...	I	2.1	I	2.1
8	I	0.1	0	...	0	...	I	0.6	I	2.0	I	1.5
9	0	...	0	...	I	0.3	I	0.5	0	...	I	1.1
10	0	...	0	...	I	1.1	0	...	0	...	0	...
11	I	0.8	0	...	I	0.7	0	...	0	...	2	6.6
12	0	...	I	0.9	0	...	0	...	0	...	0	...
13	I	0.5	I	0.2	I	1.1	0	...	0	...	I	1.6
14	2	4.6	I	0.9	I	0.2	0	...	0	...	I	1.3
15	2	4.4	I	0.1	0	...	0	...	I	0.1	0	...
16	I	1.6	0	...	0	...	I	0.1	0	...	0	...
17	I	0.9	0	...	—	—	I	0.3	I	0.1	0	...
18	I	1.1	I	0.5	—	—	0	...	0	...	0	...
19	I	0.1	I	1.5	I	1.5	0	...	0	...	0	...
20	I	2.0	0	...	2	4.6	I	1.3	2	4.0	0	...
21	2	3.8	2	3.3	I	2.2	I	0.3	I	2.8	0	...
22	0	...	0	...	0	...	I	0.2	2	3.5	0	...
23	I	0.3	I	1.3	0	...	0	...	0	...	I	1.1
24	I	1.7	0	...	I	0.2	0	...	2	4.5	0	...
25	I	0.1	0	...	I	0.5	I	0.7	I	2.0	2	6.0
26	0	...	0	...	I	2.6	0	...	I	2.9	2	3.2
27	0	...	0	...	I	2.1	0	...	0	...	I	0.3
28	I	0.6	I	0.1	2	3.6	0	...	2	9.3	0	...
29	I	1.4	I	0.9	I	2.6	0	...	2	3.7	2	(4.5)
30	I	2.5	I	1.9	I	0.3	0	...	0	...	I	2.8
31	0	...	0	...	—	—	0	...	—	—	I	1.6
Total ...	—	27.7	—	24.6	—	27.3	—	6.7	—	46.2	—	37.7
No. of days used	—	31	—	31	—	28	—	31	—	30	—	31
Mean ...	—	0.9	—	0.8	—	1.0	—	0.2	—	1.5	—	1.2

Annual Values:— Character frequency 176 140 49 Total Duration 390.0 hrs. No. of days. 363 Mean. 1.07 hrs.

541. Richmond (Kew Observatory).

1930.

Month.	January. Factor 2.20.				February. Factor 2 <sup>22.</sup> <sub>.09.</sub>				March. Factor 2.11.				
	Hour. G.M.T.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
Day. 1		570	560	310	165	540	575	-205	z+	390	560	560	695
2		95	275	475	475	230	170	-170	505	390	315	535	535
3		105	285	250	430	180	550	430	z-	460	655	365	425
4		70	500	260	-760	530	805	370	490	330	315	220	365
5		-250	120	370	595	230	575	455	610	205	350	375	500
6		570	690	450	645	155	350	480	590	220	365	290	340
7		180	275	260	275	205	625	540	385	255	245	340	415
8		70	60	510	595	310	550	600	685	375	535	280	390
9		630	335	285	155	275	550	290	530	170	230	255	330
10		10	700	500	240	370	685	515	745	25	340	195	265
11		z-	450	z±	605	370	670	625	625	135	450	195	630
12		200	380	-585	145	-85	710	650	625	435	535	255	280
13		120	490	430	370	-	-	770	575	205	365	-135	655
14		145	310	345	380	480	395	420	410	220	520	740	630
15		10	620	595	570	130	215	-	625	-120	220	280	z±
16		465	595	475	310	430	470	325	565	135	415	220	195
17		190	405	440	585	290	695	z±	960	340	740	400	435
18		320	370	355	545	275	685	610	480	245	630	z±	680
19		200	440	310	525	180	490	610	540	400	585	390	365
20		190	395	440	370	350	720	670	755	290	655	220	365
21		440	1355	750	500	515	575	600	770	170	305	265	535
22		525	645	395	380	190	650	540	540	180	390	220	290
23		145	145	-70	50	190	335	410	480	220	485	560	315
24		-50	295	335	25	290	720	530	660	230	645	350	1180
25		0	725	545	795	420	505	290	430	390	475	230	230
26		260	620	-415	-25	170	350	480	685	230	520	290	330
27		285	570	605	345	550	625	720	650	195	330	290	315
28		310	605	760	655	410	575	695	530	255	290	340	265
29		500	545	475	570					120	265	-75	435
30		665	760	490	585					350	390	265	560
31		595	535	275	z-					255	330	160	415
Means { (a)		281	486	433	424	318	549	526	594	263	434	324	445
(b)		240	485	357	362	306	556	480	578	263	434	296	437
Mean for day		(a) 406	(b) 361			(a) 497	(b) 480			(a) 367	(b) 357		

Month.	April. Factor 2.09.				May. Factor 2.11.				June. Factor 2.04.				
	Hour. G.M.T.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
Day. 1		240	360	325	385	265	570	340	605	130	60	190	115
2		130	85	-	540	280	560	425	375	200	280	365	245
3		445	565	-120	600	160	-475	z-	520	155	425	270	400
4		625	145	z±	490	205	305	170	160	155	260	375	480
5		335	550	710	455	180	435	145	-110	270	515	470	460
6		215	250	215	335	-145	330	205	-10	225	610	330	530
7		145	-	290	670	75	365	230	340	200	200	295	355
8		540	550	230	325	-35	340	180	280	355	280	140	260
9		215	360	-	550	245	230	160	85	70	175	140	235
10		215	-	600	505	10	390	195	10	140	130	60	155
11		410	755	540	350	95	110	50	170	105	155	190	315
12		170	0	215	610	85	230	500	305	210	330	190	305
13		370	300	250	z±	160	290	180	315	210	530	425	425
14		180	360	z±	610	75	290	145	195	280	435	340	340
15		250	410	395	370	220	350	220	280	210	295	155	235
16		265	110	230	205	205	220	135	180	210	260	235	340
17		95	300	z-	-70	180	230	170	315	130	190	190	-45
18		60	95	230	575	75	145	170	195	210	210	z±	95
19		250	-550	z-	530	160	205	120	95	60	190	165	315
20		410	205	-10	565	85	195	145	195	95	130	190	210
21		565	455	265	445	120	390	195	570	95	190	140	330
22		420	430	230	950	245	255	-780	315	165	190	130	245
23		335	-335	70	250	0	390	305	280	190	235	165	140
24		110	385	240	335	-365	160	220	245	-80	245	130	280
25		360	370	230	660	75	170	75	75	200	210	115	200
26		240	170	95	300	z±	460	145	330	190	365	140	280
27		155	190	145	310	520	365	180	280	115	200	115	155
28		215	310	275	180	230	220	120	180	175	260	95	175
29		190	490	445	360	145	195	135	230	190	270	155	355
30		240	480	385	515	255	-290	z+	435	315	305	95	225
31						205	375	375	245				
Means { (a)		280	334	300	463	167	302	201	269	182	271	207	283
(b)		294	324	254	432	127	297	168	229	172	273	207	278
Mean for day		(a) 344	(b) 326			(a) 235	(b) 205			(a) 236	(b) 233		

NOTE.—The Potential Gradient is reckoned as positive if the potential increases upwards. For indeterminate potential gradient the following notation is used: —z+, Indeterminate, positive value; z-, Indeterminate, negative value; z±, Indeterminate in magnitude and sign.

(a) Mean from all positive readings.

(b) Mean from all complete days using both positive and negative readings.

Mean Values for periods of sixty minutes, centred at the exact hours, Mean Greenwich Time.

541. Richmond (Kew Observatory).

1930.

Month. Hour. G.M.T.	July. Factor 2.11				August. Factor 2.11.				September. Factor 2.22							
	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.				
Day.																
1	120	255	180	220	130	280	150	350	285	505	345	170				
2	135	290	180	290	115	185	175	245	245	395	220	305				
3	220	280	145	265	150	295	140	210	170	320	355	370				
4	180	290	160	145	130	150	185	-10	220	330	295	330				
5	135	315	95	170	255	270	z+	z+	-25	480	220	260				
6	120	160	135	180	210	235	235	235	170	330	320	z±				
7	180	195	135	255	150	255	z±	375	85	235	150	320				
8	180	160	135	170	280	420	210	315	270	395	195	285				
9	180	245	195	145	305	235	210	165	210	320	125	160				
10	120	290	160	220	95	210	70	255	170	260	235	-85				
11	170	220	z±	280	115	165	165	220	125	320	295	195				
12	205	290	160	120	140	295	z±	315	150	170	195	210				
13	265	160	85	160	185	210	200	185	125	245	355	150				
14	25	245	160	170	45	295	185	210	—	110	320	245				
15	-85	60	180	290	165	255	175	280	170	235	160	270				
16	25	280	135	195	220	305	115	95	170	405	170	245				
17	135	180	180	305	—	255	140	115	150	285	160	110				
18	180	230	160	245	—	235	185	210	110	185	185	295				
19	135	195	195	290	115	220	z±	400	260	z±	z±	145				
20	160	205	135	35	295	315	200	295	115	185	70	-200				
21	35	180	-680	315	115	80	255	220	45	245	160	200				
22	145	245	195	245	175	255	210	410	165	215	100	100				
23	85	220	290	220	140	—	245	235	65	260	245	230				
24	160	220	220	-85	105	210	140	175	50	295	230	330				
25	135	375	180	415	330	385	245	280	100	330	260	445				
26	220	245	95	315	165	340	245	245	115	215	375	180				
27	245	170	120	245	105	455	210	295	50	540	510	525				
28	180	205	205	265	235	280	185	410	195	245	445	195				
29	180	195	z±	85	235	540	185	350	115	215	395	15				
30	160	170	z±	255	-115	—	255	280	260	425	475	460				
31	195	230	170	245	80	280	185	280	—	—	—	—				
Means { (a)	154	226	162	225	171	273	189	264	156	300	261	250				
(b)	143	229	132	216	173	277	186	248	145	306	256	225				
Mean for day.	(a) 192				(b) 180				(a) 242				(b) 233			

Month. Hour. G.M.T.	October. Factor 2.11				November. Factor 2.32.				December. Factor 2.56.							
	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.				
Day.																
1	310	330	575	560	200	0	390	355	275	365	535	535				
2	425	410	385	490	225	-405	310	-685	390	550	585	405				
3	255	395	300	-115	120	190	390	605	260	520	720	665				
4	255	115	255	25	120	500	285	535	405	520	420	380				
5	60	245	235	265	460	735	405	555	300	1120	575	680				
6	165	325	255	430	380	685	520	485	535	655	680	990				
7	210	280	265	405	475	570	225	285	300	365	z±	350				
8	95	220	200	220	60	285	270	390	220	835	z±	915				
9	115	300	290	490	165	105	200	120	600	1370	510	585				
10	350	500	245	560	60	440	285	415	495	785	820	655				
11	350	325	165	175	190	415	405	365	170	-730	260	-235				
12	60	235	165	360	390	380	320	440	235	770	560	575				
13	395	350	280	405	285	415	345	440	185	520	390	585				
14	220	280	325	395	390	590	500	440	315	550	470	250				
15	165	315	325	220	140	235	130	155	420	600	615	860				
16	130	255	280	315	450	535	630	535	575	455	420	835				
17	115	385	220	35	390	390	890	1100	665	690	445	1095				
18	115	395	325	500	685	770	475	225	1135	940	430	285				
19	475	350	315	395	140	85	95	510	210	430	260	365				
20	35	455	z±	745	285	z±	260	-130	325	300	455	390				
21	535	595	395	535	180	285	260	345	315	445	625	250				
22	325	370	405	465	-60	285	250	130	720	1265	430	875				
23	165	395	420	420	190	460	320	700	655	680	665	615				
24	105	440	315	535	390	-595	60	-85	275	510	405	810				
25	325	370	280	510	120	405	225	475	-285	-1150	445	680				
26	235	465	300	350	310	165	310	z-	615	90	275	575				
27	395	500	315	325	700	760	910	615	520	275	260	485				
28	140	280	265	290	-950	355	-330	425	315	470	340	210				
29	165	325	300	220	320	70	380	-85	50	-600	—	315				
30	95	175	235	300	105	180	365	275	315	795	—	640				
31	150	325	225	405	—	—	—	—	210	340	z±	550				
Means { (a)	224	345	295	378	283	381	359	437	400	615	484	580				
(b)	230	342	295	349	226	326	340	359	409	500	484	554				
Mean for day	(a) 311				(b) 304				(a) 520				(b) 487			

Annual Means { (a)				(b)			
240	375	308	383	225	361	286	351
(a) 327				(b) 306			

NOTE.—The Potential Gradient is reckoned as positive if the potential increases upwards. For indeterminate potential gradient the following notation is used: — z+, Indeterminate, positive value; z-, Indeterminate, negative value; z±, Indeterminate in magnitude and sign.  
 (a) Mean from all positive readings.  
 (b) Mean from all complete days, using both positive and negative readings.

The departures from the mean of the day are adjusted for non-cyclic change.

SELECTED QUIET DAYS.

542. Richmond (Kew Observatory).

1930.

Table with 25 columns (Hour, G.M.T., 3-23, Midt., Non-cyclic change, Mean values) and 13 rows (Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec., Year, Winter, Eqnx., Sumr.).

AIR POLLUTION: HOURLY MEANS FOR EACH MONTH (milligrams per cubic metre). COMPLETE DAYS ONLY.

543. Richmond (Kew Observatory).

1930.

Table with 25 columns (Hour, G.M.T., 3-23, Midt., Mean, No. of days used) and 13 rows (Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec., Year, Winter, Eqnx., Spring, Autumn, Sumr.).

AIR POLLUTION: DIURNAL INEQUALITIES (milligrams per cubic metre).

The departures from the mean of the day are adjusted for non-cyclic change.

544. Richmond (Kew Observatory).

1930.

Table with 25 columns (Hour, G.M.T., 3-23, Midt., Non-cyclic change, Range) and 13 rows (Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec., Year, Winter, Eqnx., Sumr.).

SEISMOLOGICAL DIARY.  
Galitzin Seismographs, three components.

545. Richmond (Kew Observatory). Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

1930.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			Δ	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			Δ	Remarks.	
				A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .							A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .			
Jan. 5	ePz eL F	h. m. s. 1 31.5 57 2 30	...	μ	μ	μ	km.	Disturbed by wind and microseisms. Kamtchatka. 51° N., 156° E. (J.S.A.)	Feb. 14 cont.	L M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	h. m. s. 49.5 51 35 51 48 52 5 19 55	s. ... 23 21 10 ...	μ	μ	μ	km.	Destructive in Crete. 36° N., 25° E. (Strasbourg.)	
5	ePz eSE eL F	19 4.5 14.6 34 20 15	...	...	...	...	8900	Kurile Islands. 46° N., 149° E. (J.S.A.)	14	e(P) <sub>Z</sub> LNE Lz F	21 0.9 55 22 4.6 23 20	...	...	...	...	...	East of Kermadoc Islands. 30° S., 175° W. (Manila).	
9	ePz eNE e(S) <sub>Z</sub> e(S*) e(Sg) <sub>NE</sub> eNE F	19 39 43 40 19 40 24 40 35 40 52 40 55 41 3 41 9 44.6	...	...	...	...	370	Disturbed by wind and microseisms. Brittany. Felt at North Okendon, Essex.—Kew File 52/30 ○ Amplitude as read in mm.*	15	e eLNE F	19 25 31 50	...	...	...	...	...	Persia. 29° N., 51° E. (U.R.S.S.).	
14/15	eE LNE Lz F	22 47.3 23 12 15 0 0	...	...	...	...	...	Tonga Islands. 19° S., 175° W. (U.R.S.S.)	18	e F	6 34 7 35	...	...	...	...	...	...	
16	eLN F	0 11 20	...	...	...	...	...	Traces on "E" and "Z" records.	23	iP iS L M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	18 23 50 27 56 29.4 30 41 31 27 32 24 19 20	...	...	...	...	2510	Destructive in Greece. Compression. Amplitudes of iP as read in mm.: N. E. Z. +1.8 -1.95 +3.4 Azimuth=131° ± 1°. 38° N., 24.5° E. (Strasbourg.)	
17	eL F	17 38 18 10	...	...	...	...	...	...	24	e LNE Lz F	21 9 47 54 22 20	...	...	...	...	...	Sea of Celebes. 3° N., 122° E. (U.R.S.S.)	
18	eL F	7 31	...	...	...	...	...	Overlapped by next shock.	27	eL F	7 57 8 5	...	...	...	...	...	...	
18	eL M <sub>1</sub> M <sub>2</sub> F	8 4 5 28 12 19 9 20	...	...	...	...	...	West of Solomon Islands. 5° S., 153° E. (J.S.A.)	28	ePz eSNE LNE Lz M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	1 7 (0) 14 22 18 21 24 23 24 43 25 53 2 20	...	...	...	...	...	...	...
20	eLNE eLz F	8 11 19 55	...	...	...	...	...	...	28	ePz eSNE LNE Lz M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	1 7 (0) 14 22 18 21 24 23 24 43 25 53 2 20	...	...	...	...	...	...	...
25	eLNE eLz F	2 28 43 3 5	...	...	...	...	...	South-east of Philip- pine Islands (Manila).	28	eL F	19 26 20 5	...	...	...	...	...	...	...
28	eL F	7 30 8 0	...	...	...	...	...	Near Soloman Islands. 12° S., 163° E. (U.R.S.S.)	Mar. 1	eL F	6 3 30	...	...	...	...	...	...	...
Feb. 1	eL F	19 41 20 5	...	...	...	...	...	Disturbed by large microseisms.	6	e F	0 2.0 10	...	...	...	...	...	Very small.	
2	ePz eSNE L F	15 7.7 17.7 24 40	...	...	...	...	8800	Aleutian Islands. 49° N., 177° E. (J.S.A.)	6	L F	8 31.6 50	...	...	...	...	...	...	
7	eL F	7 32 8 10	...	...	...	...	...	...	6	eP eS L F	9 24 4 28 2 30 45	...	...	...	...	2410	Ægean Sea (Strasbourg.)	
7	e F	17 30 18 10	...	...	...	...	...	...	6	e F	15 55.1 16 45	...	...	...	...	...	Felt in New Zealand (Strasbourg.)	
8	eL F	6 53 7 20	...	...	...	...	...	Afghanistan. 37° N., 69° E. (U.R.S.S.)	6	eL F	17 0 55	...	...	...	...	...	Near New Zealand. 40° S., 180° (Wellington).	
12	e(P) <sub>Z</sub> LNE Lz F	6 41.7 7 44 54 8 50	...	...	...	...	...	New Zealand. 41° S., 177° E. (Wellington.)	7	L F	6 49.4 7 10	...	...	...	...	...	Atlantic Ocean between Spain and Madeira (Strasbourg.)	
14	iP iPR <sub>1</sub> iSNE iSz m <sub>1</sub> m <sub>2</sub> m <sub>3</sub> m <sub>4</sub>	18 43 20 43 42 47 26 47 29 47 30 47 37 47 52 48 15	...	...	...	...	2510	Dilatation. Amplitudes of iP as read in mm.: N. E. Z. -0.95 +1.1 -3.0 Azimuth=129° ± 2°.	7	eL F	11 45 12 5	...	...	...	...	...	...	...
									8	iP iSNE L	3 57 11 4 6 46 21	...	...	...	...	8300	Compression. Destructive in Panama (Granada).	

\* The notation is that of Jeffreys:—"The Earth," 2nd Edition, Cambridge University Press, 1929, p. 100. London, Mon. Not. R. Astr. Soc. Geophys. Supp., 1, No. 8, 1926.

SEISMOLOGICAL DIARY.—continued.

Galitzin Seismographs, three components.

545. Richmond (Kew Observatory). Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

1930.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			Δ	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			Δ	Remarks.
				A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .							A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .		
Mar. 8	M <sub>1</sub>	25 31	20	+ 2	μ	μ	km.		April 4	eL	10 33	...	μ	μ	μ	km.	
cont.	M <sub>2</sub>	26 11	20	...	...	+ 4	...			F	11 0	...	...	...	...	...	
	M <sub>3</sub>	26 17	20	...	- 4	...	...		5	e	12 3	...	...	...	...	...	
	F	5 0	...	...	...	...	...			F	25	...	...	...	...	...	
10	eL	14 25	...	...	...	...	...		9	e	5 41	...	...	...	...	...	
	F	40	...	...	...	...	...			F	55	...	...	...	...	...	
10	e(PR) <sub>1</sub>	16 40.5	...	...	...	...	...	Kurile Islands.	10	eL	14 50	...	...	...	...	...	
	i(S) <sub>NE</sub>	47 0	...	...	...	...	...	44° N., 147° E.		F	15 25	...	...	...	...	...	
	L <sub>NE</sub>	17 3	...	...	...	...	...	(Manila).	15	e	11 45	...	...	...	...	...	
	L <sub>Z</sub>	10	...	...	...	...	...			F	12 5	...	...	...	...	...	
	F	40	...	...	...	...	...		15	e	12 46	...	...	...	...	...	Horizontal components disturbed by wind.
16	eL	5 49	...	...	...	...	...			F	13 0	...	...	...	...	...	
	F	6 10	...	...	...	...	...		15	e	15 56	...	...	...	...	...	
20	eL	13 58	...	...	...	...	...	Disturbed by wind and microseisms.	15	F	16 5	...	...	...	...	...	
	F	14 15	...	...	...	...	...			e	15 56	...	...	...	...	...	
	F	14 15	...	...	...	...	...			F	16 5	...	...	...	...	...	
26	e(P) <sub>z</sub>	7 27.3	...	...	...	...	(13300)	Banda Sea.	16	eL	4 39	...	...	...	...	...	West of Vancouver. 50° N., 132° W. (J.S.A.).
	iPR <sub>1</sub>	32 12	...	...	...	...	...	9° S., 127° E.		F	5 0	...	...	...	...	...	
	eS <sub>NE</sub>	40 3	...	...	...	...	...	(Manila).	16	e	13 49 31	...	...	...	...	...	
	iPS	41 55	...	...	...	...	...			eL	54	...	...	...	...	...	
	iPPS	43 8	...	...	...	...	...			F	14 20	...	...	...	...	...	
	eSR <sub>1</sub>	48 35	...	...	...	...	...		16	eL	15 7	...	...	...	...	...	
	L <sub>NE</sub>	8 1.8	...	...	...	...	...			F	40	...	...	...	...	...	
	L <sub>Z</sub>	13.1	...	...	...	...	...		17	iP	20 11 31	...	...	...	...	2430	Compression.
	M <sub>1</sub>	14 59	28	-52	...	...	...			ENE	15 23	...	...	...	...	...	Destructive in Greece. 37.5° N., 23.5° E. (Strasbourg).
	M <sub>2</sub>	16 49	26	...	+28	...	...			iS <sub>Z</sub>	15 30	...	...	...	...	...	
	M <sub>3</sub>	21 58	24	-51	...	...	...			L <sub>NE</sub>	16.2	...	...	...	...	...	
	M <sub>4</sub>	22 3	24	...	...	+29	...			M <sub>1</sub>	18 46	20	+42	+17	...	...	
	M <sub>5</sub>	23 52	23	...	...	...	...			M <sub>2</sub>	18 56	18	-43	...	...	...	
	M <sub>6</sub>	27 3	22	...	...	-25	...			L <sub>Z</sub>	19.3	...	...	...	...	...	
	M <sub>7</sub>	27 19	19	...	...	+21	...			M <sub>3</sub>	19 19	14	...	+19	...	...	
	M <sub>8</sub>	28 10	24	+40	...	...	...			M <sub>4</sub>	21 2	10	...	...	-31	...	
	eL <sub>2</sub>	9 12	...	...	...	...	...	Via Antipodes.		M <sub>5</sub>	21 5	11	...	-29	...	...	
	F	10 5	...	...	...	...	...			F	22 10	12	...	...	+12	...	
26	eL	12 32	...	...	...	...	...	No records, 26 <sup>d</sup> 14 <sup>h</sup> 10 <sup>m</sup> to 16 <sup>h</sup> 47 <sup>m</sup> , 27 <sup>d</sup> 9 <sup>h</sup> 30 <sup>m</sup> to 17 <sup>h</sup> 9 <sup>m</sup> , 28 <sup>d</sup> 9 <sup>h</sup> 35 <sup>m</sup> to 13 <sup>h</sup> 8 <sup>m</sup> , during standardisation of "Z" instrument.	18	e	13 8	...	...	...	...	...	
	F	13 0	...	...	...	...	...			F	20	...	...	...	...	...	
30	eL	1 20	...	...	...	...	...		21	e(P)	10 31 23	...	...	...	...	...	
	F	50	...	...	...	...	...			ENE	39 35	...	...	...	...	...	
30	e	8 54.6	...	...	...	...	...	North of Sandwich Islands. Near 55° S., 28° W. (J.S.A.).		L	11 5	...	...	...	...	...	
	eL	9 15	...	...	...	...	...			F	40	...	...	...	...	...	
	F	10 50	...	...	...	...	...		21	e	12 5	...	...	...	...	...	North of Sandwich Islands. Near 55° S., 28° W. (J.S.A.).
30	e(PR) <sub>1</sub>	15 39 36	...	...	...	...	...	Probably repetition of 26 <sup>d</sup> 7 <sup>h</sup> .		e(S) <sub>NE</sub>	16.0	...	...	...	...	...	
	e(PS)	49 17	...	...	...	...	...			L	47	...	...	...	...	...	
	eL <sub>NE</sub>	16 17	...	...	...	...	...			M <sub>1</sub>	48 57	22	+14	...	...	...	
	eL <sub>Z</sub>	25	...	...	...	...	...			M <sub>2</sub>	49 18	19	...	+ 7	...	...	
	F	17 40	...	...	...	...	...			M <sub>3</sub>	52 11	18	+15	...	...	...	
31	eP	12 38 30	...	...	...	...	2230	Felt at Volo, Greece. 39.5° N., 23° E. (Strasbourg).		M <sub>4</sub>	52 50	18	...	+ 7	...	...	
	iP	38 33	...	...	...	...	...			M <sub>5</sub>	54 46	16	...	...	-13	...	
	eS	42 13	...	...	...	...	...			eL <sub>2</sub>	14 7	...	...	...	...	...	
	L	43.3	...	...	...	...	...			F	15 0	...	...	...	...	...	
	M <sub>1</sub>	44 51	25	...	+26	...	...		22	e	14 44	...	...	...	...	...	
	M <sub>2</sub>	45 27	14	-69	...	...	...			F	55	...	...	...	...	...	
	M <sub>3</sub>	45 33	12	...	+23	...	...		23	eL	19 7	...	...	...	...	...	
	M <sub>4</sub>	46 21	19	-48	...	...	...			F	25	...	...	...	...	...	
	M <sub>5</sub>	47 36	10	...	...	-18	...		23/24	ePN <sub>Z</sub>	22 1 7	...	...	...	...	8800	
	M <sub>6</sub>	50 33	10	...	...	-16	...			ePR <sub>1Z</sub>	4.3	...	...	...	...	...	
	F	13 35	...	...	...	...	...			eS <sub>NE</sub>	11.1	...	...	...	...	...	
April 2	eL <sub>NE</sub>	5 14	...	...	...	...	...	No "Z" record, 1 <sup>h</sup> 37 <sup>m</sup> to 9 <sup>h</sup> 46 <sup>m</sup> . East of Mindanao. 8° N., 130° E. (Manila).		ePS	12.3	...	...	...	...	...	
	F	40	...	...	...	...	...			eSR <sub>1NE</sub>	17.0	...	...	...	...	...	
2	eNE	20 42	...	...	...	...	...	8° N., 130° E. (Manila).		L <sub>NE</sub>	24	...	...	...	...	...	
	eL	49	...	...	...	...	...			L <sub>Z</sub>	32	...	...	...	...	...	
	F	21 30	...	...	...	...	...			M <sub>1</sub>	32 45	26	...	-18	...	...	
			...	...	...	...	...			M <sub>2</sub>	35 15	20	-13	...	...	...	
			...	...	...	...	...			M <sub>3</sub>	36 29	20	...	+14	...	...	
			...	...	...	...	...			M <sub>4</sub>	37 56	20	...	+17	...	...	
			...	...	...	...	...			M <sub>5</sub>	38 11	20	...	+17	...	...	
			...	...	...	...	...			M <sub>6</sub>	41 0	19	...	+15	...	...	



SEISMOLOGICAL DIARY.—continued.

Galitzin Seismographs, three components.

545. Richmond (Kew Observatory). Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

1930.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			Δ	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			Δ	Remarks.
				A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .							A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .		
May 12	iP eS L F	h. m. s. 0 29 49 36 48 48 1 15	...	μ	μ	μ	5310	Compression. Probably repetition of 11 <sup>d</sup> 22 <sup>h</sup> .	May 29	eL F	h. m. s. 17 29 18 10	...	μ	μ	μ	...	
14	e F	0 6 10	...	...	...	...	...	Not very distant.	31	eL F	10 57 11 25	...	...	...	...	...	
14	eL F	20 14 21 5	...	...	...	...	...		31	ePz eSNE LNE Lz M <sub>1</sub> M <sub>2</sub> F	18 11 (4) 21-9 38 42 43 30 43 56 19 15	...	...	...	9830	In minute break. Felt in Kwanto (Kôti).	
15	—	—	...	...	...	...	...	2 <sup>h</sup> 0 <sup>m</sup> to 7 <sup>h</sup> 33 <sup>m</sup> . No records.				...	...	...	...	...	
16	eL F	3 22 4 0	...	...	...	...	...		June 1	eSNE eE eLNE M <sub>1</sub> M <sub>2</sub> F	13 34.4 15-6 14 15 34 43 41 48 15 55	...	...	...	...	...	No "Z" record. 1 <sup>d</sup> 11 <sup>h</sup> 35 <sup>m</sup> to 2 <sup>d</sup> 9 <sup>h</sup> 45 <sup>m</sup> . Near New Hebrides. 18° S., 170° E. (Wellington).
16	eL F	21 1 20	...	...	...	...	...	Japan. 35° N., 139° E. (Kôti).				...	...	...	...	...	
18	eL F	1 8 30	...	...	...	...	...	Disturbed by wind and microseisms.	4	ePz eSN eL F	7 34 58 40 21 46 8 30	...	...	...	...	3590	
19	ez L M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	3 40.8 4 2 13 50 14 11 14 25 5 25	...	...	...	...	...		4	ePz PR <sub>1ez</sub> eSNE L M F	10 9 59 11-9 19-0 47 51 7 11 30	...	...	...	...	7600	
19	ez LNE Lz M <sub>1</sub> M <sub>2</sub> F	15 28 43 51 58 16 3 7 3 11 30	...	...	...	...	...	Felt in northern Luzon. 20° N., 121° E. (Manila).	5	iPz L M F	12 2 24 51 13 6 2 14 25	...	...	...	...	...	Compression. Horizontal components disturbed by wind. West of Fiji. 17° S., 175° E. (Wellington).
20	eL F	8 42 9 20	...	...	...	...	...		5	e F	22 9 25	...	...	...	...	...	
20	eP eSNE e L M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> F	11 26 55 36 44 42 15 55 56 48 57 9 12 8 43 11 57 12 18 14 5	...	...	...	...	8570	Aleutian Islands. 51° N., 180°. (U.S.C. & G.S.).	7	e F	10 58 11 20	...	...	...	...	...	Very small.
21	e F	12 23 13 0	...	...	...	...	...	Very small.	8	e F	14 5 20	...	...	...	...	...	No "E" record. 4 <sup>h</sup> 0 <sup>m</sup> to 9 <sup>h</sup> 15 <sup>m</sup> .
21	eP in i SNE L M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	22 14 4 14 12 14 26 18 13 19-4 20 40 20 51 20 55 23 10	...	...	...	...	2550	Compression. Atlantic Ocean (Strasbourg).	9	ez F	4 48 55	...	...	...	...	...	New Guinea. 6° S., 144° E. (Wellington).
23	eL F	0 40 1 10	...	...	...	...	...		11	ePz iz ine en LNE Lz M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> M <sub>6</sub> M <sub>7</sub> F	1 8-9 10 57 12 13 18-0 29 32 32 57 16 58 22 59 33 2 1 13 3 0 3 43 10 25 3 40	...	...	...	...	...	Very small.
23	eL F	10 8 30	...	...	...	...	...		11	e F	11 30 35	...	...	...	...	...	
23	ePz eSNE e L F	16 51 17 17 0 58 1 15 2 16 28 18 5	...	...	...	...	8420	Horizontal components disturbed by wind.	11	e F	14 42 50	...	...	...	...	...	
24	ePz L F	22 6 24 7 57 20	...	...	...	...	...	Near M. Cimone, Italy (Strasbourg).	13	ePz eSNE L M <sub>1</sub> M <sub>2</sub> F	1 5 50 15 51 36 46 33 46 36 3 0	...	...	...	...	8820	Compression. Aleutian Islands. 52° N., 172° W. (U.S.C. & G.S.).
26	e F	23 4 20	...	...	...	...	...		13	ez F	21 28 40	...	...	...	...	...	

## SEISMOLOGICAL DIARY.—continued.

Galitzin Seismographs, three components.

545. Richmond (Kew Observatory). Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

1930.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.
				A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .							A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .		
June 15	e F	h. m. s. 8 51 9 45	...	μ	μ	μ	km.										
15	ez L M <sub>1</sub> M <sub>2</sub> F	21 30.4 22 15 16 48 17 51 23 35	...	...	...	...	...										
17	eL F	20 41 21 5	...	...	...	...	...										
18	e F	16 30 45	...	...	...	...	...									Very small.	
19	e L F	13 53 14 10 15 25	...	...	...	...	...									Felt in western Java and southern Sumatra.	
21	e F	21 55 22 10	...	...	...	...	...										
22	eL F	19 21 22 0	...	...	...	...	...										
23	—	— — —	...	...	...	...	...									No records, 9 <sup>h</sup> 20 <sup>m</sup> to 10 <sup>h</sup> 36 <sup>m</sup> .	
23	ez eL F	20 5 40 21 50	...	...	...	...	...										
25	ePz PR <sub>z</sub> eScPcS ePS L M <sub>1</sub> M <sub>2</sub> F	10 30 55 34 36 41 32 43 24 11 4 11 52 11 56 ?	...	...	...	...	(10300)									Compression. Pacific Ocean near Peru. 16° S., 75° W. (U.S.C. & G.S.).	
25	ePz eSNE L M <sub>1</sub> M <sub>2</sub> F	12 16 9 24 10 33 35 17 35 21 13 30	...	...	...	...	6460									Overlapped by next shock. Leeward Islands, 18° N., 63° W. (U.S.C. & G.S.).	
25	e F	13 50 14 15	...	...	...	...	...										
25	eP PR <sub>1</sub> eScPcS eSx LNE Lz M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> F	21 34 53 38.6 45 28 46.5 22 1 6 10 29 10 47 14 51 15 26 15 39 0 30	...	...	...	...	(10900)									Pacific Ocean near Peru. 16° S., 79° W. (U.S.C. & G.S.).	
26	e F	4 34 45	...	...	...	...	...										
27	e F	19 53 20 10	...	...	...	...	...									Very small.	
July 1	ePz eSR <sub>2,NE</sub> LNE Lz M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	1 20 21 37.8 40 45 51 24 51 37 52 9 2 55	...	...	...	...	(7700)									N. Pacific Ocean off British Columbia. 52° N., 137° W. (U.S.C. & G.S.).	
1	—	— — —	...	...	...	...	...									No records. 10 <sup>h</sup> 11 <sup>m</sup> to 11 <sup>h</sup> 49 <sup>m</sup> .	
2	iP i	21 14 58 15 8	...	...	...	...	7780									Compression. Destructive in Gauhati, Assam. 27.5° N., 90° E. (Strasbourg).	
July 2	PR <sub>1</sub> PR <sub>2</sub> iS SR <sub>1</sub> SR <sub>2</sub> LNE Lz M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> F	17.8 19.3 24 7 29.1 32.3 33 40 45 46 47 53 49 24 49 30 ?	...	...	...	...	...										
3	ePz eL F	0 30 15 49 1 20	...	...	...	...	7700									Probably repetition of preceding shock.	
3	e F	14 57 15 10	...	...	...	...	...									Very small.	
4	e F	21 11 15	...	...	...	...	...									Felt in Switzerland.	
5	e eL F	18 18 4 56 20 10	...	...	...	...	...										
5	ez M F	23 18 2 19 47 40	...	...	...	...	...									Felt in southern Spain.	
7	eL M <sub>1</sub> M <sub>2</sub> F	14 6 19 7 19 12 15 0	...	...	...	...	...									Guatemala (J.S.A.).	
7	e F	20 42 21 5	...	...	...	...	...										
7	e F	21 17 40	...	...	...	...	...										
8	e F	10.27 40	...	...	...	...	...									Very small.	
10	e F	17 26 40	...	...	...	...	...										
11	e F	7 47 8 5	...	...	...	...	...										
11	e F	15 14 20	...	...	...	...	...										
13	eL F	1 33 ?	...	...	...	...	...									Overlapped by next shock.	
13	eL M <sub>1</sub> M <sub>2</sub> F	2 10 25 2 25 8 3 45	...	...	...	...	...										
13	eL F	13 58 14 20	...	...	...	...	...										
13	ez L F	14 33 43 15 5	...	...	...	...	...										
13	eP iP PR eSNE SR <sub>1,NE</sub> SR <sub>2,NE</sub> LNE Lz M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	19 38 5 38 7 42.1 46 53 51.3 53.9 58 20 4 4 51 9 20 9 24 21 40	...	...	...	...	7370									Dilatation. Nan Shan, China. 38° N., 98° E. (Strasbourg).	
14	e F	21 14 20	...	...	...	...	...									Very small.	



## SEISMOLOGICAL DIARY.—continued.

Galitzin Seismographs, three components.

545. Richmond (Kew Observatory). Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

1930.

Date.	Phase.	Time.		Period	Amplitudes.			Δ	Remarks.	Date.	Phase.	Time.		Period	Amplitudes.			Δ	Remarks.	
		h.	m.		s.	A <sub>N</sub> .	A <sub>E</sub> .					A <sub>Z</sub> .	A <sub>N</sub> .		A <sub>E</sub> .	A <sub>Z</sub> .	h.			m.	s.
Aug. 19	e F	14	35	...	μ	μ	μ	km.	Very small.	Sept. 11	M <sub>1</sub>	51	51	17	μ	μ	μ	km.		
		45	...	...	...	...	...	...		cont.	M <sub>2</sub>	54	0	15	+46	...	-15	...		
20	ePz S <sub>N</sub> SR <sub>1</sub> L M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> F	21	7	6	...	...	...	9750	Felt in Formosa. 24° N., 123° E. (Manila).	12	e F	8	27	40	...	...	...	...	} Not very distant.	
		35	...	...	...	...	...	...		12	e F	9	25	40	...	...	...			
		42	54	23	+81	-82	...	...		12	e F	13	45	...	...	...	...			
		45	12	16	-49	...	...	...			eL <sub>NE</sub> F	14	25	...	...	...	...			
		48	48	19	...	+46	...	...				20	14	...	...	...	...			
		48	52	19	...	...	-38	...		13	e F	30	...	...	...	...	...			
		49	36	19	+39	...	...	...		13	e F	23	37	50	...	...	...	Very small.		
		50	44	15	...	...	-33	...		14	e F	0	40	...	...	...	...			
		23	25	...	...	...	...	...		14	eL F	3	21	...	...	...	...			
23	iPz ePR <sub>1ZE</sub> iS eSR <sub>1NE</sub> L M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	11	1	51	...	...	...	5170	Compression. Persia. 29° N., 58° E. (Strasbourg).	14	e F	1	25	...	...	...	...			
		3	51	...	...	...	...	...		14	e F	3	21	...	...	...	...			
		8	42	...	...	...	...	...		14	eL F	4	27	...	...	...	...			
		11	7	...	...	...	...	...		14	e F	15	22	...	...	...	...			
		16	...	...	...	...	...	...		14	e F	17	32	...	...	...	...			
		20	45	23	+17	...	...	...		16	e F	18	0	...	...	...	...			
		23	21	17	...	+11	...	...		17	e F	3	52	...	...	...	...			
		27	16	15	...	...	-8	...		21/22	eP PR <sub>1</sub> eS ez L <sub>NE</sub> M <sub>1</sub> L <sub>z</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> M <sub>6</sub> F	23	16	1	...	...	...	...	8380	Compression. Kachin. 27° N., 98° E. (Strasbourg).
		12	55	...	...	...	...	...				18	6	...	...	...	...			
23	e F	14	51	...	...	...	...	...	Small movements masked by wind disturbance on horizontal components.			25	40	...	...	...	...			
24	eL F	10	18	...	...	...	...	...				34	1	...	...	...	...			
24	e F	11	25	...	...	...	...	...				39	...	...	...	...	...			
25	e F	15	32	...	...	...	...	...				46	11	25	+135	...	...			
29	eL <sub>NZ</sub> F	7	41	...	...	...	...	...	No "E" record; 28 <sup>d</sup> 9 <sup>h</sup> 14 <sup>m</sup> to 30 <sup>d</sup> 9 <sup>h</sup> 35 <sup>m</sup> .			48	48	17	-50	...	...			
29	eL <sub>NZ</sub> F	8	55	...	...	...	...	...				49	43	23	...	-48	...			
Sept. 1	e F	5	56	...	...	...	...	...				52	36	22	...	...	+50			
		6	15	...	...	...	...	...				55	11	15	...	...	+27			
1	ePz eS <sub>NE</sub> ez L <sub>NE</sub> M <sub>1</sub> L <sub>z</sub> M <sub>2</sub> M <sub>3</sub> F	17	53	(9)	...	...	...	6050	Destructive near Stalinabad, Tajikistan.	22	iPz eL L M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> F	1	51	24	...	...	...	...	Ner Kermadec Islands. 32° S., 178° W. (Wellington).	
		18	1	(15)	...	...	...	...				2	16	5	...	...	...			
		7	1	...	...	...	...	...				3	2	...	...	...	...			
		13	23	...	...	...	...	...				16	20	17	+8	...	...			
		15	58	21	-13	...	...	...				29	15	16	...	-9	...			
		17	...	...	...	...	...	...				29	42	16	...	...	-10			
		21	0	17	...	-10	...	...				5	5	...	...	...	...			
		21	4	17	...	...	+12	...				5	5	...	...	...	...			
		55	...	...	...	...	...	...				5	5	...	...	...	...			
2	eL F	16	32	...	...	...	...	...				5	35	...	...	...	...			
2	i e e eL F	19	6	57	...	...	...	...				13	26	...	...	...	...			
		13	23	...	...	...	...	...				40	...	...	...	...	...			
		16	7	...	...	...	...	...				40	32	...	...	...	...			
		25	...	...	...	...	...	...				44	9	...	...	...	...			
		20	0	...	...	...	...	...				52	...	...	...	...	...			
3	e F	16	20	...	...	...	...	...	Not very distant.			15	0	...	...	...	...			
5	e F	16	46	...	...	...	...	...				0	17	25	+18	...	...			
7	e F	11	9	...	...	...	...	...				5	7	22	...	-7	...			
7	e F	14	56	...	...	...	...	...				7	19	16	...	...	-5			
8/9	—	—	—	...	...	...	...	...	No records, 8 <sup>d</sup> 12 <sup>h</sup> 23 <sup>m</sup> to 16 <sup>h</sup> 21 <sup>m</sup> and 9 <sup>d</sup> 8 <sup>h</sup> 25 <sup>m</sup> to 17 <sup>h</sup> 12 <sup>m</sup> during adjustments and standardisation.			16	42	34	...	...	...	...	8050	Assam. 26° N., 92° E. (Manila).
11	e F	3	26	...	...	...	...	...				53	...	...	...	...	...			
11	eP eS L	12	42	18	...	...	...	3250	Destructive near Corinth. (Strasbourg).	22	e(P) eL F	17	30	...	...	...	...			





## SEISMOLOGICAL DIARY.—continued.

Galitzin Seismographs, three components.

545. Richmond (Kew Observatory). Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

1930.

Date.	Phase.	Time. G.M.T.		Period	Amplitudes.			△	Remarks.	Date.	Phase.	Time. G.M.T.		Period	Amplitudes.			△	Remarks.
					A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .								A <sub>N</sub> .	A <sub>E</sub> .	A <sub>Z</sub> .		
Dec. 8	eL F	h. m. s. 8 44 9 30	s. ... ...	μ ... ...	μ ... ...	μ ... ...	km. ... ...	Destructive in Formosa. 23° N., 120° E. (Manila).	Dec. 22	eL <sub>NE</sub> M F	h. m. s. 0 37 1 4 54 1 42	s. ... 17 ...	μ ... +13 ...	μ ... ... ...	μ ... ... ...	km. ... ... ...	Formosa. 23° N., 121° E. (Manila).		
8	ez L F	17 42 8 18 46 19 40	... ... ...	... ... ...	... ... ...	... ... ...	...		22	eL F	5 5 44	... ...	... ...	... ...	... ...	... ...	Formosa. 23° N., 120° E. (Manila).		
10	eL F	10 44 11 5	... ...	... ...	... ...	... ...	...		23	eL F	22 37 23 0	... ...	... ...	... ...	... ...	... ...	No "Z" record.		
15	e F	16 48 17 0	... ...	... ...	... ...	... ...	...		24	eL <sub>NE</sub> F	6 41 7 30	... ...	... ...	... ...	... ...	...			
20	eL F	14 47 15 10	... ...	... ...	... ...	... ...	...		25	ez L F	13 20 49 14 0	... ... ...	... ... ...	... ... ...	... ... ...	...	Confused by micro-seisms.		
21	eL <sub>NE</sub> F	13 0 15	... ...	... ...	... ...	... ...	...		30	e(L) F	19 8 15	... ...	... ...	... ...	... ...	...			
21	iPz iPR <sub>1z</sub> L <sub>NE</sub> F	15 4 20 8 5 35 16 15	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	...		Destructive in Formosa. 20° N., 122° E. (Manila).										

Derived from readings for the period of thirty minutes centring at the exact hour, Greenwich Mean Time.

546. Richmond (Kew Observatory).

1930.

Month	January.								February.								March.							
	o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.	
	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.
Day.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.
1	1.3	5.6	1.3	5.6	1.4	5.2	1.5	5.4	3.3	6.3	2.7	8.3	3.5	6.5	3.0	8.0	0.9	5.4	0.9	5.4	1.0	6.3	1.0	5.8
2	1.6	6.3	2.4	6.0	2.8	7.3	2.5	7.3	3.2	8.0	2.7	6.5	1.9	6.5	1.5	5.8	...	...	...	...	1.8	7.3	1.7	6.5
3	2.3	6.5	2.0	6.3	3.5	6.5	2.4	6.7	1.3	8.0	1.9	6.5	1.2	8.0	1.3	7.0	1.5	6.5	1.5	5.8	0.8	5.8	1.3	6.7
4	2.9	6.5	2.6	7.3	2.7	7.0	1.9	6.5	1.3	5.6	1.5	7.0	2.3	6.5	2.2	6.3	0.6	5.8	0.6	6.5	0.6	5.8	0.2	5.4
5	...	...	2.3	5.2	...	...	2.8	6.7	1.7	6.7	1.5	6.7	0.9	5.0	1.0	6.0	0.4	5.4	0.5	5.0	0.2	5.0	0.5	5.0
6	2.5	6.3	4.2	5.8	2.5	6.5	2.1	5.6	0.7	4.8	0.5	5.0	0.4	5.4	0.5	4.5	0.4	5.4	0.4	5.4	0.4	5.6	0.2	5.2
7	2.3	5.8	1.8	6.0	1.8	5.0	2.0	8.0	0.3	4.0	0.5	4.8	0.5	4.8	0.7	4.8	0.2	5.2	0.2	5.2	0.2	5.0	0.2	5.0
8	2.1	7.5	2.4	8.3	2.8	7.5	2.9	7.5	0.7	4.7	1.4	5.2	1.0	4.8	0.7	5.0	0.5	5.0	0.4	5.4	0.5	5.0	0.2	4.8
9	2.2	7.5	1.8	7.0	2.3	6.5	2.0	6.0	0.7	5.2	0.5	4.7	...	...	1.9	5.2	0.5	4.3	0.7	4.8	0.7	5.0	1.0	4.7
10	1.7	6.5	1.5	6.5	2.2	6.3	2.7	6.0	1.8	5.6	2.2	5.8	...	...	2.1	6.5	0.5	4.7	0.9	5.4	0.9	5.0	1.7	4.8
11	3.8	6.7	3.7	6.3	7.4	7.5	10.0	7.7	1.9	6.3	1.6	6.7	1.4	6.0	0.7	4.8	1.6	5.2	2.2	6.0	2.2	6.7	1.8	6.0
12	8.8	7.7	7.1	7.7	6.0	7.0	4.1	8.0	1.4	6.3	1.3	7.0	0.9	7.3	1.4	7.5	1.6	5.2	1.7	5.8	2.0	5.2	1.8	6.0
13	4.3	6.7	3.7	6.7	3.7	6.5	3.0	6.7	1.4	6.3	1.2	6.5	1.0	6.0	0.8	6.0	2.1	5.6	2.3	5.2	2.3	5.6	2.0	6.0
14	3.9	6.5	3.3	6.5	3.1	6.5	1.9	6.7	0.6	6.0	0.4	6.5	0.6	6.5	0.6	6.3	1.5	5.6	1.7	5.8	1.6	5.2	1.2	5.0
15	2.1	6.5	1.7	6.7	1.8	5.4	1.4	6.5	0.8	6.0	1.0	6.5	1.3	5.6	1.4	5.2	1.8	6.3	1.1	5.2	1.2	4.8	1.5	5.6
16	1.8	7.0	2.1	5.8	3.1	5.8	2.9	6.5	1.1	5.6	0.9	5.6	0.6	6.0	0.8	4.3	1.3	4.3	1.7	5.8	1.8	6.0	2.0	5.2
17	3.5	6.5	2.5	6.3	2.2	6.0	1.8	6.0	0.7	5.4	0.6	5.8	0.4	5.8	0.7	5.0	1.9	4.8	...	...	1.3	4.3	2.9	4.7
18	1.4	6.5	1.2	6.3	1.2	5.8	1.4	6.0	0.9	5.2	0.6	5.8	0.5	4.1	0.7	5.0	3.4	4.8	1.9	4.8	1.7	5.6	1.5	5.8
19	2.0	6.0	2.5	6.5	2.9	6.0	2.1	5.8	0.7	5.0	1.1	5.2	1.6	6.3	1.5	5.8	1.4	5.2	1.4	6.5	1.7	6.7	1.5	5.4
20	2.1	6.5	1.7	6.7	2.0	6.0	2.0	7.0	1.9	7.3	1.9	7.3	1.8	7.0	1.8	7.3	2.5	6.5	2.2	6.7	1.5	6.5	2.1	6.5
21	1.9	6.7	2.4	7.0	3.4	6.7	3.7	6.5	1.8	7.3	1.9	6.7	1.8	7.0	1.8	7.0	2.1	6.7	2.1	6.7	2.5	6.5	3.3	6.5
22	2.9	7.0	2.6	7.3	2.1	7.5	2.9	7.0	2.1	6.7	2.1	6.7	1.5	6.7	0.9	7.0	3.5	6.3	3.5	7.0	2.1	6.5	1.6	7.0
23	2.5	8.0	2.8	7.5	2.8	7.5	2.4	7.0	0.6	6.0	0.6	5.8	1.0	6.0	0.4	6.0	1.7	6.5	1.3	5.6	1.0	5.8	1.0	6.0
24	2.9	7.0	3.1	6.5	2.4	7.0	2.5	6.5	0.5	5.2	0.6	6.0	0.5	5.2	0.4	5.8	1.0	5.8	1.1	5.4	1.7	5.8	1.1	5.4
25	2.3	6.5	2.0	6.3	1.6	6.3	1.6	6.0	0.7	4.7	0.7	5.2	2.4	4.8	2.3	5.2	0.7	4.7	1.3	5.4	1.2	5.8	1.3	5.4
26	2.0	6.0	3.7	6.0	2.9	6.0	4.1	6.0	2.4	4.7	1.4	4.1	1.2	5.0	0.8	4.5	1.1	5.6	1.0	4.8	0.8	6.0	0.9	5.0
27	4.5	5.2	2.6	5.6	2.0	6.3	1.8	7.0	1.5	4.5	1.6	4.3	0.8	4.0	0.8	4.0	0.7	5.4	0.6	6.0	...	...	0.6	5.6
28	1.6	6.0	1.5	5.6	1.9	6.5	1.9	7.5	0.6	4.0	0.5	4.3	0.9	5.4	0.6	6.3	0.6	5.6	1.8	5.2	...	...	2.1	5.8
29	1.8	7.0	3.1	7.0	3.6	7.7	3.5	8.3	2.2	6.0	2.2	6.0	2.5	5.8	2.2	4.8	2.2	6.0	2.2	6.0	2.5	5.8	2.2	5.4
30	3.5	8.0	3.4	8.3	3.5	8.7	4.2	8.3	2.3	5.0	2.0	6.0	2.2	4.8	2.2	4.7	2.3	5.0	2.0	6.0	2.2	4.8	2.4	4.7
31	3.0	8.7	2.5	8.0	3.2	8.3	3.7	7.7	2.2	4.8	1.8	5.0	1.8	5.0	2.2	4.7	2.2	4.8	1.8	5.0	2.0	4.7	1.0	5.8
Mean ...	2.7	6.7	2.6	6.6	2.8	6.6	2.8	6.8	1.3	5.8	1.3	5.9	1.2	5.9	1.2	5.8	1.4	5.5	1.4	5.7	1.4	5.7	1.4	5.6
Mean for day ...	A = 2.7 $\mu$ ; Tp = 6.7s.								A = 1.2 $\mu$ ; Tp = 5.8s.								A = 1.4 $\mu$ ; Tp = 5.6s.							

Month	April.								May.								June.							
	o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.	
	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.
Day.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.
1	2.0	5.4	1.9	6.5	2.1	6.7	1.9	6.5	0.0	—	0.0	—	0.0	—	0.0	—	0.7	5.4	0.5	5.0	0.2	5.4	0.2	4.7
2	3.3	7.0	2.7	7.7	3.3	7.0	2.6	7.5	0.0	—	0.0	—	0.0	—	0.2	7.3	0.3	4.3	0.3	4.3	0.2	5.0	0.2	4.7
3	2.1	5.6	1.9	6.7	2.8	5.0	2.7	6.0	0.5	7.7	0.9	7.3	1.2	6.0	0.8	6.5	0.3	4.1	0.3	4.1	0.2	4.8	0.2	4.8
4	2.8	5.0	2.5	5.2	2.9	4.3	2.3	5.0	0.8	6.0	0.6	6.0	0.4	6.0	0.4	5.6	0.2	5.0	0.2	5.4	0.2	5.8	0.5	7.3
5	2.1	5.0	1.3	4.5	0.8	4.0	0.5	4.7	0.2	5.0	0.4	5.6	0.7	5.2	...	...	0.7	7.5	0.6	5.8	0.7	7.3	0.5	5.0
6	0.5	4.5	0.5	5.2	0.3	3.5	0.3	4.1	0.6	6.0	0.7	5.0	0.6	5.6	0.4	5.4	0.2	5.8	0.2	4.7	0.3	4.3	0.2	5.4
7	0.3	4.5	0.2	5.0	0.2	6.7	0.2	7.0	...	...	0.5	5.2	0.3	3.7	0.3	3.6	0.2	4.8	0.0	—	0.3	4.0	0.0	—
8	0.2	6.0	0.2	6.0	0.8	8.0	1.2	8.0	0.3	3.3	0.3	4.1	0.5	5.0	0.5	5.0	0.3	3.3	0.0	—	0.0	—	0.3	3.7
9	0.9	7.5	1.0	7.5	1.1	7.0	1.1	6.7	0.3	3.7	0.3	3.9	0.3	4.3	0.3	4.3	0.3	3.9	0.3	4.5	0.3	4.3	0.3	4.3
10	1.2	6.5	1.4	6.3	0.8	6.5	1.0	6.5	0.2	5.0	0.3	3.7	0.2	4.8	0.8	4.3	0.5	4.7	0.7	4.8	1.4	6.0	1.6	7.3
11	0.5	4.3	0.4	5.8	0.5	5.0	0.5	5.0	0.7	5.0	1.0	4.8	1.2	5.0	1.0	4.5	1.2	6.3	1.0	6.0	0.6	5.8	0.6	5.6
12	0.7	5.0	0.5	5.0	0.9	5.4	1.2	6.3	0.9	5.0	0.5	5.0	0.5	5.0	0.5	4.7	0.7	5.4	0.7	5.2	0.4	5.6	0.2	6.0
13	1.5	6.5	1.6	6.3	1.0	5.8	1.8	6.0	0.5	5.2	0.5	5.0	0.5	4.5	0.7	5.2	0.6	5.6	0.2	5.6	0.2	5.0	0.2	5.4
14	1.7	5.8	1.1	5.2	1.2	6.3	1.2	6.0	0.5	4.3	0.9	5.4	0.7	5.4	0.7	5.0	0.0	—	0.2	5.0	0.0	—	0.0	—
15	1.5	5.8	0.9	6.7	1.5	5.6	0.6	5.8	0.9	5.0	...	...	0.5	5.0	0.7	5.2	0.3	4.3	0.3	4.3	0.0	—	0.3	4.0
16	0.5	4.7	0.6	5.8	0.4	5.4	0.5	5.2	0.9	5.4	0.4	5.4	1.4	6.0	1.0	6.0	0.3	4.1	0.3	4.3	0.3	4.0	0.3	4.0
17	0.7	5.2	0.5	5.2	0.3	4.0	1.6	5.2	1.0	6.0	0.7	4.7	1.1	5.6	2.1	5.0	0.3	4.3	0.3	4.3	0.2	4.7	0.0	—
18	0.6	4.0	0.6	4.0	0.3	4.5	0.5	4.5	2.1	5.0	1.9	5.8	1.6	5.2	2.0	5.2	0.0	—	0.3	4.5	0.0	—	0.3	4.3
19																								

Derived from readings for the period of thirty minutes centring at the exact hour, Greenwich Mean Time.

546. Richmond (Kew Observatory).

1930.

Month	July.								August.								September.							
	o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.	
	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.
Day.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.
1	0.2	4.7	0.2	4.8	0.3	4.0	0.2	5.0	0.3	4.3	0.3	4.3	0.3	3.7	0.3	4.3	0.2	6.0	0.4	7.0	0.2	6.7	0.4	6.0
2	0.3	3.3	0.2	5.0	0.3	3.3	0.3	3.7	0.3	4.3	0.8	4.0	0.9	3.7	0.9	5.0	0.2	6.7	0.2	6.7	0.0	—	0.3	3.5
3	0.3	4.3	0.3	3.7	0.2	4.7	0.3	4.3	0.8	4.3	1.0	4.7	0.9	5.4	0.8	4.3	0.3	3.7	0.0	—	0.0	—	0.0	—
4	0.3	4.3	0.2	4.7	0.2	4.7	0.0	—	0.8	4.5	0.5	4.1	0.3	4.1	0.2	5.0	0.0	—	0.3	3.7	0.0	—	0.3	4.1
5	0.0	—	0.0	—	0.0	—	0.0	—	0.5	5.0	0.8	4.5	0.8	4.3	0.5	4.3	0.3	3.7	0.3	3.9	0.3	4.0	0.3	4.0
6	0.0	—	0.0	—	0.0	—	0.4	6.0	0.7	4.8	0.5	4.8	0.3	4.5	0.5	4.7	0.3	4.0	0.3	4.5	0.3	3.9	0.3	4.3
7	0.4	5.6	0.8	6.3	0.9	5.6	0.7	5.4	0.3	4.3	0.3	4.1	0.3	3.7	0.3	4.5	0.3	4.0	0.3	3.5	0.0	—	0.3	3.7
8	0.5	4.8	0.5	5.0	0.2	4.8	0.3	4.5	0.2	4.8	0.2	6.0	0.3	4.5	0.2	4.7	0.3	3.7	0.3	3.5	...	...	0.3	3.9
9	0.2	5.0	0.3	4.5	0.2	5.0	0.2	4.8	0.3	4.3	0.3	4.3	0.3	4.0	0.2	5.0	0.3	3.7	0.3	3.9	...	...	0.5	4.7
10	0.2	4.8	0.2	4.8	0.3	4.5	0.2	4.7	0.4	6.7	0.2	6.3	0.2	6.0	0.2	5.4	0.3	3.9	0.3	4.1	0.3	3.6	0.3	4.3
11	0.0	—	0.0	—	0.0	—	0.0	—	0.4	6.0	0.4	5.4	0.3	4.0	0.3	4.3	0.3	4.0	0.3	4.5	0.3	3.9	0.3	3.7
12	0.3	3.1	0.3	3.9	0.3	4.1	0.6	4.0	0.3	4.3	0.3	4.3	0.3	4.5	0.5	4.1	0.3	3.7	0.3	3.7	0.3	3.9	0.3	3.5
13	0.3	3.7	0.3	3.2	0.0	—	0.0	—	0.5	4.3	0.6	4.0	0.3	4.3	0.3	4.5	0.3	4.3	0.3	4.1	0.5	4.7	0.3	3.7
14	0.0	—	0.0	—	0.0	—	0.0	—	0.3	3.9	0.3	4.0	1.2	3.7	1.1	5.4	0.5	4.3	0.3	3.7	0.3	4.1	0.2	4.5
15	...	...	0.0	—	0.0	—	0.3	3.7	1.0	4.7	0.6	4.0	0.6	3.7	0.3	3.9	0.3	4.1	0.3	3.5	0.3	3.3	0.3	3.5
16	0.3	3.9	0.3	4.3	0.3	4.3	0.2	5.0	0.3	3.7	0.4	6.0	0.3	4.3	0.3	4.5	0.3	4.3	0.2	5.2	0.2	6.5	0.4	5.4
17	0.3	3.7	0.3	4.1	...	...	0.3	4.3	0.5	4.3	0.6	5.8	0.9	5.4	0.8	4.5	0.4	6.3	0.4	6.7	0.6	6.7	0.6	5.6
18	0.3	4.0	0.3	4.0	0.5	4.7	0.3	4.0	0.7	4.7	1.1	4.0	0.3	3.5	0.3	4.3	0.3	3.5	0.3	3.3	2.5	4.0	2.3	4.5
19	0.3	4.5	0.3	3.7	0.2	4.7	0.2	5.0	0.3	4.0	0.3	4.3	0.5	4.3	0.3	4.1	1.0	4.3	1.3	5.4	2.1	4.3	2.4	4.7
20	0.3	3.7	0.3	3.5	0.3	4.3	0.3	4.3	0.2	4.8	0.3	4.0	0.8	4.0	0.9	5.2	1.9	5.2	1.8	7.5	1.7	4.8	2.1	4.8
21	0.3	3.3	0.3	4.3	0.7	3.3	0.9	3.9	1.3	4.5	1.3	4.5	0.8	4.1	2.1	4.3	1.6	5.0	1.6	4.3	1.2	3.7	0.9	3.5
22	0.6	3.9	0.6	4.0	0.5	4.1	0.3	4.1	1.5	4.7	1.1	4.1	1.4	4.1	0.6	3.7	...	...	0.3	3.9	0.2	4.7	0.3	3.9
23	...	...	0.3	3.6	0.3	3.2	0.3	3.7	0.3	4.0	0.3	4.3	0.3	3.9	0.3	3.6	0.3	3.7	0.3	4.3	0.5	4.3	0.5	4.7
24	0.3	3.3	0.3	3.3	0.0	—	0.3	3.1	0.6	4.0	0.5	4.5	0.3	3.7	0.3	4.5	0.2	4.7	0.5	4.5	0.7	5.0	1.1	5.6
25	0.3	4.3	0.3	4.3	0.2	4.7	0.5	4.5	0.2	5.0	0.5	4.5	0.6	4.0	0.5	5.0	2.2	4.7	1.7	5.6	2.3	5.0	1.5	5.6
26	0.2	4.7	0.5	4.8	0.3	4.3	0.5	4.7	0.5	4.5	0.3	4.0	0.3	4.0	0.3	4.3	1.1	5.0	1.0	4.3	0.7	5.4	1.1	5.4
27	0.5	5.0	0.6	4.0	0.5	5.0	0.5	5.0	0.3	4.0	0.3	4.1	0.0	—	0.3	4.0	1.7	4.7	0.3	3.3	0.5	4.5	0.3	3.1
28	0.5	4.8	0.5	4.8	0.3	4.3	0.5	5.0	0.0	—	0.0	—	0.0	—	0.0	—	0.2	4.8	0.2	4.8	0.5	4.3	0.2	4.7
29	0.2	5.0	0.3	4.1	0.3	4.3	0.2	5.0	0.0	—	0.0	—	0.0	—	0.0	—	0.2	4.8	0.2	5.2	0.2	6.0	0.3	4.3
30	0.3	3.7	0.3	3.7	0.3	3.7	0.3	3.6	0.2	5.4	0.2	6.0	0.2	6.0	0.2	6.5	0.2	5.4	0.2	5.0	0.2	6.0	0.2	4.7
31	0.3	3.3	0.0	—	0.0	—	0.0	—	0.2	6.0	0.2	6.0	0.0	—	0.2	7.0	...	...	...	...	...	...	...	...
Mean ...	0.3	4.2	0.3	4.3	0.3	4.3	0.3	4.5	0.5	4.6	0.5	4.7	0.5	4.3	0.5	4.7	0.5	4.5	0.5	4.6	0.6	4.7	0.6	4.4
Mean for day ...	A = 0.3 $\mu$ ; Tp = 4.3s.								A = 0.5 $\mu$ ; Tp = 4.5s.								A = 0.6 $\mu$ ; Tp = 4.6s.							

Month	October.								November.								December.							
	o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.	
	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.
Day.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.
1	0.3	4.3	0.3	4.0	0.8	4.3	0.8	4.1	1.8	7.0	1.9	6.7	1.9	7.5	1.7	7.5	1.4	7.5	1.9	7.5	1.8	7.0	1.9	7.7
2	1.0	4.3	0.9	3.7	1.1	4.1	0.8	3.9	1.4	7.3	1.9	6.7	2.6	6.0	2.5	6.5	2.9	7.7	3.4	7.7	3.1	7.3	2.8	7.5
3	1.1	5.2	0.5	4.7	0.5	4.7	0.5	4.7	2.7	5.8	2.9	6.5	2.2	5.4	2.1	5.8	3.1	7.5	1.7	7.3	1.7	7.3	1.5	6.7
4	0.3	4.5	0.3	4.5	0.3	3.9	0.3	4.1	1.9	6.5	1.9	5.6	2.1	5.0	1.8	6.0	1.4	6.0	1.7	6.5	1.9	6.7	1.9	7.5
5	0.3	4.1	0.5	4.5	1.0	4.3	1.2	3.6	1.5	6.7	1.5	6.7	2.5	4.5	2.4	5.4	1.8	8.0	2.5	8.0	1.9	7.5	2.0	7.5
6	0.8	4.1	0.5	4.7	1.0	4.7	1.9	6.3	4.1	5.0	3.9	5.0	3.7	5.0	2.8	5.4	2.1	7.3	1.7	6.3	1.1	7.0	1.7	6.5
7	1.7	4.8	1.0	4.7	0.9	5.0	0.8	4.3	2.4	4.7	2.9	5.8	1.0	4.5	1.1	5.0	1.2	6.0	0.9	6.7	0.8	6.5	0.8	6.3
8	0.8	4.0	2.1	5.0	1.6	5.0	2.1	5.0	1.6	5.0	1.9	5.8	2.6	6.0	2.1	5.8	1.3	6.5	0.8	5.8	0.4	5.6	0.6	6.0
9	3.7	4.5	1.3	5.2	0.7	5.0	1.1	5.0	2.0	5.2	2.2	5.2	1.7	6.3	1.9	5.6	0.6	5.6	0.6	6.5	1.5	6.5	1.4	7.0
10	0.9	3.7	0.5	4.1	0.5	4.3	0.5	4.7	2.3	6.3	1.7	7.3	1.7	7.3	2.2	7.0	1.1	6.5	0.5	4.7	0.5	4.5	0.5	5.0
11	0.5	4.7	0.7	5.2	0.7	5.2	0.7	5.2	1.8	7.0	2.9	5.2	2.0	6.7	1.9	6.3	0.6	6.5	0.5	4.7	0.9	5.0	1.6	5.0
12	0.7	5.2	0.7	5.4	0.7	4.7	0.5	4.0	2.1	5.8	2.7	5.8	1.6	6.0	1.8	5.2	1.6	5.2	1.6	6.0	1.6	7.0	2.0	5.8
13	1.5	5.6	1.5	6.7	1.8	5.0	2.0	5.2	1.9	6.7	1.9	6.5	2.2	6.7	2.1	7.3	1.7	6.7	2.0	7.0	2.1	6.3	4.0	7.3
14	2.0	5.4	2.5	5.2	4.4	6.5	5.2	6.3	2.0	6.0	1.6	5.2	1.4	5.0	1.2	6.0	4.7	7.0	5.4	7.3	4.1	7.7	4.7	7.3
15	3.7	6.3	3.0	6.0	1.8	6.0	2.1	5.6	1.2	6.0	1.6	5.8	1.0	4.5	0.8	4.3	4.0	7.0	2.6	7.5	2.0	7.0	1.3	6.7
16	1.5	5.6	1.3	5.6	1.1	5.0	0.6	5.8	0.5	4.3	0.5	4.3												

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1930

Comprising the meteorological and geophysical results obtained from autographic records and eye observations at the observatories at Lerwick, Aberdeen, Eskdalemuir, Cahirciveen (Valentia Observatory), and Richmond (Kew Observatory), and the results of soundings of the upper atmosphere by means of registering balloons.

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AEROLOGICAL SECTION

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1932.

## AEROLOGICAL SECTION.

Station.	Latitude.	Longitude.	Height above Sea Level.
Kew Observatory ..	51° 28' N. ..	0° 19' W. ..	7 metres.
Sealand ..	53° 14' N. ..	3° 0' W. ..	5 metres.

## INTRODUCTION.

**Notes on the tables of Upper Air Temperatures obtained from soundings with registering balloons at Richmond and Sealand, 1930.**

The present volume is the first in which it is practicable to give expression to a recommendation of the International Commission for the Exploration of the Upper Air to adopt geopotential in place of geometric height for the vertical co-ordinate in the work of the Commission. The recommendation is contained in Resolution XVIII adopted by the Commission at its meeting in Leipzig in 1927, which was formally adopted by the International Conference of Directors at the meeting in Copenhagen in 1929.\*

The practical unit of geopotential used by the Commission has been  $10^5$  c.g.s. units, for which V. Bjerknes has suggested the name Dynamic Metre which Sir Napier Shaw has modified into geodynamic metre. For reasons which are set out elsewhere,° these names are unsuitable and a suggestion has been put forward to use the name Leo (contraction of Galileo). An international decision has not yet been arrived at, but the editing of some of the tables in this Year Book, particularly table 547, has demonstrated the practical need for a name and symbol for this unit. In the present volume the following are used :

1 Leo (symbol l) =  $10^5$  c.g.s. units of geopotential.

1 Kiloleo (symbol Kl) =  $10^8$  c.g.s. units of geopotential.

In latitude  $52^\circ 20'$ , the approximate mean latitude of Kew Observatory and Sealand, the relation between height and geopotential is as follows :—

Height (metres)	0	100	200	300	400	500	600	700	800	900
20000	19563	19661	19758	19855	19953	20051	20148	20246	20343	20441
19000	18588	18686	18783	18880	18978	19076	19175	19271	19369	19466
18000	17613	17710	17808	17905	18003	18100	18198	18295	18392	18490
17000	16636	16734	16831	16929	17026	17125	17222	17320	17418	17515
16000	15660	15758	15855	15953	16050	16149	16246	16344	16441	16539
15000	14684	14782	14879	14977	15074	15173	15270	15368	15466	15563
14000	13708	13805	13903	14000	14098	14196	14293	14391	14488	14586
13000	12730	12827	12925	13023	13120	13219	13315	13414	13512	13609
12000	11753	11850	11948	12046	12143	12242	12339	12437	12535	12632
11000	10775	10873	10971	11068	11166	11264	11361	11459	11557	11654
10000	9798	9895	9993	10091	10188	10286	10384	10481	10579	10677
9000	8818	8916	9014	9112	9209	9308	9406	9504	9601	9699
8000	7840	7938	8036	8133	8231	8330	8428	8525	8622	8721
7000	6861	6959	7057	7155	7253	7350	7448	7546	7644	7741
6000	5882	5980	6078	6176	6274	6371	6469	6567	6665	6763
5000	4902	5000	5098	5196	5293	5392	5490	5588	5686	5784
4000	3923	4020	4118	4216	4314	4413	4511	4609	4706	4804
3000	2943	3041	3138	3236	3334	3432	3530	3628	3726	3824
2000	1962	2060	2158	2256	2354	2452	2550	2648	2746	2844
1000	981	1079	1177	1275	1373	1472	1570	1668	1765	1863
0	0	98	196	294	392	490	588	686	784	882
	0	100	200	300	400	500	600	700	800	900

\*Procès-Verbaux.....,Copenhagen 1929, pp. 23, 25.

Publication No. 3 of the International Secretariat.

°Meteorologische Zeitschrift 1930, p. 125.

With the exception of the use of geopotential instead of height, the tables in The Aerological Section are presented in the same form as those appearing in the Observatories' Year Book for 1929. The Dines pattern meteorograph was employed solely as before, but a few new specimens, having the thermograph constructed from a piece of bi-metallic strip, after the manner of the type used by the Canadian Meteorological Office, were employed along with the older standard instruments. About 57% of the instruments used had been constructed in the Observatory workshop, the rest being purchased from outside contractors.

The method of operation remained the same as in recent years. A full description will be found in "The Dines Balloon Meteorograph and the method of using it."\* In the computation of pressure-geopotentials the graphical method was employed, checked as to its main features by an arithmetical process. The effect of humidity on the density of the air was neglected.

A total of 55 soundings were made during the year, 40 from the Aviation Service Station of the Meteorological Office at Sealand Aerodrome and 15 from Kew Observatory. In the cases of 44 of these soundings the instruments were found and returned, the rest being lost; in one case also the returned record was unsatisfactory and was not used. The choice of station from which a sounding was made was generally determined in view of the probable direction and length of the run of the balloon.

The ventilation of the Dines meteorograph is effected solely by the natural draught produced by its vertical velocity. The vertical velocity of the rising balloon was of the order of 220 metres per minute in about 40% of the successful soundings and of the order of 310 metres per minute in the remaining 60%. After the balloon had burst the meteorograph normally fell at the rate of about 700 metres per minute.

As regards temperature, unless stated to the contrary the mean of the records on the ascent and descent was employed entirely in computing the published figures. In general the difference between the two records did not exceed  $4^{\circ}\text{A}$ ., with a mean of about half that amount; in two extreme cases, however, there was a difference of about  $6^{\circ}\text{A}$ .. Whenever direct evidence is available it is almost always found that in the troposphere the descending record is the colder of the two. An analysis of a large number of British soundings has led to the conclusion that as far as the troposphere is concerned this effect is mainly due to a temperature lag of the thermograph member, and that the mean of the two records gives in general a close approximation to the true air temperature.† Occasionally in exceptional circumstances it is deemed best to give greater weight to one record than to the other, or to publish the data from one record only. All such occasions are mentioned in the notes, they generally refer either to occasions of strong solar radiation when the less vigorous ventilation of the meteorograph on the ascent makes that record less reliable than that of the descent, or to the lowest layers of the troposphere only.

In the case of high soundings made during the day-time a pronounced rise of temperature is sometimes observed over about a kilometre at the extreme top. There is good evidence that this is a fictitious effect due to solar radiation and that the ascent is a great deal more affected by it than the descent. The rise of temperature in such cases is therefore usually ignored, and in addition greater weight is given to the descent than to the ascent in the upper parts of such records as show an unusually large difference between them. All occasions on which such selection has been made are specifically mentioned in the notes. An account of this phenomenon is to be found in "Memoirs of the Royal Meteorological Society," Vol. 2, No. 18. By L. H. G. Dines.

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\* M.O. 321, H.M. Stationery Office.

† See also :—Memoirs of the Indian Meteorological Department. Vol. XXIV. Part V. By J. H. Field.

In most cases during 1930 the meteorograph was fitted with a hair hygograph. Only one record of relative humidity in each case has been published, which unless specifically mentioned to the contrary in the notes is that of the ascent. The record of the descent appears to be the less reliable for two reasons, first that the previous exposure of the hair to extreme cold and dryness makes it more sluggish in response to changes in the relative humidity, second that the higher velocity at which the meteorograph falls increases the lag in its response reckoned in terms of height. The hygrometer readily shows changes in the relative humidity in the lower part of the troposphere, but the absolute value of its readings may be subject to an uncertain error of five or more on the percentage scale. Below a temperature of 250 °A. it seems very doubtful if in the ordinary way the record has any meaning, and the figures for the higher parts of the atmosphere have not therefore been published.

In order to ensure as far as possible that the hygograph works under standard conditions, it is normally exposed to a saturated atmosphere for ten minutes about an hour before the sounding is made.

The method employed in calibrating the hygograph is as follows:—It is first immersed in either water or a saturated atmosphere for at least ten minutes, and a mark made by the scribe on the record plate which is taken as corresponding with steady saturated conditions. It is then taken out, roughly dried to remove superfluous water, and placed as soon as possible in a testing chamber through which a current of air flows continually. The relative humidity of the air stream is next reduced in two or more stages to a minimum value of about 20%, plenty of time being allowed at each stage for the conditions to become steady. When in each case steady conditions have been attained a mark is made by the scribe. The object of the test is to obtain two marks at relative humidities near 25%, and in such case the total time taken is about 25 to 30 minutes from the instant when the hygograph is removed from the water in the first place. If the relative humidity is reduced in more than two stages the total time taken is greater, allowing about ten minutes per stage.

When the contraction of the hair corresponding with a relative humidity of 25% has been determined in the manner described, the contraction throughout the scale under the conditions met with in the sounding is assumed to follow an empirical law, which has been determined from the average behaviour of a number of hairs. This law is expressed in the following table, in which the quantity  $k$  is defined as the contraction of the hair at 25% from its saturated length expressed as a fraction of the saturated length.

Relative humidity %	25	30	40	50	60	70	80	90	96
Contraction of hair. Saturated length.	·97k	·88k	·73k	·59k	·45k	·32k	·20k	·08k	·00

The calibration is carried out at temperatures above 288 °A. and it is assumed that the thermal expansion of hair is the same as that of brass. No allowance has been made in computing the published figures for the fact that the results of the calibration are not considered to be valid at low temperatures below the freezing point.

Data of well marked inversions and regions of zero lapse rate in the troposphere are included in the notes on the soundings. They are set out in a uniform manner on the principle that corresponding values of geopotential, temperature and relative humidity are given for the salient points in each special case, the sequence being always from lesser geopotentials to greater.

The figures given in the table of lapse rates do not in every case agree with the temperatures appearing in the table of temperature-geopotentials. The reason for this is that both were determined independently from the original data, which can sometimes

profitably be read to the nearest half degree, but are rounded off to whole degrees for publication.

The lapse rates given between ground level and 0.5 Kl. are determined from the reading in the thermometer screen at the station and that of the meteorograph at 0.5 Kl. A source of error arises here in that the two standards are independent and are not exposed in the same manner. A small difference is capable of making an appreciable error in the lapse rate, and it is possible that lapse rates apparently greater than  $10^{\circ}\text{A.}$  per Kl. in this layer are sometimes due to this cause.

Whenever possible the meteorograph was calibrated again after return before the record plate had been disturbed, in order to discover whether any shift of zero had taken place since the previous calibration. Some disturbance is almost inevitable considering the rough treatment experienced, more especially in the shock of the fall. In the year 1930 the mean values of the shifts, taken without regard to sign, in the case of the standard type of instrument were  $1.2^{\circ}\text{A.}$  for the temperature and 4 mb. for the pressure; in the case of the Canadian type they were  $2.4^{\circ}\text{A.}$  for the temperature and 5 mb. for the pressure.

All new meteorographs, and all old ones used again after repair, were seasoned in a vacuum chamber before use by being subjected to several slow reductions of pressure. This process has been found greatly to reduce the chance of a systematic difference occurring between the results of a fast and slow calibration. More detail is given in the Introduction to the tables for 1923, and within the limits of accuracy at present attainable in the measurement of upper air pressures, the results of the fast reduction of pressure in the calibration test may be taken as applying to the slow reduction in the actual sounding.

The lag, or difference in pressure reading as between a falling and a rising pressure, is of the order 3 or 4 millibars on the average in the middle region of a high sounding, falling off to lesser values on either side. If a correction be applied to the recorded temperature-pressures to allow for this error, it results, for an average sounding in the troposphere, in an increase in the difference between the temperatures recorded at any pressure on the ascent and descent. The effect is to make the recorded temperatures on the descent too high by about half a degree at a level of 6 or 7 kiloleos, with a tendency for the error to fall off above and below. When the mean of the two records is employed the resultant error is halved and becomes negligible.

In Table 547 occur the entries "Type of Tropopause" and " $L_c$  = Geopotential at Tropopause." These are defined as follows:—Type I. The stratosphere commences with an inversion, and  $L_c$  is the geopotential at the first point of zero temperature gradient. Type II. The stratosphere begins with an abrupt transition to a temperature gradient below  $2^{\circ}\text{A.}$  per kiloleo without inversion, and  $L_c$  is the geopotential of the abrupt transition. Type III. There is no abrupt change of temperature gradient, and the base of the stratosphere is taken at the point where the mean fall of temperature for the kiloleo next above is  $2^{\circ}\text{A.}$  or less, provided that it does not exceed  $2^{\circ}\text{A.}$  for any subsequent kiloleo. In the Remarks on the Soundings the pressure distribution is classified according to the types defined in "Aids to Forecasting."†

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†—E. Gold, F.R.S., Geophysical Memoir No. 16, M.O. 220f, London, 1920.

T.=Temperature in Degrees absolute.

P.=Pressure in millibars.

547.

L.=Geopotential Level above M.S.L. in Kiloheos (Kl.)

RH.=Relative Humidity as percentage.

1930.

No. of Sounding.	772.	774.	775.	776.	777.	778.	780.	781.	782.																															
Date.	Jan. 16.	Jan. 18.	Mar. 26.	April 10.	April 22.	May 13.	May 14.	May 14.	May 15.																															
Station.	Sealand.	Sealand.	Kew.	Kew.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.																															
Start G.M.T. ... ..	7h. 15m.	7h. 25m.	12h. 12m.	12h. 30m.	12h. 43m.	6h. 47m.	6h. 48m.	17h. 48m.	7h. 15m.																															
$L_1$ =Geopotential at Greatest Height ... .. (Kl.)	17.53	15.98	5.62	18.58	5.22	19.00	16.76	18.28	16.65																															
$T_1$ =Corresponding Temperature (°A)	217	211	253	229	251	227	221	217	219																															
$P_1$ =Corresponding Pressure ... (mb.)	72	97	497	66	513	62	88	68	90																															
Place of Fall ... ..	Workshop, Notts.	Lyndhurst, Mansfield, Notts.	Banstead, Surrey.	Chetwode, Bucks.	St. Margarets, Middlesex.	Christchurch, Wisbech, Cambs.	Spalding, Lincs.	Swarkeston, Derby.	Wirksworth, Derby.																															
Distance ... .. (Km.)	125	121	18	75	2	227	197	112	91																															
Bearing. Degrees from N. ... ..	86	94	153	307	190	108	104	112	100																															
Geostrophic Wind— Speed ... .. (m/s.)	18	16	3	7	2	11	9	7	12																															
Degrees from N. ... ..	150	240	—	60	220	225	260	270	210																															
Wind (Anemograph)— Speed ... .. (m/s.)	3	7	2	2	2	6	4.5	5	4.5																															
Degrees from N. ... ..	170	225	25	100	160	160	270	325	145																															
Humidity at surface ... .. (%)	93	81	59	52	53	96	76	60	84																															
Type of Tropopause ... ..	I.	I.	—	I.	—	I.	II.	II.	I.																															
$L_0$ =Geopotential at ... (Kl.)	11.15	10.71	—	10.85	—	11.25	10.57	11.10	12.30																															
$T_0$ =Temp. at ... (°A.)	205	214	—	215	—	218	221	217	213																															
$P_0$ =Pressure at ... (mb.)	204	228	—	222	—	210	233	216	180																															
Mean Temp. in Stratosphere	<table border="0"> <tr> <td rowspan="3">{</td> <td><math>(L_0+2)</math> to <math>(L_0+5)</math> (°A.)</td> <td>214</td> <td>215</td> <td>—</td> <td>222</td> <td>—</td> <td>221</td> <td>222</td> <td>217</td> <td>219</td> </tr> <tr> <td><math>(L_0+5)</math> to <math>(L_0+8)</math> (°A.)</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>223</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td><math>(L_0+8)</math> to <math>(L_0+11)</math> (°A.)</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> </table>									{	$(L_0+2)$ to $(L_0+5)$ (°A.)	214	215	—	222	—	221	222	217	219	$(L_0+5)$ to $(L_0+8)$ (°A.)	—	—	—	—	—	223	—	—	—	$(L_0+8)$ to $(L_0+11)$ (°A.)	—	—	—	—	—	—	—	—	—
{	$(L_0+2)$ to $(L_0+5)$ (°A.)	214	215	—	222	—	221	222	217		219																													
	$(L_0+5)$ to $(L_0+8)$ (°A.)	—	—	—	—	—	223	—	—		—																													
	$(L_0+8)$ to $(L_0+11)$ (°A.)	—	—	—	—	—	—	—	—	—																														
$T_m$ (Mean Temp. 1 to 9 Kl.) (°A.)	249	254	—	254	—	256	255	255	257																															
$P_s$ (Pressure at M.S.L.) ... (mb.)	1021	1019	1026	1011	1012	1007	1011	1015	1015																															

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REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1930.

- No. of Sounding.
772. Weather overcast with fog. Clouds St. 10/10. *Inversion*, (1.68–1.96 Kl., 824–794 mb., 269–269.5° A., 57–46 %). *Inversion* near ground, (–0.96 Kl., –903 mb., –273° A., –86%). Pressure distribution:—A depression over the Atlantic with centre W. of Ireland, low over Scandinavia, high over Europe with a wedge of high pressure over the British Isles. Type VIIb.
774. Weather cloudy. Clouds St. 6/10, Ci–St. 2/10. St. at .45 Kl. moving from SW., Ci–St. moving from W. The mean of both records was used throughout for temperature, except that a small rise of temperature at the extreme top was ignored. *Inversion*, (0.70–1.00 Kl., 935–900 mb., 278.5–279° A., 82–74%). *Inversion* on descending record, (6.38–6.64 Kl., 439–423 mb., 242.5–243° A.). *Isothermal* on ascending record, (5.72–6.20 Kl., 483–451 mb., 249° A., 43–42%). Pressure distribution:—A series of straight isobars over the whole region of the British Isles and Scandinavia. Type V.
775. Weather cloudy. Clouds Fr–Cu. 1/10, Ci. 6/10. Fr–Cu. moving from NNW., Ci. moving from NNW. Two meteorographs employed which shewed good agreement; the mean of both was used for the tabulations. The sounding was curtailed by an automatic release. *Inversion*, (0.87–1.87 Kl., 921–812 mb., 277–278.5° A.). Pressure distribution:—An anticyclone with centre S. of Ireland extending over the British Isles and Western Europe, low over Atlantic S. of Iceland, and low over Scandinavia. Type IV.
776. Weather fine. Clouds Fr–Cu. 3/10 at .7 Kl. moving very slowly from ESE. The balloon apparently did not burst, and a rise in temperature of 24° A. occurred at almost constant pressure at the highest point; this rise was ignored. In tabulating the temperatures a slight bias was made towards the ascending record from 1 Kl. downwards. *Inversion*, (2.14–2.35 Kl., 773–753 mb., 271–271.5° A.). Pressure distribution:—An anticyclone over the Atlantic, low over the Azores, and low over Europe and Southern England. Type XI.
777. Weather fair. Clouds Cu. 5/10 moving from NE. There is a slight uncertainty as to the zero of the temperature scale. This was adjusted with reference to the starting conditions, and the published figures may be taken as reasonably accurate. The sounding was curtailed by an automatic release. *Inversion*, (1.39–1.82 Kl., 850–805 mb., 271.5–274° A.). Pressure distribution:—A deep depression N. of Scotland and a deep depression just off the west coast of Spain. High over Iceland. Type XIV.
778. Weather dull, slight mist and drizzle. Clouds Nb. 10/10 at .24 Kl. moving from SSE. A rapid rise of temperature at the top was ignored, otherwise the mean of the ascending and descending records was used throughout for temperatures. *Isothermal*, (4.97–5.36 Kl., 530–503 mb., 256° A., 83–54%). Pressure distribution:—A deep depression over the Atlantic with centre W. of Ireland extending over the British Isles. Low over Scandinavia. Region of high pressure extending from the Azores to Central Europe. Type Va.
780. Weather fair. Clouds Cu. and St–Cu. 6/10. Cu. at .75 Kl., and St–Cu. at 1.5 Kl. moving from WNW. *Small isothermal*, (5.28 Kl., 509 mb., 253.5° A., 42%). *Isothermal*, (7.91–8.16 Kl., 350–337 mb., 235.5° A., 51–49%). Pressure distribution:—High over Spain and Denmark, with a deep depression over the Atlantic S. of Iceland. Type Va.
781. Weather fine. Clouds Cu. 2/10, Ci–Cu. and Ci. trace. Cu. at 1.4 Kl. moving from W by N. The mean of the ascending and descending records of the thermogram was used except at the top where a bias was made towards the descending record. *Inversion*, (2.93–3.14 Kl., 700–682 mb., 265.5–266° A., 53–51%). Pressure distribution:—A deep depression over the Atlantic S. of Iceland, an area of high pressure extending over the Azores and Spain, low over Eastern Europe. Type IV.
782. Weather dull and cloudy, with slight rain. Clouds Nb. and St–Cu. 9/10. St–Cu. at 1.8 Kl. moving from W by S. *Inversion*, (1.15–1.34 Kl., 879–859 mb., 277–277.5° A., 69–74%). Pressure distribution:—As for No. 781. The depression over the Atlantic has moved eastwards, and there is now a wedge of high pressure over Southern England. Type Va.

T. = Temperature in Degrees absolute.

P. = Pressure in millibars.

L. = Geopotential level above M.S.L. in Kiloheos (Kl.)

RH. = Relative Humidity as percentage.

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No. of Sounding.	783.	784.	785.	788.	789.	790.	791.	792.
Date.	May 15.	May 30.	June 17.	July 11.	July 17.	July 31.	Aug. 14.	Sept. 2.
Station.	Sealand.	Kew.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.
Start G.M.T. ... ..	17h. 51m.	15h. 37m.	17h. 59m.	17h. 55m.	17h. 50m.	17h. 50m.	18h. 08m.	17h. 53m.
$L_t$ = Geopotential at Greatest Height... (Kl.)	16.93	11.52	21.15	22.35	14.59	19.02	17.96	20.12
$T_t$ = Corresponding Temperature ... (°A.)	219	229	223	229	228	227	221	219
$P_t$ = Corresponding Pressure ... (mb.)	85	211	45	38	124	63	74	53
Place of Fall ... ..	Old Rossington, Yorks.	Habberley, Pontisbury, Shropshire.	Kimpton, Beds.	Grosmont, Hereford- shire.	Ellesmere Port, Cheshire.	Hartington, Derbyshire.	Althorne, nr. Chelmsford, Essex.	Stoney Stanton, Leicester.
Distance ... (Km.)									132	219	43	132	10	80	298	138
Bearing. Degrees from N. ...	77	304	358	170	46	97	123	121
Geostrophic Wind— Speed ... (m/s.)	10	12	—	9	7	—	22	—
Degrees from N. ...	270	90	—	20	280	—	315	—
Wind (Anemograph)— Speed ... (m/s.)	1	4.5	0	8	5	4	12	2.5
Degrees from N. ...	250	70	—	315	235	305	280	325
Humidity at surface ... (%)	65	91	78	73	55	60	70	72
Type of Tropopause ...	II.	I.	I.	III.	I.	I.	I.	I.
$L_e$ = Geopotential at ... (Kl.)	10.89	10.08	11.85	9.87	9.02	11.31	11.77	13.37
$T_e$ = Temp. at ... (°A.)	215	229	213	225	225	215	221	211
$P_e$ = Pressure at ... (mb.)	225	263	197	265	290	210	196	158
Mean Temp. in Stratosphere	$(L_e+2)$ to $(L_e+5)$ ... (°A.)	218	—	220	224	229	223	216
	$(L_e+5)$ to $(L_e+8)$ ... (°A.)	—	—	220	222	—	225	—
	$(L_e+8)$ to $(L_e+11)$ ... (°A.)	—	—	—	224	—	—	—
$T_m$ (Mean Temp. 1 to 9 Kl.) ... (°A.)	257	261	261	257	253	257	257	263
$P_s$ (Pressure at M.S.L.) ... (mb.)	1014	1018	1015	1016	994	1016	1006	1027

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## REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1930.

No. of  
Sounding.

783. Weather fair with unusual visibility. Clouds Cu. 2/10, A-Cu. and Ci-Cu. 5/10. Cu. at .9 Kl. moving from W by N, A-Cu. moving from W by S, Ci-Cu. from WSW. *Inversion* on descent, (2.07-2.32 Kl., 785-759mb., 272-272.5°A.) *Inversion* on ascent, (2.26-2.97 Kl., 765-699 mb., 271-272.5°A., 83-32%). Pressure distribution:—A deep depression over the Atlantic S. of Iceland, high over the Azores. Type Va.
784. Weather dull, sky overcast and rain. Clouds St. 10/10 at .9 Kl. Pressure distribution:—Low over Bay of Biscay and Iceland, high over Azores and over Atlantic W. of Ireland. A region of high pressure extends southwards from the Arctic Circle over Scandinavia and the British Isles. Type VIII.
785. Weather thunder and lightning, slight rain just before ascent. Clouds Cu. 9/10. High Cu. moving from SW. Pressure distribution:—High over Scandinavia and the Azores, with a belt of high pressure extending across the British Isles, low over Iceland and Europe. The whole system is moving slowly eastward. Type XIa.
788. Weather fair with unusual visibility. Clouds Cu., Fr-Cu., Fr-St. 4/10. Clouds at .6 Kl. moving from NW by W. *Inversion*, (3.37-3.97 Kl., 664-613 mb., 266-268°A., 50-35%). Pressure distribution:—An anticyclone over the Atlantic extending over the British Isles. Low over Central Europe. The whole system is moving slowly westward. Type X.
789. Weather fair and dry. Clouds Cu., Ci., and Ci-St. 4/10. Cu. at 1.2 Kl. moving from SW. Mean of thermogram used except below .8 Kl., where a bias was made towards the ascending record. The high lapse rate near the ground appears to be genuine. *Trace of small Isothermal*, (1.45 Kl., 830 mb., 276.5°A.). Pressure distribution:—A deep depression with two centres over the British Isles extends over Europe. High over Azores. Type XIV.
790. Weather fair with unusual visibility. Clouds St-Cu. 3/10, A-St., Ci., Ci-St., and Ci-Cu. 3/10. St-Cu. from WSW., Ci. from W. From about 14 Kl. to the top, the ascending record has numerous oscillations of magnitude of a degree or less due, probably, to insolation. *Inversion*, (1.71-1.83 Kl., 821-810 mb., 274.5-275°A., 67-57%). *Isothermal*, (5.86-6.14 Kl., 475-457 mb., 250°A., 32-38%). Pressure distribution:—Low over Atlantic W. of Ireland, low over Scandinavia, high over France and Germany extending over Southern England. High over Iceland and the Azores. Type IVa?
791. Weather fair. Clouds St-Cu., A-Cu. 5/10. St-Cu. at .9 Kl. moving from NW by W. *Inversion*, (2.24-2.44 Kl., 760-741 mb., 269.5-270.5°A., 89-70%). *Isothermal*, (5.66-6.30 Kl., 481-440 mb., 250.5°A., 27-27%). *Isothermal*, (6.73-7.09 Kl., 415-394 mb., 248.5°A., 28-28%). Pressure distribution:—A low over North Sea moving eastwards. High over Atlantic SW. of Britain. Type I.
792. Weather fine. Clouds Ci. (trace), moving from W. *Isothermal*, (4.71-4.92 Kl., 570-555 mb., 266°A., 40-40%). *Isothermal*, (1.11-1.36 Kl., 898-870 mb., 283.5°A., 68-49%). Pressure distribution:—High over British Isles nearly stationary. Low over Atlantic WSW. of Britain. Type XIIIa.

No. of Sounding.	Date.	Station.	793.	794.	795.	796.	797.	798.	799.	801.
			Sept. 3.	Sept. 4.	Sept. 6.	Sept. 8.	Sept. 9.	Sept. 10.	Sept. 11.	Sept. 13.
			Sealand.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.	Kew.	Kew.
Start G.M.T. ...			18h. 10m.	17h. 41m.	17h. 50m.	17h. 55m.	17h. 50m.	17h. 50m.	18h. 00m.	18h. 00m.
$L_1$ =Geopotential at Greatest Height ... (Kl.)			18.03	17.59	12.14	16.20	18.64	15.71	13.36	15.19
$T_1$ =Corresponding Temperature ... (°A.)			215	220	227	222	219	221	218	220
$P_1$ =Corresponding Pressure ... (mb.)			72	80	185	98	63	103	151	114
Place of Fall ...			Stainsby, nr. Chesterfield, Derbyshire.	Selby, Yorkshire.	Darwen, Lancs.	Manton, Worksop, Notts.	Norden, Rochdale, Lancashire.	Brinscall Moor, Lancashire.	Crawley Green, Beds.	Great Sampford, nr. Braintree, Essex.
Distance ... (Km.)			105	143	63	128	68	59	46	75
Bearing. Degrees from N. ...			89	68	35	87	58	30	351	36
Geostrophic Wind— Speed ... (m/s.)			9	9	9	—	—	4	9	7
Degrees from N. ...			150	180	210	—	—	160	100	200
Wind (Anemograph)— Speed ... (m/s.)			4	4	2	1	0.5	2.5	2	4.5
Degrees from N. ...			125	125	160	35	135	305	65	200
Humidity at surface ... (%)			77	87	96	82	90	80	68	84
Type of Tropopause ...			I.	I.	I.	I.	I.	I.	I.	II.
$L_0$ =Geopotential at ... (Kl.)			12.31	11.17	9.58	11.37	10.40	10.55	10.86	9.79
$T_0$ =Temp. at ... (°A.)			210	219	222	219	213	216	216	229
$P_0$ =Pressure at ... (mb.)			184	221	274	210	237	234	227	263
Mean Temp. in Stratosphere										
{ ( $L_0+2$ ) to ( $L_0+5$ ) ... (°A.)			213	219	—	221	217	220	—	223
{ ( $L_0+5$ ) to ( $L_0+8$ ) ... (°A.)			—	—	—	—	218	—	—	—
{ ( $L_0+8$ ) to ( $L_0+11$ ) ... (°A.)			—	—	—	—	—	—	—	—
$T_m$ (Mean Temp. 1 to 9 Kl.) ... (°A.)			261	261	256	259	253	255	257	256
$P_1$ (Pressure at M.S.L.) ... (mb.)			1024	1018	1011	1012	1009	1011	1010	1001

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## REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1930.

- No. of Sounding.
793. Weather fine with slight haze. Clouds Ci. 9/10 moving from W by S. The mean of both records was used for temperature except below 1 Kl. where a slight bias was made towards the ascending record. The large lapse rate near the ground is due to using the weighted mean of the ascending and descending records at the .5 Kl. level, it would not show if the ascending record alone were used. *Isothermal*, (0.78—1.11 Kl., 930—894 mb., 284.5°A.). *Isothermal*, (1.71—2.11 Kl., 830—790 mb., 282°A.). Pressure distribution:—A high over British Isles moving slowly eastwards. Low over Atlantic W. of Britain. Type XIIIa.
794. Weather cloudy with slight mist. Thundery showers had occurred previously. Clouds Cu-Nb. 8/10, A-Cu. 1/10, Ci. (trace). Cu-Nb. at 1.44 Kl. moving from S., A-Cu. moving from S by W. The mean of the humidity records was used. Owing to the record plate shifting, the temperature zero was uncertain. This was adjusted with reference to the starting conditions, but the resulting temperature tabulations at the higher levels may be subject to an error of two or three degrees. The mean of both records was used for the temperatures except below .85 Kl. where a bias towards the ascent was made. *Inversion*, (0.85—1.12 Kl., 919—889 mb., 284.5—285.5°A., 76—60%). Pressure distribution:—High over Holland and North Sea, low to the West of Ireland, low over Spain. Type VII.
795. Weather cloudy with intermittent slight rain. Clouds Nb. and St-Cu. 7/10, A-Cu. 2/10. Nb. and St-Cu. moving from SSW. Pressure distribution:—Low over Western Ireland, high over the Azores. Type VII.
796. Weather cloudy. Clouds St. 1/10, St-Cu. 5/10 at .8 Kl. moving from WSW. Mean of both records of humidity employed. Pressure distribution:—A complex series of lows on an East-West line across the British Isles and Denmark. Type XIII.
797. Weather cloudy. Slight mist at first, drizzle later. Clouds St-Cu., and St. 10/10 at .75 Kl. Pressure distribution:—A shallow area of low pressure over the British Isles with centre W. of Ireland. High over Scandinavia and Central Europe. Type VII.
798. Weather fair. Clouds St. and St-Cu. 2/10, A-Cu. and high St-Cu. 5/10. St. and St-Cu. at 1.1 Kl. moving from SSE. A-Cu. moving from S. *Isothermal*, (2.83—3.10 Kl., 712—687 mb., 269°A., 90—63%). Pressure distribution:—An area of low pressure over the British Isles moving southwards. High over Scandinavia and the Azores, low over Iceland and the Atlantic W. of Ireland. Type XIII.
799. Weather dull, sky overcast. Clouds St. 5/10, St-Cu. 5/10 at .7 Kl. moving from ENE. Pressure distribution:—A shallow low over Central Europe with another out in the Atlantic. High over Azores and Scandinavia. Conditions maintaining themselves. Type VIII.
801. Weather cloudy, with rain. Clouds Cu. 4/10, St-Cu. 5/10 at .5 Kl. moving from SSW. Remarkable changes of lapse rate between 2.81 and 2.85 Kl. probably due to sudden emergence from the top of a cloud. See Met. Mag. Vol. 66, No. 783, pages 66 et seq. Pressure distribution:—A deep depression with centres over Cardigan Bay and Oxford moving eastwards. Low over Iceland, high over the Azores and Scandinavia. Type XV.

T. = Temperature in Degrees absolute.

P. = Pressure in millibars.

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L. = Geopotential Level above M.S.L. in Kiloleos (Kl.)

RH. = Relative Humidity as percentage.

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No. of Sounding.	802.	803.	804.	806.	807.	809.	810.	813.	814.
Date.	Sept. 14.	Sept. 15.	Sept. 15.	Sept. 16.	Sept. 17.	Sept. 18.	Sept. 19.	Sept. 21.	Sept. 22.
Station.	Kew.	Sealand.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.	Kew.	Sealand.
Start G.M.T. ... ..	7h. 04m.	7h. 15m.	7h. 23m.	7h. 12m.	7h. 15m.	7h. 35m.	7h. 15m.	7h. 0m.	17h. 55m.
$L_1$ = Geopotential at Greatest Height ... .. (Kl.)	7.02	18.58	8.35	15.77	16.47	18.92	1.14	6.80	19.00
$T_1$ = Corresponding Temperature ( $^{\circ}A.$ )	246	225	237	219	220	227	280	243	218
$P_1$ = Corresponding Pressure (mb.)	403	68	337	114	92	63	869	407	62
Place of Fall ... ..	Sanderstead, Surrey.	Cooze, Stonesfield, Oxfordshire.	Burnt Oak, Sussex.	Ilkeston, Derbyshire.	Mansfield, Notts.	Wroot, Doncaster, Yorkshire.	Wirral, Cheshire.	Seven Oaks, Kent.	Thurlby, Lincolnshire.
Distance ... .. (Km.)	23	186	59	117	128	125	22	46	184
Bearing. Degrees from N. ... ..	141	145	143	104	93	72	331	124	106
Geostrophic Wind— Speed ... .. (m/s.)	16	8	12	9	—	29	24	18	9
Degrees from N. ... ..	340	330	340	170	—	310	150	290	250
Wind (Anemograph)— Speed ... .. (m/s.)	4.5	6	2.5	2	1	11	3	4.5	2
Degrees from N. ... ..	315	290	270	135	280	270	160	270	235
Humidity at surface ... .. (%)	93	87	92	96	96	70	94	83	87
Type of Tropopause ... ..	—	II.	—	I.	I.	III.	—	—	I.
$L_0$ = Geopotential at ... .. (Kl.)	—	11.01	—	11.17	12.05	9.33	—	—	12.73
$T_0$ = Temp. at ... .. ( $^{\circ}A.$ )	—	217	—	215	211	230	—	—	209
$P_0$ = Pressure at ... .. (mb.)	—	224	—	217	188	277	—	—	173
Mean Temp. in Stratosphere									
{ ( $L_0+2$ ) to ( $L_0+5$ ) ( $^{\circ}A.$ )	—	221	—	—	—	226	—	—	214
{ ( $L_0+5$ ) to ( $L_0+8$ ) ( $^{\circ}A.$ )	—	—	—	—	—	223	—	—	—
{ ( $L_0+8$ ) to ( $L_0+11$ ) ( $^{\circ}A.$ )	—	—	—	—	—	—	—	—	—
$T_m$ (Mean Temp. 1 to 9 Km.) ( $^{\circ}A.$ )	—	258	—	259	258	254	—	—	264
$P_s$ (Pressure at M.S.L.) ... (mb.)	1006	1021	1021	1018	1012	999	997	1001	1013

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## REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1930.

- No. of Sounding.
802. Weather overcast. Clouds St. 10/10. Ascent curtailed by an automatic release. Pressure distribution:—That of No. 801 moving slowly eastwards. Type X.
803. Weather cloudy, with passing showers and slight rain. Clouds St-Cu., Cu., and Nb. 7/10 at .55 Kl., moving from WNW. From 13.5 Kl. to the top the ascending record showed numerous oscillations of magnitude  $\pm .7^{\circ}A.$  due, probably, to insolation. The mean of the ascending and descending records was used for the temperature except above 16 Kl. where a bias was made towards the descending record. A large rise of temperature at the top of the ascending record was ignored. Inversion, (1.61–1.90 Kl., 836–806 mb., 275.5–277.5 $^{\circ}A.$ , 77–41%). Pressure distribution:—An area of low pressure centred over the Atlantic with a wedge of high pressure extending from Spain to the British Isles. Low over Denmark and Southern Europe. Type IV.
804. Weather dull, sky overcast. Several layers of clouds visible. St. and St-Cu. 10/10 moving from NW. Ascent curtailed by an automatic release. Inversion, (1.87–1.95 Kl., 809–800 mb., 274.5–277 $^{\circ}A.$ ). Pressure distribution:—That of No. 803. Type IV.
806. Weather cloudy. Clouds, St-Cu. 6/10, A-St. 3/10, A-Cu. (trace). St-Cu. at 1.2 Kl. moving from WSW. Inversion, (1.24–1.57 Kl., 872–837 mb., 277–278.5 $^{\circ}A.$ , 86–50%). Pressure distribution:—Low over Denmark, high over Bay of Biscay, with a small depression over Ireland travelling SSE. Type IV.
807. Weather cm. Clouds St. and St-Cu., 6/10, A-Cu. 2/10. St. and St-Cu. at .58 Kl. moving from NW. by W. Inversion, (1.89–2.00 Kl., 799–788 mb., 273–273.5 $^{\circ}A.$ , 90–86%). Pressure distribution:—An area of low pressure over the Atlantic and over Scandinavia. A belt of high pressure over Europe and over the Arctic Circle with a wedge of high pressure extending over the British Isles. Type IVa.
809. Weather cloudy. Clouds Nb. and St. 9/10 at .6 Kl. moving from W. The mean of both traces was employed for the temperature except above 13 Kl. where a bias was made towards the descending record. There was a very large difference between the ascending and descending records from 7 Kl. and upwards. Inversion, (1.73–1.87 Kl., 796–782 mb., 272–272.5 $^{\circ}A.$ , 95–91%). Pressure distribution:—A deep depression is centred over the North of England moving NE. Low over Atlantic, and high over Southern Europe. Type XV.
810. Weather cm. Clouds St. 10/10 at .75 Kl. moving from SSE. Inversion near ground. Pressure distribution:—A very deep depression off the SW. coast of Ireland travelling NE. Type VIIb.
813. Weather overcast. Clouds St-Cu. 10/10 at .55 Kl. moving from W. An automatic release was employed to curtail the sounding. Pressure distribution:—A deep depression over the North Sea, and another shallower one over the Atlantic. An area of high pressure extends over Spain and the Azores. Type IV.
814. Weather cloudy. Clouds St. 9/10, A-Cu. (trace). St. at .45 Kl. moving from WSW., A-Cu. moving from W. Isothermal, (1.63–1.94 Kl., 832–800 mb., 281.5 $^{\circ}A.$ , 100–85%). Pressure distribution:—Low over the Atlantic SW. of Iceland, high over Spain. Type V.

T = Temperature in Degrees absolute.

P. = Pressure in millibars.

547.

L = Geopotential Level above M.S.L. in Kiloheos (Kl.)

RH. = Relative humidity as percentage.

1930.

No. of Sounding.	815.	816.	817.	818.	819.	820.	821.	822.	823.
Date.	Sept. 23.	Sept. 24.	Sept. 25.	Sept. 26.	Sept. 27.	Sept. 29.	Oct. 1.	Dec. 12.	Dec. 29.
Station.	Sealand.	Sealand.	Sealand.	Sealand.	Kew.	Kew.	Kew.	Sealand.	Sealand.
Start G.M.T. .. .. .	17h. 53m.	17h. 57m.	17h. 50m.	17h. 55m.	18h. 6m.	17h. 59m.	15h. 48m.	16h. 35m.	16h. 33m.
$L_t$ = Geopotential at Greatest height (Kl.)	19.95	9.95	11.04	13.56	13.70	14.50	14.33	18.10	19.55
$T_t$ = Corresponding Temperature (A.)	218	223	225	221	221	218	211	205	209
$P_t$ = Corresponding Pressure (mb.)	53	251	213	143	141	123	130	65	50
Place of Fall .. .. .	Kildale, N. Yorkshire.	Marsden, Yorkshire.	Burton, Staffordshire.	Upper Chapel, Brecon.	Monxton, Andover, Hants.	Longparish, Whitchurch, Hants.	Borden, Sitting- bourne, Kent.	Little Downham, Isle of Ely.	Belton, nr. Uppingham, Rutland.
Distance .. .. . (Km.)										189	83	98	133	93	80	73	225	163
Bearing. Degrees from N. .. .	42	59	122	195	251	248	101	110	115
Geostrophic Wind— Speed .. .. . (m/s.)	20	16	13	21	15	9	4	9	10
Degrees from N. .. .. .	225	260	330	30	90	50	30	220	350
Wind (Anemograph)— Speed .. .. . (m/s.)	13	5.5	10	10	2	2	4.5	2	13
Degrees from N. .. .. .	190	225	305	350	45	45	45	155	325
Humidity at surface .. .. (%)	74	76	74	75	70	90	77	77	81
Type of Tropopause .. ..	I.	I.	I.	I.	I.	II.	I.	I.	I.
$L_c$ = Geopotential at .. .. (Kl.)	13.79	8.71	9.52	9.02	9.19	10.16	11.98	11.26	7.31
$T_c$ = Temp. at .. .. (°A.)	207	219	220	220	222	222	210	211	213
$P_c$ = Pressure at .. .. (mb.)	144	305	270	291	285	247	192	204	359
Mean Temp. in Stratosphere	{ ( $L_c+2$ ) to ( $L_c+5$ ) (°A.)	—	—	—	—	—	—	208	219
	{ ( $L_c+5$ ) to ( $L_c+8$ ) (°A.)	—	—	—	—	—	—	—	214
	{ ( $L_c+8$ ) to ( $L_c+11$ ) (°A.)	—	—	—	—	—	—	—	210
$T_m$ (Mean Temp. 1 to 9 Kl.) (°A.)	263	250	251	250	250	251	259	254	243
$P_s$ (Pressure at M.S.L.) .. (mb.)	1012	1013	1014	1016	1018	1017	1026	1001	991

548.

1930.

## REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1930.

No. of  
Sounding.

815. Weather cloudy. Clouds St. 3/10, Ci. 5/10 increasing. St. at .45 Kl. moving from SSW., Ci. moving from SW by S. Stratosphere of Type I, but modified by a region of small lapse rate below it. *Inversion*, (1.24–1.43 Kl., 870–850 mb., 283–285°A., 89–74%). *Isothermal*, (12.76–13.13 Kl., 171–161 mb., 210°A.). Pressure distribution:—An area of low pressure to the NW. of Scotland. High over the Azores and Central Europe. Type Va.
816. Weather fine. Clouds St-Cu. and Cu. 2/10, Ci. (trace). St-Cu. and Cu. at 1.07 Kl. moving from WSW., Ci. from SW. by S. Pressure distribution:—An area of low pressure to the NW. of Scotland, and another W. of Scotland. A belt of high pressure extends from the Azores over Central Europe. The whole system moving slowly eastwards. Type III.
817. Weather bc. Clouds Cu-Nb. 4/10 at .75 Kl. moving from NW. *Isothermal*, (3.56–3.77 Kl., 641–623 mb., 259°A., 81–62%). Pressure distribution:—Low over North Sea. A belt of high pressure extends northwards from the Azores over the Atlantic. Type X.
818. Weather cloudy. Clouds St-Cu. 9/10 at .78 Kl. moving from NNW. Pressure distribution:—Low over North Sea and Eastern England. High over Atlantic Ocean. Type IXa.
819. Weather cloudy. Clouds Cu. and Fr-Cu. 8/10, A-Cu. (trace), all moving from ENE. Apparently on the ascent the instrument passed through a cloud of supercooled waterdrops which collected on the thermograph member; at 2.74 Kl. and at a temperature of 266.5°A. these suddenly froze, causing a sudden apparent rise of 5.5°A. on the thermogram. *Isothermal*, (1.61–1.73 Kl., 833–821 mb., 273°A., 87–90%). Pressure distribution:—An anticyclone centred N. of Ireland extends over the British Isles. The system is moving eastwards. Type IXa.
820. Weather overcast. Clouds St. 10/10 moving from NE. *Isothermal*, (2.53–2.70 Kl., 740–724 mb., 268°A., 83–80%). Pressure distribution:—An anticyclone centred over the Atlantic extends over the British Isles. High over Greenland, low over Azores. Type IX.
821. Weather overcast. Clouds St. and Fr-St. 7/10, high St. 3/10. *Inversion*, (1.06–1.36 Kl., 900–866 mb., 277.3°–280.3°A., 100–59%). Pressure distribution:—An anticyclone centred over the British Isles, low over Azores. Type VIIIb.
822. Weather bcm°. Clouds St-Cu. 7/10 at 1.2 Kl. moving from W. Two instruments were used for the sounding which agreed very closely. The tabulated figures were taken from one record only. *Inversion*, (1.09–1.43 Kl., 874–837 mb., 275–277°A., 69–83%). *Inversion* on descent, (3.05–3.16 Kl., 679–669 mb., 265.3–266.7°A.). Pressure distribution:—A very deep depression over the Atlantic with centre S. of Iceland. High over Azores and Russia, low over Eastern Mediterranean. The system is moving slowly eastwards. Type V.
823. Weather overcast, with slight rain and squalls. Clouds Nb., and Cu-Nb. 10/10 moving from NNW. at .75 Kl. Two instruments were used for the sounding, and the mean of both was used for the tabulations. Pressure distribution:—A shallow depression centred over the Faroes with a trough extending down over the North Sea. Another low over the Atlantic W. of Ireland is moving eastwards. Type XII.

T. = Temperature in Degrees Absolute.

P. = Pressure in millibars.

L. = Geopotential Level above M.S.L. in Kiloleos (Kl.)

RH. = Relative Humidity per cent.

No.	772.	774.	775.	776.	777.	778.	780.	781.	782.
Date. Station.	Jan. 16. Sealand.	Jan. 18. Sealand.	Mar. 26. Kew.	April 10. Kew.	April 22. Kew.	May 13. Sealand.	May 14. Sealand.	May 14. Sealand.	May 15. Sealand.
Start. (G.M.T.)	7h. 15m.	7h. 25m.	12h. 12m.	12h. 30m.	12h. 43m.	6h. 47m.	6h. 48m.	17h. 48m.	7h. 15m.

**549. GEOPOTENTIALS, TEMPERATURES AND RELATIVE HUMIDITIES CORRESPONDING WITH ISOBARIC SURFACES. 1930.**

Pressure. Millibars.	772.			774.			775.			776.			777.			778.			780.			781.			782.		
	L. Kl.	T. °A.	RH. %	L. Kl.	T. °A.	RH. %	L. Kl.	T. °A.	RH. %	L. Kl.	T. °A.	RH. %	L. Kl.	T. °A.	RH. %	L. Kl.	T. °A.	RH. %	L. Kl.	T. °A.	RH. %	L. Kl.	T. °A.	RH. %			
100	15.50	14	...	15.80	11	...	...	...	...	15.90	21	...	...	...	15.94	21	...	...	15.96	21	...	15.89	17	...	15.98	19	...
200	11.28	5	...	11.52	19	...	...	...	...	11.50	17	...	...	...	11.55	19	...	...	11.54	22	...	11.57	17	...	11.65	15	...
300	8.82	20	...	8.99	25	...	...	...	...	8.95	27	...	...	...	8.96	29	...	...	8.94	30	...	8.99	29	...	9.06	31	...
400	6.95	36	24	7.06	42	46	...	...	...	7.01	41	...	...	...	7.01	44	41	...	7.00	41	50	7.04	43	60	7.09	45	38
500	5.41	47	23	5.48	50	44	5.58	53	5.43	53	...	...	...	5.41	56	53	5.41	53	5.41	53	41	5.44	53	67	5.48	56	40
600	4.08	59	25	4.15	59	49	4.23	63	4.08	61	4.07	60	4.05	63	84	4.07	63	22	4.09	61	60	4.09	61	60	4.12	63	58
700	2.93	63	29	2.98	68	45	3.05	72	2.91	68	2.91	69	2.87	70	80	2.89	68	29	2.93	65	53	2.93	65	53	2.95	70	92
800	1.91	69	47	1.94	75	65	1.99	78	1.87	73	1.87	74	1.83	73	100	1.86	71	62	1.90	71	54	1.90	71	54	1.90	75	100
900	.99	73	87	1.01	79	74	1.05	77	.94	79	.95	75	.90	77	...	.93	77	88	.97	78	72	.97	78	72	.96	78	59
1000	.17	...	...	.16	...	...	.21	...	.09	...	.09	...	.05	...	...	.09	...	...	.09	...	...	.12	...	...	.12	...	...

**550. PRESSURES, TEMPERATURES AND HUMIDITIES AT GIVEN GEOPOTENTIALS. 1930.**

Geopotentials. Kiloleos.	772.			774.			775.			776.			777.			778.			780.			781.			782.		
	P. mb.	T. °A.	RH. %	P. mb.	T. °A.	RH. %	P. mb.	T. °A.	RH. %	P. mb.	T. °A.	RH. %	P. mb.	T. °A.	RH. %	P. mb.	T. °A.	RH. %	P. mb.	T. °A.	RH. %	P. mb.	T. °A.	RH. %	P. mb.	T. °A.	RH. %
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	62	27	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	72	27	...	...	...	...	...	...	...	...	...	...	...	...	...
17	78	17	...	...	...	...	...	...	...	...	...	...	84	24	...	...	...	...	...	...	...	...	...	...	...	...	...
16	92	15	...	...	...	...	...	...	...	...	...	...	99	21	...	...	...	...	...	...	...	...	...	...	...	...	...
15	108	14	...	114	13	...	...	...	...	...	...	...	115	22	...	...	...	...	...	...	...	...	...	...	...	...	...
14	127	14	...	134	16	...	...	...	...	...	...	...	135	23	...	...	...	...	...	...	...	...	...	...	...	...	...
13	150	14	...	158	17	...	...	...	...	...	...	...	158	22	...	...	...	...	...	...	...	...	...	...	...	...	...
12	177	7	...	185	21	...	...	...	...	...	...	...	185	19	...	...	...	...	...	...	...	...	...	...	...	...	...
11	209	6	...	217	15	...	...	...	...	...	...	...	217	15	...	...	...	...	...	...	...	...	...	...	...	...	...
10	248	10	...	255	17	...	...	...	...	...	...	...	255	19	...	...	...	...	...	...	...	...	...	...	...	...	...
9	291	18	...	299	25	...	...	...	...	...	...	...	298	27	...	...	...	...	...	...	...	...	...	...	...	...	...
8	341	26	25	348	35	49	...	...	...	...	...	...	346	35	...	...	...	...	...	...	...	...	...	...	...	...	...
7	397	35	24	402	43	45	...	...	...	...	...	...	401	41	...	...	...	...	...	...	...	...	...	...	...	...	...
6	459	42	23	463	47	42	...	...	...	...	...	...	462	49	...	...	...	...	...	...	...	...	...	...	...	...	...
5	529	51	24	533	53	48	541	57	530	56	529	53	528	56	82	529	55	37	532	56	68	532	56	68	534	59	50
4	606	59	25	611	59	48	619	65	607	62	606	60	604	63	83	606	63	23	608	62	57	608	62	57	610	63	60
3	693	62	29	698	68	45	704	73	692	67	691	67	688	69	78	691	67	28	694	65	52	694	65	52	695	69	90
2.5	740	67	33	744	71	47	750	76	738	71	737	71	734	72	97	737	69	39	740	68	49	740	68	49	742	72	100
2	790	69	45	794	75	65	799	78	787	72	786	73	783	73	100	786	71	59	790	70	51	790	70	51	790	75	100
1.5	843	70	63	845	77	73	851	79	839	74	838	72	834	74	100	838	73	95	842	73	66	842	73	66	841	77	81
1	899	73	87	900	79	74	905	77	894	79	893	75	888	77	100	893	77	87	897	78	72	897	78	72	896	78	62
0.5	958	...	...	958	...	...	964	80	951	83	952	80	945	79	...	950	80	86	955	83	64	955	83	64	954	81	...
Ground.	1021	73	93	1019	84	81	1025	85	1010	89	1011	85	1006	82	96	1010	85	76	1010	87	60	1014	87	60	1014	83	84

Note.—The temperatures are derived from the original tabulations which are generally made to the nearest half-degree, and are shown to the nearest whole degree

**LAPSE RATE OF TEMPERATURE BETWEEN GIVEN GEOPOTENTIALS.**

**551. Degrees absolute per kiloleo. 1930.**

Kiloleos.	772.	774.	775.	776.	777.	778.	780.	781.	782.
20 to 21	...	...	...	...	...	...	...	...	...
19 to 20	...	...	...	...	...	...	...	...	...
18 to 19	...	...	...	...	...	...	...	...	...
17 to 18	...	...	...	...	...	...	...	...	...
16 to 17	-1	...	...	...	...	...	...	...	...
15 to 16	-1	...	...	...	...	...	...	...	...
14 to 15	0	3	...	...	...	...	...	...	...
13 to 14	0	1	...	...	...	...	...	...	...
12 to 13	-7	4	...	...	...	...	...	...	...
11 to 12	-1	-5	...	...	...	...	...	...	...
10 to 11	5	1	...	...	...	...	...	...	...
9 to 10	8	8	...	...	...	...	...	...	...
8 to 9	8	10	...	...	...	...	...	...	...
7 to 8	9	8	...	...	...	...	...	...	...
6 to 7	7	5	...	...	...	...	...	...	...
5 to 6	9	6	...	...	...	...	...	...	...
4 to 5	8	6	...	...	...	...	...	...	...
3 to 4	3	9	...	...	...	...	...	...	...
2.5 to 3	8	6	...	...	...	...	...	...	...
2 to 2.5	5	7	...	...	...	...	...	...	...
1.5 to 2	2	4	...	...	...	...	...	...	...
1 to 1.5	6	5	...	...	...	...	...	...	...
0.5 to 1	...	...	...	...	...	...	...	...	...
Gd. to 0.5	0	5	...	...	...	...	...	...	...

Note.—The lapse rates are derived from the original tabulations, which are generally made to the nearest half-degree.

T.=Temperature in Degrees Absolute.

P.=Pressure in millibars.

L.=Geopotential level above M.S.L. in Kiloleos (Kl.)

RH.=Relative Humidity per cent.

No.	783.	784.	785.	788.	789.	790.	791.	792.
Date.	May 15.	May 30.	June 17.	July 11.	July 17.	July 31.	Aug. 14.	Sept. 2.
Station.	Sealand.	Kew.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.
Start. (G.M.T.)	17h. 51m.	15h. 37m.	17h. 59m.	17h. 55m.	17h. 50m.	17h. 50m.	18h. 08m.	17h. 53m.

**549. GEOPOTENTIALS, TEMPERATURES AND RELATIVE HUMIDITIES CORRESPONDING WITH ISOBARIC SURFACES—continued. 1930.**

Pressure. Millibars.	783.			784.			785.			788.			789.			790.			791.			792.		
	L. Kl.	T. °A.	RH. %																					
	200	+	...	200	+	...	200	+	...	200	+	...	200	+	...	200	+	...	200	+	...	200	+	
100	15.94	19	...	...	...	...	16.09	19	...	16.13	22	...	...	...	...	16.03	24	...	16.05	22	...	16.17	15	
200	11.61	15	...	...	...	...	11.75	13	...	11.69	25	...	11.46	31	...	11.61	16	...	11.62	21	...	11.93	14	
300	9.06	29	...	9.21	33	...	9.19	31	...	9.07	29	...	8.81	25	...	9.05	30	...	8.99	35	...	9.33	35	
400	7.11	44	29	7.21	50	...	7.21	47	...	7.12	45	28	6.89	40	60	7.09	45	52	6.99	49	28	7.33	48	
500	5.51	56	23	5.58	60	...	5.59	58	...	5.51	57	29	5.31	52	53	5.49	53	29	5.39	52	27	5.71	60	
600	4.14	66	23	4.20	67	...	4.23	67	...	4.15	67	34	3.97	61	54	4.15	62	41	4.05	62	30	4.32	69	
700	2.95	71	32	3.00	73	...	3.03	74	...	2.96	68	55	2.79	69	69	2.97	70	38	2.89	69	44	3.11	77	
800	1.91	73	84	1.95	77	...	1.97	82	...	1.93	73	77	1.76	74	70	1.93	75	49	1.85	73	82	2.05	80	
900	.98	81	79	1.00	83	...	1.01	87	...	.99	81	...	8.20	.81	75	.99	79	79	.91	81	80	1.09	83	
1000	.11	...	62	.14	...	...	.13	...	...	.13	...	...	...	...	...	.13	...	...	.05	...	...	.23	...	

**550. PRESSURES, TEMPERATURES AND HUMIDITIES AT GIVEN GEOPOTENTIALS—continued. 1930.**

Geopotentials. Kiloleos.	783.			784.			785.			788.			789.			790.			791.			792.		
	P. mb.	T. °A.	RH. %	P. mb.	T. °A.																			
	200	+	...	200	+	...	200	+	...	200	+	...	200	+	...	200	+	...	200	+	...	200	+	
21	...	...	...	...	...	...	46	23	...	40	27	...	...	...	...	...	...	...	...	...	...	...	...	
20	...	...	...	...	...	...	54	22	...	55	24	...	...	...	...	...	...	...	...	...	...	54	19	
19	...	...	...	...	...	...	63	21	...	64	24	...	...	...	...	63	27	...	...	...	...	63	17	
18	...	...	...	...	...	...	74	19	...	75	22	...	...	...	...	74	26	...	...	...	...	74	17	
17	...	...	...	...	...	...	87	19	...	87	22	...	...	...	...	86	25	...	86	22	...	87	16	
16	99	18	...	...	...	...	102	19	...	102	22	...	...	...	...	100	24	...	101	22	...	103	15	
15	116	19	...	...	...	...	119	20	...	119	23	...	...	...	...	117	24	...	118	23	...	121	13	
14	136	18	...	...	...	...	139	21	...	139	24	...	136	28	...	137	23	...	138	23	...	142	12	
13	160	16	...	...	...	...	164	19	...	163	24	...	158	29	...	160	21	...	161	23	...	168	11	
12	188	14	...	...	...	...	193	13	...	191	25	...	184	30	...	188	18	...	189	22	...	198	14	
11	221	15	...	229	30	...	226	16	...	223	24	...	214	30	...	221	16	...	220	22	...	232	21	
10	259	21	...	266	29	...	265	24	...	259	25	...	249	28	...	259	21	...	257	28	...	271	29	
9	303	29	...	309	35	...	308	32	...	303	29	...	291	25	...	302	30	58	299	35	...	315	37	
8	351	37	32	358	44	...	357	40	...	351	37	27	339	31	58	351	38	56	346	44	28	364	43	
7	406	45	29	412	52	...	412	48	...	407	45	28	393	39	60	405	45	51	399	49	28	419	51	
6	468	53	25	473	57	...	473	55	...	468	54	28	454	47	57	466	50	36	459	51	27	480	58	
5	536	60	23	540	63	...	541	61	...	545	62	30	522	55	57	534	57	32	527	55	27	548	65	
4	612	67	23	615	68	...	618	67	...	611	68	35	597	61	55	611	63	39	603	62	30	625	72	
3	696	71	31	700	72	...	703	74	...	697	74	54	681	68	68	697	70	38	689	69	41	709	77	
2.5	742	72	62	745	74	...	748	78	...	743	70	60	726	69	65	743	72	40	735	71	61	755	79	
2	791	73	86	794	77	...	796	81	...	792	73	78	774	72	69	792	75	47	783	72	85	804	80	
1.5	843	76	74	845	79	...	847	84	...	844	77	71	825	76	80	843	75	81	835	75	77	855	83	
1	897	81	80	900	82	...	900	87	...	899	81	...	879	79	81	898	79	79	889	80	80	910	84	
0.5	955	85	69	957	85	...	956	91	...	956	...	...	935	84	...	956	83	...	946	84	77	967	85	
Ground.	1013	90	65	1017	87	...	1014	93	...	1016	89	73	993	91	55	1016	89	60	1005	88	70	1027	89	

Note.—The temperatures are derived from the original tabulations which are generally made to the nearest half-degree, and are shown to the nearest whole degree.

**LAPSE RATE OF TEMPERATURE BETWEEN GIVEN GEOPOTENTIALS—continued.**

**551. Degrees absolute per kiloleo. 1930.**

Geopotentials	783.	784.	785.	788.	789.	790.	791.	792.
20 to 21	...	...	...	-1	...	...	...	...
19 to 20	...	...	...	-1	...	...	...	-1
18 to 19	...	...	...	-1	...	...	...	-1
17 to 18	...	...	...	-1	...	...	...	-1
16 to 17	...	...	...	0	...	...	...	-1
15 to 16	1	...	...	1	...	...	...	-2
14 to 15	-2	...	...	1	...	...	...	-1
13 to 14	-2	...	...	-2	...	...	...	-1
12 to 13	-2	...	...	-5	...	...	...	3
11 to 12	0	...	...	3	...	...	...	7
10 to 11	7	-1	...	8	...	...	...	9
9 to 11	8	6	...	8	...	...	...	7
8 to 9	8	9	...	8	...	...	...	6
7 to 8	7	8	...	8	...	...	...	8
6 to 7	8	6	...	7	...	...	...	7
5 to 6	7	5	...	7	...	...	...	7
4 to 5	7	5	...	5	...	...	...	6
3 to 4	4	4	...	7	...	...	...	5
2.5 to 3	2	5	...	8	...	...	...	4
2 to 2.5	1	5	...	7	...	...	...	3
1.5 to 2	7	6	...	5	...	...	...	5
1 to 1.5	9	6	...	7	...	...	...	2
0.5 to 1	9	4	...	8	...	...	...	5
Gd. to 0.5	9	6	...	3	...	...	...	5



SOUNDINGS WITH REGISTERING BALLOONS, 1930—continued.

T.=Temperature in Degrees Absolute.

P.=Pressure in millibars.

L.=Geopotential Level above M.S.L. in Kiloleos (Kl.)

R.H.=Relative Humidity per cent.

No.	802.	803.	804.	806.	807.	809.	810.	813.	814.
Date. Station.	Sept. 14. Kew.	Sept. 15. Sealand.	Sept. 15. Kew.	Sept. 16. Sealand.	Sept. 17. Sealand.	Sept. 18. Sealand.	Sept. 19. Sealand.	Sept. 21. Kew.	Sept. 22. Sealand.
Start. (G.M.T.)	7h. 4m.	7h. 15m.	7h. 23m.	7h. 12m.	7h. 15m.	7h. 15m.	7h. 15m.	7h. 0m.	17h. 55m.

549. GEOPOTENTIALS, TEMPERATURES AND RELATIVE HUMIDITIES CORRESPONDING WITH ISOBARIC SURFACES—continued.

1930.

Pressure. Millibars.	802.			803.			804.			806.			807.			809.			810.			813.			814.					
	L. Kl.	T. °A. 200	RH. %	L. Kl.	T. °A. 200	RH. %	L. Kl.	T. °A. 200	RH. %	L. Kl.	T. °A. 200	RH. %	L. Kl.	T. °A. 200	RH. %	L. Kl.	T. °A. 200	RH. %	L. Kl.	T. °A. 200	RH. %	L. Kl.	T. °A. 200	RH. %	L. Kl.	T. °A. 200	RH. %			
100	...	...	...	16.11	22	...	...	...	...	...	...	...	15.95	17	...	15.93	21	...	...	...	...	...	...	...	16.05	13	...			
200	...	...	...	11.73	17	...	...	...	...	...	...	...	11.67	12	...	11.47	29	...	...	...	...	...	...	...	11.85	15	...			
300	...	...	...	9.11	30	...	...	...	...	...	...	...	9.08	33	56	8.79	32	...	...	...	...	...	...	...	9.23	35	79			
400	...	...	...	7.15	46	17	7.16	44	7.15	46	85	7.09	47	51	6.85	41	42	...	...	...	...	...	...	...	7.23	50	86			
500	5.46	57	...	5.55	56	17	5.55	56	5.53	57	90	5.48	57	31	5.27	53	44	...	...	...	...	...	...	5.35	51	59	5.59	61	85	
600	4.09	65	...	4.18	64	35	4.19	64	4.17	65	69	4.11	65	40	3.91	63	49	...	...	...	...	...	...	4.00	61	72	4.21	70	82	
700	2.91	72	...	3.01	70	24	3.01	71	2.99	72	28	2.93	69	42	2.73	69	73	...	...	...	...	...	...	2.83	67	98	3.01	76	79	
800	1.85	77	...	1.95	77	38	1.95	77	1.93	77	35	1.89	73	90	1.69	72	95	...	...	...	...	...	...	1.80	72	97	1.94	81	85	
900	.91	82	...	1.02	79	99	1.02	79	.99	78	84	.95	79	85	.77	77	89	...	...	...	...	...	...	.85	81	91	.87	79	96	
1000	.05	...	...	.17	...	...	.17	...	.15	...	...	.10	...	...	...	...	...	...	...	...	...	...	...	...	.01	87	83	.11	90	...

550. PRESSURES, TEMPERATURES AND HUMIDITIES AT GIVEN GEOPOTENTIALS—continued.

1930.

Geopotentials. Kiloleos.	802.			803.			804.			806.			807.			809.			810.			813.			814.				
	P. mb.	T. °A. 200	RH. %	P. mb.	T. °A. 200	RH. %	P. mb.	T. °A. 200	RH. %	P. mb.	T. °A. 200	RH. %	P. mb.	T. °A. 200	RH. %	P. mb.	T. °A. 200	RH. %	P. mb.	T. °A. 200	RH. %	P. mb.	T. °A. 200	RH. %	P. mb.	T. °A. 200	RH. %		
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	75	23	...	...	...	...	...	...	...	...	...	...	73	25	...	...	...	...	...	...	...	...	...	62	18	...
17	...	...	...	87	23	...	...	...	...	...	...	...	...	...	...	85	26	...	...	...	...	...	...	...	...	...	73	16	...
16	...	...	...	102	22	...	...	...	...	...	...	...	99	17	...	99	21	...	...	...	...	...	...	...	...	...	101	13	...
15	...	...	...	119	22	...	...	...	118	19	...	...	116	18	...	116	23	...	...	...	...	...	...	...	...	...	119	12	...
14	...	...	...	139	21	...	...	...	138	19	...	...	137	16	...	135	24	...	...	...	...	...	...	...	...	...	140	9	...
13	...	...	...	167	20	...	...	...	162	18	...	...	160	15	...	158	25	...	...	...	...	...	...	...	...	...	165	10	...
12	...	...	...	192	17	...	...	...	190	17	...	...	189	11	...	184	28	...	...	...	...	...	...	...	...	...	195	13	...
11	...	...	...	224	17	...	...	...	223	15	...	...	223	16	...	215	28	...	...	...	...	...	...	...	...	...	229	21	...
10	...	...	...	262	23	...	...	...	262	23	...	...	261	25	...	250	29	...	...	...	...	...	...	...	...	...	267	29	...
9	...	...	...	305	31	...	...	...	306	31	...	...	303	34	...	291	31	...	...	...	...	...	...	...	...	...	311	37	78
8	...	...	...	354	39	19	354	39	354	40	83	351	41	53	338	34	32	...	...	...	...	...	...	...	...	...	359	44	87
7	404	46	...	408	47	17	409	45	409	47	86	405	48	50	391	40	42	...	...	...	...	...	...	...	...	...	414	51	86
6	464	53	...	470	53	16	470	53	470	54	89	465	53	39	451	47	47	...	...	...	...	...	...	...	...	...	456	46	58
5	532	60	...	538	59	21	539	59	537	61	88	533	61	28	518	56	43	...	...	...	...	...	...	...	...	...	525	54	60
4	608	65	...	615	65	36	615	65	613	65	66	609	65	41	593	63	47	...	...	...	...	...	...	...	...	...	600	61	72
3	692	71	...	701	70	24	701	71	697	71	28	693	69	41	676	68	65	...	...	...	...	...	...	...	...	...	685	67	93
2.5	738	73	...	747	73	27	746	74	744	75	27	739	71	51	721	69	85	...	...	...	...	...	...	...	...	...	731	68	100
2	786	76	...	796	77	37	795	77	793	77	33	788	76	88	769	72	85	...	...	...	...	...	...	...	...	...	780	72	99
1.5	836	79	...	848	76	91	847	76	844	79	55	840	73	88	820	73	92	...	...	...	...	...	...	...	...	...	831	75	93
1	890	81	...	902	79	99	903	79	899	78	84	894	79	85	874	76	93	...	...	...	...	...	...	...	...	...	884	80	95
0.5	946	...	...	960	83	100	960	82	956	81	69	952	81	87	931	80	81	...	...	...	...	...	...	...	...	...	941	81	...
Gd.	1005	85	...	1020	86	87	1020	83	1017	80	96	1012	85	96	998	85	70	...	...	...	...	...	...	...	...	...	1000	87	83

Note.—The temperatures are derived from the original tabulations which are generally made to the nearest half-degree, and are shown the nearest whole degree.

LAPSE RATE OF TEMPERATURE BETWEEN GIVEN GEOPOTENTIALS—continued.

551.

Degrees absolute per kiloleo.

1930.

Kiloleos.	802.	803.	804.	806.	807.	809.	810.	813.	814.
20 to 21	...	...	...	...	...	...	...	...	...
19 to 20	...	...	...	...	...	...	...	...	...
18 to 19	...	...	...	...	...	...	...	...	...
17 to 18	...	-1	...	...	...	...	...	...	...
16 to 17	...	-1	...	...	...	...	-5	...	...
15 to 16	...	0	...	...	...	...	1	...	...
14 to 15	...	-1	...	...	...	...	1	...	...
13 to 14	...	-1	...	...	...	...	1	...	...
12 to 13	...	-4	...	...	...	...	3	...	...
11 to 12	...	1	...	...	...	...	0	...	...
10 to 11	...	7	...	...	...	...	1	...	...
9 to 11	...	7	...	...	...	...	2	...	...
8 to 9	...	8	...	...	...	...	7	...	...
7 to 8	...	8	...	...	...	...	6	...	...
6 to 7	7	6	...	...	...	...	7	...	...
5 to 6	7	7	...	...	...	...	9	...	...
4 to 5	6	5	...	...	...	...	7	...	...
3 to 4	5	5	...	...	...	...	5	...	...
2.5 to 3	4	6	...	...	...	...	3	...	...
2 to 2.5	5	8	...	...	...	...	5	...	...
1.5 to 2	7	-2	...	...	...	...	2	...	...
1 to 1.5	4	7	...	...	...	...	6	...	...
0.5 to 1	4	7	...	...	...	...	8	...	...
Gd. to 0.5	4	6	...	...	...	...	11	...	...

Note.—The lapse rates are derived from the original tabulations, which are generally made to the nearest half-degree.

