

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1925

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:—

				Corresponding parts of the British Meteorological and Magnetic Year Book until the end of 1921.
New Publication from 1922.				
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 new Observatories' Year Book will contain daily values of the meteorological elements for the principal first order stations and the Daily Weather Report contains daily values for 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 fourth issue of the Observatories' Year Book. It contains meteorological and geophysical data for Lerwick, Aberdeen, Eskdalemuir, Valentia and Kew, and in addition an aerological section giving the results of soundings of the upper atmosphere by means of registering balloons.

For this year the table of mean annual values of magnetic data for observatories of the globe has been prepared at the Royal Observatory, Greenwich, under the direction of the Astronomer-Royal, and it has been transferred from the Kew Section to the Eskdalemuir Section. These changes were made in connexion with the discontinuance of magnetic work at Kew Observatory which took place at the end of 1924.

The circumstances which gave rise to this event are set out on page 288.

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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, and it is not proposed to continue it to the end of 1921 as is the case with the other sections.

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LERWICK DECLINATION SEE ERRATA 1962 OY.B.

## LIST OF OBSERVATORIES.

	Latitude.	Longitude	G.M.T. of Local Mean Noon.	Height above M.S.L. in metres.
	° ' "	° ' "	h m	
Lerwick .. .. .	60 8 N.	1 11 W.	12 5	81·7
Aberdeen .. .. .	57 10 N.	2 6 W.	12 8	*13·4
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 under the appropriate Tables.

\* Redetermination, *see* p. 35.

## NORMAL VALUES AND MONTHLY SUMMARIES.

Monthly and annual normals of pressure, dry bulb temperature, relative humidity, wind speed 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 sunshine are also published there for the same observatories and for the period of 35 years, 1881-1915.

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

Monthly Summaries giving additional mean values and frequencies of occurrence of various 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.



## 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 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, cup anemograph and Beckley raingauge used for obtaining the records of pressure, temperature, humidity, wind speed and direction,\* 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 sensitised 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 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. †

\* At Eskdalemuir wind speed and direction are recorded by a Dines tube anemograph (see p. 96).

† At Valentia and Kew Observatories the rule is to apply the same correction for the whole chart.

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 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 degrees 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 Kew and Valentia observatories 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 and Eskdalemuir observatories, 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.

**Rainfall.**—This element is recorded by a Beckley self-registering raingauge, 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.

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\* At Eskdalemuir the screen stands in the open (see p. 95).

The collecting funnel of the Beckley raingauge 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. A check gauge with funnel 8 inches in diameter is installed near by.

The records obtained from the Beckley self-registering raingauge are subjected to a proportional correction whereby they are brought into agreement with the amount of rainfall as recorded by the check raingauge read twice daily.

**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.**—Except at Eskdalemuir, the records of these elements are obtained by means of a Robinson cup-anemograph, with which a Beckley windmill-vane has been combined for giving the record of direction.

**Speed.**—The diameter of the cups for obtaining the speed of the wind is 9 inches (0.23 m.) and the length of the arms upon which they are carried is 2 feet (0.6 m.) so that the horizontal travel of a cup-centre when 7,000 revolutions of the cups have been made is, in round numbers, 88,000 feet (26,800 m.).

The revolutions of the cups are reduced by a suitable gearing of wheels so that this number of turns shall produce one complete turn of a spiral pencil, which makes a mark upon a sheet of metallic paper carried upon a clock-driven cylinder; the pencil is so arranged that when the trace reaches one extreme of the scale it recommences at the other.

Dr. Robinson concluded, as the result of a series of experiments made by him, that the rate of movement of the cup-centres was one-third of the horizontal movement of the wind current by which the cups were turned; and as the instruments were constructed in accordance with this conclusion, the 7,000 turns of the cups mentioned above were regarded as indicating the passage of 50 miles (80.4 km.) of wind.

Subsequent investigations\* into the relation between the speed of the wind and the rate of movement of the cups have led to the conclusion that Dr. Robinson's factor, 3, is too large for anemometers of the dimensions indicated above, and that the correct mean value of the factor is 2.2. The larger factor 3 was employed in deducing the wind velocities published in the preceding volumes of this series up to that for 1904; the factor 2.2 was substituted for it from the beginning of the year 1905.

If it is desired to compare the wind speeds given in the volumes previous to 1905 with those of the present year it will be necessary to reduce the former by four-fifteenths, and convert into metres per second, which may readily be done by means of a suitable conversion table. (See *Computer's Handbook*. Introduction p. 54.) If the degree of accuracy required does not exceed 2 per cent., the tabulated values in miles per hour (factor 3) may be converted into metres per second (factor 2.2) simply by dividing by 3.

The values of the hourly wind speed are means for periods of 60 minutes centred at the hours named. They have been given as recorded, no correction having been made for the effect of friction, which is of no importance except in the case of light winds, when it is doubtless different in the case of each instrument.

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\* A summary of them is given by F. J. W. Whipple in "Notes on the Robinson Cup Anemometer," London, Advis. Committee Aeronautics, Report No. 669.

*Direction.*—The direction of the wind is recorded by a pencil similar to that which records the speed. Each printed value represents the general direction\* for the 60 minutes centred at the hour named, as estimated from the anemogram.

Owing to the weight of some of its moving parts, the windmill-vane is undoubtedly sluggish in light airs, its records under these conditions being untrustworthy. All wind directions have, therefore, been omitted from the tables when the velocity was 1.5 metres per second or less.

*Tube Anemograph.*—At Eskdalemuir the speed and direction of the wind are obtained from a Dines Tube Anemograph, while at each of the observatories information regarding the highest instantaneous wind speed and the frequencies of winds of varying speeds is also obtained from instruments of this type.

The vane-head of the tube anemograph consists essentially of (a) a horizontal tube mounted in the vane and open at the end which faces the wind, and (b) a vertical annular tube, forming part of the vane support, connected to the outside air by means of small circular holes drilled symmetrically in rows around the outer wall of the tube. An increase of pressure is produced in the horizontal tube of the vane, while the wind blowing across the rows of circular holes in the annular tube gives rise therein to a diminution in pressure, the "suction" effect. In the recorder a float of sheet copper, in the shape of an inverted bell, placed in water contained in a cylindrical tank, is capable of upward and downward movement under the influence of the pressure and suction effects, which are communicated from the vane-head by suitable piping to the space inside and the space above the float respectively. The geometrical form of the internal surface of the float is such that displacement of the float from its zero position is proportional to the speed of the wind. To the float is attached a vertical spindle which projects upwards through the lid of the cylindrical tank and carries a suitable pen at its upper extremity. This pen records the movements of the float, and therefore the variations in wind speed, on a ruled chart carried by a drum which rotates once in 24 hours.

**Minimum Night Temperature on the Grass.**—For determining this temperature a minimum thermometer exposed freely over the surface of the grass is used. The thermometer is enclosed in an outer glass jacket which surrounds its stem, but leaves the spirit bulb 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*.

\*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.).

**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

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

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

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

As a millibar is a pressure, it can only be obtained from the reading of a barometer after the latter has been suitably corrected for

- (a) index error,
- (b) temperature,
- (c) gravity.

All these corrections have therefore been applied to the barometer readings in obtaining the pressure values published in this volume. The corrections for temperature and gravity have been obtained from tables consistent with the *International Meteorological Tables*. (Gauthier-Villars, Paris, 1890.)

Unless otherwise stated all pressure values refer to the level of the observatory as given in the headings of the tables. The reduction to Mean Sea Level, if made, has been calculated from tables prepared for each observatory from the formulæ of the *International Meteorological Tables*.

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 a. precisely. Other temperatures differ by 273.0 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 273.1 to the nearest tenth of a degree.\* Accordingly, to convert temperatures published in this volume to the Kelvin scale, a correction + 0.1 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

$$5.709 \times 10^{-6} (t + 0.1)^4 \text{ erg. / (cm.}^2 \text{ sec. deg.}^4) ; \text{ or } 5.717 \times 10^{-6} t^4 \text{ erg. / (cm.}^2 \text{ sec. deg.}^4)$$

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.

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

† The constant 5.709 is the value which has been adopted by the International Research Council for publication in the "*International Critical Tables*."

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 273a, values of relative humidity at exact hours are deduced from the corresponding values of dry and wet-bulb temperature obtained from the photographic thermograms, complete saturation being taken as 100. The tables employed in effecting the reductions appear in the *Computer's Handbook* (Section I). These tables are based on Glaisher's factors and make no allowance for the effect of the wind.

When the wet-bulb reading does not exceed 273a, 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 273a.

Tables are printed giving the values of relative humidity at exact hours together with daily, monthly and annual means of hourly values. 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. 10). 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 duration 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 (Δ) 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 period of 60 minutes centred at the exact hours ; the reversion to the method in use for 1903 *et ante* occurred on 1st January, 1921.

† Previous to 1st January, 1921, sunshine was tabulated for the period 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.

**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.

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 derived from records from Tube Anemographs 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. Previously the interval was 18h to 9h at Kew and Valentia observatories.

**Diary of Cloud and Weather.**—Tables are printed giving particulars of amount of cloud and of the weather at 7h, 9h, 13h, 15h, 18h, 21h daily, while cloud forms are shown for the three hours 7h, 13h, and 18h. The cloud forms are in accordance with the International classification and are indicated by the following abbreviations:—

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.

The figure given for the amount of cloud denotes the proportion of sky covered by cloud: the numerical scale running from 0, cloudless, to 10, completely overcast. In the columns for form of cloud all the forms noted by the observer at the time of observation are printed where space permits. When the number of forms is too great to permit 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. The amounts of cloud given indicate, however, 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 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.

For the purposes of the summary of the weather for each day, contained in the “Remarks” column, 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.

In the "Remarks" and "Weather" columns the entries 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. (Cloud amount 0, 1, 2, 3.)	d	drizzling rain.
bc	some cloud. (Cloud amount 4, 5, 6.)	r	● rain.
c	cloudy. (Cloud amount 7, 8.)	s	* snow.
o	overcast. (Cloud amount 9, 10.)	rs	* sleet.
g	gloomy, dull appearance.	+	drift snow.
u	ugly, threatening appearance.	⊠	snow lying. (More than half the surrounding country covered with snow.)
v	( ) visibility, unusually clear atmosphere.	h	▲ hail.
z	∞ haze.	△	soft hail.
m	≡° mist, light fog.	t	T thunder.
f	≡ fog.	l	⚡ lightning.
fe	≡: wet fog, i.e., fog which deposits water copiously on exposed surfaces.	tlr	⚡ thunderstorm
w	∩ dew.	☞	gale.
x	⊥ hoar frost.	q	☉ squalls.
	↑ ice crystals in the air.	⊙	☉ solar corona.
	∨ rime.	⊕	☉ solar halo.
	~ glazed frost.	⊖	☾ lunar corona.
e	water deposited copiously on exposed surfaces, without rain falling.	⊖	☾ lunar halo.
y	dry air. (Relative humidity less than 60 per cent.)	☾	☾ rainbow.
p	passing showers.	☾	☾ 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> slight drizzle. 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.



M.O. 299  
(Lerwick)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1925

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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Published by the authority of the  
METEOROLOGICAL COMMITTEE



LONDON :  
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

1927

## 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, on condition of maintenance of wireless plant, has the use of the station as an observatory and of the wireless plant for the transmission of meteorological reports and time signals.

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. 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, barograph, hygrograph, psychrometers, nephoscope, raingauges (ordinary and self-recording), sunshine recorder and Dines tube anemograph. But meteorological observations have been restricted, and the time of the somewhat limited staff available has been devoted chiefly to magnetic work.

The present is the third complete year of magnetic observations. Instrumental difficulties have continued to be experienced and it has again been decided to restrict publication to the monthly means extracted from the records, a summary of the absolute observations, and diurnal inequalities in declination and horizontal force.

The site and the work in 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 1923 Year Book.

### ATMOSPHERIC ELECTRICITY.

**Notes on the Instruments.**—A Benndorf electrograph was in operation, with somewhat frequent interruptions to the record, from April to November, 1925. The instrument is installed in a small wooden hut, size 1.5 × 2.0 metres, height 1.7 m. to eaves, 2.5 m. to ridge, situated within the grounds of the Observatory; an oil stove is kept burning in the hut to maintain the insulation. The collector rod passes through the N.E. corner of the hut. The collector, which projects 89 cm. from the wall of the hut, consists of a copper spiral about 5 cm. long, painted over, by means of a special adhesive varnish, with a salt of radium. This is soldered 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. 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' *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. The time scale is approximately 4 cm. to the hour, but varies considerably; this variation is not of much importance as hour marks are made automatically and as each individual minute is marked by a dot on the trace. A zero line is obtained by connecting up marks made by earthing the needle of the electrometer. At first these zero marks were made only at the beginning and end of each day, but an intermediate zero mark is now made. 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 fairly constant at about 14 volts per millimetre, which gave a range of about 700 volts on each side of zero, equivalent to about 550 volts per metre in the open. It has been found that on days which must be regarded as normal some trace has been lost and, since the year under review, it has been decided to decrease considerably the sensitivity of the record.

The insulation of the system is tested frequently, the procedure being to remove the collector and to charge the needle. The rate of leak is obtained for a period of 5 to 10 minutes. 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, usually such that the instrument would lose half its potential in 15 to 20 minutes. Also, when the insulation breaks down it does it so thoroughly that the fact can easily be recognised on the traces and the spurious readings rejected.

Weekly scale tests are carried out with the aid of Ayrton-Mather Electrostatic Voltmeter No. 11889, and an auxiliary dry battery of approximately 300 volts. With the collector removed and one pole of the battery earthed, the electrometer is given successive charges from the battery, commencing at about 90 volts, and rising by steps of 30 volts to 300 volts; a dot is recorded on the sheet for each potential, which is also measured on the electrostatic voltmeter. On reaching the full voltage of the battery the measurements are repeated for decreasing potentials. It has been found that, for all practical purposes, the scale value may be taken as constant across the full width of the sheet, consequently a mean is taken of the values corresponding with each dot. The scale value remains reasonably steady, and it has been decided to employ a single scale value of 14.0 volts per millimetre for the whole of the period recorded; this is the mean of all the scale values obtained.

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 in the vicinity of the electrograph hut. Observations are made of the potential attained by a wire stretched horizontally, and carrying a burning fuse exactly one metre above the ground at its centre. The factor ( $=0.78$ ) employed in reducing the values has been obtained from measurements made during 1926, with either an Elster and Geitel leaf electroscope or a Wulf electrometer. No known change occurred in the position of the collector or in the surroundings, from the installation of the electrograph until the exposure factor was determined.

In its response to changes of potential gradient the instrument is very sluggish compared for instance with the Kelvin water dropper in use at Eskdalemuir Observatory. In general the rise to a steady potential takes an approximately exponential character, and it was found that the mean of 34 tests gave 63 seconds as the time to rise to half the final value; this is about 10 times as slow as the water dropper at Eskdalemuir Observatory. 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 or dissipated. It is difficult to accept the readings from a radio active collector during such times. Fortunately these conditions are rare at Lerwick except in early summer, but on the other hand they are then very interesting.

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  $K_C/(K_L + K_C)$ .

$K_L/K_C$  is usually about  $\frac{1}{16}$ ; that is, the instrument reads 6 per cent. lower than the true potential; but if this were constant it would be included in the exposure factor. There is, however, a possibility of a variation of this quantity  $K_L/K_C$  equal to its usual value. As the capacity of the instrument cannot be reduced nothing can be done to remedy this except to keep  $K_L$  as small as possible.

**Review of Results.**—From various causes (failure of the clock, etc.) a considerable loss of trace has occurred, but curves have been read as far as possible and 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.

Owing to the small range which could be registered on the sheet, the further subdivision into a, b, c days as at Eskdalemuir Observatory was considered undesirable.

Owing also to their incompleteness, the results are not being published in detail in this volume, but Tables I. and II. give a summary of the observations available.

TABLE I.

POTENTIAL GRADIENT (REDUCED TO LEVEL SURFACE) : VOLTS PER METRE. MEAN VALUES FOR PERIODS OF SIXTY MINUTES, CENTRED AT THE EXACT HOURS, GREENWICH MEAN TIME.

	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
3 h. ...	125 (12)	91 (20)	108 (23)	190 (25)	117 (11)	81 (24)	111 (14)	105 (4)
9 h. ...	183 (12)	114 (22)	146 (23)	205 (20)	189 (9)	116 (23)	115 (10)	191 (2)
15 h. ...	190 (11)	118 (23)	179 (24)	219 (28)	128 (9)	159 (22)	190 (14)	171 (6)
21 h. ...	178 (12)	148 (24)	199 (23)	259 (24)	135 (9)	147 (23)	143 (13)	161 (15)

Note.—The numbers in brackets are the numbers of observations used in forming the mean.

TABLE II.

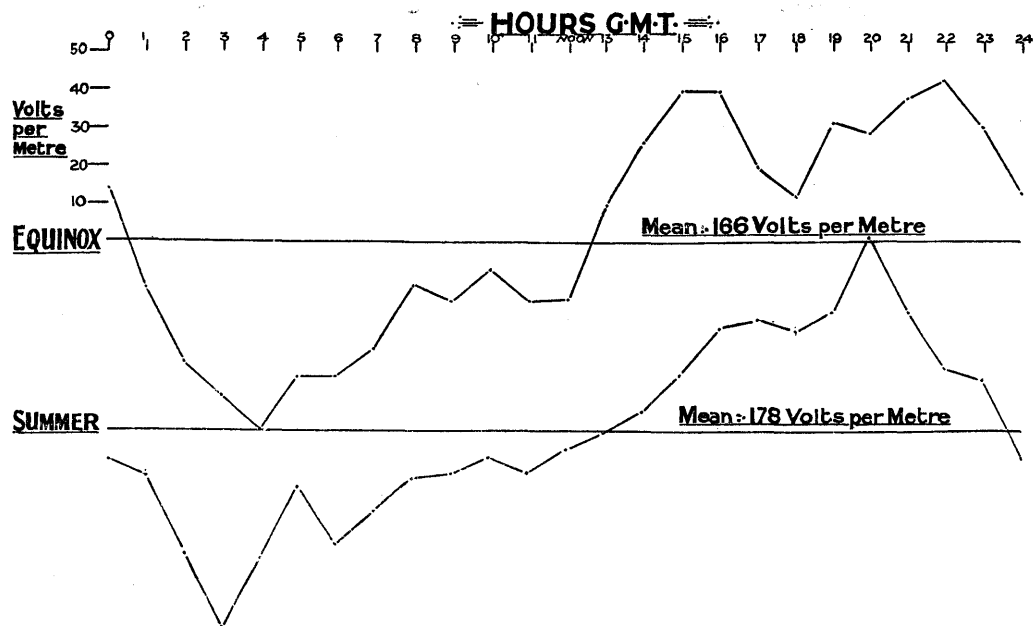
POTENTIAL GRADIENT (reduced to level surface) : DIURNAL INEQUALITIES (in volts per metre).

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

“ 0 ” DAYS ONLY.

Season.	Hour.		G.M.T.																				Midt.	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.
quinox	v/m. - 14	v/m. - 33	v/m. - 42	v/m. - 50	v/m. - 36	v/m. - 36	v/m. - 29	v/m. - 12	v/m. - 16	v/m. - 7	v/m. - 16	v/m. - 1	v/m. + 9	v/m. + 26	v/m. + 38	v/m. + 30	v/m. + 20	v/m. + 11	v/m. + 31	v/m. + 25	v/m. + 36	v/m. + 42	v/m. + 30	v/m. + 14	v/m. —	15	166
summer	v/m. - 11	v/m. - 32	v/m. - 58	v/m. - 34	v/m. - 15	v/m. - 30	v/m. - 22	v/m. - 13	v/m. - 12	v/m. - 6	v/m. - 12	v/m. - 3	v/m. - 1	v/m. + 5	v/m. + 15	v/m. + 27	v/m. + 30	v/m. + 27	v/m. + 33	v/m. + 51	v/m. + 33	v/m. + 18	v/m. + 15	v/m. - 8	v/m. —	31	178

**POTENTIAL GRADIENT. DIURNAL VARIATION.**



There appears to be little doubt that the summer diurnal variation at Lerwick is similar to the typical winter curve at other existing observatories and there is a suggestion (supported by the monthly means in Table I) that the potential gradient in summer is higher than, or not very different from, the potential gradient in winter. This is of interest, being different from all other records in the Northern hemisphere.

The behaviour of the meteorological elements likely to affect potential gradient is also unusual at Lerwick. In particular, the wind is very much reduced in summer and consequently also the portion of the turbulence, or "Austausch," which arises from the wind. The mean wind speed in the summer months of 1925 was 5.44 m/s. as against 8.66 m/s. in the winter months of the same year. On the other hand, thermal convection is at all times small at Lerwick so that the great loss of "Austausch" due to the weaker wind circulation in summer cannot be compensated, as at inland or more southerly stations, by the gain due to increased convective activity. In point of fact, early summer is also the foggy season at Lerwick as it is in general in Arctic maritime regions.

In addition the diurnal inequality of wind speed on the 31 "o" days of the summer of 1925, as deduced from the records of a pressure tube anemograph at Lerwick, is also somewhat unusual, being as follows:—

Hour.	1	2	3	4	5	6	7	8	9	10	11	12
Difference from Mean (m./s.)	-.45	-.68	-.85	-.83	-.64	-.34	+.26	+.69	+.69	+.83	+1.05	+.94
	13	14	15	16	17	18	19	20	21	22	23	24
	+.88	+.75	+.65	+.48	+.18	-.07	-.20	-.57	-.68	-.90	-.70	-.42
	Mean speed 4.75 m./s.											

It will be seen that this differs considerably from the normal summer behaviour of the wind at other observatories. There is a sharp maximum at 11 h., minima at 22h. and shortly after 3 h., and a secondary maximum shortly after midnight. There is a tendency for these peculiarities to be approached in winter at Aberdeen, but only when the diurnal range of wind speed has become negligible—about 8 per cent. of the mean velocity—whereas in the Lerwick summer inequality for "o" days the diurnal range is quite considerable, 1.95 m/s. or just over 40 per cent. of the mean velocity for the day.

The diurnal inequality of wind speed on all days in the four summer months is as follows:—

Hour.	1	2	3	4	5	6	7	8	9	10	11	12
Difference from Mean (m./s.)	-.69	-.70	-.58	-.47	-.44	-.22	+.19	+.44	+.51	+.60	+.81	+.89
	13	14	15	16	17	18	19	20	21	22	23	24
	+.91	+.89	+.75	+.52	+.23	+.06	-.16	-.50	-.73	-.85	-.77	-.66
	Mean speed 5.44 m./s.											

Comparing this with the inequality for "o" days it will be seen that the differences are not large. The main maximum occurs later in the day (13 h. instead of 11 h.), and the dip after the midnight maximum is less pronounced. The four summer months considered separately show differences amongst themselves as big as do these two curves, but on the other hand three of the four months show the secondary maximum at midnight, which is a feature of the curve for the "o" days.

The diurnal and seasonal variations of surface wind and so of turbulence in the lower layers are therefore different at Lerwick from the variations at other existing observatories. Different types of diurnal and seasonal variations of atmospheric electric potential gradient are therefore to be expected and further information as to the details of the differences should throw fresh light on various related problems.

## TERRESTRIAL MAGNETISM.

**Notes on Instruments.**—Declination and horizontal force are recorded by the Adie magnetographs which were in use at Falmouth until 1912. A multi-magnet balance, designed by the late Professor W. Watson, F.R.S., was used to record vertical force until November, but behaved in a most unsatisfactory manner and showed frequent and unaccountable variations in base and scale values; it was replaced early in November by the Adie balance belonging to the Falmouth magnetograph, and much better records were obtained subsequently. The instruments had been stored for several years, but were reconditioned by the makers, and all but the Adie vertical force balance were tested at Kew before being installed at Lerwick in November, 1922.

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. The Watson vertical force instrument is of similar construction to that in use at Eskdalemuir Observatory, but consists of only six magnets; the Adie balance consists of a single heavy magnet similar to those used for recording declination and horizontal force, and may be compensated for variations of temperature. 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 Fig. 2 of the 1923 Year Book.

The chief instrumental defects encountered during the year were:—

(a) A persistent tendency of the trace, in the case of the H force instrument, to drift away from its base line.

(b) Unsteadiness of the Watson vertical force system.

These troubles were not entirely overcome during 1925.

Adjustments to the horizontal and vertical force instruments were made on many occasions, and in consequence determinations of the scale values had to be taken frequently; the scale values have been assigned to periods between the discontinuities recorded, instead of for each month. The determinations 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 co-efficients for the H, D and V magnets less appreciable, but cannot be used owing to the restricted size of the magnetograph house. The double deflections produced are approximately 30 mm. for D, 23 mm. for H, and 16 mm. for V, giving scale values for the horizontal and vertical force instruments of about 10.7 $\gamma$  per mm. and 15 $\gamma$  per mm. respectively.

It is estimated that, in general, an accuracy to within 1 per cent. has been obtained in the scale values for horizontal force, but it has been impossible to assign scale values to a number of vertical force records owing to the erratic behaviour of the instrument in use throughout the greater part of the year.

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

Base values for the records are obtained from the results of absolute observations taken twice weekly. Horizontal force and declination are determined with Unifilar No. L 3951 (Cambridge Instrument Co.) using magnets 3951A and 3951C. The magnetometer is used on the centre pillar (No. 2) of the absolute hut, the azimuth of the fixed mark being taken as 8° 43' 2" east of south. Inclination is measured with Dover Circle No. 238 placed on the East pillar (No. 3), using 3½ inch needles. In the deflection experiment three distances 25, 30 and 35 cm. are used, and a

mean value of the correction,  $\log_{10} (1 + Pr^{-2} + Qr^{-4})$ , is derived for each month from the observations of seven cocentral months. The following table shows the values obtained for  $\log_{10} (1 + Pr^{-2} + Qr^{-4})$  at 25 cm., together with the number of observations.

Month.	Mean values of $\log_{10} (1 + Pr^{-2} + Qr^{-4})$ for $r = 25$ cm.	Number of observations at 25, 30, 35 cm.
January ...	$\bar{1}\cdot99844$	6
February ...	$\bar{1}\cdot99828$	7
March ...	$\bar{1}\cdot99825$	8
April ...	$\bar{1}\cdot99816$	7
May ...	$\bar{1}\cdot99859$	9
June ...	$\bar{1}\cdot99799$	5
July ...	$\bar{1}\cdot99800$	7
August ...	$\bar{1}\cdot99822$	7
September ...	$\bar{1}\cdot99840$	7
October ...	$\bar{1}\cdot99849$	6
November ...	$\bar{1}\cdot99856$	7
December ...	$\bar{1}\cdot99869$	7

**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 13. When any auroral display is observed, a second observer is called and detailed observations are maintained until the display subsides. So far these detailed observations have been mainly non-instrumental and have consisted in noting and making descriptions of the phenomena seen during the display. These 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 14) 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.**—Tables 7, 8, 9 contain the mean diurnal inequalities of Magnetic Declination for the months, year, and seasons, for “all,” quiet, and disturbed days respectively. Tables 10, 11, 12 deal similarly with Horizontal Force. Tables 1, 2 and 3 contain respectively, the Ranges of the Diurnal Inequalities, the Average Departure from the Mean of the Day and the Non-Cyclic Change.

Tables 5 and 6 contain the Absolute Daily Ranges of the Declination and Horizontal Force. Table 4 contains the Mean Monthly and Annual Values of Declination, Inclination, and Horizontal Force, as deduced from the results of the absolute observations; the dates on which these absolute observations were made are also given.

**Review of Results.**—The two preceding years for which magnetic data have been published from Lerwick included a sun spot minimum. The mean sun spot number increased from 5·5 in 1923, 16·7 in 1924, to 44·6 in 1925, and coincident with this increase the results for 1925 show greater magnetic activity. In the tables given this is more evident in “all” and “quiet” than in “disturbed” days because even in quiet periods a few days of very great disturbance usually occur.



In the case of Declination the quiet day diurnal inequalities as compared with 1924 show an increased range in all months except July and September, the increase being much more noticeable in the winter than the summer. The following table gives the ratio of the ranges of the quiet day inequalities in 1925 to the corresponding ranges for 1924:—

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1·15	1·36	1·10	1·09	1·09	1·16	·94	1·02	·99	1·14	1·59	1·83

The disturbed day inequalities of declination are somewhat irregular but show the usual differences from the quiet days. Seven of the twelve months show an increased range over 1924, but the increased activity is not so obvious in these figures as in those for quiet and all days.

The non-cyclic change in the all day inequalities is negative in nine months and positive in three months. The mean of the twelve values,  $-055'$ , is somewhat greater than would be expected from the secular change determined from absolute observations but only half the value for the previous years. The instrumental drift is thus dying away.

In the case of Horizontal Force the instrumental difficulties encountered in the two previous years, notably a big drift of the magnet, were not overcome in 1925. This shows itself in the figures for the non-cyclic change. From a comparison of the results of the three years there appears no doubt that the ordinary method of dealing with a non-cyclic change adequately meets this exceptional case so far as the preparation of diurnal inequalities is concerned, but there is given this year for the first time, in Table 6, the absolute daily range of H on each day. This table was prepared by measuring the maximum and minimum on the photographic curves, with their times of occurrence and correcting the range from a knowledge of the drift as calculated from absolute observations. The daily range thus derived is unlikely to be more than two or three  $\gamma$  in error, but it should be noted that not only is the proportional error more serious in the case of days of small range but the probability of these relatively larger errors is increased on such days.

In all months except September the range of the quiet day inequalities was greater than in 1924. The ratio of the two values for each month is shown below.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1·93	1·16	1·54	1·37	1·05	1·40	1·09	1·50	·93	1·42	1·31	2·94

The increase is in general considerably greater in H than in D. Disturbed day inequalities show an increased activity but less markedly.

A comparison of the records of Eskdalemuir and Lerwick shows that the declination inequalities for all, quiet and disturbed days at the two places 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 in the horizontal force curves even on quiet days; and the disturbed day inequalities in H sometimes bear no resemblance to one another. The following table gives the ratio of the range of the inequality at Lerwick to the corresponding figure for Eskdalemuir:—

Type of day.	Element.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
q	D	·95	1·10	·94	·98	1·03	·92	1·07	·98	·98	·89	·97	·99
d	D	1·23	1·15	1·29	1·07	1·11	1·14	1·07	1·06	1·20	1·15	1·31	1·26
q	H	·67*	1·04	1·19	1·25	1·18	1·14	1·21	1·10	1·02	·94	1·01	·93
d	H	1·65	1·09	1·17	1·33	1·28	·92	1·18	2·38	3·85	4·51	1·85	

\* January 25th was missing at Lerwick so that the inequalities are not strictly comparable.

On quiet days, both in H and D, there is a tendency for the range to be smaller at Lerwick than at Eskdalemuir in the winter months and larger in the summer months, so that the annual variation of the range is bigger at Lerwick. The figures for D for the present year show this tendency very little compared with 1923, a year of sun spot minimum. Because of the smaller absolute value of H at Lerwick a given value of D represents there a west-east magnetic force about 14 per cent.

smaller than at Eskdalemuir. Thus on quiet days the range of this force is considerably smaller at Lerwick and on disturbed days approximately the same. In the above table the two rows showing the ratio of the ranges on disturbed days bring out the completely different behaviour of D and H in disturbed conditions. Thus the extreme variation of the ratio of D is about 25 per cent. but of H about 500 per cent. Chree and Watson (Proc. Roy. Soc., vol. 112, 1926) have studied irregular movements which could be identified at several places in the British Isles and found that while there were a few cases of irregular movements in D which could not be identified in the records from Lerwick and a southern station there were many such occasions in H. A direct comparison of the absolute daily range of H cannot be made as Eskdalemuir records only the North and West components, but the difference between H records and N records cannot be large especially as we see that the differences in D disturbances over the British Isles do not seem to be in general very large. The following table gives the frequency of the occurrence of specified values of the differences between the absolute daily range of the North component at Eskdalemuir and the absolute daily range of the Horizontal Force at Lerwick, and illustrates the enormous variations in the H disturbances which may occur over so small an area as Scotland.

Difference ( $\gamma$ )	+	+	+	-	-	-
	40 & over.	39-20	19-0	0-19	20-39	40-59
Occurrences	2	20	174	103	20	2
Difference ( $\gamma$ )	-	-	-	-	-	-
	60-79	80-99	100-119	120-139	140 & more.	
Occurrences	6	5	5	2	26	

**RANGES OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS, YEAR AND SEASONS.\***

**AVERAGE DEPARTURE OF THE INDIVIDUAL VALUES FROM MEAN OF THE DAY.**

**NON-CYCLIC CHANGE (24h. - 0h).†**

**1. Lerwick. 1925.**

**1925.**

**2. Lerwick. 1925.**

**1925.**

**3. Lerwick. 1925.**

**1925.**

Month and Season.	"All" Days.		Quiet Days.		Disturbed Days.		"All" Days.		Quiet Days.		Disturbed Days.		"All" Days.		Quiet Days.		Disturbed Days.	
	D.	H.	D.	H.	D.	H.	D.	H.	D.	H.	D.	H.	D.	H.	D.	H.	D.	H.
Jan. ..	6.08	13.2	3.64	10.6	13.28	50.4	1.26	3.3	0.85	2.1	2.67	10.2	-0.04	-6.0	+0.10	-4.6	-1.51	-8.6
Feb. ..	7.20	16.6	5.19	18.3	11.60	24.5	1.95	3.7	1.13	4.0	2.89	5.4	-0.15	+0.4	+0.19	+3.0	-1.08	-3.4
Mar. ..	9.16	34.0	7.06	32.0	14.38	43.5	2.24	8.9	1.57	8.1	3.48	8.7	+0.02	-0.3	+0.58	+2.2	+1.04	-10.3
April ..	10.82	55.1	9.30	48.6	13.28	68.7	2.46	12.8	1.97	12.4	3.55	16.0	-0.06	-1.8	+0.35	+13.9	-0.77	-12.2
May ..	9.73	61.7	8.42	47.9	14.09	90.5	2.38	13.3	2.05	11.7	2.87	22.9	+0.04	-9.1	+0.19	-2.2	+6.02	-4.8
June ..	11.19	74.3	11.87	65.7	14.67	167.4	3.01	19.1	2.80	15.2	4.07	34.6	-0.10	-17.8	+0.35	-17.7	-2.01	-29.2
July ..	11.69	64.8	11.19	51.3	12.35	73.0	2.92	14.4	2.68	11.5	2.95	18.1	-0.06	-20.4	-0.23	-20.8	+2.32	+6.8
August	12.00	63.6	9.78	54.6	16.44	94.7	2.75	14.5	2.22	12.8	3.62	28.8	-0.06	-20.3	+0.19	-23.1	+1.04	-31.6
Sept. ..	9.71	48.8	9.82	39.2	15.83	146.5	2.45	12.3	1.85	11.0	3.68	32.0	-0.02	-8.8	-0.39	-5.8	-2.39	-28.0
Oct. ..	10.59	47.3	7.39	36.7	17.93	195.3	2.79	9.9	1.72	9.4	5.03	41.2	-0.21	-9.5	+0.39	-9.9	-0.08	-46.5
Nov. ..	8.02	28.2	4.67	20.2	16.13	157.9	1.98	6.9	1.13	4.6	4.39	30.9	-0.06	-2.5	+1.97	-2.2	+2.59	-4.2
Dec. ..	7.28	19.1	4.84	14.4	11.08	67.9	1.79	4.1	1.37	3.4	2.86	12.4	+0.04	-5.5	-0.35	-2.2	-0.66	-14.1
Year ..	8.14	42.0	7.47	35.7	11.33	69.3	2.27	8.8	1.69	8.5	3.08	17.9	—	—	—	—	—	—
Winter..	6.78	16.1	4.29	14.1	11.33	49.8	1.72	4.3	1.08	3.4	2.83	11.7	—	—	—	—	—	—
Equinox	9.22	45.4	8.40	38.8	13.42	87.0	2.44	9.3	1.71	10.2	3.65	19.8	—	—	—	—	—	—
Summer	10.97	65.0	10.11	54.8	14.35	90.6	2.76	15.0	2.42	12.6	3.05	25.1	—	—	—	—	—	—

\* The ranges are those shown in Tables 7 to 12, in the preparation of which the non-cyclic change has been eliminated.  
 † The non-cyclic changes shown under H. are mainly of instrumental origin. See p. 25.

**MEAN MONTHLY AND ANNUAL VALUES OF MAGNETIC DECLINATION, INCLINATION AND HORIZONTAL FORCE.**

*Means of the results of absolute observations made on the dates shown.*

**4. Lerwick.**

**1925.**

Month.	Declination. (West).		Inclination. (North).		Horizontal Force.	
	Mean Value.	Dates of Observation.	Mean Value.	Dates of Observation.	Mean Value.	Dates of Observation.
January ..	15 23.9	2, 7, 12, 19, 26, 30 ..	72 35.5	2, 7, 12, 19, 26, 30 ..	14643	2, 7, 12, 19, 26, 30
February ..	15 22.7	2, 7, 10, 13, 19, 23, 27 ..	72 36.0	2, 7, 10, 13, 19, 23, 27 ..	14634	2, 7, 10, 13, 19, 23, 27.
March ..	15 22.7	3, 7, 10, 13, 17, 19, 24, 27, 31 ..	72 36.7	3, 7, 13, 17, 19, 24, 27, 31 ..	14626	3, 7, 13, 17, 19, 24, 27, 31.
April ..	15 20.9	4, 11, 14, 18, 21, 24, 27 ..	72 37.3	4, 11, 14, 18, 21, 24, 27 ..	14620	4, 11, 14, 18, 21, 24, 27.
May ..	15 17.0	1, 7, 9, 12, 14, 20, 23, 26, 29 ..	72 37.1	1, 7, 9, 12, 14, 20, 23, 26, 29 ..	14618	1, 7, 9, 12, 14, 20, 23, 26, 29.
June ..	15 15.9	8, 11, 16, 19, 26 ..	72 37.1	8, 11, 16, 19, 26 ..	14611	8, 11, 16, 19, 26.
July ..	15 16.1	1, 3, 7, 16, 18, 21, 24, 30 ..	72 37.2	1, 3, 7, 16, 21, 24, 30 ..	14613	1, 3, 13, 16, 21, 24, 30.
August ..	15 16.5	5, 12, 15, 20, 22, 25, 27 ..	72 37.7	5, 12, 15, 20, 24, 25, 27 ..	14602	5, 12, 15, 20, 22, 25, 27.
September ..	15 16.5	3, 5, 8, 10, 18, 25, 29 ..	72 38.5	3, 5, 8, 10, 18, 25, 29 ..	14608	3, 5, 8, 10, 18, 25, 29.
October ..	15 14.2	1, 8, 14, 19, 20, 27, 29 ..	72 38.2	1, 8, 14, 19, 20, 27, 29 ..	14621	1, 8, 14, 19, 20, 27, 29.
November ..	15 13.8	2, 5, 12, 15, 17, 19, 22, 26, 29 ..	72 37.8	2, 5, 12, 15, 17, 19, 22, 26, 29 ..	14624	2, 5, 12, 15, 17, 19, 22, 25, 26, 29.
December ..	15 12.6	2, 8, 13, 16, 22, 24, 27 ..	72 37.4	2, 8, 13, 16, 22, 24, 27 ..	14626	2, 8, 13, 16, 22, 24, 27.
Year ..	15 17.7		72 37.2		14621	

5. Lerwick.

1925.

Month.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.
1	7.7	17.9	17.0	12.9	10.0	21.0	12.5	16.4	61.6	13.1	40.5	10.8	1
2	4.8	7.1	6.9	17.4	10.0	13.3	16.4	13.3	68.1	9.5	22.8	10.8	2
3	8.3	6.6	8.7	18.5	10.2	14.1	11.6	17.4	22.2	8.7	16.2	6.9	3
4	4.6	6.4	13.1	10.0	31.3	15.2	18.1	20.3	16.6	43.0	10.6	12.2	4
5	8.9	6.4	19.7	15.6	17.6	16.4	14.7	15.8	19.5	18.3	7.9	35.7	5
6	3.9	9.3	10.4	23.4	11.4	16.8	14.5	16.2	17.2	13.9	10.6	24.9	6
7	5.4	6.8	10.6	15.8	14.1	12.9	13.3	33.4	21.4	10.8	12.4	17.9	7
8	4.6	34.9	6.6	17.2	15.2	12.4	17.0	32.4	10.2	44.4	47.3	12.0	8
9	4.8	45.5	19.3	18.1	20.7	14.1	20.1	16.6	19.3	56.0	61.4	10.4	9
10	5.0	12.7	21.2	26.2	12.4	16.4	15.2	11.2	12.4	40.0	45.9	17.4	10
11	3.3	12.2	10.0	16.0	10.2	16.2	11.8	10.2	12.5	49.8	23.9	19.1	11
12	4.4	16.2	12.2	20.7	10.0	13.5	13.5	9.8	11.6	58.9	11.6	10.2	12
13	17.0	15.4	14.9	12.9	10.2	35.1	12.4	13.7	10.2	18.3	29.7	15.2	13
14	8.1	14.9	12.4	11.0	10.0	24.9	23.5	14.9	56.7	14.3	21.8	12.2	14
15	5.8	8.7	30.7	23.4	9.7	13.1	38.4	10.6	55.2	21.0	23.2	31.1	15
16	12.0	19.7	12.5	16.8	7.9	16.6	12.2	12.9	21.4	24.1	12.2	21.4	16
17	21.8	23.5	11.0	10.4	9.7	33.4	11.4	17.8	20.5	16.8	9.8	4.4	17
18	22.4	13.7	9.8	11.2	16.2	16.6	14.1	27.2	19.3	10.6	8.9	31.7	18
19	42.5	23.7	12.5	10.2	16.4	17.0	15.4	19.7	13.1	17.8	10.2	7.9	19
20	42.7	25.1	16.2	33.4	10.6	12.2	12.0	11.8	12.9	22.4	14.3	12.5	20
21	18.3	5.8	12.0	13.1	14.1	11.6	21.0	18.1	45.0	110.0	7.9	7.3	21
22	5.2	6.8	13.9	13.9	14.3	13.7	15.2	20.8	29.1	57.1	6.4	7.3	22
23	28.6	6.6	14.7	11.4	15.1	27.0	14.5	54.0	21.2	95.9	13.5	18.9	23
24	11.4	19.9	12.5	9.5	15.6	104.4	12.2	17.6	50.6	76.6	16.6	23.7	24
25	4.1	14.1	12.2	10.2	9.7	78.2	20.7	21.8	14.3	24.7	12.5	11.6	25
26	5.6	5.6	13.7	13.1	11.8	13.3	20.7	19.3	13.9	11.2	7.5	5.2	26
27	6.2	5.4	21.4	14.5	28.0	28.8	23.9	14.3	7.9	21.2	5.8	49.4	27
28	6.8	14.5	10.0	11.8	43.6	24.1	25.1	11.4	8.9	17.6	6.4	38.4	28
29	6.6	—	12.9	18.1	12.9	17.6	13.3	15.8	7.9	8.1	7.3	12.0	29
30	12.9	—	13.5	10.4	27.6	15.1	12.5	23.9	11.6	9.1	5.2	8.5	30
31	4.2	—	8.7	—	20.7	—	11.2	12.0	—	18.7	—	11.8	31
Mean	11.22	14.48	13.59	15.57	15.39	22.83	16.40	18.41	23.74	31.03	17.68	16.73	
No. of days used	31	28	31	30	31	30	31	31	30	31	30	31	

ABSOLUTE DAILY RANGES OF HORIZONTAL FORCE.

6. Lerwick.

1925.

Month.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.
1	7	7	7	7	7	7	7	7	7	7	7	7	1
2	12	57	31	59	55	141	141	96	394	56	169	38	2
3	17	15	44	63	53	120	84	71	341	53	33	39	3
4	42	29	28	92	60	227	62	177	122	47	36	18	4
5	17	25	44	56	361	86	81	102	77	133	62	30	5
6	50	24	49	85	228	73	85	74	85	96	29	105	6
7	22	26	35	97	65	131	78	77	79	68	35	229	7
8	34	42	44	84	77	83	59	172	148	47	42	82	8
9	11	85	28	78	70	73	67	163	59	239	165	42	9
10	12	146	15	101	104	88	90	118	74	470	500	30	10
11	12	39	100	217	69	98	147	85	48	414	391	67	11
12	14	29	32	87	66	84	86	61	37	156	199	95	12
13	18	30	37	82	63	73	61	54	57	154	43	28	13
14	44	37	37	60	63	207	70	52	58	195	54	35	14
15	17	34	40	67	56	105	187	66	974	183	560	35	15
16	22	33	119	99	59	87	324	41	435	84	55	81	16
17	72	45	49	69	52	150	65	70	116	72	31	59	17
18	55	10	62	59	48	120	35	79	145	58	45	25	18
19	65	35	44	87	96	73	56	114	87	41	52	59	19
20	320	57	53	62	76	70	86	81	46	52	32	21	20
21	262	56	68	108	53	68	53	67	65	63	44	54	21
22	49	19	43	71	73	60	154	91	374	696	27	26	22
23	16	18	51	86	71	83	154	259	113	389	27	22	23
24	49	27	63	79	93	146	114	252	86	812	37	35	24
25	52	54	48	75	65	> 681	92	95	479	429	—	42	25
26	18	42	38	67	66	> 650	114	84	73	70	—	25	26
27	27	25	48	63	82	98	123	82	53	59	42	21	27
28	17	26	59	90	159	155	132	60	45	65	24	390	28
29	24	63	43	61	237	388	170	68	35	31	23	150	29
30	27	—	58	66	100	101	85	73	33	43	25	32	30
31	27	—	49	50	357	130	82	80	48	43	16	58	31
Mean	60	—	42	—	226	—	64	103	—	55	—	40	
No. of days used	47.9	40.3	48.4	80.7	106.5	155.0	103.3	98.9	159.5	173.3	99.9	64.9	
	31	28	31	30	31	30	31	31	30	31	28	31	

DIURNAL INEQUALITIES OF THE MAGNETIC DECLINATION.

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

Table for 7. Lerwick. DECLINATION (All Days except Jan. 25, 30, 31; Mar. 1, 9, 11, 12). 1925. Columns: Hour (1-24), G.M.T., Month and Season (Jan-Dec, Year, Winter, Equinox, Summer). Values range from -1.88 to +1.88.

Table for 8. Lerwick. DECLINATION (Quiet Days). 1925. Columns: Hour (1-24), G.M.T., Month and Season (Jan-Dec, Year, Winter, Equinox, Summer). Values range from -1.18 to +1.18.

Table for 9. Lerwick. DECLINATION (Disturbed Days). 1925. Columns: Hour (1-24), G.M.T., Month and Season (Jan-Dec, Year, Winter, Equinox, Summer). Values range from -6.72 to +6.72.

DIURNAL INEQUALITIES OF THE HORIZONTAL MAGNETIC FORCE.

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

Table 10: HORIZONTAL FORCE (All Days except Jan. 25, 30-31; Feb. 17, 18; Mar. 1, 8, 9, 10, 11, 12). 1925. Lerwick. Columns: Hour (G.M.T.) 1-24. Rows: Months (Jan-Dec), Year, Winter, Equinox, Summer.

Table 11: HORIZONTAL FORCE (Quiet Days). 1925. Lerwick. Columns: Hour (G.M.T.) 1-24. Rows: Months (Jan-Dec), Year, Winter, Equinox, Summer.

Table 12: HORIZONTAL FORCE (Disturbed Days). 1925. Lerwick. Columns: Hour (G.M.T.) 1-24. Rows: Months (Jan-Dec), Year, Winter, Equinox, Summer.

13. Lerwick.

1925.

Date.	Month.	Date.	Month.	Date.	Month.	Date.	Month.
	<b>January.</b>		<b>March.</b>		<b>September.</b>		<b>November.</b>
2 ...		9 ...		3 ...	Moonlight.	4 ☰	Glow 20·20-21·30 : eclipsed by cloud.
3 ...		11 ...		8 ...	Moonlight.	5 ...	Moonlight.
4 ...	Moonlight.	12 ...		9 ...		6 ...	
11 ...		13 ...	Rain.	10 ☰	Faint glow 21·00-22·00.	7 ...	
12 ...		14 ...		11 ...		8 ...	
14 ...		16 ...		12 ☰	Glow 22·30-22·35.	9 ☰	Display 04·25-04·35 : much Aurora : 17·45-23·30.*
15 ...		19 ☰	Glow 20·25-20·30 ; eclipsed by cloud.	14 ☰	Glow visible through breaks in clouds : 21·35-21·55.	10 ☰	Visible through breaks in clouds : 19·00-22·58.
16 ☰	Glow 23·20-23·30 : eclipsed by cloud.	20 ...		15 ☰	Weak ; 21·00-23·20.*	12 ...	
17 ...		21 ...		16 ☰	Weak ; 19·00-23·15.*	14 ☰	Visible through breaks in clouds : 19·35-23·45.
18 ☰	Glow 19·00-00·40.	22 ...		17 ...		15 ☰	Visible through breaks in clouds : 19·00-23·00.
19 ☰	19·00-23·50.*	23 ...		18 ...		16 ☰	Visible through breaks in clouds : 22·00-23·17.
24 ...		24 ...		19 ☰	Glow visible through breaks in clouds ; 21·00-21·15.	17 ...	
25 ...		25 ...		22 ☰	Brilliant : 20·15-00·20.*	21 ...	
26 ...		26 ...		24 ☰	Weak ; 20·10-22·30 : eclipsed by cloud.*	22 ...	
	<b>February.</b>	27 ...		25 ...		23 ...	
		28 ...	Rain.	26 ☰	Glow visible through breaks in clouds ; 21·40.	24 ...	
1 ...	Moonlight.	29 ...		29 ☰	Moonlight ; Glow ; 20·30-20·50.	25 ...	
2 ...	Moonlight.	30 ...				26 ...	Moonlight.
3 ...	Moonlight.	31 ...	Moonlight.			27 ...	Moonlight.
5 ...						28 ...	Moonlight.
8 ☰	Glow 21·05-22·00 ; eclipsed by cloud.		<b>April.</b>		<b>October.</b>		<b>December.</b>
9 ...		2 ...		6 ...	Moonlight.	1 ...	Moonlight.
10 ...		3 ...		7 ...	Moonlight.	2 ...	Moonlight.
11 ...		4 ...		9 ...		3 ...	Rain.
12 ...		10 ...		10 ...		11 ...	
14 ...	Rain.	11 ☰	Faint glow 21·40-22·07.	11 ☰	Visible through breaks in clouds : 20·47-00·20.	12 ...	Snow showers.
15 ☰	Glow 22·00-22·45 ; eclipsed by cloud.	12 ...		12 ☰	Visible through breaks in clouds : 20·52-20·54.	13 ...	
17 ☰	Glow 20·05-21·00 ; eclipsed by cloud.	14 ...		13 ☰	Glow : 19·40-22·10.	14 ...	
18 ...		16 ...		14 ☰	Faint glow 22·30-23·00.	15 ☰	Visible through breaks in clouds : 20·50-23·00.
19 ☰	18·53-00·55 ; auroral glow persisting till daybreak.*	17 ...		15 ☰	Glow 19·00-22·10.	17 ...	
20 ...		18 ...		16 ☰	Glow 19·35-21·13 ; eclipsed by cloud.	18 ...	
22 ...		19 ...		18 ...		19 ...	
27 ...		20 ...		19 ☰	Glow : 19·40-22·55 : eclipsed by cloud.	20 ...	
		24 ...		23 ☰	Visible through breaks in clouds : 21·20-21·30.	21 ...	Moonlight.
		25 ...		24 ☰	Visible through breaks in clouds : 21·35-22·05.	22 ...	Moonlight.
		26 ...		28 ...	Moonlight.	23 ...	Moonlight.
		27 ...		29 ...	Moonlight.	25 ...	Drizzle.
		29 ...				27 ...	
		30 ...				28 ...	
						31 ...	Moonlight.
1 ...			<b>September.</b>				
5 ...	Moonlight.	1 ...	Moonlight.				
6 ...		2 ...	Moonlight.				
7 ...	Moonlight.						

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. An asterisk (\*) after any date indicates that a full description is available of the auroral phenomena observed on the date in question.





M.O. 299  
(Aberdeen)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1925

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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1927

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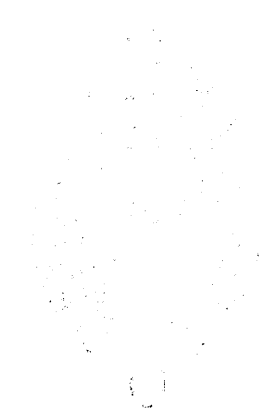
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## ABERDEEN OBSERVATORY.

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 .. .. .	13·4*
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

## 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, lies to the north-east of the Observatory at a distance of about 50 metres. The "North-wall" screen in which the recording thermometers are exposed is erected on the wall outside the north window of the uppermost story 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, will be found in the Introduction to the Observatories' Year Book 1923.

*Change of value adopted for height of Station above Mean Sea Level.*—Consequent upon a careful redetermination of the height of the Station above Mean Sea Level a new value has been adopted for this height for all purposes, as from the 1st January, 1925. The value for the station level is now 13·4 m., and that for the height of the barometer-cistern is 26·0 m., in place of the former values of 14·0 m. and 26·8 m. respectively.

### 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.

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

*Pressure and Temperature.*—The barograph, standard Kew barometer and thermograph are housed in the uppermost story of the Observatory. The pressure scale value of the barogram is 1 mm. on the paper = 0.85 mb., when the paper is at normal atmospheric humidity. In similar circumstances the time scale is 9.3 mm. = 1 hour. The records of the photobarograph are standardised by means of control readings taken from Fortin Standard Barometer M.O. 273.

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 standardised by control readings from Standard Thermometers M.O. 1698 (dry bulb) and M.O. 1697 (wet bulb). The heights of the barometer cisterns and of the bulbs of the thermometers are given at the top of the appropriate tables.

*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 is by check gauge M.O. 167.

*Humidity.*—On those occasions when the temperature of the wet bulb has been 27.3a or under, the relative humidity has been obtained from the records of a hair hygograph. This instrument is accommodated in a small louvered screen which rests on top of the Stevenson screen and is securely fixed to it. The hygograph is 11.6 metres below the level of the thermograph bulbs in the North-wall screen, and in using its records an appropriate adjustment is made.

*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 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. The "possible" duration of sunshine has been computed from the mean solar declination for the four years 1849, 1850, 1851 and 1852.

*Wind Speed and Direction.*—The Robinson Cup anemograph is erected on the top of a small cylindrical tower which rises about fifteen feet (4.6 m.) above the main square tower and about five feet (1.5 m.) above a smaller tower at the south-west corner of the main tower. The height of the cups above this smaller square tower (which may for the purpose be regarded as the "roof" of the building) is about 4 metres. Owing to the surrounding buildings the exposure of the instrument is a very gusty one, particularly towards south and west.

There is also in use a Dines Tube Anemograph which is mounted in a more open exposure in a field about  $\frac{1}{2}$  km. east of the Observatory. The speeds given in Tables 85-96 are those obtained from the Cup Anemograph, but the directions are taken from the records of the tube instrument, as are also the particulars of the highest gust each day and the annual table of distribution of wind speed given in Tables 97-98.

A careful analysis of simultaneous records of the two anemographs\* has shown that the directions recorded by the two instruments differ only very slightly; but the values of velocity show considerable differences. Those recorded by the tube instrument exceed those recorded by the Cup Anemograph by between 10 and 30 per cent., depending upon the direction of the wind. This fact must therefore be borne in mind in using the values entered in Table 98 giving the annual distribution of wind speed. The monthly tables of hourly values are obtained from the Cup Anemograph velocities, in order to maintain continuity with previous years' publications.

\* To be published later as a Geophysical Memoir.

*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.

*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.

*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. (It is probable that in future a suggestion will be made to extend the definition of A-St in the International Classification to include the dense rain-giving layer which develops from the normal A-St.)

On occasions when the low anticyclonic stratus degrades into drizzle or light rain, it is customary at Aberdeen to enter Nb-St (Nimbo-stratus). 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.

IDENTIFICATION NUMBERS OF INSTRUMENTS USED IN 1925.

The following were the instruments actually in use during the year 1925 :—

Standard Fortin Barometer	..	..	M.O.	273
„ Dry Bulb Thermometer	..	..	M.O.	1698
„ Wet „ „	..	..	M.O.	1697
Recording Beckley Raingauge	..	..		2
Control Raingauge	..	..	M.O.	167
Glass for „	..	..	M.O.	400
Hair Hygograph	..	..	M.O.	35
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.	17007

### Review of Meteorological Results.

Pressure during the year 1925 was on the whole slightly below the normal, but varied irregularly from month to month. There was a large deficiency of about 15 mb. in February, which was succeeded by a large excess of 10 mb. in March. April and May were below normal, by 5 mb. and 8 mb., respectively, while December also showed a deficiency of 6 mb.

Rainfall during the year showed marked sympathy with the variations of pressure; those months of sub-normal pressure having an excess of precipitation, except in the case of December, which month, despite its deficient pressure, had only 60 per cent. of the normal rainfall. February, with its markedly low pressure, had double the normal rainfall, while both April and May had about 125 per cent. of their usual values. January, March, June and November, all of which were months of excess of pressure, showed considerable deficiencies in their rainfall, June having only half the normal quantity. The driest month was August with only 40 per cent. of the normal rainfall, though its pressure was almost exactly normal.

Temperature which was about 1.3a. and 0.6a. over the normal values in January and February respectively, became normal in March and April, but rose again in May and remained on an average about 1 a. above the normal during the whole period from May to August; it suffered a rather sharp decrease to 1.2a. below normal in September, reverting to a little above normal in October, then falling very sharply to a deficiency of a little over 2 a. during both November and December. It might therefore be said that a decidedly warm summer was followed by a very cold winter.

The summer warmth was not accompanied by an excess of sunshine, as might have been expected. On the contrary there was a deficiency of between 1 and 5 per cent. of the possible sunshine in all the months during this period, even the exceptionally dry August being markedly dull. October and November were, however, very much brighter than usual, an excess of as much as 10 per cent. of the possible being recorded in the latter month.

The records of wind call for no particular comment, except that on no occasion during the year did the hourly mean value reach gale force.

To sum up, the year 1925 at Aberdeen was marked by a dull wet spring, a warm but dull summer, and a cold but bright and dry winter.

Readings in millibars at exact hours, Greenwich Mean Time.

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

January, 1925.

Table for Aberdeen in January 1925. Columns: Day, Station Level (1-31), Mean (Station level), Mean (Sea level). Rows: 1-31. Values in millibars.

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

February, 1925.

Table for Aberdeen in February 1925. Columns: Day, Station Level (1-31), Mean (Station level), Mean (Sea level), G.M.T. Rows: 1-31. 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.

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

March, 1925.

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		
	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	997.0	997.6	998.0	998.5	999.3	1000.2	1001.1	1002.1	1003.1	1004.0	1004.6	1005.6	1006.0	1006.7	1007.6	1008.4	1009.4	1010.6	1011.9	1012.7	1013.8	1015.1	1015.8	1016.4	1017.4	1018.1	
2	017.4	018.0	018.2	018.8	019.2	019.7	020.3	021.1	022.1	022.4	022.6	022.9	023.8	024.2	024.9	025.4	026.0	026.3	026.9	027.0	027.0	027.0	027.0	027.0	027.0	027.0	
3	027.4	027.5	027.9	028.4	028.7	028.9	029.5	030.4	030.7	031.1	031.4	031.5	031.6	031.6	031.5	031.3	031.8	032.3	032.4	032.7	032.8	032.9	032.9	032.3	030.5	030.7	
4	031.8	032.0	032.2	032.2	031.9	031.8	031.5	031.3	031.1	031.3	031.1	030.9	030.9	030.5	029.9	029.9	029.2	029.1	029.1	029.1	028.8	028.8	028.3	028.2	026.7	026.7	
5	025.6	024.6	024.5	023.6	022.8	021.9	021.3	020.4	019.2	019.0	018.2	017.3	016.2	015.2	014.8	013.5	012.1	011.4	010.4	010.0	009.7	009.5	009.2	009.0	008.6	016.7	
6	008.7	008.1	008.3	007.7	007.8	008.1	007.9	007.5	007.4	006.9	007.1	006.2	005.9	005.2	004.7	004.9	004.3	003.9	003.9	003.1	002.2	002.1	001.6	001.5	001.5	005.8	
7	001.1	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	000.0	000.0	
8	089.2	088.9	088.8	089.1	090.4	092.0	094.6	097.0	099.1	100.5	101.1	102.9	103.6	103.8	104.3	105.2	105.5	106.6	106.6	106.6	106.8	107.3	106.7	106.2	107.4	109.8	
9	006.8	006.8	006.4	006.1	007.0	007.3	007.7	008.3	008.6	010.1	011.0	011.3	011.9	012.8	013.5	014.4	016.0	016.4	016.4	017.2	018.2	019.0	019.8	019.9	020.7	021.1	022.4
10	021.1	021.5	021.8	022.5	022.9	023.4	023.9	024.2	024.5	024.5	024.3	024.0	023.6	022.7	022.2	021.6	021.6	021.5	021.2	021.0	020.9	020.9	021.0	021.0	021.1	022.4	
11	021.1	021.4	021.8	022.2	023.0	023.7	024.4	024.9	025.6	026.1	026.4	026.7	026.7	026.9	026.9	026.8	027.0	027.3	028.0	028.2	028.4	028.4	028.7	028.8	028.8	025.6	
12	029.0	029.1	029.1	029.4	029.7	030.3	030.6	030.6	030.3	030.4	030.1	029.8	029.4	028.7	028.3	027.8	027.3	027.0	026.4	025.9	025.2	024.4	023.8	023.8	023.8	022.8	
13	023.1	022.0	021.3	020.0	019.2	018.4	017.6	016.5	015.3	014.2	013.8	013.4	013.0	012.4	011.6	011.1	011.1	011.1	011.0	010.9	010.7	010.7	010.7	010.4	010.4	014.8	
14	010.3	010.1	010.1	009.8	009.9	009.9	010.1	010.2	010.4	010.8	010.9	010.9	011.0	011.0	011.0	011.1	011.1	011.8	012.9	014.0	014.8	015.7	016.7	016.8	016.8	011.5	
15	017.6	018.2	018.5	018.9	019.1	019.7	020.3	020.8	021.1	021.8	022.0	022.7	022.8	022.8	022.8	023.0	023.0	023.4	024.1	025.3	025.6	025.6	025.7	026.0	026.0	022.0	
16	026.0	025.8	025.2	025.0	024.9	024.7	024.4	024.5	024.3	024.2	024.2	024.0	023.4	023.4	023.3	023.2	023.0	023.2	023.5	024.1	025.1	025.5	025.6	026.0	026.0	024.4	
17	026.3	026.4	026.7	026.5	026.5	026.7	026.9	026.7	027.0	027.4	027.4	027.2	027.1	026.8	026.5	026.7	026.8	026.8	026.8	027.0	027.3	027.4	027.3	027.2	026.9	026.9	
18	027.0	027.0	027.1	027.1	027.3	027.4	027.5	027.7	027.4	027.2	027.1	027.0	026.8	026.5	026.2	026.1	026.1	026.2	026.2	026.4	026.5	026.6	026.4	026.1	026.8	026.8	
19	025.7	025.5	025.3	024.9	024.7	024.5	024.3	024.3	024.3	024.0	024.1	024.0	024.7	024.7	024.3	024.0	024.5	024.8	024.6	024.6	024.6	024.5	024.4	024.1	024.6	024.6	
20	023.3	023.1	022.2	021.9	021.5	021.1	020.9	020.4	020.3	020.0	019.5	019.0	018.5	017.9	017.4	017.2	016.8	016.3	016.3	016.2	016.2	016.2	016.0	015.8	015.7	019.1	
21	015.3	014.6	014.7	014.4	014.6	014.8	014.9	015.1	015.7	016.1	016.4	016.3	016.6	016.4	016.3	016.3	016.0	016.1	017.3	017.8	018.1	018.6	018.9	019.3	016.2	016.2	
22	019.6	020.0	020.0	020.4	020.8	021.1	021.3	021.6	022.1	022.1	022.0	022.0	021.8	021.3	020.5	020.8	020.0	019.8	019.1	018.8	018.3	017.6	016.5	015.8	020.2	020.2	
23	014.7	013.7	012.3	011.1	010.0	009.2	008.2	007.0	007.2	007.1	006.8	006.7	006.4	005.8	005.5	005.4	005.2	005.2	004.8	004.4	003.9	003.4	003.0	002.9	007.4	007.4	
24	002.5	001.8	001.1	000.6	000.4	000.9	000.6	000.9	000.9	000.9	000.9	000.8	000.9	000.9	000.9	000.9	000.9	000.8	000.2	000.5	000.4	000.4	000.2	000.2	000.9	000.9	
25	000.5	000.2	000.2	000.3	000.4	000.3	000.3	000.3	000.4	000.2	000.2	000.2	000.4	000.9	010.7	011.6	012.6	013.6	014.8	015.8	016.8	017.4	017.7	018.0	018.5	008.5	
26	018.8	019.0	019.2	019.2	019.6	019.7	020.0	020.0	020.3	020.3	020.2	020.4	020.2	019.9	019.5	019.2	019.0	019.3	019.4	019.7	019.9	019.9	020.0	019.8	019.7	019.7	
27	019.9	019.6	019.4	019.1	019.2	019.3	019.4	019.2	019.1	018.7	018.6	018.2	017.8	017.5	017.1	017.3	017.8	018.3	019.5	020.2	020.7	021.1	021.5	021.9	019.1	019.1	
28	022.1	022.4	022.4	022.5	022.5	022.6	022.6	022.6	022.9	022.9	022.8	022.6	022.0	021.5	021.0	020.1	019.8	019.5	019.4	018.8	018.2	016.8	015.6	014.6	016.3	020.6	
29	013.1	012.8	012.4	012.2	012.6	012.7	012.8	012.9	013.4	013.2	013.3	013.0	012.1	011.7	011.4	011.0	010.5	010.2	010.4	010.3	010.0	009.8	009.1	008.5	011.7	011.7	
30	008.0	007.2	006.8	006.0	005.8	005.1	004.6	004.0	003.4	002.6	002.3	001.7	000.2	999.7	999.7	998.9	998.7	998.5	998.5	998.4	998.7	000.0	000.7	001.2	002.3	002.3	
31	001.4	001.7	002.0	001.9	002.3	002.7	003.2	003.5	003.9	004.1	004.1	003.9	003.8	003.5	003.2	003.2	002.9	002.9	002.9	003.0	002.9	003.0	003.5	003.8	003.1	003.1	
Mean (Station level)	1015.85	1015.70	1015.60	1015.47	1015.57	1015.67	1015.85	1015.99	1016.19	1016.31	1016.41	1016.35	1016.21	1016.02	1015.81	1015.73	1015.78	1015.92	1016.10	1016.23	1016.30	1016.32	1016.25	1016.18	1015.99		
Mean (Sea level)	1019.13	1018.98	1018.88	1018.75	1018.85	1018.95	1019.13	1019.27	1019.46	1019.56	1019.66	1019.60	1019.45	1019.26	1019.15	1019.97	1019.03	1019.17	1019.36	1019.50	1019.57	1019.60	1019.53	1019.46	1019.26		

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

April, 1925.

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	
	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	004.1	004.5	004.7	005.0	005.6	006.0	006.4	006.6	006.8	006.7	006.5	006.0	005.4	004.5	004.0	003.0	002.5	001.9	000.9	000.6	000.0	998.9	998.3	996.8	003.7	
2	996.3	995.4	994.4	994.2	994.0	995.2	995.9	996.4	997.2	998.1	998.8	999.7	1000.4	1001.3	1002.1	1002.7	1003.4	1004.5	1005.4	1006.2	1007.0	1007.9	1008.7	1009.2	1000.3	1000.3
3	009.8	010.1	010.5	011.0	012.0	012.4	012.8	013.3	013.5	014.1	014.3	014.1	014.3	014.3	014.2	013.8	013.4	013.3	013.1	012.8	012.6	012.2	011.3	010.8	012.6	012.6
4	010.0	009.3	009.1	008.2	007.8	007.4	007.0	006.5	006.4	006.0	005.5	005.4	004.9	004.5	004.2	003.9	003.2	003.1	003.0	002.9	003.0	002.8				



Readings in millibars at exact hours, Greenwich Mean Time.

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

May, 1925.

Table for Aberdeen pressure readings in May 1925. Columns include Day, Station Level (1-31), and Mean (Station level/Sea level). Rows show hourly pressure readings in millibars.

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

June, 1925.

Table for Aberdeen pressure readings in June 1925. Columns include Day, 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.

21. Aberdeen : Hb (height of barometer cistern above M.S.L.) = 26.0 metres.

July, 1925.

Table for Aberdeen July 1925. Columns: Day (1-31), Station Level (1-31), Mean (Station level), Mean (Sea level). Rows contain hourly barometric readings in millibars.

22. Aberdeen : Hb = 26.0 metres.

August, 1925.

Table for Aberdeen August 1925. Columns: Day (1-31), Station Level (1-31), Mean (Station level), Mean (Sea level), G.M.T. ... (1-24, Mean). Rows contain hourly barometric 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.

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

September, 1925.

Table for September 1925 showing pressure readings at various station levels (1-30) and mean values for station and sea level. Columns include Day, Station Level, and 24 hourly readings plus a mean column.

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

October, 1925.

Table for October 1925 showing pressure readings at various station levels (1-31) and mean values for station and sea level. Columns include Day, Station Level, and 24 hourly readings plus a mean column.

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.

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

November, 1925.

Table for Aberdeen pressure readings in November 1925. Columns include Day (1-30), Station Level (1-30), and Mean (Station level). Rows show hourly pressure readings in millibars.

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

December, 1925.

Table for Aberdeen pressure readings in December 1925. Columns include Day (1-31), Station Level (1-31), 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 degrees absolute at exact hours, Greenwich Mean Time.

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

January, 1925.

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	75.0	75.0	75.0	75.1	74.7	75.6	74.5	74.1	74.3	75.6	75.7	75.6	76.4	77.9	78.0	78.9	80.0	80.0	80.9	80.2	79.2	77.4	76.8	76.5	76.7
2	77.0	76.9	77.6	78.2	76.9	77.0	76.4	76.4	76.3	76.6	76.6	76.9	74.6	73.5	73.4	73.5	73.6	73.9	74.1	73.7	74.1	74.1	74.4	74.7	75.5
3	74.9	74.5	75.0	74.6	74.4	75.1	75.1	74.6	74.5	75.0	76.1	76.3	75.8	76.1	75.7	76.2	75.8	75.2	75.4	75.6	76.0	75.4	75.4	75.4	75.3
4	75.2	74.0	74.1	74.0	73.7	73.2	72.7	72.5	72.2	74.5	74.7	76.0	76.4	76.8	76.0	75.4	74.6	74.2	73.7	73.6	73.0	73.0	72.6	72.9	74.2
5	73.8	73.1	73.5	74.0	73.6	72.7	72.6	72.6	74.1	75.0	75.2	76.1	76.0	75.7	75.1	74.4	74.4	74.8	74.1	73.7	73.0	72.5	72.6	72.9	74.4
6	75.0	74.7	74.1	74.0	74.0	73.9	74.2	73.7	74.3	74.0	74.6	74.5	75.1	75.1	75.0	74.9	75.9	76.0	76.1	75.9	75.8	76.1	76.3	77.5	75.0
7	78.2	77.3	78.7	79.3	79.4	79.9	80.1	79.6	78.7	79.4	80.3	80.4	80.8	81.1	80.9	80.3	79.3	79.2	79.6	78.7	79.0	78.6	78.4	78.2	79.4
8	78.1	78.2	78.5	78.3	78.1	78.1	78.0	78.1	78.1	77.6	78.0	78.4	78.6	78.9	78.9	79.1	78.8	79.1	79.1	79.4	79.2	79.1	79.2	78.9	78.6
9	79.6	79.4	78.4	78.4	77.7	77.2	77.2	77.5	77.3	77.7	77.8	78.3	78.8	78.8	78.4	77.6	77.7	77.6	77.2	77.0	77.2	76.6	76.6	75.8	77.8
10	75.1	75.2	75.6	75.9	77.4	78.2	77.7	77.9	77.7	79.0	79.6	80.5	81.4	80.9	80.9	81.0	80.4	80.6	80.6	80.6	80.1	80.3	80.4	80.2	79.0
11	78.6	78.8	79.9	79.7	80.0	78.9	78.5	78.9	79.8	80.6	80.7	81.3	81.3	81.0	80.6	80.0	79.8	79.1	79.3	78.6	78.6	78.5	78.7	78.6	79.2
12	78.2	77.6	77.5	77.5	77.5	78.0	78.4	78.5	78.6	78.9	78.9	79.0	79.2	79.1	78.9	78.8	78.9	78.6	79.0	79.2	79.0	79.0	78.9	78.7	78.6
13	78.6	78.4	78.4	78.1	77.5	77.6	78.0	78.6	78.6	78.9	79.2	80.0	80.4	80.9	81.3	81.4	80.9	80.9	81.0	81.0	81.0	80.8	80.9	80.8	79.8
14	80.8	80.2	80.2	80.1	80.6	81.8	82.3	83.4	81.8	80.2	80.8	80.9	81.0	80.8	80.6	80.3	80.0	79.6	79.0	79.2	80.1	79.1	78.4	78.8	80.5
15	78.2	78.5	78.5	78.4	78.0	77.4	77.5	77.2	76.7	77.4	77.8	79.0	79.6	79.8	79.5	79.0	78.4	78.3	78.4	78.2	78.1	77.1	77.6	78.0	78.2
16	79.3	79.4	79.9	79.6	79.6	80.4	80.3	79.7	79.5	78.8	79.2	79.6	79.6	79.4	79.6	78.5	78.0	77.4	77.0	77.3	77.5	77.4	77.0	76.9	78.8
17	76.6	76.3	76.1	76.1	76.4	76.5	77.0	76.4	76.2	76.9	78.0	78.5	79.3	79.5	80.1	81.5	81.6	82.1	82.4	82.3	81.9	82.1	81.8	81.8	79.0
18	82.3	82.4	82.4	82.1	81.9	81.4	82.4	82.6	82.9	83.4	83.4	83.7	83.6	83.4	82.8	82.1	81.2	80.8	80.6	80.3	79.7	78.6	77.9	77.6	81.7
19	77.7	75.6	75.1	75.0	74.0	74.2	74.0	73.0	72.9	73.4	73.7	74.9	76.4	79.3	79.4	79.0	79.2	79.7	79.6	79.7	79.7	79.7	79.9	79.9	76.8
20	79.9	80.0	79.9	79.9	79.5	79.2	79.4	79.6	79.6	79.6	79.7	79.8	79.9	79.9	79.8	79.7	79.6	79.1	79.1	79.1	78.9	79.1	79.4	79.0	79.6
21	78.7	78.8	78.8	78.7	78.7	78.6	78.6	78.6	78.6	78.7	78.8	78.6	78.8	78.7	78.7	78.7	78.8	78.9	78.6	78.4	78.3	78.6	78.6	78.5	78.7
22	78.4	78.3	78.0	77.8	77.5	76.8	76.9	77.3	77.6	77.7	78.1	78.4	78.4	78.3	78.2	78.1	78.0	77.8	77.9	77.9	77.9	78.1	78.3	77.7	77.9
23	77.5	77.6	77.6	77.4	77.1	77.4	77.6	77.8	77.8	77.7	77.8	77.8	77.6	77.3	76.6	76.7	77.0	77.2	77.6	77.8	77.8	78.0	78.0	78.1	77.5
24	78.3	78.6	78.6	78.6	78.0	76.1	75.6	75.6	74.5	74.7	74.3	75.0	75.4	76.6	76.7	76.5	74.7	73.2	72.9	72.2	71.9	71.9	72.0	71.4	75.3
25	71.4	71.9	72.7	73.5	74.1	74.6	74.5	74.7	74.3	74.1	74.4	75.2	77.8	78.7	78.8	78.7	78.7	79.1	79.2	78.9	79.1	78.9	78.9	78.6	76.1
26	78.3	78.6	78.8	78.3	78.4	77.7	77.8	78.2	78.3	77.9	78.6	79.0	79.0	79.0	79.2	79.0	78.2	78.3	79.0	79.0	78.9	78.7	78.3	77.7	78.5
27	77.7	77.5	78.0	78.2	78.4	78.3	78.1	77.8	77.8	77.7	77.9	78.4	77.8	77.7	76.8	77.3	77.2	77.2	77.4	77.5	77.4	77.4	77.4	77.3	77.7
28	77.3	77.0	77.2	77.6	77.5	77.4	77.2	77.4	77.6	77.7	77.7	77.5	77.4	77.6	77.5	77.3	77.4	77.6	77.6	77.7	77.7	77.7	77.7	77.0	77.5
29	76.7	75.9	75.0	74.9	75.4	75.7	76.8	76.8	77.8	78.7	79.3	79.6	79.5	79.4	77.8	77.1	75.8	75.7	75.8	75.8	75.9	75.6	74.9	75.4	76.8
30	75.5	75.2	76.2	76.6	76.9	76.0	77.0	76.0	77.2	77.6	78.3	78.8	79.4	78.6	78.7	78.6	78.7	79.7	81.3	81.5	82.4	83.4	83.7	83.2	78.6
31	81.8	81.1	80.8	79.7	79.3	78.9	77.9	77.6	77.5	78.6	79.1	79.6	79.7	79.5	79.2	78.5	77.1	76.8	76.1	76.1	76.1	75.3	75.2	75.6	78.4
Mean	77.5	77.3	77.4	77.4	77.3	77.2	77.2	77.2	77.2	77.5	77.9	78.3	78.6	78.7	78.5	78.3	78.0	78.0	78.0	77.9	77.8	77.7	77.6	77.8	77.8

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

February, 1925.

I	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	75.4	74.8	74.8	74.7	74.6	74.4	74.6	74.9	75.6	76.6	77.6	77.5	78.6	78.7	78.7	78.4	78.0	78.2	77.9	77.6	77.3	77.5	77.6	78.0	76.7
2	77.3	77.4	77.4	77.4	77.4	77.5	77.6	78.6	79.0	79.7	80.6	81.3	80.6	82.4	82.4	81.1	81.2	80.7	79.4	79.6	80.1	78.2	77.9	77.4	79.8
3	77.9	77.6	77.6	77.3	77.4	77.7	77.7	78.0	78.6	78.9	79.5	80.7	80.9	81.0	82.1	82.4	81.2	79.7	79.3	78.5	77.0	76.7	76.5	76.3	78.8
4	76.0	75.6	75.8	75.7	75.9	75.4	75.4	75.8	75.4	75.8	76.7	77.6	77.8	78.2	78.1	78.4	78.1	78.4	79.1	79.4	79.9	79.4	79.9	80.1	77.3
5	80.5	81.0	81.2	82.1	82.1	81.6	81.5	80.5	79.6	78.8	79.8	80.2	80.4	79.8	80.0	79.0	78.0	77.0	76.6	76.5	75.9	75.3	75.5	75.5	79.2
6	74.6	74.6	74.4	75.5	74.2	75.0	73.7	73.2	73.8	74.6	75.0	76.1	77.4	76.8	76.7	76.2	75.6	75.0	74.3	73.7	73.7	73.1	73.3	73.0	74.8
7	72.8	72.7	71.6	72.6	73.7	74.5	74.1	73.8	74.3	74.3	74.9	75.8	76.0	76.1	76.2	75.8	75.0	74.7	75.8	76.1	76.2	76.6	76.9	76.0	74.8
8	76.2	76.4	76.6	77.4	77.6	77.5	77.6	76.9	77.6	78.0	80.3	81.1	81.2	82.6	81.6	81.6	81.3	78.3	77.1	78.5	78.3	77.2	76.5	78.6	
9	77.1	76.8	77.2	77.5	77.0	76.8	76.7	76.9	77.3	78.0	77.9	78.6	78.7	79.2	78.7	77.9	77.0	76.5	76.1	75.9	75.6	75.0	74.9	75.0	77.0
10	75.5	76.5	77.5	77.6	77.7	77.8	78.0	78.0	78.7	79.0	80.0	80.5	80.8	80.7	80.7	80.1	78.8	78.0	77.9	77.1	77.1	77.3	76.9	76.7	78.3
11	76.6	76.5	76.4	76.3	76.1	76.1	76.0	76.0	76.4	77.1	77.7	78.2	78.6	78.5	78.4	77.9	77.5	77.5	77.3	77.1	76.7	76.6	76.6	76.2	77.0
12	75.6	75.2	75.3	75.0	74.5	74.5	74.7	74.4	74.7	75.5	76.6	76.9	77.0	76.7	77.4	75.4	75.6	75.8	75.7	75.3	75.2	74.6	74.4	74.2	75.5
13	73.9	73.4	73.7	73.4	72.6	72.6	73.4	73.6	76.5	77.4	77.8	77.9	78.1	77.7	78.0	77.6	76.6	76.7	76.9	76.2	75.9	75.1	74.6	73.6	75.6
14	73.3	73.6	73.4	74.1	74.4	75.0	75.6	75.8	76.7	77.0	77.4	78.6	78.5	78.7	78.1	78.0	77.7	78.4	78.5	77.0	76.6	76.7	76.0	76.5	76.5
15	75.8	75.5	75.1	75.7	75.9	75.9	75.8	76.6	76.9	77.1	77.7	78.1	77.6	77.6	77.9	77.9	78.6	78.6	78.8	78.9	78.6	78.7	78.6	78.7	77.3
16	78.6	78.6	78.5	78.2	78.1	78.1	77.7	77.6	78.0	78.4	78.6	78.7	79.4	79.4	79.4	79.4	78.2	78.2	77.4	77.6	77.6	78.0	78.0	78.2	78.3
17	78.0	78.1	78.4	78.2	78.0	77.8	77.6	77.9	78.0	78.4	78.5	79.2	78.7	79.0	79.0	78.6	78.2	78.0	78.2	78.0	77.7	77.8	77.9	77.6	78.2</

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

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

March, 1925.

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
	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	78.1	78.1	78.1	77.9	78.0	78.0	77.9	77.7	78.1	78.0	78.9	78.4	79.4	79.4	79.0	78.9	78.0	78.5	78.1	78.0	78.4	78.1	77.8	77.5	78.3
2	76.6	76.3	76.6	76.9	76.0	75.9	75.4	75.7	76.7	76.7	77.7	77.4	77.5	78.2	77.4	77.2	76.9	76.9	76.0	75.6	75.6	74.9	75.4	75.6	76.4
3	75.7	75.8	75.9	76.0	76.0	75.9	76.0	75.9	76.2	77.7	78.0	78.1	78.5	78.8	78.7	79.0	78.7	78.1	77.1	77.3	77.0	76.3	76.2	76.6	77.0
4	76.6	76.5	76.2	76.4	77.1	76.9	77.6	78.2	79.0	79.9	80.3	81.0	81.6	81.3	81.4	81.2	80.8	80.4	80.4	80.0	79.8	79.1	79.1	79.1	78.4
5	78.8	78.9	79.0	79.1	79.4	79.2	79.0	79.0	79.5	81.1	81.4	81.7	81.8	81.7	82.2	82.3	82.0	82.0	82.3	82.6	82.4	82.2	81.4	81.1	80.8
6	80.8	80.5	80.1	79.8	79.9	80.0	79.8	79.9	80.0	80.4	80.3	80.3	80.4	80.9	81.5	80.5	80.3	80.1	79.9	79.1	79.6	79.4	79.1	78.7	80.1
7	78.7	78.3	77.6	77.5	76.9	77.0	76.9	77.0	77.6	78.0	77.7	79.2	78.1	79.0	79.3	79.1	78.1	77.1	76.0	76.0	74.8	74.2	74.0	73.7	77.3
8	73.7	73.7	73.1	73.3	73.3	73.1	74.0	75.0	74.5	75.4	74.2	74.8	73.0	73.9	74.4	73.4	72.6	72.3	72.1	71.0	70.9	71.5	72.0	71.0	73.2
9	71.0	71.2	71.4	72.6	71.6	72.1	72.7	73.5	74.1	73.7	73.8	75.0	74.4	74.4	75.3	74.8	74.5	74.0	73.6	73.8	74.4	74.3	74.4	73.7	73.5
10	73.7	73.6	73.4	72.6	72.9	72.6	72.7	73.2	74.0	74.8	75.8	76.4	77.0	77.6	77.6	77.0	75.9	75.4	74.9	74.9	74.7	74.6	74.2	73.9	74.7
11	73.6	73.7	73.9	74.5	74.6	73.1	72.4	72.8	73.3	74.2	75.0	75.9	76.6	76.7	76.3	76.9	76.7	75.7	75.0	74.1	74.3	73.1	73.0	74.1	74.6
12	73.6	73.9	73.7	74.7	74.4	71.7	70.4	70.3	71.9	73.4	74.4	75.6	76.0	76.6	77.1	77.2	76.7	75.5	74.7	74.1	74.3	74.6	74.4	74.4	74.3
13	75.1	75.2	75.5	75.6	75.2	75.6	76.0	75.8	76.0	76.7	78.4	78.4	78.4	78.6	79.0	79.4	79.0	78.1	77.6	78.3	78.5	78.2	78.4	78.1	77.2
14	78.0	78.0	77.6	78.1	77.7	77.9	78.1	78.3	78.7	79.0	79.1	79.5	80.0	80.4	80.2	80.8	80.8	80.3	80.0	79.4	79.1	79.0	78.8	78.4	79.0
15	78.1	78.2	78.0	77.9	77.6	77.7	78.0	78.4	79.2	80.3	81.5	81.6	82.2	82.6	83.1	84.5	84.1	82.7	82.5	81.6	80.9	79.0	79.4	80.0	80.4
16	79.4	79.3	78.7	79.0	79.3	80.1	79.8	80.4	81.0	81.6	81.5	82.3	83.4	83.9	84.0	83.9	83.4	82.7	82.4	82.0	79.8	79.4	78.9	78.0	81.1
17	78.0	77.0	76.8	76.8	76.2	75.3	75.2	76.8	78.7	79.8	79.6	80.3	80.1	81.0	80.6	80.4	80.7	79.4	79.0	79.3	79.3	79.2	79.4	79.3	78.6
18	79.2	78.8	78.1	77.0	77.1	76.5	76.4	76.9	79.6	81.6	82.7	81.6	81.2	81.9	82.0	82.9	82.6	82.1	81.9	81.5	81.1	81.0	80.6	80.5	80.2
19	80.0	80.0	80.0	80.0	80.1	79.7	80.0	80.5	81.3	82.4	83.3	83.1	81.5	80.7	81.0	81.2	80.8	80.0	79.5	79.0	78.7	78.5	78.1	77.6	80.3
20	77.2	77.1	77.1	77.0	76.6	76.0	76.1	76.9	77.1	77.6	78.1	78.1	78.2	77.4	78.3	75.5	74.5	75.0	74.7	74.2	73.5	73.2	72.9	72.8	76.1
21	72.4	72.4	72.5	71.6	71.7	71.6	71.8	72.4	73.4	73.1	73.6	74.5	73.5	74.7	74.0	74.2	73.4	73.6	73.1	73.5	73.6	73.6	73.9	74.4	73.2
22	74.1	72.5	72.0	71.4	71.0	71.6	71.6	72.4	73.1	74.3	75.3	76.2	76.4	77.5	77.2	77.2	77.0	76.5	75.8	75.4	75.3	75.3	75.5	75.5	74.6
23	74.9	75.0	75.3	75.5	75.7	76.1	76.0	76.0	77.8	77.3	78.5	78.6	78.7	79.7	80.0	78.7	78.6	77.5	76.0	77.3	76.7	77.0	77.1	76.9	77.2
24	77.0	77.1	76.2	76.6	76.5	76.0	76.2	76.7	77.1	78.4	79.2	79.8	79.6	75.8	76.5	78.9	79.0	77.3	76.5	76.0	75.8	76.3	76.2	74.9	77.1
25	75.4	76.3	76.1	76.0	76.0	76.4	76.9	77.3	76.9	78.4	78.6	79.4	79.6	79.6	79.4	78.7	78.8	77.6	77.4	76.7	76.4	75.7	76.3	75.9	77.2
26	75.0	76.0	75.7	75.0	74.4	74.4	74.4	75.4	76.6	76.7	77.4	76.6	77.1	77.0	77.6	77.6	77.2	76.7	76.3	75.3	74.7	74.0	73.4	72.9	75.8
27	72.6	72.4	72.0	72.0	72.2	71.9	72.8	74.6	76.4	78.6	80.0	80.9	81.9	81.8	82.5	80.7	80.1	79.7	78.3	77.6	77.5	77.2	76.0	76.2	76.8
28	76.1	75.8	75.5	75.1	74.2	74.5	74.6	75.1	76.2	76.8	77.5	77.9	78.8	79.3	79.3	79.2	79.1	78.5	78.1	77.9	78.0	78.2	79.6	80.0	77.2
29	80.1	80.4	80.6	80.7	79.8	79.6	80.4	80.8	81.4	82.4	81.6	82.4	82.7	82.9	83.0	82.9	82.9	82.3	81.5	80.5	79.8	80.1	79.0	79.4	81.1
30	78.5	77.8	78.4	77.9	78.2	78.0	78.7	80.0	81.1	82.7	83.0	83.2	83.1	83.4	83.5	83.4	82.9	82.1	81.7	80.9	81.1	78.0	77.2	76.6	80.5
31	77.0	77.1	77.1	77.2	77.1	76.7	76.7	77.0	77.8	78.2	77.7	77.8	77.8	77.5	76.5	75.5	74.8	74.6	74.5	74.1	73.8	74.2	74.0	74.3	76.3
Mean	...	76.4	76.4	76.2	76.0	75.8	76.0	76.4	77.2	78.0	78.5	78.9	79.0	79.2	79.3	79.1	78.7	78.2	77.7	77.3	77.1	76.8	76.6	76.5	77.4

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

April, 1925.

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
	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	74.5	73.9	74.0	73.6	73.2	72.6	73.4	73.7	74.8	75.8	76.6	77.8	78.5	78.8	78.7	78.4	77.9	77.8	77.6	77.4	77.4	77.4	77.4	77.6	76.1
2	77.8	78.0	78.3	78.2	78.4	78.2	77.8	78.3	78.0	77.2	77.6	77.6	78.4	78.5	78.2	78.2	77.4	76.4	75.3	74.7	73.8	72.9	72.6	72.0	76.9
3	72.1	72.1	71.7	71.6	71.2	71.2	72.5	73.1	74.4	75.0	75.6	76.8	76.9	77.6	77.2	76.8	76.9	76.9	76.2	75.9	75.9	76.1	75.7	76.0	74.7
4	75.9	75.6	75.7	75.9	76.1	76.2	77.0	77.5	77.7	77.7	78.1	79.0	80.1	80.4	79.6	79.0	78.9	78.2	77.8	77.6	77.4	77.4	77.4	77.6	77.6
5	77.6	77.7	77.7	77.8	78.0	78.1	78.2	78.2	78.5	78.7	79.1	79.0	79.0	79.3	79.4	79.6	79.6	79.5	79.4	79.5	79.4	79.3	79.4	79.4	78.8
6	79.3	79.2	79.2	79.1	79.1	79.1	79.4	79.4	79.6	79.8	80.0	80.2	80.2	80.3	80.3	80.0	80.1	80.0	79.7	79.6	79.6	79.6	79.5	79.3	79.7
7	79.2	78.9	78.5	78.2	78.1	78.0	78.4	78.8	79.1	79.3	79.3	79.4	79.8	79.9	79.6	79.6	79.5	79.2	79.3	79.2	79.5	79.4	79.4	79.1	79.1
8	78.8	78.4	78.4	78.0	77.6	76.9	76.9	77.0	77.8	77.9	78.6	79.4	78.9	79.0	79.1	78.6	78.4	78.3	78.1	78.5	78.8	78.9	79.0	78.3	78.3
9	79.0	78.9	78.8	78.6	77.9	78.0	78.1	77.7	78.0	78.0	78.4	78.7	79.1	79.4	79.4	79.1	78.6	79.0	79.2	79.0	78.6	78.6	78.3	78.7	78.6
10	79.0	79.0	79.1	79.2	79.2	79.0	79.4	80.3	80.7	81.7	82.6	83.4	82.6	82.6	81.8	81.0	80.8	80.3	79.7	79.4	79.3	79.4	79.2	79.1	80.3
11	79.2	79.1	78.8	78.5	78.2	78.1	78.7	79.6	80.6	8															

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

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

May, 1925.

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	78.6	78.0	77.2	77.2	76.9	77.4	79.3	79.4	79.2	80.4	80.5	81.2	81.0	81.4	81.5	81.6	81.7	81.4	81.2	79.9	79.1	78.0	76.9	76.3	79.4
2	76.2	74.9	74.4	73.7	74.1	75.8	78.0	80.0	80.5	81.2	81.6	81.7	81.8	82.0	82.4	83.2	83.3	82.2	81.3	81.0	80.9	80.9	80.5	80.0	79.6
3	79.6	79.4	79.6	79.8	80.0	80.4	83.0	84.0	84.6	84.4	85.2	83.6	84.5	83.9	85.1	84.5	83.8	82.8	82.2	81.6	81.6	81.5	81.5	81.4	82.4
4	81.1	81.2	80.9	80.6	80.9	80.9	80.6	80.6	80.8	80.7	80.7	80.7	80.5	80.8	80.8	81.2	80.5	80.4	80.3	80.3	79.9	79.6	79.5	79.7	80.6
5	80.2	80.5	80.5	80.4	80.4	80.4	80.4	80.6	80.7	80.6	81.0	81.4	81.5	81.5	81.4	81.2	81.0	80.6	80.4	80.0	80.0	80.0	80.0	80.0	80.6
6	79.6	79.3	79.3	79.0	79.0	79.2	80.0	80.2	80.3	80.6	80.6	80.8	82.7	83.0	82.4	82.1	82.4	81.1	81.0	80.6	80.4	80.2	80.3	80.2	80.6
7	80.2	79.9	80.0	80.0	80.0	80.1	80.5	80.5	81.0	81.1	81.3	81.0	80.6	80.6	80.6	81.2	81.0	80.7	80.7	80.3	80.3	79.6	79.6	79.9	80.5
8	80.1	80.6	80.6	80.5	80.6	80.6	80.6	80.9	80.2	80.0	80.6	81.4	82.4	82.6	81.9	82.0	81.9	81.4	81.2	81.0	81.0	80.9	80.9	80.9	81.0
9	81.0	81.0	81.0	81.0	81.0	81.0	80.9	81.0	81.1	81.0	80.7	80.7	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.8
10	80.2	79.9	80.0	79.9	80.1	80.5	81.1	82.0	82.2	81.1	81.2	82.2	81.5	81.2	80.9	81.6	81.2	80.8	80.4	79.9	79.7	80.0	79.5	79.6	80.7
11	80.0	80.1	80.2	79.9	80.1	81.0	81.4	81.8	81.7	81.9	82.0	81.8	82.0	83.3	84.1	84.2	84.4	86.6	86.0	84.0	82.6	82.4	81.8	81.6	82.2
12	81.3	81.0	80.7	80.7	81.1	81.8	83.7	84.6	85.4	85.7	86.0	86.5	87.0	86.6	85.0	84.6	83.6	83.0	82.6	82.1	82.1	81.9	81.7	81.7	83.3
13	81.5	80.7	81.1	80.0	81.3	82.3	83.2	83.9	84.6	86.0	86.1	86.9	86.0	86.2	86.3	85.5	85.0	85.4	83.4	83.4	83.0	82.7	82.5	82.5	83.7
14	82.0	81.6	81.2	81.0	81.1	81.5	82.1	83.1	84.4	85.0	83.0	83.0	82.7	82.6	82.8	83.0	83.2	83.3	82.5	81.6	81.0	80.7	80.6	80.4	82.3
15	80.2	80.5	80.8	80.7	80.7	80.8	80.9	81.4	81.8	81.6	82.3	83.4	82.6	82.3	83.5	83.5	82.8	82.7	82.2	81.9	81.9	82.0	81.9	82.3	81.7
16	82.3	81.7	81.5	82.0	81.6	81.6	82.0	82.6	83.9	85.6	87.4	87.6	88.5	87.5	83.6	82.6	82.1	81.4	81.3	81.3	81.4	81.4	81.6	81.8	83.1
17	81.3	81.1	81.0	81.0	81.9	83.5	84.7	86.7	86.2	86.7	88.0	87.8	88.5	89.0	85.3	84.4	84.6	83.6	83.6	83.1	82.8	82.6	83.0	82.7	84.3
18	82.4	82.0	82.0	82.6	82.4	82.5	83.0	83.4	83.7	84.1	83.2	83.2	83.7	86.3	84.2	83.6	83.5	83.6	82.7	82.8	82.7	82.3	82.2	82.4	83.1
19	82.5	82.4	82.4	82.4	82.5	83.5	84.4	84.5	84.4	84.2	84.2	84.5	84.4	84.1	84.4	84.2	84.1	84.1	83.8	83.3	83.0	82.9	82.9	82.8	83.6
20	82.6	82.5	82.6	82.9	83.0	83.3	83.3	83.4	84.7	83.7	84.7	84.5	84.4	84.6	85.0	84.7	84.4	84.9	84.3	84.0	83.8	84.4	83.7	83.6	83.9
21	84.7	84.6	84.0	83.2	83.6	84.3	85.1	85.5	85.6	86.1	86.4	85.3	85.7	85.8	89.0	88.9	89.8	89.1	87.8	84.8	83.3	83.0	82.5	82.3	85.5
22	82.1	81.9	81.7	81.6	81.0	81.1	81.2	81.7	81.7	81.4	81.9	82.4	82.2	82.2	82.3	82.2	82.1	82.0	81.8	81.6	81.5	81.5	81.5	81.5	81.8
23	81.5	81.4	81.2	81.3	81.5	81.6	81.7	81.7	82.0	82.5	82.5	82.6	82.3	82.4	82.0	81.5	81.3	81.2	81.3	81.1	81.1	81.0	81.0	81.0	81.6
24	80.9	81.0	80.9	80.9	80.9	81.0	81.4	81.6	82.4	82.2	82.6	82.9	82.7	82.4	82.3	82.2	82.1	82.0	81.8	81.8	82.0	81.9	81.9	81.9	81.6
25	81.9	82.0	81.9	81.8	81.7	81.6	81.9	81.9	82.2	82.4	82.4	82.4	82.2	82.0	81.7	81.6	81.6	81.6	81.6	81.5	81.4	81.1	81.1	81.0	81.8
26	80.8	80.6	80.5	80.4	80.3	80.4	82.0	82.4	83.2	83.9	83.0	83.1	83.6	84.0	83.9	83.4	83.3	83.0	82.3	82.3	82.1	82.1	82.2	82.0	82.3
27	82.0	82.1	82.0	82.0	82.1	82.2	82.2	82.4	82.5	82.7	83.0	83.4	84.1	85.2	87.8	87.9	87.7	87.8	87.7	86.1	83.6	83.0	82.5	82.1	83.9
28	82.0	82.0	82.0	82.3	82.6	83.4	83.6	83.1	84.0	83.7	84.5	84.4	84.4	84.4	84.4	85.8	86.0	85.1	83.7	83.0	82.5	82.8	82.3	82.3	83.5
29	82.1	81.6	81.6	81.6	82.1	82.1	82.4	82.5	83.2	84.8	86.7	86.8	88.0	88.8	88.0	88.4	87.6	85.8	84.0	83.4	83.1	82.2	82.2	82.6	83.6
30	82.6	82.5	82.6	82.0	83.0	83.6	85.1	85.7	86.0	86.4	86.1	86.6	85.3	86.7	86.8	85.5	85.4	85.0	83.7	82.4	82.0	81.9	81.8	81.7	84.2
31	81.8	81.8	81.6	82.0	82.4	83.0	84.0	85.0	85.4	86.4	86.8	87.1	87.7	87.3	88.0	87.8	87.1	87.8	86.0	84.4	83.4	83.0	82.8	82.5	84.8
Mean	...	81.1	81.0	80.9	80.8	81.0	81.4	82.1	82.6	82.9	83.2	83.4	83.5	83.7	83.9	83.8	83.7	83.5	83.2	82.7	82.1	81.7	81.6	81.4	82.3

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

June, 1925.

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	82.3	81.8	81.7	81.6	81.4	81.8	84.2	85.6	85.2	86.1	86.6	88.0	87.4	88.1	87.5	86.9	87.2	86.4	86.1	85.2	84.2	83.2	82.6	82.5	84.7
2	82.3	81.6	81.2	81.1	81.8	83.0	84.6	85.7	86.5	86.1	87.3	86.0	87.0	85.2	83.9	84.8	83.6	83.4	83.0	83.6	83.0	82.2	81.8	82.0	83.8
3	80.6	80.2	79.8	80.6	81.8	83.2	84.0	83.6	82.6	82.8	82.8	82.8	83.7	85.0	86.4	88.1	88.8	89.3	88.9	88.6	87.7	87.4	86.3	86.2	84.5
4	86.1	85.9	85.4	85.6	86.1	87.3	89.6	89.9	91.5	91.0	92.0	93.0	94.1	95.7	94.5	95.3	93.9	92.3	91.6	90.6	89.7	88.5	87.9	88.0	90.2
5	87.9	85.6	86.3	85.8	87.5	89.1	89.3	89.5	89.0	89.1	90.0	91.0	90.8	91.9	90.8	91.0	90.2	88.8	89.1	87.8	87.1	86.4	85.0	84.8	88.6
6	84.0	84.2	84.0	84.1	84.3	83.8	83.6	83.5	83.8	84.4	86.8	85.6	86.2	86.4	87.1	86.5	85.9	85.7	85.3	84.6	83.4	83.1	82.6	81.6	84.7
7	81.3	80.9	80.2	81.0	81.1	83.2	85.8	85.6	85.3	85.6	85.6	85.6	85.5	86.0	86.0	86.8	86.4	85.9	86.5	85.6	84.6	83.9	83.5	83.5	84.3
8	83.1	82.9	82.5	82.1	82.0	82.0	82.0	82.1	82.5	82.4	82.6	83.5	83.6	84.0	84.2	84.1	84.1	83.9	83.3	83.1	82.8	82.6	82.3	82.2	82.9
9	82.2	82.2	82.1	82.0	82.0	82.7	83.9	84.3	84.9	85.3	86.7	87.3	86.7	87.4	88.2	88.2	89.2	90.5	91.0	90.0	88.8	88.1	86.7	86.3	85.8
10	85.6	85.9	85.8	86.1	87.1	88.8	91.9	93.6	94.8	96.1	91.6	92.9	91.2	89.1	88.6	87.0	86.8	86.5	86.3	86.1	87.3	87.0	86.0	85.5	88.7
11	85.0	85.0	86.0	86.1	86.6	87.4	88.7	87.1	86.4	87.1	86.2	86.7	86.4	85.8	85.7	86.3	86.3	85.8	85.8	85.2	85.5	85.2	85.1	84.9	86.1
12	84.8	84.7	84.4	84.6	85.0	85.5	85.7	86.0	86.9	87.3	86.5	87.0	87.5	88.4	87.0	87.8	88.3	88.5	87.5	86.4	85.3	85.2	84.3	84.5	86.2
13	85.0	84.7	84.9	84.8	85.6	86.4	86.4	89.0	89.0	90.7	90.0	88.2	88.1	89.8	90.3	90.6	90.3	89.7	89.1	88.1	86.1	85.7	84.3	83.9	87.5
14	83.1	82.6	82.5	82.7	83.6	83.8	84.4	85.0	85.5	86.2	87.0	88.0	89.1	89.2	89.4	87.1	85.4	86.0	85.6	85.1	84.6	84.5	84.9	85.3	85.4
15	85.5	85.5	84.5	84.3	84.9	85.7	87.1	89.4	91.0	93.2	94.3	91.3	94.0	94.4	95.6	93.9	91.3	90.6	87.4	86.8	87.1	86.8	86.3	86.9	89.0
16	86.6	86.3	85.9	85.6	86.4	87.5	87.7	88.1	88.6	89.1	88.7	89.3	89.6	90.0	89.7	87.6	87.3	86.4	86.3	85.7	84.6	84.1	84.0	83.5	87.1
17	82.5	81.5	81.3	81.4	81.8	82.0	82.7	83.3	83.5	83.3	84.6	85.3	86.6	87.0	86.8	87.4	87.8	86.0	85.6	84					



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

36. Aberdeen : North Wall Screen on Tower : ht (height of thermometer bulb above ground) = 12.5 metres.

July, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows (1-31). Each cell contains two temperature readings (a. and a.).

37. Aberdeen : North Wall Screen on Tower : ht = 12.5 metres.

August, 1925.

Table with 25 columns (1-24, Mean) and 31 rows (1-31). Each cell contains two temperature readings (a. and a.).

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.

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

September, 1925.

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	83.3	82.8	83.9	83.4	84.2	83.9	84.5	85.8	86.2	86.6	86.7	87.0	87.8	86.4	86.2	86.1	84.4	84.8	83.9	83.5	82.8	82.4	82.0	82.0	82.0	84.7		
2	82.0	81.9	81.7	82.0	81.7	82.5	83.0	84.3	85.1	85.4	85.7	86.4	86.5	85.1	84.5	84.5	84.4	84.4	84.5	84.2	84.5	84.5	84.5	84.5	84.5	84.1	84.0	
3	82.0	81.0	80.9	80.9	80.3	80.6	81.1	82.2	83.0	83.2	83.9	84.3	83.4	83.0	83.8	83.6	81.6	81.5	81.1	80.9	80.6	80.2	79.8	79.6	79.6	81.9	81.9	
4	79.1	78.8	79.0	78.5	78.0	77.5	78.7	79.6	80.1	80.6	80.9	81.7	82.8	83.2	82.6	82.6	82.7	81.5	81.2	80.6	80.5	80.6	80.9	81.0	81.0	80.5	80.5	
5	81.0	80.5	80.0	79.8	80.0	79.9	80.4	80.8	81.4	81.9	82.7	82.9	83.1	83.6	83.7	83.0	82.8	82.2	81.9	82.0	82.0	81.7	81.6	81.6	81.6	81.6	81.7	
6	81.8	82.3	82.4	82.3	82.3	82.2	82.2	83.2	83.1	83.2	83.3	83.4	83.8	84.3	84.0	84.1	84.1	83.6	82.5	82.3	82.4	82.1	81.5	81.1	81.1	81.1	82.8	
7	81.1	81.5	81.7	81.7	82.0	82.1	82.5	83.5	84.0	85.4	85.9	85.7	85.7	84.9	85.0	85.0	84.0	83.4	82.6	82.0	81.7	81.6	81.0	81.0	81.0	80.5	83.1	
8	80.4	80.1	80.1	80.3	80.8	81.2	81.6	82.3	82.6	83.9	84.4	84.4	84.7	84.1	84.3	84.9	83.8	82.9	82.5	82.0	81.5	81.4	81.5	81.4	81.5	81.1	82.4	
9	81.0	80.8	80.7	80.6	80.4	80.3	80.2	80.7	80.8	81.4	82.3	81.2	82.1	81.4	82.9	83.0	82.9	82.4	81.6	80.6	80.4	80.4	80.4	80.4	80.4	80.1	81.2	
10	79.3	79.1	79.2	79.6	79.7	79.9	81.8	83.6	84.0	84.9	85.3	85.8	86.3	86.0	85.9	85.7	84.9	84.5	84.1	83.9	83.9	84.1	83.9	84.1	83.9	83.2	83.2	
11	82.8	82.9	82.5	82.2	81.7	81.1	82.0	82.8	82.6	83.2	82.7	83.6	85.1	84.8	85.1	84.1	82.6	82.9	82.5	82.1	81.0	81.0	79.9	80.7	80.7	82.6	82.6	
12	80.0	79.7	79.9	79.4	79.3	80.1	81.0	82.2	83.6	84.0	84.5	84.9	84.8	84.7	84.6	84.6	84.1	83.5	83.1	82.1	80.6	80.6	79.7	80.1	80.1	82.1	82.1	
13	79.8	80.7	80.6	79.8	79.4	79.8	81.1	83.0	83.5	85.4	85.9	86.6	87.2	86.8	87.5	87.6	86.8	86.0	84.8	83.9	83.6	83.8	83.6	83.6	83.6	83.2	83.7	
14	83.9	84.0	84.3	84.0	83.8	83.6	84.0	84.7	85.9	87.7	88.6	89.6	89.6	89.6	89.6	89.6	89.3	89.3	88.9	88.0	87.7	87.3	86.9	86.6	86.6	86.6	86.8	
15	85.9	85.3	85.7	85.6	85.6	85.1	85.1	85.2	86.9	87.2	87.8	87.3	87.0	87.3	88.0	87.0	87.0	86.1	85.8	85.6	85.7	85.4	85.4	85.4	85.4	85.4	86.1	86.1
16	85.2	85.0	84.9	84.8	84.9	84.3	84.5	84.2	84.8	85.1	86.6	86.9	87.0	87.8	87.2	86.7	86.8	85.6	85.0	84.7	83.0	82.0	81.1	80.7	80.7	85.0	85.0	
17	81.2	80.4	80.3	79.2	78.9	78.1	78.7	80.3	83.0	84.4	84.1	84.5	84.8	84.8	84.8	84.5	84.3	83.8	83.6	83.5	83.2	83.0	82.6	82.6	82.6	82.6	82.4	82.4
18	82.3	82.2	82.0	81.6	81.5	81.4	81.6	81.9	83.5	84.4	85.7	86.0	86.0	85.7	88.0	87.7	87.6	87.1	85.9	85.0	84.5	84.1	83.5	83.2	83.2	83.2	84.3	84.3
19	82.5	82.6	82.4	82.6	82.9	82.4	82.8	84.2	85.5	85.8	86.0	86.6	86.4	85.9	85.6	85.1	84.9	84.8	84.7	82.9	82.4	82.4	82.8	82.4	82.4	82.4	84.0	84.0
20	81.4	80.6	80.4	80.4	80.9	81.2	81.6	82.0	83.0	83.9	84.6	85.8	86.8	86.8	86.6	86.2	85.9	84.5	83.9	82.9	82.2	81.0	80.6	80.3	80.3	80.3	83.1	83.1
21	80.5	79.8	79.4	79.0	78.6	78.5	80.0	81.5	83.0	83.6	83.8	84.5	85.4	84.7	83.8	84.3	84.4	83.0	83.1	81.5	82.1	80.9	80.1	79.6	79.6	81.9	81.9	
22	79.5	78.4	78.8	78.9	79.5	80.0	80.5	81.6	83.0	83.5	84.9	84.9	85.0	84.9	84.2	84.0	83.2	82.9	82.6	82.1	82.0	81.9	81.7	81.9	81.9	82.0	82.0	
23	81.9	82.0	82.1	81.5	81.8	81.9	82.3	83.0	83.4	84.4	84.5	85.4	85.9	85.1	85.2	83.6	83.1	82.4	82.1	82.0	82.0	81.9	81.6	81.6	81.6	81.6	83.0	83.0
24	81.4	81.5	81.3	81.1	80.6	80.6	81.0	81.9	81.7	82.2	83.6	83.8	83.4	83.0	81.9	82.6	83.0	82.2	81.6	81.0	81.0	81.0	81.0	81.0	81.0	80.3	81.9	
25	80.3	80.7	79.9	79.4	79.6	78.6	78.9	80.0	81.7	83.1	84.1	84.6	84.0	84.3	83.3	83.8	83.4	83.1	83.0	82.9	82.4	81.4	81.1	80.7	80.7	81.8	81.8	
26	80.4	80.3	80.3	80.1	79.9	79.7	79.9	80.0	80.7	81.5	82.1	82.5	82.5	82.6	82.7	82.4	82.4	82.3	82.0	81.8	81.5	81.4	81.6	81.1	81.1	81.3	81.3	
27	80.9	80.9	81.1	80.6	79.7	79.8	80.4	81.8	82.8	83.4	84.0	84.1	84.7	84.9	84.8	84.4	84.1	83.1	81.6	80.6	80.4	81.0	81.3	81.4	81.4	82.1	82.1	
28	82.2	82.7	82.0	82.0	82.3	82.0	82.3	83.2	84.4	85.4	86.6	88.6	88.8	89.4	90.7	91.1	89.6	88.0	87.4	86.9	86.6	86.7	87.0	87.1	87.1	87.1	85.8	85.8
29	87.1	87.2	87.4	87.0	86.9	86.6	86.5	86.6	85.0	84.9	85.1	85.4	85.4	85.5	85.5	85.0	85.4	84.6	83.5	83.3	83.5	83.4	83.6	83.3	83.3	83.3	85.4	85.4
30	83.2	82.7	82.6	82.6	83.1	83.4	83.0	83.6	84.8	86.5	87.2	87.7	87.2	88.0	88.0	87.3	87.1	86.7	85.6	85.1	84.4	83.9	83.6	83.0	83.0	83.0	85.0	85.0
Mean	81.8	81.6	81.6	81.4	81.3	81.3	81.8	82.7	83.4	84.2	84.8	85.2	85.5	85.3	85.3	85.1	84.6	84.0	83.5	83.0	82.6	82.5	82.1	81.9	81.9	83.2	83.2	

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

October, 1925.

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	81.9	81.5	81.8	81.8	81.8	81.7	81.7	83.6	84.6	87.0	88.4	88.3	88.5	86.6	87.1	86.6	86.2	85.3	85.0	84.6	83.6	82.8	83.0	82.6	82.6	84.4
2	82.6	83.2	83.0	82.6	82.4	82.5	83.0	83.9	84.5	86.1	86.7	87.4	87.9	87.5	87.3	86.5	85.8	84.5	85.0	85.4	84.9	84.7	84.0	83.7	83.7	84.8
3	83.9	83.7	84.1	84.5	84.6	85.4	85.6	86.1	87.4	89.2	86.4	86.2	85.7	84.3	83.3	83.7	83.3	82.9	82.6	82.6	82.4	82.6	82.6	82.6	82.6	84.4
4	82.6	82.1	81.0	80.2	79.5	79.4	79.8	80.5	82.5	83.5	84.5	85.3	85.5	85.6	86.1	86.0	85.3	84.7	84.5	84.3	83.7	84.2	84.2	84.2	84.2	83.3
5	84.2	84.3	84.6	84.3	83.0	88.9	88.7	88.1	86.4	87.1	88.5	89.1	88.7	88.6	88.6	87.0	87.0	86.8	86.6	86.2	86.3	86.6	86.9	87.2	87.2	87.0
6	87.5	87.7	87.3	87.9	88.3	88.6	88.5	89.1	89.7	89.6	89.2	89.5	89.7	89.5	89.4	89.5	88.1	87.0	87.4	86.7	84.6	84.0	82.9	82.7	82.7	87.8
7	82.2	81.5	80.9	80.6	80.1	80.5	80.2	80.0	81.1	81.0	81.5	81.5	81.6	81.6	81.2	80.4	79.6	79.1	79.2	78.3	78.3	77.4	77.8	77.6	77.6	80.2
8	77.4	77.0	77.6	77.7	77.0	77.1	76.9	78.7	79.2	80.7	81.9	83.3	83.3	83.7	83.4	82.9	82.6	82.0	82.1	82.0	81.8	80.8	80.6	80.0	80.0	80.4
9	80.8	80.0	78.8	77.7	77.7	77.7	77.9	79.6	81.2	83.2	84.3	84.7	85.0	85.5	86.3	86.3	85.5	83.4	82.6	81.4	81.6	81.1	80.9	80.1	80.1	81.8
10	79.4	78.7	78.6	79.4	78.9	77.9	78.1	80.5	82.4	85.0	86.2	86.2	86.0	86.0	85.8	85.4</										

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

40. Aberdeen : North Wall Screen on Tower : ht (height of thermometer bulb above ground) = 12.5 metres.

November, 1925.

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	83.2	83.3	83.3	83.4	83.0	82.6	81.7	81.7	82.3	82.2	82.6	82.7	83.2	83.1	83.5	83.6	83.5	83.4	83.5	83.6	83.5	83.7	84.0	84.2	83.9	
2	84.2	84.1	84.1	84.0	84.0	84.0	84.0	83.8	84.0	84.2	84.2	84.4	84.5	84.4	84.1	84.2	83.9	84.2	84.3	84.2	83.5	83.1	82.3	81.6	81.1	81.1
3	80.9	81.1	80.3	80.4	80.1	79.8	79.5	79.0	78.6	78.9	80.8	81.7	82.5	83.0	82.8	82.8	82.7	82.3	82.0	81.6	81.4	81.1	81.5	81.1	81.1	81.0
4	80.7	80.0	79.7	79.3	79.2	80.0	80.1	80.0	81.0	81.5	82.7	83.5	84.0	84.4	84.6	84.2	83.0	82.0	81.1	79.1	78.8	78.7	78.0	77.4	77.4	81.0
5	77.4	76.6	77.0	76.5	77.0	78.0	78.6	78.8	80.0	80.2	80.8	82.0	82.2	82.2	82.0	81.3	80.2	79.9	80.2	79.6	79.2	78.3	78.1	77.6	77.6	79.3
6	78.6	78.4	78.0	77.7	77.6	77.4	77.0	76.9	77.5	77.8	78.6	79.0	79.4	79.3	79.0	78.6	78.2	77.7	77.6	77.2	76.8	76.8	76.9	76.4	77.9	
7	75.7	75.8	76.8	77.4	78.1	78.4	78.5	78.3	78.5	79.0	79.5	79.8	78.2	78.3	78.6	79.1	78.9	77.2	78.1	78.0	76.9	78.0	77.8	77.5	78.0	78.0
8	78.6	78.1	77.8	77.4	77.2	76.3	75.2	75.9	74.1	74.2	75.7	75.1	75.7	75.0	74.8	74.1	73.7	73.8	73.6	73.6	74.0	73.6	73.6	73.5	73.5	75.4
9	73.4	73.4	73.7	73.8	73.9	73.6	73.5	73.5	73.6	74.0	74.5	74.9	75.4	75.6	75.2	74.6	73.6	73.5	73.3	72.7	72.7	72.6	72.8	72.9	72.9	78.8
10	72.4	72.6	72.8	73.1	73.3	73.7	73.6	73.7	73.9	74.5	74.9	75.1	75.6	75.9	76.1	75.4	75.4	74.7	73.9	73.6	73.0	73.3	73.6	73.5	74.1	74.1
11	72.8	73.7	74.0	73.9	73.8	72.9	73.5	74.0	74.5	75.2	76.2	76.8	76.7	77.0	76.7	75.8	75.8	75.4	74.9	74.7	74.8	75.0	74.5	73.6	74.8	74.8
12	73.4	73.4	72.9	73.2	73.1	73.2	73.3	73.4	73.5	74.6	76.6	76.7	77.9	76.9	76.6	76.1	76.0	75.6	75.0	75.0	74.8	74.4	74.2	74.3	74.9	74.9
13	74.5	74.4	73.9	73.6	73.2	73.9	73.9	74.6	74.6	75.3	76.4	76.9	77.2	77.2	77.0	76.2	75.7	75.6	74.7	74.7	74.2	74.0	73.5	72.4	74.9	74.9
14	72.6	71.2	71.1	72.0	72.5	73.4	73.4	73.4	74.6	74.5	74.7	75.6	76.5	77.2	77.5	76.6	75.8	75.7	75.9	75.8	75.6	75.6	75.6	75.4	74.6	74.6
15	75.0	75.1	75.7	76.2	75.8	75.7	74.6	74.4	75.2	75.5	76.0	77.1	77.2	77.3	77.4	77.3	76.7	77.1	76.8	76.1	76.6	76.6	77.0	77.8	76.2	76.2
16	77.4	77.0	77.1	77.4	77.5	78.5	78.2	78.0	77.1	78.0	79.3	79.9	80.3	80.4	79.7	78.4	77.3	75.6	75.3	74.5	74.4	74.5	74.3	73.5	77.3	77.3
17	72.9	72.4	72.4	71.4	71.3	71.2	71.2	71.4	71.8	72.5	73.4	74.8	76.9	77.8	77.9	77.4	77.0	76.7	76.1	76.4	77.5	77.0	76.8	77.0	74.6	74.6
18	76.6	76.6	76.0	75.9	75.8	75.4	75.0	75.2	76.3	77.4	78.6	79.0	79.4	79.6	79.0	78.3	78.0	77.4	77.0	77.1	76.5	75.5	76.2	75.6	77.0	77.0
19	75.2	74.1	72.8	71.9	72.2	70.9	71.4	70.8	71.8	72.4	74.1	74.6	76.0	76.9	76.5	76.4	75.1	75.4	76.5	75.2	76.9	76.9	76.3	76.1	76.1	74.8
20	76.0	76.6	75.8	76.2	75.9	76.3	77.4	77.5	76.4	78.1	78.9	80.1	81.0	80.7	80.5	79.6	78.9	78.5	78.5	77.3	77.1	77.0	76.6	76.1	77.8	77.8
21	75.5	75.9	75.5	75.6	76.1	76.1	76.2	76.6	77.1	77.2	77.9	78.5	78.9	79.7	79.0	78.6	78.6	78.0	78.0	78.0	78.1	78.2	78.2	78.0	77.5	77.5
22	77.9	77.8	77.7	77.6	78.0	77.9	77.9	76.9	76.6	77.5	80.0	80.7	80.5	80.4	80.1	79.6	79.4	78.7	78.3	78.2	76.7	76.5	76.0	76.5	78.3	78.3
23	75.8	75.8	76.3	76.4	75.8	75.9	76.0	75.3	76.1	77.0	78.0	78.0	78.3	78.2	76.5	76.0	75.6	75.8	76.1	76.1	76.2	75.6	75.9	75.8	76.3	76.3
24	75.8	75.2	75.0	75.8	76.2	76.9	77.1	76.9	77.0	77.8	78.2	78.1	77.9	78.0	77.9	77.8	77.4	78.2	77.9	78.3	78.3	79.6	77.0	75.9	77.3	77.3
25	74.9	73.9	73.2	72.8	73.2	73.0	73.9	73.8	74.6	74.6	75.0	74.4	75.5	75.6	75.0	74.8	74.3	73.7	73.5	73.4	73.0	73.4	73.0	72.8	72.9	74.0
26	73.2	73.0	73.0	72.5	72.3	72.6	72.8	73.2	73.6	74.0	74.2	75.0	75.2	74.9	75.1	74.3	75.0	75.3	76.3	76.5	77.9	77.1	76.0	76.2	74.5	74.5
27	74.1	73.8	74.3	73.7	74.2	74.3	75.0	73.8	74.8	74.4	74.8	75.1	75.5	75.0	75.1	74.3	74.3	73.8	73.6	73.6	73.3	73.4	73.6	73.6	74.2	74.2
28	72.3	73.4	74.0	73.8	74.2	74.0	73.2	74.8	74.8	74.4	74.4	74.5	74.5	74.4	75.7	75.4	75.0	74.8	75.2	74.4	74.6	74.4	74.5	74.8	74.3	74.3
29	73.9	74.1	74.0	73.6	73.6	73.6	73.6	74.0	74.4	73.7	72.6	72.9	73.5	73.7	73.7	73.6	73.6	74.0	74.2	74.5	74.4	74.4	74.0	74.5	74.0	73.8
30	74.2	74.4	75.0	77.1	77.8	77.2	77.5	78.0	77.9	77.9	78.0	77.0	76.9	77.8	77.8	76.9	77.1	77.1	78.0	77.6	76.8	76.2	76.0	75.6	76.8	76.8
Mean	...	76.0	75.8	75.7	75.8	75.9	75.9	75.9	76.2	76.6	77.4	77.8	78.2	78.3	78.2	77.8	77.3	77.1	77.0	76.7	76.6	76.5	76.3	76.1	76.7	76.7

41. Aberdeen : North Wall Screen on Tower : ht = 12.5 metres.

December, 1925.

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	74.9	74.8	74.6	73.9	74.0	73.9	74.0	73.7	73.5	73.9	73.8	74.5	73.8	73.8	74.1	73.7	73.7	73.8	73.7	73.5	73.2	73.0	72.8	72.7	73.9	
2	72.8	73.0	73.3	72.8	73.3	73.1	73.5	73.5	73.3	73.4	73.8	74.7	74.9	75.0	74.6	74.6	75.0	75.5	75.5	75.3	75.2	75.0	75.1	74.8	74.2	
3	75.0	74.6	75.1	75.2	75.5	75.6	75.8	75.7	75.5	75.8	76.0	76.0	76.0	75.9	75.7	75.6	75.6	75.5	75.4	75.6	75.4	75.0	75.3	75.4	75.1	75.5
4	75.4	75.7	76.0	75.9	75.5	75.6	75.8	75.6	74.9	74.5	75.5	76.0	76.2	75.9	75.2	74.4	74.1	73.9	73.9	74.2	74.0	74.4	74.5	73.3	75.1	75.1
5	73.3	73.5	73.2	73.9	72.7	73.0	72.9	73.1	73.6	74.1	74.4	75.4	75.2	75.4	74.8	74.6	74.5	74.1	74.6	75.0	75.3	75.4	75.6	76.2	74.2	74.2
6	76.1	75.7	75.3	75.2	74.8	74.6	74.2	74.6	73.6	74.3	74.4	75.5	76.1	75.2	73.9	73.1	71.9	71.4	71.5	73.1	75.9	75.8	76.0	75.9	74.5	74.5
7	76.0	76.5	75.6	75.6	76.2	77.2	77.4	77.6	77.6	78.0	78.6	78.3	78.8	78.9	78.0	78.1	78.9	79.3	79.4	79.4	79.4	79.6	79.6	79.6	80.2	80.2
8	79.9	80.2	80.3	80.6	80.8	81.2	81.2	81.4	81.4	81.9	81.9	81.5	81.9	81.8	82.1	82.0	79.5	78.6	78.4	78.4	78.1	77.7	77.4	78.5	77.5	77.5
9	76.4	76.0	75.8	75.8	76.0	75.7	76.5	76.9	77.4	77.8	77.9	78.6	78.1	78.8	78.6	79.0	78.7	78.6	78.2	77.5	77.4	78.2	78.6	78.7	78.5	77.5
10	78.5	78.4	78.4	78.3	78.1	77.8	78.1	77.9	78.0	77.7	77.3	77.8	78.1	77.9	78.1	77.9	77.9	77.9	77.9	78.0	77.9	77.3	77.0	76.6	76.4	77.9
11	76.4	76.2	76.1	75.7	75.6	75.6	75.7	76.0	76.2	76.5	76.3	76.6	76.6	75.6	77.6	77.0	76.6	76.5	76.8	76.2	76.4	76.3	76.5	77.4	76.3	76.3
12	77.8	77.4	77.1	77.0	76.3	75.																				

TEMPERATURE : ANNUAL MEANS OF HOURLY VALUES.

From readings in degrees absolute at exact hours, Greenwich Mean Time.

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

1925.

	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.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
	79.73	79.62	79.52	<b>79.48</b>	79.52	79.71	80.06	80.47	80.95	81.43	81.84	82.19	82.43	<b>82.47</b>	82.41	82.15	81.83	81.49	81.11	80.75	80.46	80.24	80.02	79.87	80.82

TEMPERATURE : MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

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

1925.

Month.	Mean.	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.
		1.	2.																						
Jan.	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.
Feb.	277.17	-0.79	-0.83	-0.77	-0.69	-0.77	-0.75	-0.79	-0.77	-0.30	+0.20	+0.68	+1.14	+1.33	+1.45	+1.39	+0.98	+0.63	+0.40	+0.09	+0.02	-0.24	-0.45	-0.54	-0.66
Mar.	277.39	-1.03	-1.09	-1.24	-1.27	-1.41	-1.58	-1.47	-0.98	-0.19	+0.59	+1.11	+1.49	+1.60	+1.79	+1.92	+1.76	+1.38	+0.79	+0.32	-0.03	-0.25	-0.55	-0.69	-0.87
April	279.02	-1.27	-1.36	-1.53	-1.73	-1.81	-1.56	-0.92	-0.22	+0.50	+0.92	+1.26	+1.57	+1.80	+2.00	+2.00	+1.42	+1.11	+0.72	+0.21	-0.18	-0.39	-0.55	-0.81	-1.07
May	282.35	-1.15	-1.34	-1.43	-1.52	-1.35	-0.96	-0.27	+0.22	+0.56	+0.82	+1.09	+1.20	+1.35	+1.55	+1.47	+1.29	+1.13	+0.87	+0.30	-0.30	-0.66	-0.85	-1.01	-1.09
June	285.28	-1.92	-2.17	-2.34	-2.32	-1.95	-1.29	-0.54	+0.11	+0.65	+1.07	+1.33	+1.55	+1.93	+2.20	+2.10	+2.13	+1.79	+1.31	+0.78	+0.17	-0.55	-0.99	-1.45	-1.65
July	<b>287.37</b>	-1.55	-1.75	-1.91	-1.94	-1.64	-1.01	-0.31	+0.29	+0.90	+1.12	+1.56	+1.77	+1.64	+1.58	+1.41	+1.41	+1.29	+0.90	+0.35	-0.20	-0.63	-0.95	-1.19	-1.39
Aug.	286.77	-1.67	-1.77	-1.92	-1.96	-1.96	-1.53	-0.75	-0.10	+0.39	+0.95	+1.31	+1.65	+1.92	+2.00	+1.91	+1.77	+1.57	+1.39	+0.80	+0.11	-0.40	-0.82	-1.26	-1.51
Sept.	283.20	-1.45	-1.62	-1.64	-1.86	-1.88	-1.93	-1.44	-0.55	+0.23	+0.99	+1.58	+1.99	+2.29	+2.15	+2.15	+1.95	+1.45	+0.85	+0.30	-0.16	-0.54	-0.71	-1.03	-1.22
Oct.	281.99	-0.93	-0.96	-1.14	-1.24	-1.35	-1.35	-1.34	-0.85	-0.23	+0.76	+1.31	+1.83	+2.16	+1.90	+1.86	+1.48	+0.87	+0.24	-0.01	-0.24	-0.52	-0.68	-0.79	-0.89
Nov.	276.70	-0.85	-0.97	-1.06	-1.02	-0.92	-0.87	-0.84	-0.55	-0.13	+0.64	+1.10	+1.53	+1.65	+1.51	+1.11	+0.66	+0.42	+0.37	+0.08	-0.01	-0.13	-0.32	-0.51	-0.51
Dec.	<b>274.85</b>	-0.25	-0.13	-0.30	-0.21	-0.10	+0.02	+0.07	+0.09	+0.17	+0.24	+0.61	+0.80	+0.60	+0.38	+0.02	-0.09	-0.10	-0.36	-0.28	-0.25	-0.27	-0.37	-0.46	-0.46
Year	280.82	-1.09	-1.21	-1.30	-1.34	-1.30	-1.11	-0.76	-0.35	+0.12	+0.60	+1.02	+1.37	+1.61	+1.65	+1.59	+1.32	+1.01	+0.67	+0.28	-0.07	-0.36	-0.58	-0.80	-0.95

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

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

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

1925.

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	86.9	73.9	78.9	74.0	79.4	77.4	79.2	72.6	82.2	76.3	88.4	81.4	88.4	84.1	86.9	82.4	87.8	82.0	89.0	80.8	84.2	81.5	85.6	75.6	72.7
2	78.3	73.3	82.6	77.2	78.4	74.9	78.8	72.0	83.4	<b>73.6</b>	87.6	80.9	88.1	83.6	89.2	82.0	86.6	81.5	88.1	82.1	84.6	81.6	75.8	72.5	72.5
3	76.4	74.0	82.6	76.3	79.0	75.3	77.6	<b>70.9</b>	86.1	79.0	89.3	<b>79.6</b>	88.1	83.5	87.6	81.1	84.5	79.6	89.4	82.3	83.0	78.5	76.1	74.5	74.5
4	77.3	71.6	80.1	75.1	81.6	76.0	81.1	75.5	81.4	75.5	85.4	90.2	84.7	87.8	84.0	83.3	<b>77.4</b>	86.3	78.6	<b>84.9</b>	77.0	76.3	76.3	73.3	73.3
5	76.4	72.2	82.3	74.7	82.9	78.4	79.7	77.5	81.7	79.7	91.9	84.7	91.1	84.3	88.0	84.9	84.5	79.8	89.3	83.9	82.3	77.2	76.3	72.6	72.6
6	77.5	73.7	77.6	72.9	81.6	78.7	80.5	79.0	83.3	78.9	87.4	81.5	88.3	85.0	92.2	84.7	84.4	81.1	<b>90.2</b>	82.7	79.5	76.4	76.4	70.8	70.8
7	81.5	77.3	76.9	<b>71.0</b>	79.7	73.6	80.1	77.9	81.5	79.5	87.0	80.2	90.8	84.1	90.0	82.5	86.2	80.5	82.7	77.2	80.0	75.5	79.7	75.4	75.4
8	79.5	77.6	<b>82.8</b>	75.8	75.9	70.8	79.6	76.6	83.0	79.9	84.6	81.6	90.0	<b>82.6</b>	92.2	83.9	85.2	80.0	83.9	76.5	76.6	73.5	<b>82.2</b>	76.6	76.6
9	80.8	75.8	79.2	74.6	76.0	70.7	79.6	77.6	81.2	80.5	91.3	81.7	89.4	83.5	93.2	86.0	83.1	79.9	86.5	77.1	75.6	72.4	79.1	75.5	75.5
10	81.4	75.0	81.2	74.9	77.7	72.4	84.0	78.7	83.0	79.4	<b>96.2</b>	85.1	91.6	85.0	93.0	83.8	86.5	79.1	86.6	77.2	76.3	72.2	78.7	76.4	76.4
11	81.4	78.3	78.7	75.9	77.0	72.4	81.9	78.1	86.8	79.6	88.6	84.6	<b>97.4</b>	86.2	90.7	82.5	85.5	79.7	85.9	81.0	77.2	72.2	77.6	75.4	75.4
12	79.3	77.1	77.9	74.1	77.4	<b>70.0</b>	84.4	78.0	87.4	80.6	88.7	84.3	96.7	85.8	91.8	85.3	85.0	79.2	81.0	76.4	78.1	72.6	77.8	72.7	72.7
13	81.6	77.4	78.2	72.5	79.5	74.4	84.4	77.5	86.9	79.4	91.2	83.8	87.9	84.7	92.1	85.5	87.6	79.4	78.0	74.3	77.4	72.4	73.6	71.1	71.1
14	<b>84.0</b>	78.4	78.8	73.3	80.9	77.5	84.3	76.0	85.0	80.4	90.0	82.4	92.0	84.2	88.5	81.6	90.1	83.2	80.9	75.2	77.6	<b>70.5</b>	74.3	70.9	70.9
15	79.9	76.6	78.9	75.1	<b>84.5</b>	77.6	83.3	75.3	83.6	80.2	95.7	84.1	91.0	85.1	91.1	81.4	88.3	85.0	79.8	74.0	77.8	74.4	76.4	71.4	71.4
16	80.6	76.6	79.5	76.5	84.0	78.0	83.1	75.6	88.6	81.2	90.3	83.5	92.2	85.0	89.7	83.3	87.9	80.7	79.7	73.5	80.5	73.5	79.6	74.9	74.9
17	82.5	76.0	79.4	77.5	81.1	74.6	<b>84.8</b>	78.3	89.1	80.8	87.8	81.3	90.6	85.4	92.2	83.2	85.0	78.0	85.6	74.2	78.0	71.1	81.5	73.8	73.8
18	83.7	77.4	78.4	74.1	82.9	75.9	79.4	77.4	86.3	82.0	85.8	80.7	90.6	86.2	87.2	84.1	88.1	81.4	82.5	74.5	79.7	74.7	73.9	69.4	69.4
19	79.9	72.8	79.6	74.2	83.5	77.6	81.0	75.8	84.7	82.3	89.0	80.5	89.7	84.5	86.7	84.1	86.7	82.1	81.3	<b>73.2</b>	77.1	70.6	71.5	<b>66.5</b>	66.5
20	80.0	78.8	78.2	72.6	78.7	72.8	83.7	74.6	85.3	82.5	87.9	81.6	89.1	82.8	90.0	85.2	86.9	80.2	82.6	80.5	81.1	75.4	75.9	69.4	69.4
21	79.0	78.2	77.0	74.8	75.0	71.4	83.3	74.3	<b>90.0</b>	82.3	85.0	80.2	93.7	85.7	87.5	86.4	85.7	78.2	87.4	80.7	79.8	75.1	75.1	70.4	70.4
22	78.5	76.8	77.1	72.6	77.5	71.0	83.0	79.6	82.6	80.9	85.6	81.0	91.6	85.0	88.2	85.7	85.4	78.2	85.8	83.6	80.8	75.9	72.6	67.6	67.6
23	78.1	76.4	79.1	76.0	80.5	74.7	83.7	76.4	82.8	80.8	85.5	81.5	90.5	86.6	88.1	86.1	85.9	81.4	85.6	82.3	78.4	75.0	75.2	69.3	69.3
24	78.7	71.4	78.2	75.4	80.1	74.9	83.5	74.9	83.4	78.7	86.4	81.5	87.5	85.2	88.4	84.7	83.9	80.3	86.5	81.5	79.6	74.4	73.9	71.0	71.0
25	79.2	<b>71.3</b>	78.9	76.4	79.8	74.9	83.7	77.5	82.5	71.0	86.4	81.2	89.8	85.8	88.8	80.7	84.6	78.2	86.4	81.2	75.9	72.4	72.8	67.4	67.4
26	79.2	77.6	79.2	75.6	77.6	72.9	82.1	77.9	84.3	80.2	86.1	81.3	90.3	85.7	88.6	<b>78.6</b>	82.9	79.6	84.6	80.8	78.0	72.0	75.4</		

Percentages at exact hours Greenwich Mean Time. Determined as explained on page 14.

45. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulbs above the ground) = 12.5 metres. **January, 1925.**

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.	Vapour Pressure.*
1	84	85	85	84	86	76	86	87	84	81	81	81	92	92	91	88	88	94	84	80	75	74	78	85	84.1	6.7
2	81	85	71	61	75	72	71	71	73	76	82	81	92	98	95	98	97	94	91	93	92	86	85	89	83.6	6.1
3	86	89	88	89	90	89	89	80	79	79	76	80	84	82	84	75	73	75	73	78	76	78	78	75	81.0	5.8
4	76	83	84	85	86	88	89	88	90	83	77	70	66	71	73	75	77	76	77	7	80	81	81	84	79.7	5.8
5	83	83	84	89	90	91	93	90	85	79	73	70	78	78	78	79	79	79	82	81	78	77	78	84	81.7	5.5
6	86	89	86	89	88	88	82	82	81	81	77	77	72	70	68	70	73	76	79	85	88	90	87	82	81.1	5.7
7	79	87	81	80	81	76	77	77	79	75	72	73	72	68	71	73	77	78	75	76	74	79	84	86	77.0	7.4
8	88	88	82	81	81	79	80	80	80	87	86	86	90	93	91	85	88	86	90	92	93	93	94	94	86.8	7.9
9	83	82	86	76	81	77	77	77	76	76	75	70	66	68	69	72	70	70	70	71	74	77	78	80	75.3	6.4
10	84	82	83	83	76	74	80	81	87	80	80	79	77	84	85	84	86	86	86	84	84	81	80	79	81.9	7.6
11	87	84	76	76	74	79	79	87	85	84	89	83	82	82	79	82	80	82	74	78	78	83	82	83	81.1	7.6
12	84	85	84	85	88	89	87	84	84	86	86	87	86	85	87	88	87	87	85	85	86	84	86	86	85.8	7.8
13	84	86	84	87	87	85	88	84	87	87	88	89	86	83	86	87	89	88	88	88	88	86	85	84	86.5	8.5
14	83	86	88	89	86	85	84	78	65	60	62	65	63	65	65	66	68	72	76	75	75	74	79	76	74.5	7.7
15	81	81	80	78	78	80	73	74	75	72	74	65	66	64	65	66	73	76	74	75	78	84	84	83	74.8	6.6
16	72	72	68	71	71	62	63	71	69	78	75	74	74	74	74	77	74	74	77	76	76	76	76	76	73.1	6.7
17	79	80	84	86	84	83	84	87	90	89	91	94	96	93	93	86	89	88	87	85	89	90	87	87	87.5	8.1
18	89	88	89	89	90	92	89	89	88	85	82	75	73	75	78	81	84	84	79	73	74	78	79	79	82.7	9.3
19	76	83	87	85	88	87	90	92	92	92	92	86	89	87	86	86	90	92	89	86	89	90	94	95	88.1	7.0
20	97	97	95	93	92	92	93	91	91	91	91	91	89	89	87	87	89	90	90	91	92	93	93	94	91.6	8.9
21	93	91	91	91	91	91	91	91	88	87	88	88	87	88	88	88	88	87	88	87	84	84	86	86	88.5	8.1
22	86	87	87	85	85	88	90	89	87	87	86	84	86	86	86	87	86	86	85	85	87	90	90	91	86.8	7.5
23	88	88	87	87	89	88	91	91	91	91	92	92	95	94	93	95	95	97	95	94	92	93	94	94	91.9	7.7
24	94	95	95	97	94	97	98	98	98	98	100	98	100	99	100	97	96	98	98	97	97	97	97	97	97.2	7.0
25	97	97	97	97	97	98	98	98	98	98	96	97	99	99	97	97	79	83	85	83	82	85	82	76	89.8	6.8
26	79	78	77	86	83	89	87	88	76	81	83	80	83	81	76	78	84	83	83	82	82	83	87	87	82.1	7.4
27	89	87	87	81	74	73	76	80	75	80	79	65	75	77	85	73	74	73	72	70	71	70	73	76	76.7	6.5
28	76	78	77	71	78	74	78	76	72	77	80	81	80	84	85	87	87	85	88	89	91	91	89	92	81.6	6.8
29	92	88	92	86	84	87	81	88	87	90	90	83	64	59	68	70	78	74	72	72	72	80	76	79	70.7	6.4
30	73	75	70	69	66	75	68	76	71	72	68	72	72	83	84	88	91	90	83	88	82	78	75	68	76.7	7.0
31	56	62	59	65	64	64	70	72	72	67	68	64	63	63	64	64	71	74	76	77	73	81	75	65	67.9	6.1
Mean ..	83.4	84.5	83.4	82.9	83.1	82.8	83.0	83.8	82.4	82.3	81.8	80.1	80.3	80.4	80.9	81.0	82.8	83.2	82.2	82.5	82.5	83.0	83.7	83.5	82.5	77.1
Vapour Pressure*	mb. 7.0	mb. 7.0	mb. 6.9	mb. 6.9	mb. 6.9	mb. 6.8	mb. 6.8	mb. 6.9	mb. 6.7	mb. 6.9	mb. 7.0	mb. 7.1	mb. 7.2	mb. 7.3	mb. 7.2	mb. 7.2	mb. 7.2	mb. 7.2	mb. 7.1	mb. 7.1	mb. 7.1	mb. 7.1	mb. 7.1	mb. 7.0	mb. 7.0	mb. 7.0

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

February, 1925.

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.	Vapour Pressure.*
1	68	67	66	68	70	77	75	71	72	69	67	71	65	66	68	70	70	71	75	75	77	77	75	74	70.9	5.6
2	77	81	81	85	88	87	85	82	83	83	81	81	87	61	61	69	60	67	72	66	63	73	75	77	76.0	7.3
3	74	77	79	84	87	87	88	88	87	87	85	78	78	80	71	70	66	73	65	68	77	75	74	70	78.0	7.1
4	71	70	68	72	67	68	71	70	69	73	75	71	70	73	75	78	83	80	81	78	81	82	81	84	74.3	6.1
5	79	78	79	74	75	79	72	67	62	67	60	56	57	57	55	59	62	66	68	67	68	73	72	72	67.9	6.4
6	77	82	83	83	78	82	81	83	86	82	78	75	68	71	73	73	80	83	84	93	93	93	90	85	81.2	5.6
7	83	82	83	87	91	92	93	93	94	88	79	73	67	64	64	65	67	70	72	72	76	78	75	87	78.9	5.5
8	89	87	90	88	88	92	92	93	91	82	75	72	75	66	73	81	88	97	88	69	70	74	77	82.1	7.4	
9	74	69	68	62	67	73	71	69	67	64	69	67	67	62	67	69	72	73	72	72	74	76	79	82	70.1	5.7
10	81	83	80	79	80	76	77	82	81	83	83	83	81	83	59	59	65	69	70	76	74	70	72	71	75.9	6.7
11	72	77	73	78	82	82	77	76	72	73	70	69	69	73	74	77	76	81	81	82	83	85	82	82	76.7	6.2
12	84	88	84	85	85	83	79	79	80	75	71	67	74	79	73	85	81	76	80	81	81	85	84	85	80.1	5.8
13	85	88	88	88	89	91	92	93	81	74	80	84	90	92	91	87	89	90	82	83	81	88	88	92	86.8	6.4
14	92	92	92	93	95	95	91	95	95	94	95	98	95	98	93	94	92	96	91	87	91	89	95	94	93.4	7.3
15	93	95	97	98	95	95	95	92	92	91	87	86	91	91	89	88	84	86	83	86	86	88	86	84	90.1	7.5
16	88	90	90	88	87	84	87	87	84	83	84	86	85	85	86	86	91	83	89	91	92	91	92	90	87.3	7.8
17	90	90	88	91	92	89	92	92	90	87	86	85	90	90	89	90	86	89	91	88	92	89	92	91	89.5	7.9
18	91	90	92	88	85	91	89	92	91	86	90	92</														

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

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

March, 1925.

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.	Vapour Pressure.*
1	90	90	91	89	91	88	82	85	87	89	86	88	83	83	84	82	87	87	86	88	79	79	80	78	85.7	mb.
2	83	84	79	80	83	80	84	80	80	86	81	80	84	74	78	77	79	75	81	88	87	92	88	85	82.3	7.6
3	83	84	83	83	80	81	81	84	84	71	68	70	68	68	69	69	73	79	88	85	86	86	83	78	78.6	6.4
4	78	78	76	77	77	78	80	79	78	80	76	74	74	75	72	77	78	82	82	85	85	87	83	86	78.9	7.3
5	81	76	77	78	75	75	72	72	69	60	62	64	66	71	69	68	72	73	72	70	75	74	82	79	72.2	7.6
6	67	67	68	65	69	65	68	68	68	66	68	73	73	67	60	70	66	71	72	75	67	67	70	72	68.6	6.9
7	70	67	72	73	75	72	73	73	70	70	75	61	68	54	55	58	64	68	72	72	85	87	84	80	70.6	5.8
8	78	77	80	80	79	80	86	74	70	59	61	59	65	70	66	76	79	81	78	83	84	82	80	83	75.4	4.7
9	83	83	83	81	83	83	83	81	81	78	77	75	77	75	74	76	78	78	79	80	80	79	83	79	79.3	5.0
10	80	76	75	74	77	78	79	80	78	73	65	62	62	66	66	68	77	84	91	91	91	91	91	92	77.6	5.4
11	96	94	96	92	91	90	88	87	85	81	79	84	79	79	82	72	69	71	82	89	84	90	91	80	84.9	5.8
12	76	74	73	70	68	70	76	79	81	79	72	64	63	62	61	60	57	58	61	64	66	68	69	72	68.5	4.6
13	71	71	72	76	79	78	87	87	86	85	79	79	79	78	75	77	83	82	80	78	80	80	81	78	78.9	6.5
14	82	84	85	84	89	87	86	83	82	81	87	87	85	85	85	84	84	88	82	89	94	92	93	93	86.5	8.1
15	94	93	94	94	97	97	97	96	96	93	89	96	96	93	90	78	76	86	83	87	86	87	86	75	90.3	9.3
16	80	77	78	80	77	72	77	76	75	74	80	81	75	71	64	69	66	71	70	71	87	93	91	94	76.6	8.2
17	89	92	93	93	97	93	95	95	90	81	86	79	85	85	86	88	89	93	94	93	93	93	89	87	90.1	8.2
18	86	88	90	89	88	88	87	89	85	75	72	85	84	76	76	66	70	75	74	75	78	77	79	78	80.6	8.2
19	79	77	78	78	77	78	77	78	76	72	69	76	84	85	78	71	73	73	78	76	76	75	74	75	75.4	7.8
20	77	76	72	72	75	76	75	72	71	69	68	65	66	74	63	81	85	84	76	82	84	85	84	81	75.4	5.7
21	84	81	81	88	87	87	83	83	75	73	77	63	70	74	75	84	91	90	89	87	86	86	82	76	81.4	5.0
22	72	70	70	71	71	73	75	77	75	73	69	62	67	66	64	63	63	69	70	69	69	68	67	68	69.4	4.8
23	69	71	72	72	74	74	78	78	79	91	76	72	76	63	62	72	72	81	73	72	75	73	72	74	73.7	6.1
24	77	72	82	77	77	76	72	68	63	65	64	62	64	88	86	64	66	74	80	77	78	79	82	92	74.2	6.1
25	93	92	89	89	95	89	84	88	87	81	81	78	74	71	74	76	76	85	85	88	87	90	86	87	84.5	6.9
26	91	90	87	89	95	95	91	91	82	83	70	73	66	66	63	64	66	67	67	71	77	84	87	90	79.3	5.9
27	91	93	94	94	95	95	95	95	86	70	67	69	69	72	69	81	73	73	83	84	78	76	79	75	81.8	6.5
28	70	71	69	75	79	77	77	75	70	59	60	59	58	58	60	61	65	72	73	74	76	75	72	73	69.1	5.7
29	74	75	77	80	91	94	85	78	75	68	78	67	63	63	62	62	61	59	63	69	68	68	77	75	72.1	7.8
30	79	84	76	77	75	82	82	77	71	68	66	67	68	65	63	63	66	72	68	79	78	91	91	89	74.6	7.7
31	85	84	84	80	80	83	83	83	82	83	80	80	74	78	86	91	92	94	96	98	96	96	96	95	86.5	6.7
Mean ..	80.9	80.4	80.5	80.6	82.1	81.7	81.9	81.0	79.0	75.3	73.8	72.8	73.1	72.7	71.5	72.4	73.8	77.3	78.6	80.5	81.0	82.3	82.2	81.5	78.2	† 6.6
Vapour Pressure*	mb. 6.3	mb. 6.2	mb. 6.2	mb. 6.2	mb. 6.2	mb. 6.1	mb. 6.2	mb. 6.3	mb. 6.5	mb. 6.5	mb. 6.6	mb. 6.7	mb. 6.8	mb. 6.9	mb. 6.8	mb. 6.8	mb. 6.7	mb. 6.8	mb. 6.7	mb. 6.7	mb. 6.6	mb. 6.5	mb. 6.5	mb. 6.4	mb. 6.5	

48. Aberdeen : North Wall Screen on Tower : ht = 12.5 metres.

April, 1925.

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.	Vapour Pressure.*	
1	88	85	84	83	83	83	83	80	76	71	64	62	59	59	63	66	67	70	75	77	78	80	80	81	75.2	mb.	
2	81	80	79	80	79	83	83	80	78	81	79	74	59	59	60	60	67	62	64	65	68	78	88	93	73.8	5.7	
3	93	92	89	89	88	88	86	82	75	64	61	56	56	58	62	63	66	71	73	74	80	80	85	84	75.8	5.9	
4	83	81	81	78	80	82	72	68	71	71	70	69	68	65	67	72	72	75	77	77	76	78	80	80	74.8	6.2	
5	80	81	81	81	81	83	83	84	84	86	83	85	92	89	89	89	89	91	93	92	93	94	93	94	86.8	8.0	
6	96	97	97	99	99	99	97	99	98	97	96	96	96	94	94	94	93	92	95	95	94	94	96	97	95.9	9.4	
7	97	98	98	99	99	100	100	100	100	100	99	99	99	100	100	99	99	99	99	99	99	99	100	100	99.2	9.3	
8	99	99	100	99	99	99	99	100	97	98	97	94	97	95	94	96	97	99	97	99	100	98	98	98	97.9	8.7	
9	100	100	100	99	100	100	100	100	100	100	100	100	99	97	97	99	99	100	97	98	98	97	98	98	99.0	9.0	
10	97	97	99	97	97	98	97	94	92	88	85	81	87	85	88	92	92	93	95	96	96	96	96	96	93.1	9.5	
11	97	97	97	97	99	99	98	97	90	89	89	88	89	90	92	93	95	97	97	97	97	98	97	95	94.8	9.1	
12	98	97	97	98	96	94	92	89	83	83	86	86	83	76	68	71	69	69	69	71	73	77	82	93	83.4	8.7	
13	97	96	96	97	95	91	90	85	84	84	86	86	82	78	55	52	56	64	72	72	77	80	79	72	75	80.7	8.1
14	76	72	75	77	81	80	72	63	58	58	55	52	53	64	57	55	57	71	72	76	77	80	81	82	68.8	6.9	
15	89	93	91	85	85	83	80	73	63	62	62	60	56	54	53	56	54	55	64	60	67	69	73	78	80	71.0	7.0
16	84	86	85	82	82	82	78	77	74	69	72	74	68	69	66	67	70	82	83	81	86	87	87	89	78.1	7.7	
17	93	82	78	78	76	75	74	73	68	60	60	56	59	55	58	58	69	68	80	81	82	89	93	92	73.1	7.7	
18	94	94	91	92	92	92																					

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

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

May, 1925.

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.	Vapour Pressure*	
1	81	84	81	78	78	78	71	65	68	63	59	57	56	52	53	56	56	57	59	71	81	81	82	84	84	68.6	6.6
2	84	83	84	88	89	85	83	74	75	76	73	77	78	65	72	76	79	84	88	80	86	84	84	84	81.0	7.9	
3	83	82	85	83	81	84	76	70	67	67	68	80	72	76	72	75	75	84	80	84	84	85	85	86	78.2	9.1	
4	88	85	86	89	87	87	92	92	92	94	96	95	100	97	98	98	100	100	100	99	99	99	100	100	94.4	9.8	
5	100	100	100	100	99	99	100	100	100	100	99	97	96	95	95	97	95	93	93	94	94	94	93	93	97.1	10.1	
6	93	93	92	94	95	97	98	97	96	94	96	96	85	80	75	81	81	86	86	90	93	96	93	94	90.9	9.5	
7	94	95	94	94	95	95	94	94	96	85	89	91	89	89	89	89	83	94	94	90	90	91	93	94	92.1	9.5	
8	97	94	93	94	94	94	96	85	89	93	92	91	87	82	87	87	87	89	92	96	96	97	96	96	91.8	9.8	
9	96	96	96	96	96	96	97	98	100	99	99	99	100	100	100	100	100	100	100	100	100	100	100	100	98.6	10.4	
10	100	100	100	100	100	99	96	95	92	95	96	91	92	92	93	90	92	93	94	95	97	94	96	97	95.4	10.0	
11	95	99	97	95	97	93	89	85	89	87	88	90	90	84	83	90	84	58	59	68	76	72	81	79	84.9	9.8	
12	80	83	84	83	82	82	73	70	63	63	63	64	72	73	76	75	76	86	87	88	93	93	92	92	78.6	9.8	
13	88	89	74	74	68	71	65	60	58	56	61	58	59	63	62	67	72	72	72	69	70	80	82	81	69.9	8.9	
14	83	85	85	82	85	85	82	72	68	64	86	82	89	88	83	76	73	73	81	87	90	90	92	93	82.0	9.6	
15	94	89	83	83	83	83	84	82	83	87	86	88	85	84	80	85	85	89	89	90	90	90	90	89	86.4	9.7	
16	89	90	92	92	96	96	96	93	87	83	78	76	72	74	85	91	91	95	95	96	97	97	97	97	89.6	11.0	
17	96	97	96	97	96	93	86	81	81	75	70	71	68	74	73	81	82	86	84	87	89	91	88	89	84.4	11.2	
18	89	89	90	91	95	96	96	93	92	91	95	93	91	84	91	92	92	93	94	94	94	95	95	95	92.4	11.3	
19	93	96	95	95	95	92	89	88	86	87	89	86	86	87	86	86	86	86	87	90	92	92	93	94	89.9	11.4	
20	93	93	93	91	92	93	91	89	88	90	88	88	89	87	88	89	90	89	91	92	93	90	93	93	90.7	11.7	
21	88	88	87	90	85	81	84	82	82	80	74	80	74	70	59	61	56	61	61	79	87	86	86	86	77.9	11.2	
22	84	84	85	84	86	83	82	78	78	80	79	77	77	78	77	80	81	82	84	82	85	84	85	84	81.4	9.2	
23	85	86	89	89	88	88	87	87	86	83	82	82	81	82	83	85	88	88	84	86	84	84	80	84	85.1	9.5	
24	86	83	83	83	82	82	94	85	84	83	84	82	83	84	84	84	85	87	88	89	92	93	96	96	86.1	9.7	
25	96	96	96	97	97	97	96	96	95	95	95	96	97	99	99	97	97	97	97	96	95	95	93	90	96.3	10.8	
26	91	91	91	88	83	82	78	72	68	67	75	79	74	73	73	77	78	81	88	88	93	94	94	96	82.1	9.6	
27	95	95	95	95	95	97	97	97	97	96	95	95	93	89	70	60	55	51	53	62	77	79	81	81	83.6	10.8	
28	81	83	84	87	88	85	84	87	80	84	73	76	74	74	77	68	68	71	76	74	79	79	83	88	79.1	10.0	
29	81	83	87	84	83	87	87	88	86	79	66	67	61	55	52	61	69	72	83	83	81	87	92	90	77.6	10.3	
30	90	91	92	76	75	78	69	69	66	46	60	61	61	60	58	60	58	60	61	59	58	55	56	56	66.3	8.8	
31	55	56	55	53	55	55	54	58	59	56	56	55	53	52	51	51	56	52	63	73	76	76	75	75	58.8	8.1	
Mean ..	88.6	89.0	88.5	87.9	87.8	87.5	86.1	83.3	82.1	80.8	81.0	81.3	80.1	78.5	78.2	79.5	80.0	80.7	82.6	85.2	87.4	87.9	88.5	88.9	84.2	†9.8	
Vapour Pressure* ..	mb. 9.5	mb. 9.5	mb. 9.4	mb. 9.3	mb. 9.4	mb. 9.6	mb. 9.8	mb. 9.9	mb. 10.0	mb. 10.0	mb. 10.2	mb. 10.3	mb. 10.2	mb. 10.2	mb. 10.1	mb. 10.1	mb. 10.1	mb. 10.0	mb. 9.9	mb. 9.8	mb. 9.8	mb. 9.7	mb. 9.7	mb. 9.7	mb. 9.7	mb. 9.8	

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

June, 1925.

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.	Vapour Pressure*
1	76	81	81	84	86	87	80	66	62	59	59	57	56	56	56	57	57	64	60	61	65	68	73	72	67.7	9.2
2	74	79	77	78	75	69	63	58	54	58	54	64	59	74	80	76	83	85	87	78	80	86	79	73	72.6	9.3
3	80	79	81	79	80	75	72	79	87	86	85	84	84	75	74	67	68	66	69	69	75	74	81	81	76.4	10.3
4	82	83	85	86	82	81	73	73	66	68	63	63	63	54	55	52	57	60	64	66	71	76	78	76	70.0	13.6
5	72	78	67	64	56	49	52	51	56	60	56	55	54	47	43	49	57	68	68	74	74	77	84	88	62.2	10.9
6	92	92	95	96	91	90	91	92	93	90	80	86	81	81	76	76	76	81	81	80	87	87	88	90	86.3	11.8
7	91	90	92	94	96	91	77	78	80	81	82	81	82	81	79	72	76	78	76	81	86	88	93	93	84.0	11.1
8	92	93	94	93	94	95	94	95	95	96	98	92	93	94	92	92	92	95	97	96	96	96	99	97	94.5	11.5
9	97	99	97	97	97	97	96	91	86	85	81	79	79	70	75	76	68	57	58	61	63	63	70	70	80.2	11.8
10	75	73	80	84	82	80	73	67	66	56	75	71	76	82	82	86	87	89	89	90	86	83	82	82	78.7	13.9
11	81	81	81	82	83	76	78	81	82	81	86	84	86	84	82	77	73	74	75	79	79	76	70	74	79.5	11.9
12	73	77	79	77	78	72	67	68	68	67	62	62	61	59	61	62	55	63	69	69	74	72	75	67	68.2	10.3
13	67	71	73	79	76	71	71	61	63	49	54	67	76	70	62	61	63	66	68	73	77	76	77	72	68.4	11.2
14	75	74	76	74	72	66	68	63	63	59	57	56	55	54	52	68	73	71	73	76	79	82	81	80	68.5	9.8
15	77	77	78	82	82	83	79	76	75	66	63	75	62	59	58	64	83	87	88	90	88	88	88	88	77.2	13.9
16	78	70	67	70	68	65	60	62	58	53	58	58	55	51	55	65	69	72	63	62	63	66	65	67	63.8	10.1
17	81	85	88	83	78	76	60	65	61	66	56	52	49	47	49	48	53	62	58	63	65	65	69	64.0	8.4	

RELATIVE HUMIDITY.

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

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

July, 1925.

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.	Vapour Pressure.*	
1	93	94	93	93	92	94	93	88	80	88	90	92	91	94	91	91	92	92	92	94	91	92	92	90	91.3	13.4	
2	94	94	90	87	88	91	90	89	90	87	87	87	87	86	80	86	82	86	90	91	92	94	90	94	88.7	12.7	
3	95	95	96	97	99	99	99	95	93	90	89	87	86	85	87	84	86	83	83	89	88	89	94	92	90.9	13.7	
4	94	92	92	93	88	84	82	79	76	70	67	67	58	66	64	69	69	77	83	81	85	88	88	88	79.6	13.0	
5	90	90	91	91	90	85	79	84	82	84	84	85	84	77	77	79	75	77	83	85	92	91	92	94	84.9	13.8	
6	94	94	92	92	92	93	91	89	91	89	86	85	90	88	90	94	91	90	94	92	89	89	88	86	90.5	13.5	
7	97	96	96	94	95	92	89	86	86	74	64	61	57	61	57	55	61	80	77	79	73	63	64	64	76.3	12.1	
8	66	72	77	73	70	62	61	56	54	53	52	56	51	49	48	52	54	59	62	67	82	77	79	61.6	9.6		
9	76	76	77	79	80	78	76	71	67	59	61	62	79	77	68	69	75	76	75	77	82	87	89	88	75.0	11.6	
10	91	88	86	88	89	83	78	72	69	69	68	66	65	65	58	56	55	58	57	61	66	68	69	68	71.0	12.3	
11	72	72	82	80	77	80	79	73	70	65	61	60	51	52	57	59	59	54	67	81	83	85	84	86	70.0	14.2	
12	87	88	85	82	80	70	67	59	51	53	55	59	62	67	81	86	81	91	91	95	95	98	97	97	78.0	15.9	
13	98	96	97	95	95	92	92	91	91	95	95	93	90	94	95	94	84	91	96	98	98	99	99	96	95.1	14.0	
14	97	96	97	98	99	97	95	94	89	86	82	76	75	79	82	89	87	87	85	80	79	80	84	94	87.8	14.8	
15	95	95	94	94	94	93	95	94	91	85	86	86	91	95	95	92	94	91	92	92	91	95	95	98	92.5	14.7	
16	94	92	92	94	90	87	81	73	71	68	68	69	65	55	64	60	78	76	75	80	86	82	88	88	78.7	12.8	
17	88	85	89	89	85	81	82	81	76	74	73	73	75	74	70	75	82	80	81	83	85	89	89	89	81.1	13.6	
18	89	92	93	93	94	93	92	90	82	85	84	84	76	83	80	81	76	83	89	92	92	89	88	92	87.2	14.8	
19	92	95	96	95	96	94	99	95	96	99	93	94	96	96	91	86	87	86	89	87	95	92	92	92	93.0	14.8	
20	94	94	95	96	95	90	86	90	90	89	91	85	78	84	87	89	87	84	80	81	88	89	93	95	88.7	13.5	
21	95	95	93	95	94	92	89	86	79	83	80	74	75	77	74	71	78	85	90	94	93	93	95	95	85.6	15.6	
22	97	96	95	95	95	94	92	91	85	82	80	85	83	82	85	87	93	93	94	95	95	95	96	96	90.8	15.9	
23	95	94	94	95	97	94	92	91	90	89	88	89	91	89	88	88	87	86	87	83	86	86	87	88	89.9	16.1	
24	90	91	92	90	92	92	91	94	89	91	87	86	84	83	83	83	83	84	83	87	86	87	91	95	87.9	13.3	
25	95	95	96	96	94	93	93	92	89	90	86	83	80	83	83	83	89	91	91	95	97	100	99	100	92.0	14.9	
26	99	100	100	99	100	99	100	99	97	96	96	90	89	91	79	78	87	86	90	93	92	91	94	94	93.4	14.9	
27	91	93	89	89	87	83	80	78	83	78	77	73	78	77	80	81	87	86	90	71	74	79	86	87	89	81.5	13.0
28	89	91	92	93	95	95	92	84	87	87	85	85	80	81	80	89	85	75	77	81	87	89	88	87	86.9	14.2	
29	88	87	88	89	87	86	87	81	72	80	75	73	78	93	92	94	90	88	92	93	92	93	94	89	86.6	13.9	
30	88	88	85	84	82	82	71	68	65	63	61	64	60	78	76	80	77	84	88	89	91	92	92	92	79.1	12.3	
31	91	90	88	87	87	83	87	81	78	77	70	76	70	65	61	65	66	70	73	76	75	73	76	75	77.0	11.3	
Mean ..	90.8	90.8	91.0	90.8	90.3	88.2	86.5	83.9	80.9	80.2	78.3	77.5	76.8	78.3	77.6	79.3	79.7	80.9	83.0	85.1	86.9	87.9	88.7	89.3	84.3	†13.7	
Vapour Pressure* ..	mb. 13.3	mb. 13.2	mb. 13.1	mb. 13.0	mb. 13.2	mb. 13.4	mb. 13.7	mb. 13.9	mb. 13.9	mb. 14.0	mb. 14.0	mb. 14.1	mb. 14.0	mb. 14.1	mb. 14.0	mb. 14.0	mb. 14.0	mb. 13.9	mb. 13.8	mb. 13.6	mb. 13.5	mb. 13.4	mb. 13.3	mb. 13.2	mb. 13.7		

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

August, 1925.

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.	Vapour Pressure.*	
1	78	75	74	76	75	77	77	71	65	64	64	64	68	65	65	70	77	82	78	81	84	80	79	80	73.6	10.2	
2	81	84	84	87	88	84	84	83	92	81	75	71	71	69	66	64	66	66	81	84	85	88	88	79	88	79.4	11.3
3	87	84	84	87	86	80	76	70	73	75	73	73	73	75	85	83	84	84	88	90	91	93	94	94	81.8	11.5	
4	95	95	92	96	97	95	93	90	92	86	86	89	86	85	85	90	89	88	94	96	95	95	98	97	91.8	13.8	
5	95	95	95	94	94	94	90	89	88	85	85	85	84	83	86	86	89	90	92	92	90	92	93	93	90.0	13.9	
6	89	89	93	91	90	91	88	87	84	75	71	69	67	63	70	81	83	84	84	87	91	90	90	89	83.3	14.1	
7	89	87	87	88	86	81	84	81	82	77	77	78	69	73	76	78	79	83	84	81	83	84	87	87	81.6	13.0	
8	89	89	90	91	85	82	77	82	81	80	79	79	74	67	63	68	70	76	78	83	82	86	94	95	81.2	13.9	
9	93	92	89	88	88	94	93	95	92	94	95	91	79	78	67	61	56	55	60	65	70	68	71	70	79.9	14.0	
10	78	81	82	79	80	82	77	69	61	62	56	64	61	59	67	71	76	66	71	74	78	71	77	82	71.6	12.1	
11	82	75	77	79	76	77	71	68	61	60	58	64	62	60	69	64	66	68	64	68	72	75	86	82	70.2	11.3	
12	86	86	89	89	87	94	94	94	95	91	90	91	88	83	78	77	78	80	82	85	87	88	90	86	86.9	14.3	
13	91	93	95	95	92	88	76	70	80	82	80	82	80	74	72	72	68	70	74	78	83	86	86	86	82.5	14.0	
14	80	80	81	81	79	79	70	70	67	61	71	62	59	64	59	59	61	61	64	67	69	79	81	83	70.4	10.6	
15	85	83	85	84	80	82	76	71	68	65	63	61	59	66	68	68	69	63	65	72	76	79	81	79	72.9	11.2	
16	76	75	73	76	77	72	70	69	67	68	64	64	67	68	69	73	76	78	76	84	86	76	82	87	73.7	11.6	
17	84	79	76	75	77	75	73	70	70	70	70	66	63	62	65	66	74	78	80	83	86	86	89	90	75.4	12.5	



Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

53. Aberdeen : North Wall Screen on Tower :  $h_t$  (height of thermometer bulbs above the ground) = 12.5 metres. September, 1925.

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.	Vapour Pressure.*
1	69	74	68	71	65	68	66	61	58	58	58	57	58	63	60	61	68	65	68	66	69	71	73	74	65.3	mb.
2	73	74	74	72	74	74	69	67	63	62	61	57	53	66	82	84	82	85	82	78	83	80	80	84	73.1	8.9
3	93	91	89	86	89	85	82	77	80	84	66	67	72	67	65	66	79	76	75	72	76	79	83	80	78.4	8.9
4	80	78	81	84	90	84	84	85	81	81	84	79	67	65	65	63	59	68	66	70	69	69	67	65	74.4	7.7
5	64	70	75	77	72	71	70	71	75	75	74	72	72	71	75	85	87	87	86	87	87	89	89	92	77.5	8.7
6	93	91	88	87	87	88	91	81	82	79	81	84	80	76	78	76	75	75	87	91	81	81	79	77	83.1	10.0
7	76	75	75	76	75	76	77	73	75	72	72	81	83	89	91	92	93	92	92	87	93	93	92	93	82.7	10.1
8	90	92	93	95	92	90	88	84	86	73	70	71	73	78	73	67	69	77	78	79	85	85	88	81	8.8	9.6
9	86	85	85	87	88	89	92	90	89	86	83	86	83	89	77	76	77	75	79	83	81	81	82	85	81.0	9.0
10	88	87	88	90	91	91	89	85	83	75	79	77	73	76	76	76	79	80	77	75	72	70	87	85	81.2	10.1
11	87	88	88	86	89	92	86	83	87	85	93	79	65	65	66	72	91	82	82	86	85	86	87	84	83.1	9.9
12	90	91	89	89	90	89	88	84	76	76	74	67	68	66	71	68	74	76	76	86	90	92	90	92	81.2	9.3
13	91	92	92	94	94	90	85	80	76	66	67	60	59	61	59	61	61	63	68	71	73	75	78	81	75.1	9.6
14	78	80	77	79	85	92	93	92	89	87	82	76	79	80	79	80	81	81	86	87	89	89	89	91	84.0	13.1
15	90	94	91	91	87	89	88	81	72	70	72	77	76	72	72	75	77	79	80	79	79	80	80	78	80.6	12.0
16	76	78	80	81	83	86	86	92	89	88	84	81	81	77	84	85	85	90	91	86	93	92	97	96	85.5	11.9
17	92	92	89	92	91	93	90	89	86	84	90	86	85	84	85	85	84	87	90	90	91	87	87	91	88.4	10.4
18	93	95	93	94	95	96	94	93	84	75	69	69	60	57	60	65	64	71	76	73	77	75	76	78	78.7	10.5
19	82	82	83	83	86	92	92	90	87	85	81	77	75	79	79	88	89	89	90	88	89	87	92	87	85.3	11.1
20	91	92	92	92	90	89	84	81	76	73	69	66	61	62	60	65	65	69	69	76	78	86	85	89	77.5	9.5
21	86	87	86	88	86	88	86	79	75	75	74	76	68	69	79	74	74	73	69	78	71	76	79	81	78.4	8.9
22	80	87	82	87	86	84	85	87	81	84	76	81	81	78	81	85	90	91	92	92	96	96	96	93	86.0	9.8
23	94	93	91	89	94	90	84	84	79	75	71	70	73	71	83	90	84	82	80	80	80	81	81	81	83.0	10.1
24	80	77	76	77	78	78	76	74	74	69	62	63	66	66	69	76	69	71	73	72	75	72	77	79	72.9	8.2
25	77	76	80	81	80	83	84	81	77	76	69	69	66	69	70	72	71	79	78	79	87	91	92	94	78.1	8.8
26	94	96	96	94	94	94	93	94	90	88	84	81	81	82	79	83	84	86	87	89	88	91	90	91	88.8	9.7
27	87	87	85	85	85	85	85	83	80	75	72	71	67	65	63	67	69	76	78	83	84	82	83	84	73.5	9.0
28	88	79	81	80	76	82	83	85	82	81	81	76	78	77	77	71	77	85	91	92	94	94	93	92	83.0	12.1
29	92	93	91	95	96	97	96	96	95	95	95	92	89	88	88	89	80	88	92	93	92	91	91	92	91.9	13.1
30	91	91	91	92	92	93	93	91	89	82	80	73	81	76	76	81	77	78	82	76	74	76	80	83.2	11.5	
Mean ..	85.0	85.6	85.0	85.8	86.0	86.6	85.3	82.9	80.7	77.9	75.9	74.1	72.3	72.9	73.7	75.7	77.3	79.3	80.8	81.5	82.7	83.2	84.5	85.2	80.8	†10.0
Vapour Pressure* ..	mb. 9.6	mb. 9.5	mb. 9.5	mb. 9.4	mb. 9.4	mb. 9.4	mb. 9.6	mb. 9.9	mb. 10.2	mb. 10.3	mb. 10.4	mb. 10.4	mb. 10.4	mb. 10.4	mb. 10.5	mb. 10.7	mb. 10.5	mb. 10.3	mb. 10.2	mb. 10.0	mb. 9.8	mb. 9.8	mb. 9.7	mb. 9.7	mb. †10.0	

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

October, 1925.

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.	mb.
1	83	78	80	82	79	81	83	79	79	72	71	63	67	83	85	87	89	91	91	91	87	89	89	91	81.9	11.0
2	88	86	87	87	89	89	88	84	84	76	74	73	69	68	68	74	79	88	82	79	83	79	80	85	80.9	11.1
3	86	87	86	86	86	84	86	87	83	75	85	79	80	82	84	74	79	80	81	81	82	81	82	85	82.5	11.0
4	85	86	88	92	89	90	89	89	82	75	68	70	71	76	70	71	75	80	81	83	85	82	85	86	81.1	10.1
5	84	85	88	90	78	73	74	79	88	82	70	70	73	76	76	80	82	81	80	86	89	89	90	92	81.3	12.8
6	89	87	88	86	84	82	83	82	79	80	78	74	74	77	69	63	67	69	67	74	91	87	86	83	79.3	13.2
7	84	88	86	79	82	77	80	80	75	71	68	64	60	60	64	66	72	72	75	79	78	81	82	82	75.2	7.6
8	82	85	81	81	84	82	81	71	70	64	62	59	60	60	59	65	71	68	66	68	69	71	74	70.9	7.3	
9	70	75	81	81	84	81	80	78	77	67	65	67	62	60	65	65	69	81	85	86	84	84	84	86	75.5	8.5
10	86	86	86	82	83	87	87	80	76	68	64	66	68	69	70	72	77	93	91	91	88	87	93	91	80.8	9.5
11	89	89	89	88	94	95	96	94	88	82	76	74	82	82	82	82	77	77	75	89	87	78	78	72	84.4	10.5
12	79	77	80	74	74	76	88	84	72	59	67	60	58	58	59	64	69	71	75	75	72	75	77	77	71.6	6.8
13	79	83	83	82	83	85	88	87	91	86	85	85	80	84	78	73	85	83	79	85	88	85	82	85	83.3	6.3
14	80	84	84	83	81	83	85	83	89	80	79	76	62	76	68	71	80	82	81	81	82	90	90	87	80.7	6.6
15	87	87	84	84	88	87	84	85	82	75	75	68	70	81	70	74	84	87	88	91	93	91	89	91	83.0	6.3
16	87	89	90	90	90	90	89	89	89	85	80	72	70	71	66	68	74	81	85	85	88	87	87	89	83.0	6.1
17	89	86	86	90	93	94	91	95	97	94	90	82	66	67	66	67	63	65	77	79	75	76	77	81	81.3	8.2
18	82	81	92	89	90	91	92	89	87	82	82	73	70	74	71	68	69	76	80	84	85	86	88	85	81.8	7.6
19	86	88	87	88	88	88	89	89	85	80	71	66	60	59	60	60	63	63	61	64	65	65	66	65	73.6	6.3
20	65	65	70	78	79	86	82	93	92	89	87	90	92	92	93	95	96	96	98	97	97	99	100	100	88.1	9.8
21	98	97	97	98	98	97	97	99	99	96	94	91	89	88	88	88	94	95	94	91	89	91	95	95	94.2	12.2
22	94	94	94	94	95	95	95	94	96	96	95	95	90	89	89	92	92	86	87	87	90	91	92	94	93.0	12.5
23	97	98	97	92	91	92	92	96	95	93	95	95	94	85	87	84	83	86	87	87	90	91	92	92	91.4	11.8
24	93	92	91	92	92	91	89	89	87	81	73	71	67	72	74	77	82	82	85	80	81	81	82	84	83.0	10.7
25	84	83	84	86	89	88	81	76	80	75	67	58	62	63	66	72	75	73	74	81	88	84	88	77.7	9.6	
26	89	85	82	86	85																					

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

55. Aberdeen : North Wall Screen on Tower : ht (height of thermometer bulbs above the ground) = 12.5 metres. November, 1925.

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.	Vapour Pressure.*	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	100	100	100	99	100	97	98	100	100	100	100	98	97	100	99	91	91	95	93	93	92	92	92	92	92	96.8	11.9
2	92	94	95	96	96	95	96	95	96	92	92	90	86	82	86	86	90	90	90	88	88	91	92	90	91	91.2	11.8
3	90	88	90	91	99	94	93	100	95	95	97	96	96	96	97	97	97	97	97	97	95	93	91	89	89	94.6	10.1
4	85	85	86	86	85	81	84	81	79	78	77	73	71	68	67	69	78	80	84	86	86	86	87	89	89	80.5	8.5
5	88	90	86	89	90	90	84	89	86	88	85	84	80	78	81	86	86	86	88	93	92	94	93	95	95	87.4	8.3
6	97	90	87	85	88	88	89	89	80	79	72	66	62	64	65	68	71	76	75	80	80	74	74	79	78.6	6.8	
7	80	80	82	80	70	68	67	63	62	67	63	67	74	75	72	63	58	68	70	66	77	63	69	64	69.8	6.1	
8	63	62	63	67	68	75	69	72	79	92	88	89	93	90	90	90	95	96	96	96	96	96	96	94	83.3	6.0	
9	93	89	90	92	89	92	90	89	88	85	83	77	79	78	80	79	82	87	86	86	86	86	86	86	86	85.7	5.5
10	85	85	86	86	86	85	88	91	95	91	91	91	87	85	86	86	90	89	91	89	90	90	90	89	88.4	5.9	
11	89	88	87	85	85	85	86	87	87	86	80	80	79	81	82	81	83	79	82	85	83	84	85	86	84.0	5.8	
12	87	88	88	90	92	92	93	92	92	89	87	83	74	78	79	81	82	84	88	87	88	89	88	87	86.6	5.9	
13	83	85	86	84	85	86	86	84	83	79	77	77	77	77	78	83	85	83	88	87	89	88	91	91	83.7	5.8	
14	91	91	91	91	90	90	88	88	82	87	85	83	84	80	85	87	89	85	87	89	85	86	87	85	83	87.1	5.9
15	84	82	80	79	77	75	82	82	79	78	77	76	77	68	70	76	74	67	72	75	72	75	73	80	76.3	5.8	
16	80	85	86	88	88	87	87	83	87	80	72	67	65	64	69	74	74	80	80	83	82	83	84	85	79.6	6.6	
17	85	86	86	87	87	87	87	88	87	86	82	85	86	85	88	89	92	95	97	94	89	90	90	88	88.1	6.0	
18	88	85	87	86	87	90	88	86	81	78	78	75	74	77	76	77	81	82	82	84	88	84	87	87	83.0	6.7	
19	87	87	88	87	87	86	84	83	79	77	76	76	77	76	78	76	82	82	82	87	86	86	89	89	82.7	5.5	
20	90	89	90	90	88	89	85	84	87	86	83	79	76	77	76	78	81	82	81	87	87	85	83	87	84.2	7.2	
21	89	87	85	87	87	89	89	87	88	88	87	84	83	77	75	81	82	80	82	81	81	80	79	79	83.8	7.0	
22	79	79	77	79	78	77	77	82	85	84	75	73	71	71	73	78	76	79	79	81	86	89	89	89	79.2	7.0	
23	90	90	89	91	90	87	87	88	82	76	72	71	76	81	90	91	91	87	82	76	80	76	74	84	84.0	6.5	
24	73	76	75	71	70	73	74	81	83	81	81	86	89	91	89	88	87	83	87	83	81	83	89	87	81.4	6.7	
25	86	80	82	86	80	79	79	84	76	69	69	69	68	66	64	63	70	84	85	85	85	85	85	87	77.7	5.1	
26	87	87	88	87	85	84	84	80	77	75	74	70	70	67	67	67	67	68	64	70	72	84	93	89	77.3	5.2	
27	92	92	89	91	91	90	83	80	87	87	87	84	75	75	79	77	81	79	78	80	84	87	85	85	83.9	5.6	
28	86	89	90	87	84	80	90	89	88	83	82	83	80	75	72	79	79	86	82	88	91	91	89	85	84.5	5.7	
29	87	88	89	88	85	82	80	77	74	75	84	85	86	87	86	85	85	87	87	87	86	86	86	86	84.5	5.5	
30	89	91	94	92	81	84	80	74	81	76	77	85	86	81	86	85	78	78	67	66	67	70	67	71	79.7	6.4	
Mean ..	86.5	86.3	86.5	86.6	85.6	85.3	85.1	85.0	84.3	83.0	81.2	80.2	79.3	78.4	79.3	80.1	81.6	83.2	83.5	84.3	84.5	85.1	85.4	85.4	83.6	†6.8	
Vapour Pressure* ..	mb. 6.5	mb. 6.4	mb. 6.4	mb. 6.4	mb. 6.4	mb. 6.4	mb. 6.4	mb. 6.4	mb. 6.4	mb. 6.5	mb. 6.8	mb. 6.8	mb. 7.0	mb. 7.0	mb. 7.0	mb. 6.8	mb. 6.7	mb. 6.7	mb. 6.8	mb. 6.7	mb. 6.6	mb. 6.6	mb. 6.6	mb. 6.5	mb. 6.6	†6.6	

56. Aberdeen : North Wall Screen on Tower : ht = 12.5 metres. December, 1925.

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.	Vapour Pressure.*	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	76	77	82	94	93	93	91	93	93	93	93	89	92	94	93	97	96	94	95	95	94	94	94	94	94	91.1	6.0
2	94	94	94	94	94	94	94	94	93	92	90	85	80	83	82	88	92	91	87	91	91	91	90	90	92	90.4	6.0
3	91	92	91	91	91	91	90	95	95	95	95	95	95	95	95	96	96	95	97	96	95	95	97	95	94.1	6.9	
4	95	95	94	93	95	93	93	88	88	88	83	79	77	77	81	82	82	79	79	79	80	83	83	85.3	6.1	6.9	
5	81	79	77	79	81	81	80	80	80	80	80	80	79	76	73	74	74	74	74	76	74	71	73	69	76.8	5.1	
6	69	71	72	72	73	76	77	78	76	77	74	72	69	71	72	74	78	82	86	89	91	95	95	95	78.0	5.3	
7	97	92	96	96	97	91	91	88	91	92	97	97	96	94	94	96	93	93	94	94	94	94	97	97	94.2	8.2	
8	95	94	96	93	95	93	95	92	92	89	87	90	88	90	88	81	86	83	83	81	80	82	81	85	88.5	9.0	
9	83	84	85	87	87	87	84	81	78	79	80	79	78	84	82	84	86	86	87	84	79	77	76	77	82.4	6.9	
10	81	79	79	78	78	75	75	74	78	81	82	82	83	88	83	84	81	82	81	83	84	80	82	80	80.4	6.9	
11	77	79	77	80	80	77	77	78	80	82	87	97	95	96	94	94	92	91	93	94	89	92	94	89	86.6	6.7	
12	89	89	88	81	77	84	85	86	82	83	93	84	75	82	80	81	83	86	86	86	87	87	87	84	84.5	5.9	
13	82	81	82	82	81	78	77	76	76	76	86	90	90	90	90	90	91	91	91	90	90	91	92	92	85.4	5.1	
14	92	92	91	91	92	92	92	92	92	87	87	87	85	85	85	83	80	84	86	88	88	90	91	92	88.0	5.3	
15	91	90	88	88	86	85	80	78	79	80	82	82	84	87	87	88	87	89	94	94	94	94	94	93	87.2	5.5	
16	91	87	90	84	84	84	90	89	85	80	79	79	78	79	76	82	80	81	84	80	79	74	80	81	82.6	6.9	
17	79	77	81	80	79	76	84	84	92	93	87	86	90	87	86	87	86	87	88	93	93	95					

HUMIDITY : ANNUAL MEANS OF HOURLY VALUES.

59

From the monthly means for exact hours, Greenwich Mean Time.

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

1925.

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 ...	% 85.3	% 85.3	% 85.3	% 85.4	% 85.4	% 84.8	% 84.0	% 82.5	% 80.8	% 78.9	% 77.8	% 76.7	% 75.9	% 75.8	% 75.7	% 77.0	% 78.3	% 79.8	% 80.9	% 82.4	% 83.3	% 84.1	% 84.8	% 85.1	% 81.5
Vapour Pressure, in millibars ...	mb. 8.6	mb. 8.5	mb. 8.5	mb. 8.5	mb. 8.5	mb. 8.5	mb. 8.7	mb. 8.8	mb. 8.9	mb. 8.9	mb. 9.1	mb. 9.1	mb. 9.2	mb. 9.2	mb. 9.1	mb. 9.1	mb. 9.1	mb. 9.1	mb. 9.0	mb. 8.9	mb. 8.8	mb. 8.8	mb. 8.7	mb. 8.7	mb. 8.8

RELATIVE HUMIDITY : MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

58. Aberdeen : North Wall Screen on Tower : ht = 12.5 metres.

1925.

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.	% 82.5	% +0.7	% +1.9	% +0.7	% +0.3	% +0.5	% +0.2	% +0.4	% +1.2	% -0.2	% -0.2	% -0.7	% -2.4	% -2.2	% -2.0	% -1.5	% -1.4	% +0.4	% +0.8	% -0.1	% +0.1	% +0.2	% +0.7	% +1.4	% +1.3
Feb.	% 82.0	% +2.1	% +2.7	% +1.7	% +2.4	% +2.9	% +3.6	% +3.3	% +3.2	% +2.0	% -0.5	% -2.2	% -3.7	% -3.2	% -3.6	% -4.9	% -2.9	% -2.3	% -1.1	% -1.0	% -1.0	% -0.4	% +0.6	% +0.9	% +1.5
Mar.	% 78.2	% +2.8	% +2.2	% +2.4	% +2.5	% +4.0	% +3.6	% +3.7	% +2.8	% +0.9	% -2.9	% -4.3	% -5.4	% -5.1	% -5.5	% -6.7	% -5.9	% -4.4	% -1.0	% +0.3	% +2.2	% +2.7	% +4.0	% +3.9	% +3.2
April	% 80.2	% +6.2	% +5.5	% +5.8	% +5.9	% +6.0	% +5.0	% +3.2	% +0.5	% -1.8	% -4.4	% -5.5	% -6.0	% -6.7	% -7.7	% -8.6	% -5.6	% -4.4	% -2.6	% -0.4	% +1.6	% +2.1	% +3.1	% +3.7	% +5.0
May	% 84.2	% +4.4	% +4.7	% +4.2	% +3.6	% +3.5	% +3.3	% +1.8	% -1.0	% -2.1	% -3.5	% -3.3	% -3.0	% -4.1	% -5.8	% -6.0	% -4.7	% -4.2	% -3.5	% -1.6	% +1.0	% +3.2	% +3.8	% +4.3	% +4.8
June	% 75.4	% +5.9	% +6.0	% +6.5	% +7.1	% +6.4	% +4.0	% +1.5	% -1.0	% -2.7	% -3.8	% -4.6	% -4.3	% -6.1	% -7.7	% -7.9	% -7.2	% -5.5	% -3.4	% -2.0	% -0.1	% +2.9	% +4.7	% +5.8	% +5.2
July	% 84.3	% +6.3	% +6.3	% +6.5	% +6.4	% +5.8	% +3.8	% +2.2	% -0.4	% -3.5	% -4.2	% -6.0	% -6.8	% -7.5	% -5.9	% -6.6	% -4.9	% -4.5	% -3.2	% -1.1	% +1.0	% +2.8	% +3.8	% +4.6	% +5.3
Aug.	% 79.6	% +5.6	% +5.5	% +5.6	% +5.9	% +5.9	% +5.1	% +3.1	% +0.3	% -1.8	% -4.1	% -5.3	% -6.2	% -7.9	% -7.5	% -6.8	% -6.5	% -4.5	% -3.9	% -1.6	% +1.7	% +2.9	% +3.6	% +5.4	% +5.5
Sept.	% 80.8	% +4.4	% +4.9	% +4.3	% +5.1	% +5.3	% +5.9	% +4.5	% +2.2	% -0.1	% -2.9	% -4.9	% -6.7	% -8.5	% -8.0	% -7.2	% -5.2	% -3.6	% -1.6	% -0.1	% +0.6	% +1.7	% +2.2	% +3.5	% +4.2
Oct.	% 82.6	% +3.3	% +3.4	% +4.3	% +4.3	% +4.5	% +4.6	% +4.8	% +4.2	% +2.5	% -2.1	% -4.5	% -7.3	% -9.3	% -7.4	% -7.4	% -6.2	% -3.1	% -0.5	% -0.2	% +1.4	% +2.1	% +2.2	% +2.8	% +3.6
Nov.	% 83.6	% +2.5	% +2.3	% +2.6	% +2.7	% +1.8	% +1.5	% +1.3	% +1.3	% +0.6	% -0.7	% -2.5	% -3.4	% -4.3	% -5.1	% -4.1	% -3.3	% -1.8	% -0.2	% +0.2	% +1.0	% +1.2	% +1.9	% +2.2	% +2.3
Dec.	% 84.2	% +1.3	% +0.1	% +1.1	% +0.4	% +0.1	% -0.1	% -0.3	% -0.8	% -1.4	% -1.3	% -0.7	% -1.6	% -2.3	% -1.2	% -0.9	% 0.0	% +0.2	% -0.1	% +0.6	% +1.1	% +0.8	% +1.4	% +1.7	% +1.9
Year	% 81.5	% +3.8	% +3.8	% +3.8	% +3.9	% +3.9	% +3.4	% +2.5	% +1.0	% -0.6	% -2.5	% -3.7	% -4.7	% -5.6	% -5.6	% -5.7	% -4.5	% -3.1	% -1.7	% -0.6	% +0.9	% +1.9	% +2.7	% +3.3	% +3.7

RAINFALL : ANNUAL TOTALS OF HOURLY VALUES.

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

59. Aberdeen : H<sub>r</sub> = 13.4 metres + 0.6 metres.

1925.

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. 28.9	mm. 39.4	mm. 28.9	mm. 42.3	mm. 38.1	mm. 26.5	mm. 32.9	mm. 30.2	mm. 33.5	mm. 20.5	mm. 17.1	mm. 16.7	mm. 30.4	mm. 38.5	mm. 27.6	mm. 35.3	mm. 24.8	mm. 24.6	mm. 19.8	mm. 28.5	mm. 16.1	mm. 21.1	mm. 21.6	mm. 26.0	mm. 669.3
Duration ...	hr. 32.0	hr. 34.4	hr. 28.5	hr. 31.3	hr. 33.4	hr. 26.1	hr. 29.7	hr. 24.5	hr. 26.9	hr. 19.4	hr. 18.7	hr. 19.1	hr. 25.7	hr. 26.4	hr. 21.3	hr. 25.7	hr. 22.3	hr. 25.0	hr. 22.1	hr. 25.7	hr. 22.1	hr. 23.0	hr. 26.5	hr. 29.8	hr. 619.6

60. Aberdeen.

NOTES ON RAINFALL.

1925.

Notable Falls of the Year.—There were no really notable falls of rain during 1925. The most prominent one was perhaps that of 2nd January, when a snowstorm yielded 20 mm. of water in about 5½ hours.

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

Jan. 3—12. Period of 10 days with 0.5 mm. (snow showers).

Jan. 15—22. Period of 8 days with no rainfall.

June 7—30. Period of 24 days with slight falls amounting in all to only 6 mm. June was a very dry month.

Aug. 14—21. Period of 8 days with 0.2 mm. August also was a very dry month.

Sept. 30—Oct. 10. Period of 11 days with 0.6 mm. From 20th July to 18th September no serious fall of rain occurred.

Nov. 11—22. Period of 12 days with 0.1 mm.

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

Jan. 2. 20 mm. fell in 5½ hours during snowstorm.

Feb. 23—28. Six days wet spell, 46 mm. in all fell, of which 8 mm. fell in 2½ hours on 24th.

May 18. 9 mm. fell in a little over 1 hour, of which 5 mm. fell in 15 minutes.

May 25—27. 29 mm. of rain in 3 days, but without any noteworthy rate of fall.

July 26. 15 mm. in 2½ hours, during 15. Of this, 5 mm. fell in 10 minutes.

July 29. 16 mm. in under 5 hours, of which 5 mm. fell in 10 minutes.

Sept. 19—20. 23 mm. fell in 11 hours, but no noteworthy rate of fall.

Oct. 26. 13 mm. in 2½ hours, 5 mm. of which fell in 35 minutes.

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

61. Aberdeen :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 13.4 metres + 0.6 metres. January, 1925.

Day.	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.	mm.	hr.	
2	1.4	3.8	1	...	...	...	...	...	...	...	...	...	1.4	1.2	(4.5)	(.8)	...	...	...	...	...	...	...	...	...	3	3.0	1.7
3	...	...	...	...	...	...	...	...	...	...	...	...	(4.5)	(4.5)	(4.5)	(.8)	...	...	...	...	...	...	...	...	...	...	...	(5.4)
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	(.1)	(.1)	(.1)	(.1)	(...)	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(0.4)	(0.4)
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	.2	.6	1.5	1.7	.3	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	.8	.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	2.5	5.4	1.7	1.9	0.3	...	0.4	0.4	0.1	0.1	...	0.3	5.9	5.7	4.6	1.1	0.7	2.7	0.5	0.2	0.2	0.2	0.2	0.2	0.6	35.7	21.7	
Total Duration.	hr. 2.4	hr. 2.8	hr. 1.4	hr. 1.6	hr. 1.0	...	hr. 0.9	hr. 0.5	hr. 0.3	hr. 0.2	...	hr. 0.4	hr. 1.5	hr. 1.8	hr. 1.2	hr. 1.0	hr. 0.9	hr. 1.0	hr. 0.7	hr. 0.3	hr. 0.4	hr. 0.5	hr. 0.2	hr. 0.7	hr. 21.7			

62. Aberdeen :  $H_r = 13.4$  metres + 0.6 metres.

February, 1925.

Day.	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.	mm.	hr.	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	1.2	.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	.9	2.0	1.9	2.4	.2	.5	.5	.9	1.1	.6	.1	.3	1.2	1.6	1.4	1.6	.2	.1	...	...	...	...	...	...	...	...	...	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	.2	.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	.8	.5	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	.6	.2	.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	.5	2.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	.1	.7	.1	.3	.1	2.5	.1	.1	.2	.1	.1	.3	...	.1	2.4	.3	.5	.1	...	.9	.8	...	...	...	...	...	
Sum.	3.7	5.7	3.3	2.8	1.4	1.9	4.3	6.6	7.3	2.3	2.9	2.5	5.3	6.2	2.8	7.0	7.0	6.1	4.5	2.1	2.3	1.9	2.7	4.8	97.4	73.6		
Total Duration.	hr. 3.2	hr. 4.2	hr. 4.1	hr. 2.3	hr. 1.9	hr. 1.4	hr. 2.9	hr. 3.3	hr. 3.8	hr. 2.1	hr. 2.9	hr. 1.8	hr. 5.5	hr. 4.7	hr. 2.6	hr. 3.5	hr. 2.7	hr. 2.7	hr. 3.4	hr. 3.3	hr. 3.0	hr. 1.7	hr. 3.2	hr. 3.4	hr. 73.6			
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.

63. Aberdeen :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 13.4 metres + 0.6 metres. March, 1925.

Day.	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			
	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	.8	.4	...	...	...	...	...	0.2	.9	.1	...	...	...	...	.1	...	.3	.3	...	...	...	3.3	3.0			
2	...	...	...	...	.1	...	...	...	.2	...	...	...	.4	...	...	...	...	...	...	...	...	...	...	...	0.7	0.8			
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.3	0.3	0.4			
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
8	(...)	(...)	(...)	(.1)	(...)	(.1)	(.1)	(...)	(...)	(...)	(...)	(.1)	(.1)	(...)	(.1)	(.1)	(.1)	(...)	(.4)	(.8)	(.6)	(.2)	(.4)	(.8)	(4.0)	(6.2)			
9	(.6)	(.6)	(.6)	(.6)	(.6)	(.2)	(...)	(...)	(...)	(.2)	(.2)	(.2)	(.3)	(.3)	(.2)	(.3)	(.1)	(...)	(.2)	(.2)	(.3)	(.4)	(.3)	(.2)	(6.6)	(7.4)			
10	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.1	0.4			
11	(...)	(...)	(.5)	(1.0)	(1.0)	(.4)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	.7	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(3.6)	(3.9)			
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
13	...	...	...	...	...	...	...	4	.2	...	...	...	.1	...	...	.1	...	...	...	...	.1	...	...	...	0.9	1.7			
14	...	...	...	...	.1	.1	...	...	...	...	...	.1	.1	.1	...	...	...	...	...	...	...	...	...	...	0.5	2.0			
15	...	...	...	...	.1	.2	.1	.1	...	...	...	...	.5	.1	...	...	...	...	...	...	...	...	...	...	1.1	3.8			
16	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.5			
17	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.5			
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	.1	...	...	.1	(...)	(...)	(...)	0.3	0.9		
21	(.1)	(.2)	(.2)	(.1)	(.2)	(.1)	(.1)	...	...	...	...	...	...	...	...	.1	.3	.3	...	(.1)	(.1)	...	...	...	(1.9)	(4.4)			
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
23	...	...	...	...	...	...	...	...	.1	1.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	1.1			
24	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	.2	...	...	...	...	...	...	...	...	...	1.0	1.3			
25	1.9	1.3	...	.1	1.3	.3	...	.1	.7	.2	...	...	...	...	...	...	...	.7	.1	...	.1	.1	...	...	6.9	4.8			
26	...	.1	...	...	.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	0.7			
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
29	...	...	...	...	.4	.4	.1	...	...	...	...	.1	.4	...	...	...	...	...	...	...	...	...	...	...	1.4	1.7			
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	5	3	1.5	2.2
31	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	.2	1.2	1.4	1.6	1.4	1.3	.6	.9	.9	.6	10.2	9.6			
Sum.	2.7	2.3	1.4	2.7	4.9	1.8	0.8	0.4	1.0	1.4	0.6	1.7	1.6	0.7	1.4	1.8	2.0	2.8	2.1	2.7	2.3	2.5	2.2	3.2	47.0	57.7			
Total Duration.	hr. 1.6	hr. 2.3	hr. 2.0	hr. 3.2	hr. 5.5	hr. 3.7	hr. 1.9	hr. 1.3	hr. 1.1	hr. 1.7	hr. 0.8	hr. 1.5	hr. 2.8	hr. 1.7	hr. 2.0	hr. 2.4	hr. 2.3	hr. 2.5	hr. 1.6	hr. 2.7	hr. 3.7	hr. 3.1	hr. 2.9	hr. 3.4	hr. 57.7				

64. Aberdeen :  $H_r = 13.4$  metres + 0.6 metres.

April, 1925.

Day.	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	
	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.3
2	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	.5	...	...	.5	...	...	.1	...	.6	.7	...	...	2.4	3.0	
6	.6	.7	.4	.4	.4	.5	.6	.7	.9	.6	.7	.9	.7	.4	.2	.2	...	.2	.1	...	.1	...	...	...	9.8	15.3	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.8	8.5
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	...	(≡)	(≡)	(.1)	(≡)	(.1)	(≡)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	(...)
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	1.2	1.3	1.1
15	.6	5.8	2.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.7	2.7	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	.9	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	.1	...	.1	...	...	...	2.4	3.8	
18	.1	.3	.5	.6	.9	1.0	.9	1.1	.6	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.2	8.7	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	2.3
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.3
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	1.2
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.4
26	...	...	...	...	...	...	.2	.1	.4	...	.5	.2	.2	.1	...	.1	...	...	...	...	.5	.1	.2	...	2.6	3.9	
27	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2
28	.1	.1	...	.2	.1	.1	...	...	...	...	...	...	...	...	...	3.4	1.8	.5	.1	...	...	...	...	...	6.4	4.4	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	1.6	.1	...	...	.1	.3	...	...	3.7	1.8	
30	.1	...	...	...	.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.6	.1	...	.2	.1	3.6	1.9
Sum.	2.6	7.0	3.2	1.3	1.9	1.7	1.8	1.9	1.9	1.2	1.7	2.8	2.5	1.8	0.9	7.6	5.1	1.6	1.1	2.9	1.5	1.9	1.1	1.9	58.9	62.1	
Total Duration.	hr. 4.3	hr. 3.6	hr. 2.5	hr. 2.4	hr. 2.4	hr. 1.8	hr. 2.6	hr. 2.2	hr. 2.5	hr. 1.8	hr. 1.9	hr. 2.4	hr. 2.7	hr. 3.1	hr. 1.8	hr. 4.4	hr. 3.2	hr. 3.0	hr. 2.6	hr. 1.4	hr. 2.5	hr. 2.3	hr. 2.0	hr. 2.7	hr. 62.1		
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.

65. Aberdeen :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 13.4 metres + 0.6 metres. May, 1925.

Day.	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	
	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.3
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.5
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	4.7
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.3	7.2
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	2.9
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.5	8.5
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.2
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.7
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	1.8
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.4	1.0
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.4
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.9	1.1
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	4.8
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	1.1
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.6	12.9
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	1.3
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.6	7.9
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.8
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	2.9
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	2.1	0.6	0.3	1.5	14.0	7.7	8.7	7.4	7.7	3.6	3.3	2.1	1.6	0.9	1.0	1.4	0.9	1.0	1.6	0.3	0.5	2.3	0.7	3.4	74.6	61.4	
Total Duration.	hr. 2.4	hr. 1.8	hr. 0.9	hr. 1.2	hr. 2.6	hr. 4.0	hr. 4.5	hr. 4.3	hr. 5.0	hr. 3.7	hr. 3.3	hr. 2.8	hr. 2.6	hr. 2.0	hr. 1.5	hr. 3.1	hr. 2.1	hr. 2.1	hr. 2.0	hr. 1.1	hr. 1.5	hr. 2.0	hr. 2.1	hr. 2.8	hr. 61.4		

66. Aberdeen :  $H_r = 13.4$  metres + 0.6 metres.

June, 1925.

	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.3
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.2	2.2
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.3	2.2
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.7	3.9
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.5
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	(1.0)
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	1.4
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.8
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.3
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.8
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.4
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	1.4
Sum.	0.1	1.1	0.3	0.1	0.9	1.4	0.1	2.0	2.2	2.2	0.8	0.2	2.1	1.7	2.4	...	0.3	...	0.1	1.2	...	0.2	0.6	1.4	21.4	15.2	
Total Duration.	hr. 0.3	hr. 0.4	hr. 0.7	hr. 0.3	hr. 1.1	hr. 1.0	hr. 0.2	hr. 1.0	hr. 1.0	hr. 1.5	hr. 0.6	hr. 0.2	hr. 1.4	hr. 0.6	hr. 1.0	hr. ...	hr. 0.3	hr. ...	hr. 0.1	hr. 1.0	hr. ...	hr. 0.5	hr. 0.6	hr. 1.4	hr. 15.2		
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.

67. Aberdeen : Hr (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + hr (height of receiving surface above ground) = 13.4 metres + 0.6 metres. July, 1925.

Day.	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	
	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	1.0	.6	.2	.3	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.2	2.8	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	...	...	...	.9	.9	.4	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.5	2.7	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.7	2.0	1.7	.7	5.1	3.4	
7	...	...	2.0	2.5	...	...	...	...	.2	...	...	...	...	...	...	...	...	.2	...	...	...	...	...	...	4.9	1.3	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.2	...	0.2	0.7	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.7	.1	1.3	2.1	
10	.6	.2	...	...	...	...	...	...	...	...	...	...	.4	...	...	...	...	...	...	...	...	...	...	...	0.8	0.8	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
13	.4	1.1	.9	.2	.4	.2	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.4	5.5	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.8	0.6	
15	1.3	.1	.2	2.3	.9	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.0	3.3	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.3	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	...	...	.2	2.0	...	...	...	...	...	...	...	...	...	...	2.2	1.1	
21	...	...	...	...	...	...	...	...	...	...	...	...	1.9	1.4	1.5	...	...	...	...	...	...	...	...	...	5.7	2.9	
22	1.5	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	1.2	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	2.5	.4	...	...	...	...	3.9	2.1	
24	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.5	
25	...	.1	.1	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	4.0	
26	...	...	.7	9.8	...	...	...	...	1.6	3.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15.2	2.3	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.3
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16.8	4.7
30	...	...	...	...	...	...	...	...	...	...	...	...	...	9.3	1.2	2.7	...	...	...	.2	1.1	...	...	...	3.1	4.4	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	.5	.1	...	...	...	...	...	...	...	...	0.4	0.4	
Sum.	4.8	2.3	4.1	16.1	2.5	0.8	2.3	...	1.8	3.1	0.3	0.1	2.5	12.8	3.5	4.1	0.2	2.1	3.0	2.9	1.7	3.3	2.8	2.2	79.3	52.3	
Total Dura- tion.	hr. 3.9	hr. 4.0	hr. 3.3	hr. 5.1	hr. 4.6	hr. 1.4	hr. 1.6	...	hr. 0.5	hr. 0.8	hr. 0.2	hr. 0.2	hr. 1.3	hr. 2.9	hr. 2.3	hr. 1.8	hr. 0.5	hr. 2.1	hr. 1.7	hr. 2.8	hr. 2.2	hr. 3.0	hr. 3.1	hr. 3.0	hr. 52.3		

68. Aberdeen : Hr = 13.4 metres + 0.6 metres.

August, 1925.

	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.2		
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.4	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(.1)	...	...	...	...	...	...	...	...	0.4	0.9		
7	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.3	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	3.4	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
12	...	...	.1	.4	.2	.2	1.1	.5	...	.9	.4	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	4.0	4.3	
13	...	.1	.2	.4	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	1.9	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
18	...	...	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.8	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
23	.1	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.9	.2	1.1	2.6	.7	5.5	3.4	
24	.1	.2	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.5	6.7	1.4	.4	.1	.2	9.5	4.6
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	1.4	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	0.8
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.2
31	...	...	...	...	.1	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.8	
Sum.	0.3	0.3	0.4	1.1	0.6	0.4	1.3	1.2	1.5	1.5	0.4	0.2	...	0.5	2.3	0.5	0.1	0.2	0.5	7.8	1.6	1.6	2.7	0.9	27.9	25.6		
Total Dura- tion.	hr. 1.0	hr. 0.7	hr. 1.0	hr. 2.4	hr. 1.5	hr. 0.8	hr. 1.9	hr. 1.7	hr. 1.4	hr. 1.1	hr. 0.4	hr. 0.1	...	hr. 0.7	hr. 1.5	hr. 0.9	hr. 0.4	hr. 0.2	hr. 0.3	hr. 1.8	hr. 1.5	hr. 1.7	hr. 1.3	hr. 1.3	hr. 25.6			
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.

69. Aberdeen :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 13.4 metres + 0.6 metres. **September, 1925.**

Day.	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		
	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.5	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	1.4	
3	1.8	.6	.2	.1	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.6	3.4	
4	...	...	...	.3	1.1	.2	.1	...	.3	...	.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	2.6	
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.8	
6	.2	.1	.3	...	.1	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	2.0	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	5.6	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	.2	.1	.5	1.2	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	2.1	2.5	4.0	2.6	1.5	.3	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	.2	.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	.8	.4	.8	.5	.7	(.2)	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	5.5	3.9	5.9	5.4	4.5	2.1	1.9	1.0	2.2	1.4	2.6	1.6	1.3	2.1	1.1	0.3	0.7	2.4	2.0	2.2	3.2	4.1	4.0	3.2	64.6	63.8		
Total Duration.	5.8	4.0	4.1	3.9	3.9	3.6	4.2	1.8	1.8	1.5	1.9	1.4	1.0	1.9	1.7	0.7	1.5	3.2	1.4	2.0	1.6	3.6	3.6	3.7	63.8			

70. Aberdeen :  $H_r = 13.4$  metres +  $0.6$  metres.

**October, 1925.**

	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	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	.4	.5	.8	1.6	(.4)	(.4)	(1.9)	(1.6)	.9	1.8	.5	.1	.1	.5	.4	...	...	...	...	...	...	...	...	...	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	.8	4.6	1.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	1.4	5.2	2.0	3.6	1.8	3.1	5.2	4.9	4.7	1.1	0.9	0.7	2.6	1.7	5.1	8.9	3.9	2.6	1.3	2.7	1.1	1.4	1.1	1.1	68.1	49.9		
Total Duration.	2.4	2.3	1.0	1.9	1.2	1.6	1.6	3.0	4.5	1.5	1.0	1.6	1.9	2.4	2.2	2.5	2.3	2.1	2.1	3.2	2.0	1.5	2.2	1.9	49.9			
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.

71. Aberdeen :  $H_r$  (height of receiving surface above M.S.L.) =  $H$  (height of station above M.S.L.) +  $h_r$  (height of receiving surface above ground) = 13.4 metres + 0.6 metres. **November, 1925.**

Day.	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	
	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.8	6.6
2	...	1	3	1.2	1.0	1.5	2.2	1.7	.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	1.8
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	0.6
6	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.8
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.3
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	(.2)	(.2)	(.1)	(.1)	(.1)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	(...)	(...)	(.1)	(...)	(.1)	(...)	(.1)	(1.3)	(.3)	...	1	1	9	...	...	...	3	6	(5)	(.4)	(.4)	(.3)	(.2)	(.2)	(4.8)	(5.8)	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.3
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	1.5
24	...	...	...	(.3)	(.3)	(.3)	(.3)	(...)	(.1)	(...)	(...)	(.1)	(.1)	(.3)	(...)	(...)	(.1)	(.2)	...	...	...	...	...	...	...	...	...
25	3	(.3)	(.3)	(.3)	(.3)	(.3)	(.3)	(...)	(.1)	(...)	(...)	(.1)	(.1)	(.1)	(...)	(...)	(.1)	(.2)	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	1	1.1	.2	(1.2)	(.4)	(.6)	(.2)	(.4)	(.3)	(.3)	(.2)	(.2)	(.1)	(.1)	(.2)	(.3)	(.4)	(.2)	(.1)	(.1)	(.2)	(.3)	(.3)	(.3)	0.6	0.8	
28	(.3)	(.3)	(.3)	(.3)	(.3)	(.3)	(.3)	(.2)	(.1)	(...)	(...)	(.1)	(...)	(.1)	(...)	(.1)	(.2)	(.2)	(.7)	(.7)	...	...	...	...	...	...	...
29	...	(.1)	(.1)	...	...	...	...	...	...	...	(.6)	(.8)	(.6)	(.1)	(...)	(.1)	(.1)	(.1)	...	...	...	...	...	...	...	...	...
30	...	...	2.5	...	1	1	4	...	2	5	...	1	...	1	9	1	6	...	...	...	...	...	...	...	...	...	...
Sum.	1.0	2.4	3.9	3.2	2.4	2.9	4.0	3.7	1.6	1.2	1.0	1.7	1.8	0.8	1.3	0.9	2.9	1.6	1.3	2.2	0.8	0.6	1.7	1.0	45.9	58.3	
Total Duration.	hr. 1.6	hr. 3.7	hr. 3.6	hr. 2.8	hr. 3.6	hr. 3.0	hr. 3.8	hr. 3.5	hr. 2.7	hr. 1.4	hr. 1.7	hr. 2.7	hr. 2.4	hr. 1.5	hr. 1.2	hr. 1.9	hr. 3.3	hr. 2.5	hr. 2.4	hr. 2.8	hr. 1.5	hr. 1.0	hr. 2.1	hr. 1.6	hr. 58.3		

72. Aberdeen :  $H_r = 13.4$  metres +  $0.6$  metres.

**December, 1925.**

	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	(...)	(...)	(...)	(.6)	(.6)	(.6)	(.6)	(...)	(...)	(...)	(.6)	(...)	(1.4)	(1.8)	(.3)	(.7)	(.3)	(.2)	(.2)	...	...	...	...	...	...	...	(7.9)	(7.4)						
2	(...)	(.2)	(.3)	(.2)	(.3)	(.2)	(.2)	(...)	(...)	(...)	(.5)	(...)	(...)	(...)	(.1)	(.2)	(...)	(.1)	(...)	...	...	...	...	...	...	...	(2.6)	(3.8)						
3	(...)	(.1)	(...)	(.1)	(...)	(.1)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(0.3)	(0.6)						
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
8	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.6					
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	1.0					
10	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	1.3					
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.5					
12	...	9	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1	3.0					
13	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	2.5					
14	(.6)	(.7)	(.8)	(.7)	(.8)	(.7)	(.1)	(...)	(...)	(...)	(.1)	(.1)	(...)	(.3)	(.1)	(.4)	(.3)	(.3)	(.1)	(...)	(...)	(.2)	(.2)	(.2)	(.2)	(2.5)	(6.3)	(7.0)						
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
18	(.6)	(.6)	(.6)	(.5)	(.6)	(.6)	(.6)	(.4)	(.4)	(1.0)	(.7)	(.6)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)				
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
20	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)	(...)	(...)	(.1)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)			
21	(.2)	(.1)	(.2)	(.1)	(.3)	(.3)	(.3)	(.1)	(...)	(...)	(.2)	(.2)	(.2)	(.2)	(.1)	(...)	(...)	(.2)	(.1)	(.1)	(.2)	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)			
22	(.1)	(.1)	(.2)	(.1)	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
24	(...)	(...)	(...)	(.1)	(.1)	(.1)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
28	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	2.2	3.2	2.4	2.6	2.9	2.7	2.1	0.7	1.5	1.4	2.6	2.8	3.2	3.6	1.2	1.7	1.0	1.5	1.8	1.3	0.9	1.1	1.8	2.3	48.5	78.0								
Total Duration.	hr. 3.1	hr. 4.6	hr. 3.9	hr. 4.2	hr. 4.1	hr. 3.8	hr. 3.6	hr. 1.9	hr. 2.3	hr. 2.1	hr. 4.0	hr. 4.0	hr. 2.6	hr. 3.1	hr. 2.3	hr. 3.5	hr. 2.8	hr. 3.6	hr. 3.8	hr. 3.3	hr. 2.2	hr. 2.1	hr. 3.2	hr. 3.9	hr. 78.0									
G.M.T.	0-1	1-2	2-3	3-4																														

DURATION OF BRIGHT SUNSHINE.

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

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

January, 1925.

Day.	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.	
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	30
3	—	—	—	—	—	...	...	...	1.0	.4	.2	...	...	...	...	...	...	...	1.1	16	
4	—	—	—	—	—	...	...	...	...	.4	.6	.1	...	...	...	...	...	...	...	...	...
5	—	—	—	—	—	...	...	...	.8	.9	1.0	.6	...	...	...	...	...	...	5.1	75	
6	—	—	—	—	—	...	...	...	.8	1.0	1.0	.7	.5	...	...	...	...	...	4.0	58	
7	—	—	—	—	—	...	...	...	...	.1	...	.8	...	.5	...	...	...	...	1.4	20	
8	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.0	71
10	—	—	—	—	—	...	...	...	.1	1.0	1.0	1.0	.4	...	...	...	...	...	3.4	49	
11	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	4	
13	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	60	
15	—	—	—	—	—	...	...	...	.7	1.0	1.0	1.0	.6	...	...	...	...	...	5.3	73	
16	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
17	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	8	
19	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	18	
25	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	25	
26	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	16	
27	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0	37	
30	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	11	
31	—	—	—	—	—	...	...	...	.3	1.0	1.0	1.0	.9	1.0	.4	...	...	...	6.6	80	
Sum.	—	—	—	—	...	0.3	4.9	8.3	8.7	10.1	9.6	5.5	0.4	...	...	...	...	...	47.8	—	
Mean.	—	—	—	—	...	.01	.16	.27	.28	.33	.31	.18	.01	...	...	...	...	...	1.54	21	

74. Aberdeen :  $h_s$  = 20.7 metres.

February, 1925.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	—	—	—	...	.2	1.0	1.0	.8	1.0	1.0	1.0	.1	...	...	...	...	...	...	...	6.1	73
2	—	—	—	—	...	.5	...	.9	.5	...	.5	.8	.1	...	...	...	...	...	...	...	3.9	46
3	—	—	—	—	...	...	...	.9	1.0	.6	.6	.8	.1	...	...	...	...	...	...	...	4.0	47
4	—	—	—	—	...	.1	.9	1.0	.7	...	...	...	...	...	...	...	...	...	...	...	2.9	34
5	—	—	—	—	...	...	.4	1.0	1.0	.9	.9	.8	.7	...	...	...	...	...	...	...	5.7	66
6	—	—	—	—	...	.1	.1	...	.8	.7	...	...	...	...	...	...	...	...	...	...	1.7	20
7	—	—	—	—	...	.6	1.0	1.0	1.0	1.0	1.0	1.0	.3	...	...	...	...	...	...	...	6.9	78
8	—	—	—	—	...	.6	.5	.3	.3	.8	.4	...	...	...	...	...	...	...	...	...	2.9	33
9	—	—	—	—	...	1.0	1.0	1.0	1.0	1.0	1.0	.8	...	...	...	...	...	...	...	...	6.8	76
10	—	—	—	—	...	...	...	...	...	...	.2	.6	.8	.3	...	...	...	...	...	...	1.9	21
11	—	—	—	—	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
12	—	—	—	—	...	.1	.5	.7	...	...	...	...	.1	.2	...	...	...	...	...	...	1.6	17
13	—	—	—	—	...	...	...	...	...	...	...	...	...	.3	...	...	...	...	...	...	0.3	32
14	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	—	—	—	—	...	...	...	.2	.4	...	...	...	...	...	...	...	...	...	...	...	0.6	6
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	—	—	—	—	...	.1	.5	.9	.9	.9	.2	.1	...	...	...	...	...	...	...	...	3.6	37
20	—	—	—	—	...	.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	...	...	...	...	...	...	7.4	76
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	—	—	—	...	.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.1	...	...	...	...	...	8.3	83
23	—	—	—	—	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
24	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	—	—	—	—	...	...	...	...	...	.2	...	.9	.7	.2	...	...	...	...	...	...	2.0	20
26	—	—	—	—	...	...	...	...	...	...	...	...	...	.2	...	...	...	...	...	...	0.2	2
27	—	—	—	—	...	.1	.2	...	.1	...	.1	...	...	...	...	...	...	...	...	...	0.5	5
28	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	—	—	—	...	0.2	4.8	8.9	10.9	10.7	9.3	9.2	8.9	4.5	0.1	...	...	...	...	...	...	67.5	—
Mean.	—	—	—	...	.01	.17	.32	.39	.38	.33	.33	.32	.16	.00	...	...	...	...	...	...	2.41	26
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.	18 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.

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

March, 1925.

Day.	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.
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	—	—	—	—	—	—	·4	·4	·2	—	—	—	—	—	—	1·0	9
2	—	—	—	—	—	—	—	—	·1	·1	—	—	—	—	—	—	—	—	0·3	3
3	—	—	—	—	—	·1	·8	—	·1	·1	—	·2	—	—	—	—	—	—	1·3	12
4	—	—	—	—	—	—	—	·1	·1	·6	·2	—	·1	—	—	—	—	—	1·1	10
5	—	—	—	—	—	—	·3	·4	—	—	·3	·3	·4	—	—	—	—	—	1·7	16
6	—	—	—	—	—	—	—	—	·4	·4	·2	·3	·1	—	—	—	—	—	1·4	13
7	—	—	—	—	·7	1·0	1·0	·9	1·0	1·0	1·0	1·0	·9	·8	—	—	—	—	9·3	84
8	—	—	—	—	—	·2	·9	·2	·9	·7	·3	·7	·6	·2	—	—	—	—	4·7	42
9	—	—	—	—	·4	·7	·2	·2	·3	·6	·4	·7	·7	·6	—	—	—	—	4·8	43
10	—	—	—	—	—	·2	—	—	·4	·5	—	—	—	—	—	—	—	—	1·1	10
11	—	—	—	—	·9	1·0	1·0	·4	—	·3	·1	·6	1·0	·9	·2	—	—	—	6·4	56
12	—	—	—	·1	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·7	—	—	—	—	9·8	85
13	—	—	—	—	—	—	—	—	—	—	—	·3	·8	·7	—	—	—	—	1·8	16
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	—	—	—	—	—	—	—	—	—	—	—	—	·3	·2	—	—	—	—	0·5	4
16	—	—	—	—	—	—	—	—	·2	·3	—	—	·5	·6	—	—	—	—	1·6	14
17	—	—	—	—	—	—	—	—	—	—	·8	·7	·4	—	—	—	—	—	1·9	16
18	—	—	—	—	·6	·4	·8	·4	—	—	—	—	—	—	—	—	—	—	2·2	18
19	—	—	—	—	—	—	—	—	—	·2	—	—	—	—	—	—	—	—	0·2	2
20	—	—	—	—	—	·8	·7	·7	·8	·7	·6	·2	·3	—	·1	—	—	—	4·9	40
21	—	—	—	·3	·9	1·0	·9	·7	1·0	·7	·8	·9	·8	—	—	—	—	—	8·0	66
22	—	—	—	·4	1·0	·6	·7	1·0	1·0	·7	·7	·2	—	—	—	—	—	—	6·3	51
23	—	—	—	—	—	—	—	—	—	·2	—	·5	·5	·3	—	—	—	—	1·5	12
24	—	—	—	·4	·6	—	·5	1·0	·9	·9	·4	·9	·9	·5	—	—	—	—	7·0	56
25	—	—	—	—	·1	·2	·4	·6	·5	·9	1·0	·9	·3	—	·1	—	—	—	5·5	44
26	—	—	—	—	·8	·7	·2	·1	—	—	·1	·1	—	·1	—	—	—	—	2·1	17
27	—	—	—	·1	1·0	1·0	1·0	·1	·2	·1	—	·4	—	—	—	—	—	—	3·9	31
28	—	—	—	—	—	1·0	1·0	·8	·1	—	—	—	—	—	—	—	—	—	2·9	23
29	—	—	—	—	—	·3	·8	·3	·1	—	—	—	—	—	—	—	—	—	1·5	12
30	—	—	—	·4	1·0	·7	·7	1·0	1·0	·2	·1	—	·1	—	—	—	—	—	5·2	40
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sum.	—	—	—	1·7	9·0	10·9	12·9	9·9	10·1	10·5	8·6	9·9	9·9	6·1	0·4	—	—	—	99·9	—
Mean.	—	—	—	·05	·29	·35	·42	·32	·33	·34	·28	·32	·32	·20	·01	—	—	—	3·22	27

76. Aberdeen :  $h_s$  = 20.7 metres.

April, 1925.

Day.	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.
	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	·8	·1	—	—	—	—	—	—	7·7	59
2	—	—	—	—	—	—	—	—	—	—	·3	·3	·9	·9	·5	—	—	—	2·9	22
3	—	—	—	·9	1·0	1·0	1·0	1·0	·9	·4	·5	·2	·4	·2	—	—	—	—	7·5	56
4	—	—	—	—	—	—	—	—	—	·3	·6	—	—	—	—	—	—	—	0·9	7
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	·2	—	—	—	—	—	—	—	—	—	—	—	0·2	1
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	·2	·9	1·0	1·0	·9	·8	1·0	1·0	1·0	—	—	—	—	7·8	57
11	—	—	—	—	·3	1·0	1·0	1·0	1·0	1·0	·4	—	—	—	—	—	—	—	5·7	41
12	—	—	—	·3	·9	1·0	1·0	·8	·5	1·0	1·0	1·0	1·0	1·0	·8	·4	—	—	10·2	73
13	—	—	—	—	—	·1	·2	—	—	—	·6	·9	1·0	1·0	·8	·4	—	—	5·0	35
14	—	—	·3	1·0	1·0	1·0	·9	·6	·4	·8	·3	·3	·9	·9	·6	—	—	—	9·0	64
15	—	—	·2	·4	—	—	·9	·1	—	—	—	—	—	—	·6	·4	—	—	2·6	18
16	—	—	—	·1	1·0	1·0	·9	1·0	·9	·8	·6	·9	·4	—	—	—	—	—	7·6	53
17	—	—	—	—	·2	1·0	·9	·9	·8	·7	·7	·4	·4	—	—	—	—	—	6·0	42
18	—	—	—	—	—	—	—	—	—	—	—	—	·2	—	·1	—	—	—	0·3	2
19	—	—	—	—	·2	·2	·1	—	·1	·8	·7	·8	·8	·7	·9	·8	—	—	6·1	42
20	—	—	·1	·1	·5	1·0	·6	·7	·3	·2	·7	·9	·9	1·0	1·0	·3	—	—	8·3	57
21	—	—	·1	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·8	·5	—	—	—	—	10·4	71
22	—	—	—	—	—	—	·1	·1	—	—	—	—	—	—	—	—	—	—	0·2	1
23	—	—	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·6	·6	·5	·7	—	—	12·4	83
24	—	—	·4	·1	·5	—	·3	·9	·6	·4	·4	·5	·8	·7	·4	·1	—	—	6·1	41
25	—	—	—	·4	·6	·9	·2	—	—	·3	·8	·8	·3	·2	·4	·4	—	—	5·3	35
26	—	—	·2	·2	·3	·3	·5	·2	·6	·7	·8	·4	·2	—	—	—	—	—	4·4	29
27	—	—	·5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·8	1·0	1·0	·2	—	—	12·5	82
28	—	—	·2	·3	·8	1·0	·5	·7	1·0	·9	·6	·6	—	—	—	—	—	—	6·6	43
29	—	—	—	·2	·4	1·0	1·0	·9	·6	—	·2	—	—	—	—	—	—	—	4·3	28
30	—	—	—	—	—	·4	1·0	·9	1·0	·9	·2	·3	·7	·9	·7	—	—	—	7·0	45
Sum.	—	—	3·0	7·8	11·7	15·1	16·2	14·8	13·7	14·1	14·0	12·4	12·1	10·6	8·2	3·3	—	—	157·0	—
Mean.	—	—	·10	·26	·39	·50	·54	·49	·46	·47	·47	·41	·40	·35	·27	·11	—	—	5·23	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.

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

May, 1925.

Day.	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 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.	
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	...	.7	.6	1.0	.7	.8	.2	.7	.5	.7	1.0	.6	.3	.4	.9	.1	—	9.2	59	
2	—	...	...	1.0	.9	.7	1.0	.4	1.0	.9	.5	...	.5	...	...	...	...	—	8.5	55	
3	—	...	.1	.9	.7	.9	.2	.4	...	...	...	...	...	...	...	...	...	—	3.7	24	
4	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	...	...	
5	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	...	...	
6	—	...	...	...	...	...	...	...	...	.5	1.0	1.0	1.0	1.0	.5	...	...	—	5.0	32	
7	—	...	...	...	...	.1	.3	1.0	1.0	1.0	.6	...	...	.1	...	...	...	—	4.1	26	
8	—	...	...	...	...	...	...	...	...	.2	1.0	.9	.7	.2	...	...	...	—	3.0	19	
9	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	...	...	
10	...	...	...	...	.4	.6	.7	.1	.8	1.0	.6	.2	...	.1	...	...	...	...	4.5	28	
11	...	...	...	...	...	...	...	...	...	...	.2	.5	.7	.9	.8	1.0	.6	...	4.7	29	
12	...	...	...	.5	1.0	1.0	.7	.2	.7	.8	.4	...	...	...	...	...	...	...	5.3	33	
13	...	.4	1.0	1.0	1.0	1.0	1.0	.9	1.0	1.0	.7	.5	...	...	...	...	...	...	9.5	58	
14	...	...	...	...	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	...	12.0	73	
15	...	...	...	...	...	...	...	...	...	...	...	.3	.5	.2	...	...	...	...	1.0	6	
16	...	...	...	...	...	.3	.5	.8	...	.2	...	.1	...	...	...	...	...	...	1.9	12	
17	...	...	.3	.6	.6	.3	.8	.5	.8	.8	1.0	.9	1.0	1.0	.7	...	...	...	9.3	56	
18	...	...	...	...	...	...	...	...	...	...	.5	...	.6	...	...	...	...	...	1.1	7	
19	...	...	.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.7	1.0	.6	.9	.6	.2	...	...	11.4	68	
20	...	...	...	...	...	.5	.5	.9	1.0	1.0	1.0	1.0	1.0	.4	.5	.1	...	...	7.9	47	
21	...	.2	...	...	.3	.4	1.0	1.0	1.0	1.0	.8	1.0	1.0	1.0	1.0	.9	...	...	10.6	63	
22	...	...	...	.1	.8	.7	1.0	1.0	.8	.6	...	...	...	...	...	...	...	...	5.0	30	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	.3	.4	.3	...	...	...	...	...	...	...	...	1.0	6	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	.1	.9	.9	.8	.3	...	...	.4	1.0	.5	1.0	.6	...	...	...	...	6.5	38	
27	...	...	...	...	...	...	...	...	...	...	.1	.9	.7	.9	1.0	1.0	.9	...	5.5	32	
28	...	...	...	...	...	...	...	.5	.9	.1	.5	.6	.5	.9	.9	.2	...	...	5.6	33	
29	...	...	...	...	...	.1	.8	.8	.9	1.0	.8	1.0	.9	.8	...	...	...	...	7.1	41	
30	...	.9	.8	1.0	1.0	1.0	1.0	1.0	1.0	.6	.9	.7	.7	.6	.9	.6	.2	...	12.9	75	
31	...	...	...	...	...	...	...	.3	.1	.7	.4	.9	.8	.5	.8	.5	...	...	5.0	29	
Sum.	...	1.5	4.7	7.6	10.7	11.3	13.6	13.0	14.4	13.9	13.8	14.2	13.9	11.3	9.2	6.4	1.8	...	161.3	—	
Mean.	...	.05	.15	.25	.35	.36	.44	.42	.46	.45	.45	.46	.45	.36	.30	.21	.06	...	5.20	32	

78. Aberdeen :  $h_s$  = 20.7 metres.

June, 1925.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	...	...	.2	.9	1.0	1.0	1.0	1.0	.9	.6	.9	.6	...	.5	...	.2	.3	...	9.1	52	
2	...	.4	.5	.2	1.0	.9	.6	.4	.2	.8	.4	...	.5	.7	.3	.1	.1	...	7.1	41	
3	...	...	.1	...	...	...	...	...	...	...	.2	...	...	.1	...	...	...	...	0.4	2	
4	...	...	...	.2	...	.9	1.0	1.0	.9	1.0	1.0	.9	.9	.2	.5	...	...	...	8.5	49	
5	...	.4	.9	.9	1.0	.9	.7	1.0	.9	.9	.7	.6	.9	.3	.1	...	...	...	10.9	62	
6	...	...	...	...	...	...	...	.9	.9	.3	...	.3	.4	.1	.8	1.0	1.0	.1	5.8	33	
7	...	...	.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	1.0	.1	15.0	85	
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	.1	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.7	...	11.7	66	
10	...	.1	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	...	...	...	13.0	73	
11	...	...	.7	.7	.9	.6	.7	...	.2	...	...	...	...	...	.9	.4	...	...	5.1	29	
12	...	...	...	...	...	.4	.4	.4	.5	1.0	1.0	.5	.4	.6	1.0	1.0	1.0	...	8.2	46	
13	...	.1	...	...	1.0	.8	.6	...	...	...	.2	.6	.2	.1	.2	...	...	...	3.8	21	
14	...	.3	.5	.5	.6	.1	.9	.9	1.0	.8	.8	.6	.2	.1	.1	...	...	...	7.4	42	
15	...	...	...	...	.1	.1	.3	.5	.4	.4	.5	.4	...	...	...	...	...	...	2.7	15	
16	...	.1	.8	.4	.3	.3	.1	...	.1	...	...	.4	...	...	...	.6	.4	...	3.5	20	
17	...	.5	.9	.8	1.0	.9	.7	.9	1.0	1.0	.9	.8	.9	1.0	.6	.1	.2	...	12.2	69	
18	...	.1	.4	.3	.1	.1	...	.2	.6	.7	1.0	1.0	.9	1.0	1.0	1.0	1.0	.3	9.7	54	
19	...	.2	.8	.3	.5	.7	.1	.1	...	...	...	...	...	...	...	...	...	...	2.8	16	
20	...	...	...	...	...	.2	.2	.1	.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.4	9.7	54	
21	...	.2	.4	.3	...	...	...	...	.6	.3	.5	.1	.1	.1	...	...	...	...	2.6	15	
22	...	...	...	...	...	...	...	.1	...	...	.1	.1	...	.7	.3	...	...	...	1.3	7	
23	...	...	...	.1	...	...	...	...	...	...	.2	.7	.9	...	.4	.2	...	...	2.5	14	
24	...	...	.1	...	...	...	...	.3	.1	.7	1.0	1.0	1.0	1.0	1.0	.9	...	...	8.1	45	
25	...	...	...	...	...	.5	.4	...	...	.1	.1	...	...	...	...	...	...	...	1.1	6	
26	...	...	.1	.1	.1	...	...	.1	.1	.2	.5	.4	.5	...	.6	.2	...	...	2.9	16	
27	...	...	...	...	...	...	...	...	...	...	.1	.1	.6	.9	.9	.3	.2	...	3.1	17	
28	...	.1	...	...	...	.1	...	...	...	...	...	...	...	...	.1	...	...	...	0.3	2	
29	...	...	...	...	.3	.9	.8	.8	.2	.7	.5	.4	...	...	...	...	...	...	4.6	26	
30	...	...	...	.1	.7	1.0	1.0	1.0	.9	1.0	.5	.1	.5	.5	...	...	...	...	7.3	41	
Sum.	...	2.5	8.3	7.8	10.7	13.3	12.8	12.2	14.0	14.8	15.4	13.7	12.6	12.5	12.9	9.1	6.9	0.9	180.4	—	
Mean.	...	.08	.28	.26	.36	.44	.43	.41	.47	.49	.51	.46	.42	.42	.43	.30	.23	.03	6.01	34	
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.

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

September, 1925.

Day.	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.	
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	—	.1	.7	1.0	.6	.8	.9	.9	.9	.2	.1	.1	...	.4	.1	—	—	—	6.8	49
2	—	—	...	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1
3	—	—	...	.2	1.0	1.0	.6	.7	.8	.2	.8	.9	.9	.3	.2	...	...	...	7.6	55	
4	—	—	...	.5	.8	.8	.6	...	.2	...	...	...	...	.3	.1	...	...	...	3.4	25	
5	—	—	...	...	...	...	...	...	.1	...	.1	...	.8	.1	...	...	...	...	1.1	8	
6	—	—	...	.1	.4	.5	...	...	.1	.1	.1	...	1.0	1.0	.5	...	...	...	3.8	28	
7	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	—	—	...	.1	.3	...	...	.7	.5	...	...	.1	...	.4	...	...	...	...	2.1	16	
9	—	—	...	...	...	...	...	...	.2	...	...	...	...	.2	...	...	...	...	0.4	3	
10	—	—	...	.5	1.0	.9	.8	.6	1.0	1.0	.9	.4	.8	.1	...	...	...	...	8.0	61	
11	—	—	...	.1	.7	.1	.2	.2	.1	.9	1.0	.9	.6	.2	...	...	...	...	5.0	38	
12	—	—	...	.1	.6	.8	...	.1	...	...	...	.2	.2	1.0	.6	...	...	...	3.6	28	
13	—	—	...	.3	.6	.3	.8	1.0	.9	1.0	.1	.1	1.0	1.0	.5	...	...	...	7.6	59	
14	—	—	...	...	...	...	.3	...	.2	...	...	...	...	...	...	...	...	...	0.5	4	
15	—	—	...	...	...	.4	1.0	1.0	1.0	.1	.6	.7	.6	...	...	...	...	...	5.4	42	
16	—	—	...	...	...	...	...	.4	.6	...	.1	.1	.2	.6	...	...	...	...	2.0	16	
17	—	—	...	.5	1.0	1.0	1.0	1.0	1.0	1.0	.3	...	...	...	...	...	...	...	6.8	54	
18	—	—	...	...	...	.9	.9	.8	.2	.7	1.0	.2	1.0	.8	.5	...	...	...	7.0	56	
19	—	—	...	...	...	.2	.3	.4	.7	...	...	...	...	...	...	...	...	...	1.6	13	
20	—	—	...	...	...	.3	.5	.4	.7	.3	.6	.7	.3	.8	.4	...	...	...	5.0	40	
21	—	—	...	.6	.4	.2	...	...	...	...	.1	.4	.1	.5	...	...	...	...	2.3	19	
22	—	—	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	0.1	1	
23	—	—	...	...	.7	.1	.7	.7	.7	.7	.4	.2	.3	.2	...	...	...	...	4.7	39	
24	—	—	...	...	.2	...	...	.8	.6	.1	.1	...	...	.1	...	...	...	...	1.9	16	
25	—	—	...	...	.4	.6	.4	.8	1.0	.6	.5	.3	...	...	...	...	...	...	4.6	38	
26	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	—	—	...	.2	.3	.5	.8	.9	.5	.5	.8	.8	.8	.4	...	...	...	...	6.5	55	
28	—	—	...	...	...	...	...	...	...	.3	...	.2	.1	.2	.1	...	...	...	0.9	8	
29	—	—	...	...	...	...	...	...	...	...	...	...	.1	.5	...	...	...	...	0.6	5	
30	—	—	...	...	.2	1.0	1.0	1.0	1.0	1.0	1.0	.9	.9	.1	...	...	...	...	8.2	71	
Sum.	—	—	0.2	4.2	9.4	10.2	11.4	12.7	12.3	9.3	8.9	7.9	9.6	8.2	3.2	0.2	—	—	107.7	—	
Mean.	—	—	.01	.14	.31	.34	.38	.42	.41	.31	.30	.26	.32	.27	.11	.01	—	—	3.59	28	

82. Aberdeen :  $h_s$  = 20.7 metres.

October, 1925.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	—	...	...	.3	.2	.9	.9	.2	.9	1.0	1.0	1.0	.3	...	...	...	...	6.7	58	
2	—	—	...	...	...	...	.1	...	...	.9	.4	.1	.4	...	...	...	...	...	1.9	17	
3	—	—	...	...	...	...	...	.4	.6	.5	...	...	...	...	...	...	...	...	1.5	13	
4	—	—	...	.3	1.0	.9	.9	.6	.8	.8	1.0	.9	.4	...	...	...	...	...	7.6	67	
5	—	—	...	...	...	...	...	.4	.6	.1	.1	.1	...	...	...	...	...	...	1.3	12	
6	—	—	...	...	.1	...	.1	...	.7	.6	1.0	1.0	1.0	.2	...	...	...	...	4.7	42	
7	—	—	...	...	.5	.8	.1	.6	.6	.2	.3	.1	.2	.5	...	...	...	...	3.9	35	
8	—	—	...	...	.8	.2	1.0	1.0	1.0	.5	.1	.2	...	...	...	...	...	...	4.8	44	
9	—	—	...	...	.7	.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	...	...	...	...	8.8	81	
10	—	—	...	...	.6	1.0	1.0	1.0	.1	...	.2	...	...	...	...	...	...	...	3.9	36	
11	—	—	...	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	0.1	1	
12	—	—	...	...	.1	.4	.7	.4	.2	.9	.4	.6	.6	.5	.1	...	...	...	1.8	17	
13	—	—	...	...	.1	...	.4	.2	.9	.4	.6	.6	.5	.1	...	...	...	...	3.8	36	
14	—	—	...	...	...	.5	.9	.5	.6	1.0	.5	.7	.2	.1	...	...	...	...	5.0	48	
15	—	—	...	...	.6	.9	1.0	1.0	1.0	.8	.5	.7	1.0	.4	...	...	...	...	7.9	77	
16	—	—	...	...	.6	1.0	1.0	1.0	1.0	.7	.7	.9	1.0	.3	...	...	...	...	8.2	80	
17	—	—	...	...	...	...	...	...	1.0	.5	.7	.8	.2	.1	...	...	...	...	3.3	32	
18	—	—	...	...	...	.3	.7	.5	.8	.7	.6	.9	.9	.5	...	...	...	...	5.9	58	
19	—	—	...	...	.4	1.0	1.0	1.0	1.0	.8	.7	...	...	...	...	...	...	...	5.9	59	
20	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	—	...	...	...	...	...	...	...	...	.4	.4	.7	...	...	...	...	...	1.5	15	
23	—	—	...	...	...	...	...	...	...	...	...	.5	.3	...	...	...	...	...	0.8	8	
24	—	—	...	...	.1	.2	.1	.6	.6	1.0	.1	.8	.3	.1	...	...	...	...	3.9	41	
25	—	—	...	...	...	...	.1	.3	.6	.4	.9	...	.8	.3	...	...	...	...	4.3	45	
26	—	—	...	...	...	...	...	.1	.1	...	...	...	...	...	...	...	...	...	0.2	2	
27	—	—	...	...	...	...	.1	.7	1.0	.7	.3	.8	.1	...	...	...	...	...	3.7	39	
28	—	—	...	...	.1	.8	1.0	1.0	1.0	1.0	.9	.9	.1	...	...	...	...	...	6.8	73	
29	—	—	...	...	...	.9	.9	.1	.8	.2	...	...	...	...	...	...	...	...	2.9	31	
30	—	—	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	...	0.1	1	
31	—	—	...	...	...	.4	.9	.5	.7	.5	...	...	...	...	...	...	...	...	3.0	33	
Sum.	—	—	—	...	5.3	9.8	14.0	13.8	16.7	14.9	12.3	13.6	9.6	4.2	...	...	...	...	114.2	—	
Mean.	—	—	—	...	.17	.32	.45	.45	.54	.48	.40	.44	.31	.14	...	...	...	...	3.68	36	
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.

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

November, 1925.

Day.	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.	
	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.	—	—	—	—	...	1.6	8.4	12.2	13.1	14.6	15.0	10.7	3.7	...	—	—	—	—	79.3	—	
Mean.	—	—	—	—	...	.05	.28	.41	.44	.49	.50	.36	.12	...	—	—	—	—	2.64	33	

84. Aberdeen :  $h_s$  = 20.7 metres.

December, 1925.

	hr.	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.	—	—	—	—	...	2.6	6.2	8.9	11.8	7.2	2.7	...	—	—	—	—	—	—	39.4	—		
Mean.	—	—	—	—	...	.08	.20	.29	.38	.23	.09	...	—	—	—	—	—	—	1.27	19		
Annual Totals.	...	7.3	24.8	41.8	73.8	95.9	126.2	135.5	143.9	147.4	138.4	121.8	100.0	74.2	54.1	31.5	11.4	0.9	1328.9	—		
Annual Mean.	...	.02	.07	.11	.20	.26	.35	.37	.39	.40	.38	.33	.27	.20	.15	.09	.03	.00	3.64	30		
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.		

WIND : DIRECTION AND SPEED.

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

85. Aberdeen :

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

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	200	5.9	210	6.6	210	7.2	210	5.6	180	2.6	200	2.6	210	5.2	190	3.3	170	3.3	180	3.6	200	5.9	190	3.6
2	220	9.5	240	10.2	240	12.8	250	11.1	250	11.1	250	9.5	250	5.9	230	4.3	200	3.6	200	2.6	170	2.3	160	2.3
3	220	5.9	220	3.9	230	2.6	270	2.3	260	3.3	280	5.6	290	4.9	250	4.9	240	2.3	180	1.6	220	5.6	210	4.6
4	230	3.3	—	1.3	190	1.6	220	2.0	—	0.7	—	1.3	—	1.3	—	0.7	290	2.6	290	3.3	270	3.6	280	3.0
5	240	2.3	—	1.3	230	2.3	220	2.0	220	2.3	—	0.7	160	2.3	240	2.0	240	3.6	230	3.6	250	4.3	250	4.6
6	310	6.2	310	5.6	300	8.2	310	6.2	300	6.6	310	5.9	300	5.9	300	6.6	310	5.9	280	2.6	280	3.3	270	4.3
7	200	1.6	220	2.0	220	3.0	260	2.3	240	2.0	240	3.9	250	4.3	240	3.9	230	3.0	250	3.3	190	3.3	220	2.3
8	220	4.9	220	4.9	230	6.2	230	6.2	220	5.6	230	5.2	220	3.9	210	4.6	220	3.9	200	3.3	190	3.0	180	2.6
9	270	4.9	310	12.5	320	9.8	320	9.2	320	6.9	310	7.9	300	6.2	300	6.6	300	5.9	290	4.9	290	5.9	290	5.2
10	—	1.3	220	2.6	210	3.0	200	2.3	220	3.0	210	1.6	200	1.6	190	3.0	190	2.3	220	3.9	220	4.6	220	5.6
11	200	1.6	200	1.6	290	1.6	250	2.3	270	2.0	220	1.6	210	2.0	210	3.3	220	3.3	220	3.9	210	3.3	240	3.3
12	210	3.0	200	1.6	210	2.3	200	2.6	200	2.0	210	3.0	210	3.0	210	3.0	210	2.6	220	3.6	210	3.6	160	2.6
13	180	4.3	170	3.9	180	4.3	190	3.9	190	4.9	210	3.3	190	4.3	190	5.2	200	5.2	190	5.2	190	4.9	170	4.6
14	180	9.2	180	8.5	180	8.2	180	9.5	180	8.9	180	8.5	200	8.9	220	7.9	250	11.1	240	11.5	230	8.9	230	8.9
15	210	3.9	220	4.9	230	5.2	230	5.6	230	4.9	240	3.9	260	3.6	250	4.6	240	3.3	200	2.0	220	2.3	250	3.0
16	230	4.9	240	6.2	250	5.9	—	1.3	240	2.0	260	3.6	260	5.6	—	1.0	—	1.0	190	1.6	—	1.0	—	0.3
17	210	2.3	230	3.9	230	3.3	230	3.0	230	3.9	230	3.6	220	3.6	210	2.3	190	1.6	200	2.6	190	1.6	210	2.0
18	220	5.6	200	3.6	210	4.3	200	2.6	190	2.6	—	1.0	210	3.9	230	7.9	230	7.2	220	9.5	220	7.9	220	8.2
19	300	3.6	290	3.0	—	1.0	290	2.3	290	2.0	—	1.0	—	0.7	—	1.3	280	2.0	290	2.3	290	1.6	—	1.3
20	170	4.6	170	4.3	180	4.3	170	3.6	170	3.6	170	3.0	180	2.6	200	2.6	190	1.6	200	2.3	200	2.6	220	2.3
21	170	3.6	180	3.3	180	2.6	170	3.6	170	3.6	180	3.6	170	3.6	180	3.9	180	3.6	170	3.9	170	4.6	180	4.9
22	170	5.9	170	5.6	170	5.6	170	5.2	160	5.9	180	5.9	180	5.6	170	5.6	170	3.9	170	5.2	170	5.6	180	5.6
23	170	3.0	190	2.6	190	2.6	180	2.6	180	2.3	190	1.6	190	1.6	—	1.0	—	0.3	—	1.0	—	1.3	310	2.0
24	310	2.3	310	1.6	—	0.7	—	0.7	—	1.0	310	2.3	310	3.0	310	3.0	300	1.6	310	2.6	310	3.0	310	2.6
25	290	3.3	290	3.6	290	3.3	290	3.0	290	2.0	290	1.6	—	1.0	—	1.3	—	1.3	300	2.6	310	2.6	310	1.6
26	140	2.6	140	2.0	130	3.0	100	4.3	160	3.0	170	1.6	—	1.3	140	2.3	130	4.6	130	5.2	140	3.6	140	3.6
27	160	4.9	160	4.3	160	5.2	150	6.2	140	6.6	150	6.2	150	5.6	150	6.6	150	4.9	150	6.2	150	5.9	150	6.2
28	170	3.3	200	1.6	180	2.0	170	3.3	200	2.3	210	2.3	200	2.6	190	2.6	190	3.3	180	3.6	200	3.6	190	3.6
29	240	2.3	230	3.3	200	1.6	210	2.6	200	3.9	200	4.6	210	6.2	200	7.9	190	7.5	200	6.2	240	5.9	250	7.2
30	260	6.6	250	6.6	260	7.9	270	7.9	260	6.6	260	7.5	260	5.2	250	4.9	250	4.6	240	4.9	230	3.9	230	4.6
31	260	12.5	270	10.5	280	9.8	280	9.2	280	8.2	280	5.6	270	5.6	260	6.2	260	5.2	260	6.6	260	6.6	270	6.2
Mean ...	—	4.5	—	4.4	—	4.6	—	4.3	—	4.1	—	3.9	—	3.9	—	4.0	—	3.7	—	4.0	—	4.1	—	4.0

86. Aberdeen : H<sub>a</sub> = 13 metres + 23 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	290	9.5	290	6.9	280	5.6	280	6.6	290	6.9	290	7.2	290	6.6	290	5.9	290	6.9	290	8.2	300	9.5	300	9.8
2	230	2.6	220	2.0	210	4.3	210	3.9	210	3.0	200	2.3	200	2.3	200	4.3	210	3.3	220	7.2	220	8.2	210	6.6
3	220	3.6	210	3.6	220	3.0	210	4.9	210	5.2	220	5.2	210	4.6	210	3.9	210	3.6	200	3.6	210	4.9	220	6.9
4	260	4.3	250	4.3	250	6.2	250	4.9	230	3.9	240	4.3	230	2.6	240	2.6	210	2.6	200	3.0	170	2.0	200	3.3
5	210	6.9	200	7.2	210	8.2	230	9.8	240	8.2	250	4.9	270	4.6	270	5.9	270	5.6	260	5.6	260	6.6	260	7.5
6	230	2.6	230	2.3	240	2.6	250	3.6	240	3.3	220	2.3	230	2.0	240	2.3	220	2.0	210	3.0	—	0.7	190	1.0
7	290	2.6	280	2.6	300	3.6	300	5.9	290	5.2	300	5.6	300	4.6	320	4.6	320	5.9	320	4.9	310	5.9	300	4.3
8	190	8.2	190	8.2	190	6.2	200	4.9	200	4.6	210	3.9	210	3.0	210	2.3	200	1.6	200	2.3	190	3.3	190	2.3
9	260	6.6	250	6.6	260	7.9	260	6.6	260	7.2	250	7.9	260	6.9	250	5.9	250	7.9	250	8.2	250	7.2	260	9.2
10	200	3.6	210	5.6	220	7.2	230	5.6	220	5.6	240	6.6	230	6.6	220	7.2	210	7.5	200	7.9	210	7.9	210	8.9
11	210	5.2	210	6.2	220	4.9	220	5.9	220	4.3	220	4.9	230	3.6	240	5.2	240	4.3	220	3.0	230	2.3	—	1.3
12	—	0.7	—	1.0	—	1.3	250	1.6	240	2.6	240	3.3	240	3.3	230	4.3	230	3.6	220	4.9	230	4.9	230	4.6
13	210	2.6	190	1.6	230	2.3	—	1.0	—	1.0	—	1.3	150	1.6	140	3.9	120	6.2	110	6.2	100	7.9	100	7.9
14	300	3.3	300	3.0	300	2.6	300	2.6	310	3.6	310	3.0	310	3.3	340	2.3	340	2.0	350	3.0	10	3.9	50	5.6
15	160	7.2	160	7.2	150	9.5	150	8.9	160	7.9	170	6.6	160	6.9	160	6.9	150	6.6	150	5.6	150	4.6	160	3.0
16	50	4.9	40	4.6	30	5.2	20	4.3	360	5.2	350	4.6	350	4.3	340	3.9	340	3.3	340	5.2	330	6.2	330	5.9
17	320	6.6	320	6.6	320	7.5	320	7.2	310	6.9	320	6.9	320	5.9	330	5.9	340	4.6	340	5.9	340	4.9	340	5.6
18	340	4.9	340	4.3	330	3.9	340	4.9	330	3.9	320	3.6	320	4.6	330	4.3	320	4.3	330	5.6	320	4.9	310	5.2
19	300	4.9	300	5.6	310	5.2	310	5.2	320	3.6	310	4.9	310	6.2	310	6.2	310	5.2	310	5.9	310	6.6	320	6.6
20	300	3.0	300	3.3	290	3.0	300	3.0	290	2.6	—	1.3	—	1.0	290	1.6	—	1.0	220	1.6	—	1.3	200	3.3
21	170	4.6	180	3.9	180	4.3	190	3.6	190	4.6	190	3.0	190	4.3	180	5.2	180	5.6	180	5.6	180	5.9	180	6.2
22	—	1.0	—	1.0	—	1.3	260	1.6	—	1.3	250	1.6	260	1.6	—	1.3	—	0.7	—	1.0	—	1.0	170	3.0
23	170	8.2	160	9.2	160	9.2	160	9.8	150	10.5	160	10.5	150	9.8	150	9.2	150	10.2	160	8.2	150	8.9	150	9.8
24	150	9.5	140	9.5	160	5.9	170	4.9	170	4.3	170	4.3	180	3.9	180	5.6	150	7.9	140	11.8	140	11.8	140	11.5
25	120	11.1	110	11.5	110	10.2	110	9.8	100	7.9	90	9.5	80	8.9	60	7.2	50	4.3	—	1.0	230	3.3	2	



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

M.S.L. + ha (height of anemograph above ground) = 13 metres + 23 metres.

January, 1925.

Table with columns for days 13-24, Mean, and Day. Each day has two columns for wind speed in m/s. Data includes values for each hour from 170 to 270.

February, 1925.

Table with columns for days 13-24, Mean, and Day. Each day has two columns for wind speed in m/s. Data includes values for each hour from 310 to 20.

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

87. Aberdeen :

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

Table with 25 columns (Day, 1-11, Noon) and 2 rows per day (° and m/s). Data for Aberdeen from Day 1 to 31, including a Mean row at the bottom.

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

Table with 25 columns (G.M.T., 1-11, Noon) and 2 rows per day (° and m/s). Data for Aberdeen from Day 1 to 30, including a Mean row at the bottom.







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

91. Aberdeen :

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

Table with 23 columns (Day, 1-11, Noon) and 2 rows per day (m/s, °). Data includes wind speed and direction for each hour from 1 to 31.

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

Table with 23 columns (G.M.T., 1-11, Noon) and 2 rows per day (m/s, °). Data includes wind speed and direction for each hour from 1 to 31, with a mean row at the bottom.

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, 1925.

Table with 25 columns (13-24, Mean, Day) and multiple rows of wind speed data in m/s for each hour.

August, 1925.

Table with 25 columns (13-24, Mean, Day) and multiple rows of wind speed data in m/s for each hour.







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

95. Aberdeen :

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

Table with 12 columns for days (1-30) and 12 columns for wind directions (I-11, Noon). Each cell contains wind speed in m/s for two different heights.

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

Table with 12 columns for days (1-31) and 12 columns for wind directions (I-11, Noon). Each cell contains wind speed in m/s for two different heights.



HIGHEST INSTANTANEOUS WIND SPEED RECORDED EACH DAY BY THE DINES TUBE ANEMOGRAPH.

97. Aberdeen: Ha=8 metres+13 metres.

Table with 25 rows (Days 1-25) and 25 columns (Months Jan-Dec). Each cell contains wind speed data in m/s and h. m. format.

\* Defective Record.

DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES TUBE ANEMOGRAPH.

98. Aberdeen: Ha=8 metres+13 metres.

Table with 2 main sections: DISTRIBUTION OF WIND SPEED and EXTREME VELOCITIES. Includes columns for Month, wind speed ranges, duration, and extreme velocities.

99. Aberdeen.

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

1925.

Day.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>
1	79·6	78·3	77·7	78·2	80·0	82·8	84·4	86·7	86·0	83·8	82·3	78·7
2	79·4	78·3	77·8	78·3	80·1	82·9	84·6	86·7	85·9	83·9	82·3	78·6
3	79·3	78·3	77·8	78·3	80·1	82·9	84·7	86·7	85·9	83·9	82·4	78·5
4	79·2	78·2	77·8	78·3	80·2	83·1	84·8	86·6	85·8	83·9	82·4	78·4
5	79·1	78·2	77·9	78·3	80·2	83·1	84·9	86·4	85·7	83·9	82·4	78·3
6	78·9	78·1	77·9	78·3	80·3	83·2	85·0	86·4	85·6	83·9	82·4	78·3
7	78·9	78·1	78·0	78·3	80·3	83·3	85·2	86·4	85·4	83·9	82·3	78·3
8	78·8	78·1	78·1	78·3	80·4	83·5	85·4	86·4	85·3	83·9	82·2	78·2
9	78·7	78·0	78·1	78·3	80·5	83·6	85·6	86·4	85·2	83·9	82·1	78·1
10	78·5	77·9	78·2	78·4	80·6	83·7	85·6	86·4	85·1	83·9	81·9	78·0
11	78·4	77·8	78·1	78·6	80·7	83·9	85·6	86·4	85·0	83·9	81·7	78·0
12	78·4	77·8	77·9	78·7	80·8	84·1	85·6	86·4	84·9	83·8	81·6	78·1
13	78·3	77·8	77·8	78·8	80·9	84·3	85·7	86·4	84·9	83·7	81·3	78·1
14	78·3	77·8	77·8	78·9	81·0	84·4	85·8	86·4	84·8	83·6	81·1	78·0
15	78·3	77·8	77·7	79·1	81·1	84·5	85·9	86·3	84·7	83·5	80·8	78·0
16	78·3	77·7	77·7	79·2	81·2	84·6	85·9	86·3	84·7	83·3	80·6	77·9
17	78·3	77·7	77·7	79·3	81·3	84·7	85·9	86·3	84·7	83·3	80·4	77·8
18	78·4	77·6	77·8	79·3	81·4	84·8	86·0	86·3	84·7	83·2	80·2	77·8
19	78·3	77·6	77·8	79·5	81·6	84·8	86·1	86·3	84·6	82·8	80·1	77·8
20	78·3	77·7	77·9	79·5	81·7	84·9	86·1	86·3	84·6	82·4	79·9	77·8
21	78·3	77·7	78·1	79·5	81·9	84·7	86·1	86·3	84·6	82·3	79·7	77·8
22	78·3	77·7	78·1	79·5	82·1	84·8	86·1	86·3	84·6	82·2	79·6	77·7
23	78·4	77·7	78·2	79·6	82·3	84·7	86·2	86·3	84·5	82·2	79·5	77·6
24	78·4	77·7	78·1	79·6	82·5	84·6	86·3	86·3	84·4	82·2	79·4	77·6
25	78·4	77·6	78·1	79·7	82·7	84·6	86·3	86·3	84·4	82·2	79·3	77·5
26	78·4	77·6	78·1	79·7	82·8	84·6	86·4	86·3	84·3	82·3	79·2	77·4
27	78·4	77·6	78·1	79·8	82·8	84·4	86·4	86·3	84·2	82·3	79·1	77·4
28	78·4	77·6	78·1	79·8	82·8	84·4	86·5	86·2	84·1	82·3	79·0	77·3
29	78·4	—	78·1	79·8	82·8	84·5	86·6	86·2	84·0	82·3	78·9	77·2
30	78·4	—	78·1	79·9	82·8	84·4	86·6	86·1	83·9	82·3	78·9	77·2
31	78·4	—	78·2	—	82·8	—	86·7	86·1	—	82·3	—	77·2
Mean ...	78·6	77·9	78·0	79·0	81·4	84·1	85·8	86·4	84·9	83·1	80·8	77·9

Annual Mean at 124 cm. 281·5.

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

100. Aberdeen.

Readings, in degrees absolute.

1925.

Day.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>
1	70·9	71·3	76·7	69·3	73·3	78·2	84·9	81·7	73·9	74·3	75·8	72·8
2	73·6	73·9	73·3	76·6	68·2	76·3	83·6	75·9	77·4	76·5	81·9	69·7
3	71·6	72·1	75·6	66·7	72·4	74·2	77·6	75·9	77·4	77·6	71·4	72·1
4	69·7	71·9	71·6	73·1	77·1	82·3	80·2	82·4	75·2	71·6	73·4	73·3
5	66·5	77·3	75·6	75·7	79·3	82·4	79·2	84·2	77·2	77·7	72·7	68·2
6	71·3	68·3	77·7	78·6	76·1	82·4	82·7	85·3	80·1	83·1	74·4	70·6
7	74·1	65·8	74·2	77·4	77·2	77·4	85·1	76·7	77·4	77·3	73·1	66·0
8	73·1	71·9	70·6	76·4	75·8	79·3	75·4	80·9	76·6	73·1	72·1	77·8
9	74·9	72·9	68·6	77·4	80·4	82·2	76·7	80·2	78·6	69·0	70·1	72·6
10	70·4	70·2	70·2	73·2	80·4	80·2	84·3	76·7	76·4	71·1	68·4	74·8
11	72·1	73·9	70·9	74·4	78·4	81·8	84·4	75·2	78·7	76·9	68·3	72·6
12	73·4	71·9	68·0	76·0	76·3	81·6	80·7	83·0	76·3	71·9	65·2	71·2
13	75·7	66·8	70·4	76·3	74·1	80·2	85·4	84·5	71·8	71·3	66·6	69·7
14	79·2	70·6	74·4	72·4	79·6	79·7	82·7	81·2	78·3	72·4	65·8	66·6
15	72·7	74·4	76·8	76·0	76·3	79·7	85·8	78·2	81·0	70·8	70·5	66·5
16	73·8	74·1	74·2	71·8	79·1	81·8	84·3	77·7	81·9	69·9	71·4	70·3
17	70·3	76·2	72·6	75·3	79·3	79·1	81·3	76·9	75·0	70·4	68·9	74·5
18	76·2	75·2	71·4	76·9	79·5	79·3	84·9	84·3	79·1	72·4	67·0	73·0
19	69·0	72·7	77·2	73·0	79·2	77·4	83·9	83·1	77·3	71·0	66·9	65·6
20	77·6	69·5	73·9	69·3	82·9	82·4	79·7	83·6	79·3	76·6	68·6	65·2
21	76·3	74·4	69·7	67·4	76·9	77·2	82·6	84·2	70·7	75·3	68·3	66·9
22	75·5	68·0	68·9	76·3	81·2	80·4	83·8	80·3	70·9	77·9	74·8	66·9
23	75·4	74·0	71·4	72·4	80·2	81·1	87·0	85·7	79·4	82·3	72·4	65·8
24	74·5	74·4	72·8	70·0	79·9	79·3	85·1	85·4	76·7	77·5	69·8	63·8
25	70·2	75·4	73·5	(73·0)	81·6	80·1	85·3	79·8	*	74·3	70·6	67·1
26	74·3	74·1	72·3	74·9	79·2	82·0	85·8	74·1	79·1	74·0	69·1	62·9
27	76·2	76·3	68·0	71·2	81·4	79·7	78·6	80·2	74·6	78·5	71·7	70·9
28	75·8	76·1	71·4	72·9	76·3	75·2	81·2	73·8	75·9	73·6	70·3	71·9
29	72·1	—	75·5	65·2	79·5	79·2	81·5	78·4	84·9	76·7	71·2	70·7
30	72·2	—	72·1	70·6	78·4	81·2	80·8	79·7	74·8	82·1	70·3	70·0
31	74·8	—	75·1	—	79·1	—	83·6	84·3	—	79·1	—	73·9
Mean ...	73·3	72·6	72·7	73·3	78·0	79·8	82·5	80·4	77·1	75·0	70·7	69·8

Annual Mean 275·5.

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.

101. Aberdeen.

Table for January 1925 in Aberdeen, showing Cloud Forms, Cloud Amount (All Forms) for hours 7h to 21h, Weather, and Remarks for days 1 through 31, including a Mean Cloud Am't row.

102. Aberdeen.

Table for February 1925 in Aberdeen, showing Cloud Forms, Cloud Amount (All Forms) for hours 7h to 21h, Weather, and Remarks for days 1 through 28, including a Mean Cloud Am't row.

Summary table for both months showing Cloud Forms, Cloud Amount (All Forms) for hours 7h to 21h, and Weather.

103. Aberdeen.

March, 1925.

Table for March 1925 in Aberdeen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-31 and Mean Cloud Am't.

104. Aberdeen.

April, 1925.

Table for April 1925 in Aberdeen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-30 and Mean Cloud Am't.





107. Aberdeen.

Table for July 1925 in Aberdeen, showing daily weather observations from July 1st to 31st. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes a Mean Cloud Am't row at the bottom.

108. Aberdeen.

August, 1925.

Table for August 1925 in Aberdeen, showing daily weather observations from August 1st to 31st. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes a Mean Cloud Am't row at the bottom.

109. Aberdeen.

Day.	Cloud Forms.			Cloud Amount (All Forms).						Weather.						Remarks.
	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>	
1	St-Cu : St-Cuf.	A-Cu : Cu.	St-Cu : Cu-Nb.	6	4	6	9	4	1	...	...	...	...	...	...	b & bc a : c p <sup>0</sup> p : bc, bn :
2	Ci : Ci-Cu : St-Cu.	St-Cu : Cu.	Nb.	4	9	10	10	10	10	...	...	...	...	...	...	bc to o a : o <sup>0</sup> p : o <sup>0</sup> n :
3	Cu : Nb-Cuf.	A-Cu-lent : Cu-Nb.	St-Cu : Cu-Nb.	4	5	8	5	3	5	...	...	...	...	...	...	bc & cp <sup>0</sup> q a : bcq p <sup>0</sup> p : b c p <sup>0</sup> q n :
4	Cu-Nb.	A-Cu : Cu.	St-Cu : Nb-Cuf.	4	8	9	10	7	3	p <sup>0</sup>	p <sup>0</sup>	...	...	...	...	bc & cp <sup>0</sup> q a : c & o p <sup>0</sup> q p : b q n :
5	St-Cu : St-Cuf.	St-Cu - Cu.	A-Cu : Cu-Nb.	6	9	8	6	9	8	...	...	...	...	p <sup>0</sup>	...	c & o q a : bcq, c & o p <sup>0</sup> p : p <sup>0</sup> , c n :
6	St-Cu : Fr-Nb.	Nb-Cuf.	St-Cu : Nb-Cuf.	8	5	9	3	7	9	p <sup>0</sup>	...	p <sup>0</sup>	...	...	...	bc & cp <sup>0</sup> q a : bc & c p : <sup>0</sup> , o n :
7	St-Cu.	A-St:St-Cu:Nb-Cuf.	Nb.	9	9	10	10	9	10	...	...	...	...	...	...	o, o <sup>0</sup> a : o <sup>0</sup> p : o <sup>0</sup> n :
8	St-Cu : Cu-Nb.	St-Cu : Cu-Nb.	A-Cu : St-Cu : Cu.	2	7	9	9	10	10	...	...	...	...	...	...	b to o a : o p <sup>0</sup> p : o n :
9	St-Cu : Fr-Nb.	St-Cu : Nb-Cuf.	A-Cu:St-Cu:Fr-Cu.	9	10	9	9	8	7	...	...	...	...	...	...	p <sup>0</sup> , o, o <sup>0</sup> a : c & o <sup>0</sup> p : c n :
10	St-Cu : Cu-Nb.	A-Cu : Cu : Cu-Nb.	St-Cu : Cu.	2	4	4	4	9	10	p	...	...	...	...	...	b <sup>0</sup> , bc & c p <sup>0</sup> a : b & bc p : c, o
11	St-Cu : Cu.	Cu-Nb.	St-Cu : Cu.	3	9	5	5	8	6	...	...	...	...	...	...	bc & o p <sup>0</sup> a : bc, c p <sup>0</sup> p : bc n :
12	St-Cu.	St-Cu : Cu.	St-Cu.	8	8	9	8	1	—	...	...	...	...	...	p <sup>0</sup>	c a : c & o p : b <sup>0</sup> n :
13	St-Cu.	A-Cu.	Ci-St : A-Cu.	4	2	3	3	4	9	...	...	...	...	...	...	bc <sup>0</sup> , by a : b y p : c, op <sup>0</sup> n :
14	Nb.	A-St : St-Cu.	A-St : St-Cu : Cu.	10	9	9	9	8	10	...	...	...	...	...	...	o <sup>0</sup> to o a : o p : c, o n :
15	A-St.	Ci-St. A-Cu.	Ci : Ci-Cu : A-Cu.	10	6	6	6	6	2	...	⊕	⊕	...	...	...	o to bc a : bc p : bn : ⊕ 9 <sup>h</sup>
16	A-St:St-Cu:Fr-Nb.	St-Cu : Cu-Nb.	A-Cu : Cu-Nb.	10	9	8	7	7	—	...	...	...	...	T	...	o, <sup>0</sup> , c a : c p <sup>0</sup> , T p : <sup>0</sup> to b
17	Ci : St-Cu.	Ci : A-Cu : Cu-Nb.	A-St : M-Cu:St-Cuf.	1	1	4	9	10	10	...	...	...	...	...	...	b <sup>0</sup> to bc a : c, o p : o <sup>0</sup> n :
18	St-Cu.	St-Cu : Cu.	Ci : St-Cu	10	5	4	5	1	10	...	...	...	...	...	...	early, o to bc a : b & bc y p : c, o n :
19	A-St : St-Cu.	Ci-St : Fr-Cu.	A-St : Fr-Nb.	8	7	8	10	10	10	...	⊕	⊕	...	...	...	p <sup>0</sup> early, c ≡ a : c to o p : <sup>0</sup> , [o <sup>0</sup> n : ⊕ 9-14 <sup>h</sup>
20	A-St : Fr-St.	Ci-St : A-Cu : Cu.	A-Cu : St-Cu.	10	7	7	7	2	1	...	⊕	...	...	...	...	early, o to c a : c i o b p : bn : ⊕ 9 <sup>h</sup>
21	Ci : A-Cu.	A-St : Cu-Nb.	Ci : St-Cu.	4	9	10	9	2	—	...	⊕	...	...	...	...	early, bc to o a : o <sup>0</sup> p : bn : ⊕ 9 <sup>h</sup>
22	A-Cu : Cu.	A-St:St-Cu:Fr-Cu.	Nb.	9	8	9	10	10	10	...	...	...	...	...	...	c & o a : o, o <sup>0</sup> p : o <sup>0</sup> n :
23	Ci : St-Cuf.	Cu-Nb.	St-Cu : Cu-Nb.	7	9	8	8	7	10	...	p <sup>0</sup>	p <sup>0</sup>	...	...	...	c & o p <sup>0</sup> a : c & p : c, o n :
24	Ci-Cu:A-Cu:St-Cu.	Cu.	St-Cu	7	6	9	9	5	10	...	...	...	...	...	...	bc & c a : o <sup>0</sup> p : c to o n : <sup>0</sup> 23 <sup>h</sup>
25	A-Cu : St-Cu.	Ci-St.	A-St : Cu.	5	6	8	8	10	10	...	...	...	...	...	...	bc to c a : c p : o <sup>0</sup> n :
26	St-Cu : Nb.	St-Cu : Nb-Cuf.	St-Cu : Nb-Cuf.	8	8	9	10	8	7	...	...	...	...	...	...	o <sup>0</sup> to <sup>0</sup> a : o to c <sup>0</sup> p : c p <sup>0</sup> , c n :
27	St-Cu : Cu-Nb.	Ci-St:St-Cu:Cu-Nb.	A-Cu : St-Cu.	2	5	8	4	3	6	...	...	⊕	...	...	...	b & bc p <sup>0</sup> , c a bc p & n : ⊕ 13 <sup>h</sup>
28	St-Cu.	Ci-St : A-Cu : St-Cu.	Ci-St : A-Cu : St-Cu.	9	9	8	8	6	8	...	...	...	...	...	...	o to c a : c p : bc to c n :
29	St-Cu : Nb.	St-Cu : Nb-Cuf.	Ci : St-Cu.	10	10	10	9	3	2	...	...	...	...	...	...	o <sup>0</sup> & <sup>0</sup> a : to <sup>0</sup> to b p : bn :
30	A-Cu.	A-Cu.	Ci : A-Cu : St-Cu.	4	2	1	1	4	5	...	...	...	...	...	...	bc to b a : b o bc p : bc n : <sup>0</sup> 21 <sup>h</sup>
Mean Cloud Am't.				6.4	6.8	7.5	7.3	6.4	6.6							

110. Aberdeen.

1	Ci.	Ci : A-Cu.	Ci-St : A-Cu-lent.	2	3	2	1	2	2	...	...	...	...	...	...	b, ≡ & c a : b p : b <sup>0</sup> n : ≡ n : ⊕ 8 <sup>h</sup>
2	A-St.	A-St : A-Cu.	A-St : A-Cu : St-Cu.	7	9	6	6	7	7	...	...	...	...	...	...	c <sup>0</sup> to o ≡, bc a : bc p : c n : ⊕ 13 <sup>h</sup>
3	A-Cu : St-Cu.	St-Cu : Cu.	A-Cu : St-Cu.	9	9	8	10	10	9	...	...	...	...	...	...	o to c a : c & o p : o n :
4	St-Cu.	Cu.	Ci : St-Cu.	7	1	4	1	7	4	...	...	...	...	...	...	c to b & bc a : b & bc p : bc n :
5	A-Cu : St-Cu : Fr-St.	St-Cu.	St-Cu : St.	7	9	9	9	9	10	...	...	...	...	...	...	c & o a : o p : o, o <sup>0</sup> n :
6	A-St : St-Cu : Cu.	A-Cu : Cu.	Ci : Ci-Cu : Cu.	8	8	3	4	4	10	...	...	...	...	...	...	c to b a : bc p : c, o <sup>0</sup> , o n :
7	Ci-St : Ci-Cu : Cu.	St-Cu : Cu.	Ci : St-Cu : Cu.	6	6	8	5	4	3	...	...	...	...	...	...	bc p <sup>0</sup> a : bc p : bn :
8	Ci-St : St-Cu : Cu.	St-Cu : Cu.	A-Cu : A-St : St-Cu.	4	3	9	9	10	1	...	...	...	...	...	...	b & bc <sup>0</sup> to o a : c & o p : bn : <sup>0</sup> 23 <sup>h</sup>
9	St-Cu	St-Cu-lent.	St-Cu-lent.	5	3	1	1	1	—	...	...	...	...	...	...	bc & bc a : b, b ≡ <sup>0</sup> p & n : <sup>0</sup> 19-24 <sup>h</sup>
10	St-Cu.	Ci : St-Cu.	St : Nb.	1	1	9	9	10	10	...	...	...	...	...	...	b <sup>0</sup> to o a : o, o <sup>0</sup> p : o <sup>0</sup> n :
11	St.	St-Cu : Fr-Nb.	A-St:St-Cu:Nb-Cuf.	9	9	10	10	10	10	...	...	...	...	...	...	o <sup>0</sup> a, p & n : <sup>0</sup> 24 <sup>h</sup>
12	St-Cu : Nb-Cuf.	Ci-St : A-Cu : Cu.	A-St : St-Cu.	9	2	7	8	10	10	...	...	...	...	...	...	o p <sup>0</sup> to b & c a : c p : o n : ⊕ 15-17 <sup>h</sup>
13	Ci : Cu-Nb.	Cu-Nb : Fr-Nb.	Cu-Nb.	8	9	3	2	8	9	...	...	...	...	...	...	c & o p <sup>0</sup> a : bc & cp <sup>0</sup> p : cp <sup>0</sup> , <sup>0</sup> , <sup>0</sup> , <sup>0</sup> n :
14	Cu-Nb.	Cu-Nb.	Ci : Cu-Nb.	7	3	7	3	3	2	...	...	...	...	...	...	bc & bc a : bc p <sup>0</sup> a : bc p <sup>0</sup> p : cp <sup>0</sup> , <sup>0</sup> , <sup>0</sup> n :
15	Ci : Cu-Nb.	St-Cu : Cu-Nb.	Cu-Nb.	5	1	2	2	4	1	...	...	...	...	...	...	b & bc p <sup>0</sup> a : bc p <sup>0</sup> a : bc p <sup>0</sup> p : cp <sup>0</sup> , <sup>0</sup> & bn :
16	Ci-Cu : Cu : St-Cu.	Ci : St-Cu : Cu.	St-Cu.	1	1	5	2	2	4	...	...	...	...	...	...	b <sup>0</sup> , bc a : b & bc p : bc ≡ & ≡ n :
17	Nb.	Cu.	St-Cu : Cu.	10	10	3	6	2	8	...	...	...	...	...	...	o <sup>0</sup> to b a : b & bc p : c n :
18	Cu-Nb : Fr-Nb.	St-Cu : Cu-Nb.	St-Cu : Cu.	4	4	5	2	1	4	...	...	...	...	...	...	bc p <sup>0</sup> a : b p : bc n :
19	St-Cu : Cu.	Ci : Cu.	A-St : Cu.	2	1	6	7	9	8	...	...	...	...	...	...	b <sup>0</sup> to bc y a : c to o p : c n : ⊕ 14-17 <sup>h</sup>
20	Nb.	Nb.	Nb.	10	10	10	10	10	10	...	...	...	...	...	...	o <sup>0</sup> to <sup>0</sup> q a & p : o <sup>0</sup> n :
21	Ci-St to A-St:St-Cu.	St-Cu : St.	St-Cu.	3	10	10	9	1	10	...	...	...	...	...	...	b ≡ <sup>0</sup> to o a : o p : b to o, p n : <sup>0</sup> 18 <sup>h</sup> et seq
22	Ci-St:St-Cu:Fr-Nb.	A-Cu : Fr-St.	St-Cu : St.	7	10	6	7	10	7	...	...	...	...	...	...	c & o <sup>0</sup> a : bc & c p <sup>0</sup> p : c & o n :
23	Nb.	St-Cu : Nb-Cuf.	A-Cu : St-Cu.	10	10	9	9	5	1	...	...	...	p <sup>0</sup>	...	...	<sup>0</sup> early, o <sup>0</sup> a : c & o p : c & o p <sup>0</sup> p, [bn : <sup>0</sup> 18 <sup>h</sup> et seq
24	Ci-Cu : St-Cu.	Ci-Cu : St-Cu : Cu.	St-Cu.	7	7	3	4	4	6	...	...	...	...	...	...	c p <sup>0</sup> , b a : b, bc p : bc n :
25	St-Cu.	St-Cu : Cu.	St-Cu.	8	7	6	4	2	10	...	...	...	...	...	...	c a : bc p : b to o, <sup>0</sup> later n :
26	St-Cu : St.	A-St : St-Cu.	St-Cu.	8	10	10	10	4	1	...	...	...	...	...	...	<sup>0</sup> early, c to o a : o <sup>0</sup> & <sup>0</sup> q p : bn :
27	St-Cu : Fr-St.	St-Cu : Cu : Fr-St.	St-Cu.	4	8	7	7	6	3	...	...	...	...	...	...	bc & c p <sup>0</sup> q a & p : p <sup>0</sup> to bn :
28	A-Cu : St-Cu.	A-Cu : Fr-Cu.	St-Cu.	2	3	1	3	2	10	...	...	...	...	...	...	p <sup>0</sup> early, b a & p : b to o <sup>0</sup> n :
29	St-Cu.	St-Cu.	Nb.	1	1	6	7	10	10	...	...	...	...	...	...	b a : bc to o <sup>0</sup> p : o <sup>0</sup> to o n :
30	St-Cu : Fr-St.	St-Cu : St-Cuf.	St-Cu : St.	9	9	10	7	9	10	...	...	...	...	...	...	c & o a, p & n :
31	Ci-Cu : St-Cu:Fr-St.	Ci-Cu : St-Cu : Cu.	St-Cu.	2	2	7	9	10	9	...	...	...	...	...	...	o early, b to c a : c, o p : o ≡ & ≡ n :
Mean Cloud Am't.				5.9	5.8	6.2	5.9	6.0	6.4							

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>	Remarks.
	Cloud Forms.			Cloud Amount (All Forms).						Weather.						

1. Aberdeen.

Table for Aberdeen, November 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-30 and Mean Cloud Am't.

112. Aberdeen.

December, 1925.

Table for Aberdeen, December 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-31 and Mean Cloud Am't.



M.O. 299  
(Eskdalemuir)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1925

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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Published by the authority of the  
METEOROLOGICAL COMMITTEE



LONDON:

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

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1927

## 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

## INTRODUCTION.

## 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 which leads 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 Hartmanor, 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 Llandoverly series traversed by igneous dykes."

The selection, in the early years of the century, of this isolated site for the Observatory was dictated by the desire to reduce to a minimum the possibility of artificial magnetic disturbance due to electric traction and power circuits, and in this connection it may be noted that there is no town, industrial centre, or point of railway within a radius of 9 miles ( $14\frac{1}{2}$  km.) from the Observatory.

Photographs, site plan, and a brief description of the Observatory will be found in the Introduction to *The Observatories' Year Book*, 1923.

### METEOROLOGY.

The elements dealt with in the following tables are :—Atmospheric pressure, air temperature, humidity, rainfall, sunshine, solar radiation, wind speed and direction, 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.

*Pressure.*—The standard mercury barometer, Kew pattern, is situated in a north window embrasure on the ground floor of the main building.

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  $0.05^{\circ}\text{C}$ , the annual range being about  $4^{\circ}$ . 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\*, of which a description will be found in the Introduction for 1923, 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 louvred 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 scale values of the thermograph records are  $1^{\circ}$  absolute =  $2.79$  millimetres and  $2.44$  millimetres on the paper for the dry and wet bulb records respectively, while the time scale is 1 hour =  $9.20$  millimetres.

As auxiliary recorders of temperature there are, in the same louvred hut :—

(a) A psychograph, pen recording, which is in effect a bimetallic spiral thermograph with two spirals, one of which is kept dry and the other wet. The records are of 24 hours' duration.

(b) A bimetallic spiral thermograph, of which the record is changed every week. It is described in the *Meteorological Observer's Handbook*.

*Humidity.*—In addition to the dry and wet bulb thermograph described above there is a Richard hair hygograph which is situated in a Stevenson screen about midway between the louvred hut and the main building.

As is stated on p. 14, the records from this instrument are utilised when the wet bulb reading does not exceed  $273\text{a}$ . On the records obtained in 1925 a change of

\* In December, 1924, this instrument was removed from the Underground Magnet House, overhauled, and installed against the north wall of the laboratory on the ground floor of the main building.

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 p. 10. 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. 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.

*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° and 110° east of south varies from 2.5° to 5°, while between 50° and 135° west of south the high ground varies in elevation from 3° to 4.4°, being generally about 3.5°. As sunshine can be recorded when the sun is 3° 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.\* 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.

*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. A description of the speed recorder will be found on p. 12.

The records of speed and direction are obtained on the same chart. The recorder in use until 22nd June, 1925, was provided with a Munro-Rooker single-pen direction recorder. In this arrangement the lower end of a long vertical rod, rigidly attached at

\* 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.



its upper end to the freely moving vane, is connected to the vertical axle of a short solid brass cylinder which consequently rotates with the vane. In the curved surface of the cylinder is cut a helical channel in which runs a short roller projecting from the side of a pivoted pen arm. The helix forms a nearly complete turn, and the upper and lower ends are connected by a steep cam. As the recording pen reaches the upper North line on the chart it is rapidly forced by the connecting cam to the bottom North line, or conversely if the wind direction is changing from east of north to west of north. For some years prior to the introduction, in June, 1922, of the Munro-Rooker recorder a Dines twin-pen recorder was in use. On 22nd June, 1925, the Munro-Rooker single-pen direction recorder was replaced by a twin-lever recorder. In this instrument a pen is carried by each of the 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, rotating with the vane. At any instant one pen is unconstrained by the helix and records undisturbed along the top or bottom north line of the ruled chart; while the other, being controlled by the helix, records the direction of the wind. As the latter changes through north the pen hitherto in action is released automatically from control, falls or rises to the bottom or top line of the chart, as the case may be, and the other pen, becoming controlled by the helix, continues the record. On August 6th a new head and vane were introduced and the former thin direction rod was replaced by a "rod" consisting of steel tubing of 1.5 cm. external diameter. The pressure and suction effects produced at the head are now transmitted to the speed recorder by means of "compo" tubing of 1.3 cm. internal diameter. The design of the new vane differs from that of the old in that the greatest dimension of the fin is vertical instead of horizontal. The horizontal cross-section of the fin is of aerofoil shape.

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 (40m.) 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.

*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 louvred thermometer hut.

#### IDENTIFICATION NUMBERS OF INSTRUMENTS IN USE IN 1925.

Standard Kew pattern Barometer	..	..	..	M.O.	1320
Standard Dry Bulb Thermometer	..	..	..	M.O.	19123
Standard Wet Bulb Thermometer	..	..	..	M.O.	1695
Hair Hygograph	..	..	..	M.O.	59
Recording Beckley Raingauge	..	..	..		4
Control Raingauge	..	..	..	M.O.	391
"    "    glass for	..	..	..	M.O.	1354
Campbell Stokes Sunshine Recorder	..	..	..	M.O.	99
Ångström compensating Pyrheliometer	..	..	..		116
Dines Tube Anemograph	..	..	..	M.O.	{ 1015 1032
Grass Minimum Thermometer	..	..	..	M.O.	13

#### Notes on Results.

*Diurnal Variation of Atmospheric Pressure.* The values of the mean diurnal inequalities for the months and the year, 1925, are given in Table 126. Compared with the range of the mean diurnal inequalities for the years 1911–20 the

value of the range in 1925 is highest in February, October, and November, and lowest in May. In January, April, June, July and September, the range exceeds the corresponding value in 1924. There is rather prominent development of the forenoon minimum in October and of the forenoon maximum in September and November. In December the forenoon minimum is not well developed, and there seems to be unusually strong development of the tertiary maximum, which appears near 3h in the mean inequality for 1911-20. In 1925 the principal minimum occurs at 4h in April, May, September, October and November, and at one of the hours 14h to 18h in the remaining months. It may be noted that in January, June, July, November and December, the time of the principal minimum agrees closely with the normal (1911-20), whereas in each of the other months the principal minimum occurs near to the time of the secondary minimum of the normal inequality. The principal maximum is at 9h, 10h, or 11h in January, March, September, November and December, and at times varying between 19h and 23h in the other months. Excepting in February, March, September and December, the time of the principal maximum approximates to that shown in the normal inequality.

The results of the harmonic analysis of the monthly and seasonal mean diurnal inequalities for 1925 are given in the accompanying table. For purposes of comparison the corresponding data (†) derived from the mean inequalities for the period 1911-20 are also given. In computing the Fourier co-efficients for the individual months of 1925 the unit employed was  $\cdot 01$  mb; but for the seasons and the year the inequalities were taken to  $\cdot 001$  mb, and in these cases the values of  $c_1$ , etc. are given to three decimal places. Although for 1925, as for recent years, the phase angles are given to the nearest  $1^\circ$ , this course is scarcely justified, at least for the third and fourth components, by the character of the data from which the harmonic coefficients 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.

The range in the monthly values of  $c_1$  is considerably less than in each of the years 1922-24. In only four months is  $c_1$  greater than the corresponding value in 1924. The arithmetic mean of the twelve monthly values of  $c_1$  is  $0\cdot 19$ , as compared with  $0\cdot 22$ ,  $0\cdot 23$ ,  $0\cdot 26$ , in 1924, 1923, 1922, respectively. The variability in the monthly values of  $\alpha_1$  is greater than in the three preceding years, the value of the ratio of  $c_1$  for the year to the arithmetic mean of the monthly values of  $c_1$  being very small. The amplitude of the 12-hour term is comparatively high in February, March and November, and low in May and December. In January  $\alpha_2$  is greater than the normal by  $21^\circ$ , and in June less than the normal by  $13^\circ$ , but these are the only months in which the divergence from normal exceeds  $10^\circ$ . As is usual,  $c_2$  is greatest in equinoctial months. The values of  $\alpha_2$  for the seasons and the year are very near to the values for 1911-20. The variation in  $c_3$  and  $\alpha_3$  throughout 1925 bears general resemblance to that shown by the results for 1911-20,  $c_3$  being greatest in winter and least in equinoctial months, and the phase in winter and summer being approximately in opposition. However, the change in phase in this term from March to April is less marked than in some years. The best agreement with the normal values is shown by the values of  $c_3$  and  $\alpha_3$  for winter and summer. For the year and seasons the values of  $c_4$  are less than in 1924 and also less than the normal values, but the variation from season to season in both amplitude and phase is close to the normal. The maximum divergence of phase from the normal is in July, in which month  $\alpha_4$  is less than the normal by  $52^\circ$ .

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(†) "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. L., 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  $\Sigma c_n \sin(15nt^0 + \alpha_n)$ ,  $t$  being Local Mean Time reckoned in hours from midnight.

Month and Season.	$c_1$		$\alpha_1$		$c_2$		$\alpha_2$		$c_3$		$\alpha_3$		$c_4$		$\alpha_4$	
	1925.	1911-20.	1925.	1911-20.	1925.	1911-20.	1925.	1911-20.	1925.	1911-20.	1925.	1911-20.	1925.	1911-20.	1925.	1911-20.
Jan. ...	mb. .22	mb. .094	° 14	° 346.4	mb. .22	mb. .235	° 173	° 151.6	mb. .11	mb. .125	° 2	° 345.3	mb. .04	mb. .046	° 237	° 213.9
Feb. ...	.23	.118	94	215.1	.34	.273	133	138.1	.08	.083	337	341.2	.06	.042	37	67.7
Mar. ...	.10	.128	2	185.3	.36	.304	138	145.3	.03	.053	334	335.0	.04	.051	67	24.5
Apr. ...	.16	.205	200	92.3	.33	.299	158	154.8	.03	.022	241	156.3	.06	.045	343	355.7
May ...	.14	.225	201	52.7	.20	.270	144	147.4	.06	.075	154	160.1	.01	.035	322	330.1
June ...	.20	.152	39	53.9	.22	.234	133	146.1	.09	.084	179	160.6	.02	.018	355	325.7
July ...	.15	.171	76	69.4	.25	.211	146	141.2	.08	.077	174	155.8	.02	.023	248	300.0
Aug. ...	.17	.114	72	114.6	.20	.239	146	147.7	.07	.057	161	157.2	.06	.047	321	330.8
Sept. ...	.19	.121	283	87.7	.29	.313	153	151.6	.01	.012	56	110.7	.04	.050	335	344.7
Oct. ...	.29	.110	181	76.0	.30	.315	165	159.5	.10	.060	355	8.2	.04	.041	56	32.9
Nov. ...	.13	.125	263	183.5	.29	.242	162	168.1	.12	.101	10	9.2	.03	.015	139	146.2
Dec. ...	.27	.137	13	97.1	.12	.213	148	146.9	.16	.124	350	4.2	.05	.067	189	212.8
Arithmetic mean	.19	.142	...	...	.26	.262	...	...	.08	.073	...	...	.04	.040	...	...
Year ...	.036	.085	51	90.8	.254	.260	150	150.1	.024	.020	358	41.7	.012	.016	343	341.9
Winter ...	.123	.038	23	165.4	.232	.236	154	150.9	.115	.106	355	355.5	.016	.023	180	189.1
Equinox ...	.095	.108	219	103.9	.316	.306	153	152.8	.033	.021	343	4.4	.035	.044	18	8.9
Summer ...	.097	.153	79	67.2	.217	.238	143	145.8	.073	.074	167	158.5	.028	.030	309	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.

ATMOSPHERIC ELECTRICITY.

Notes on the Instruments.

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. 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*, 1922, pp. 75-76.

The scale value of the photographic record obtained by means of the Dolezalek electrometer remained at about 6.1 volts per millimetre during the first four months of 1925. On May 1st the number of Weston normal cells across the quadrants of the electrometer was doubled, and for the rest of the year the scale value of the record was about 3.1 volts per millimetre. The number of determinations of the reduction factor varied from four in December to fourteen in June, each determination being based on about fifteen or more readings (at intervals of one minute) of the potential at one metre above the ground in the open. The values of the monthly reduction factors finally adopted for 1925 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. The final values, which are given in Table 210, range from 6.26 in May to 6.35 in October.

The Wulf quartz-thread electrometer used in scale value and reduction factor determinations was calibrated in March and April, 1925, using the Kelvin multicellular voltmeter as standard. This calibration was used throughout 1925. Late in the year, and subsequently, further calibrations of the Wulf electrometer were made, employing a potentiometer and standard cell, and were in close agreement with the earlier calibration over the range of voltages usual in scale value and reduction factor determinations.

#### IDENTIFICATION NUMBERS OF INSTRUMENTS USED IN 1925.

Wulf bifilar electrometer	..	..	..	..	..	..	3040
Kelvin Multicellular voltmeter	..	..	..	..	..	..	3180

#### Notes on the Tables and Results.

Table 210 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. 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.

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. on all days, while values for all hours are assigned on days classified as *oa*, *1a* or *2a*. The character figures are given in Table 213, the significance of these symbols being as follows:—

- o*, denotes a day during which from midnight to midnight no negative potential was recorded.
- 1*, denotes one or more excursions of limited duration to the negative side of the scale during the same period.
- 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.
- b*, denotes that, during the same period, a range of 1,000 volts or more 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 was reached in at least six hours.

In Table 211 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.

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.

Corresponding data for *1a* and *2a* days combined appear in Table 212.

Contrary to the practice followed in some earlier years\* the mean values of potential gradient given in Table 210 are of two kinds, viz., (*a*) the means 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

\* *i.e.* prior to 1923.

of days will approximate closely to the mean value derived from all hourly values of all the days.

In nine months the (*a*) mean exceeds the (*b*) mean, while in every month the (*a*) mean is exceeded by the mean on *oa* days. The general tendency is for the 1925 values to exceed those for 1924, this being true of the (*a*) mean and the mean for *oa* days in ten months and of the (*b*) mean in nine months. 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 follows :—

				<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

Each of the values for 1925 is greater than the corresponding values in the three preceding years. In nine months of 1925 the mean value for *oa* days is greater than the corresponding mean for 1913–23, and the annual mean exceeds the eleven-year mean by about 9 per cent. The mean potential for the eleven *oa* days in November is unusually high. On only one of these days—and this was the day of lowest mean potential—was the mean wind speed greater than 3 metres per second. Fog which occurred on two of these days was accompanied by high values of potential.

The following were the more noteworthy occasions when for several hours the potential remained continuously negative, excepting for a few small excursions to the positive side on one of the occasions :—

- (i) January 29d 5h 10m to 29d 12h 10m, during a few hours of which the potential was less than  $-1,300$  v/m.
- (ii) February 16d 21h 40m to 17d 4h 40m. Seven hours of negative potential during continuous rain.
- (iii) April 5d 23h 10m to 6d 5h 20m, during part of which the potential was below  $-3,000$  v/m.
- (iv) April 17d 19h 50m to 18d 21h 0m. Over 25 hours continuous negative potential during continuous rain. For several hours the potential was less than  $-2,800$  v/m, while individual movements showed a potential of less than  $-3,800$  v/m.
- (v) April 22d 10h 0m to 22d 22h 10m, during continuous rain, heavy at times. For three or four hours the potential was very considerably less than  $-1,000$  v m.
- (vi) From May 27d 2h 0m to 27d 5h 20m, potential was mainly negative, with two short intervals of small positive potential ; then from 27d 5h 20m to 27d 11h 50m the potential was continuously negative, being less than  $-1,000$  v/m for a time.

The mean diurnal inequalities on *oa* days for the year and the seasons exhibit tolerably close likeness to the normals for the years 1913–23. The principal maximum in the evening and a much smaller secondary maximum in the forenoon are to be seen in all seasons. In the mean inequality for Equinox the forenoon maximum is rather more prominent than usual, and this is apparently due to the enhancement of this feature in the inequalities for September and October. In January, November and December the chief minimum occurs in the early forenoon. The effect of the high range of the inequality in November and December is seen in the comparatively large range of the inequality for winter. The principal minimum in three of the summer and in three of the equinoctial months falls between 12h and 16h, G.M.T. In August the principal maximum is at 6h and 7h, G.M.T. This somewhat unusual development of the forenoon maximum is largely due to the high values of potential in the early forenoon hours on the 18th and 19th.

## TERRESTRIAL MAGNETISM.

## Notes on the Instruments.\*

The magnetographs in use 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 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 217, 221, etc.; the monthly means of the readings so obtained during 1925, together with the mean values for the years 1911-24, were as follow:—

## EXCESS OF MEAN TEMPERATURE ABOVE 280a.

Month.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Mean 1925 .. .. .	5.3	4.4	3.5	3.1	3.3	4.1	5.0	5.8	6.2	6.0	5.6	4.3
Mean 1911-24 .. .. .	3.5	3.0	2.6	2.4	2.7	3.6	4.6	5.7	6.4	6.3	5.6	4.6

The annual range of temperature during 1925 was 3.3° C., the mean range for the previous twelve years being 4.3° C.

The north and west component instruments are of the bifilar type, by Adie. In each of these instruments the torsion of a bifilar suspension, of fine tungsten-steel wire, is utilised to bring the magnet into an azimuth approximately perpendicular to the direction of the component of which the changes are recorded. On December 31, 1924, the azimuth of the magnet of the west component instrument was adjusted to be very approximately north-south. The operations resulted in the scale value being increased by about one-quarter of its former value, but it was decided not to return to the former sensitiveness. Slight adjustments for azimuth and scale value of the north component instrument were made on January 8, 1925, and the orientation of the fixed mirror of this instrument was altered slightly. The instrument for the vertical component is a multiple magnet balance designed by the late Professor W. Watson, F.R.S. This instrument is very sensitive to mechanical disturbance. During several months of 1925 modification of the ventilation system and reconditioning of certain parts of the Magnet House were in progress and disturbance arising out of this work produced displacement of the magnet system on April 17, October 5 and 7, December 11. On October 28 renewal of the reagent in the drier attached to the instrument resulted in a considerable drift which continued for some days. On October 31 the small control magnet attached to the side of the pier on which the instrument is supported was raised in order to secure a more convenient position of the trace on the photographic paper.

\* For more detailed accounts of the magnetographs, absolute instruments, and normal methods of procedure, see *The Observatories' Year Book*, 1922, pp. 77 *et seq.*

The constants of the 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* .. .. .	.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°

\* Log. decr. =  $\text{Log}e a_n - \text{log}e a_{n+1}$ ; where  $a_n, a_{n+1}$  are the amplitudes of two successive swings on the same side of the zero position.

The scale values of the magnetographs were determined at intervals of two weeks. In the following table are given the scale values, obtained by overlapping means, which were employed in reducing the curve readings.

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 ..	{ 4.85 4.96*	4.96	4.96	4.95	4.95	4.97	4.98	4.99	4.99	4.98	4.98	4.98
West Instrument ..	6.61	6.61	6.61	6.63	6.63	6.63	6.63	6.63	6.63	6.62	6.62	6.62
Vertical Instrument ..	4.12	4.13	4.13	4.14	4.17	4.18	4.20	4.22	4.24	—	4.82	—

\* From January 8d 11h.

The more frequent determinations which were made after the mechanical disturbances early in October show that the scale value of the vertical instrument was increased as a result of the first disturbance but that a somewhat irregular decrease ensued. The scale values adopted for the vertical instrument for October and December are : October, 1d to 5d 9h, 4.25 ; 5d 11h to 15d 11h, 4.97 ; 15d 12h to 19d 14h, 4.85 ; 19d 15h to 29d 14h, 4.68 ; 29d 15h to 31d, 4.78. December, 1d to 10d, 4.70 ; 11d to 20d, 4.55 ; 21d to 31d, 4.47.

Absolute observations of horizontal force, declination, and inclination were taken, usually twice weekly, in the east magnetic hut. Declination and horizontal intensity were determined by means of the Kew pattern unifilar magnetometer, placed on Pier No. 5, and determinations of inclination (dip) were made with the Schulze Inductor, placed on Pier No. 6. In the deflection experiment of the horizontal intensity determination observations were made for three distances of the collimator magnet, viz. 25, 30, 35 cm.

As in 1924, the procedure in respect of the P and Q correction,  $\log_{10}(1 + P/25^2 + Q/25^4)$ , which is used in the reduction of the horizontal intensity observations, differed from that which had been followed from the latter part of 1913 until 1923. Throughout the period named the value of the correction adopted for a given month was the mean 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. It was decided to use throughout 1925 a value based on the observations during the years 1917-25. From the values of  $m/H$  for the three deflection distances, during each of these years, a mean value of  $\log_{10}(1 + P/25^2 + Q/25^4)$  was computed and the mean of the nine values so obtained was used in reducing the 1925 observations. The values of P, Q, and  $\log_{10}(1 + P/25^2 + Q/25^4)$  are as follows:—

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

The mean value of  $\log_{10}(1 + P/25^2 + Q/25^4)$  for 1917-24 is .00533; for 1917-25, is .00534. A variation of .00020 in the value of the logarithm corresponds with a variation of about 4  $\gamma$  in the derived value of H.

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. The base line values finally adopted are obtained from a curve drawn smoothly through points given by the deduced values.

The results of the absolute determinations of D, I and H are summarised 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, excepting for V in October, when there were discontinuities on the 5th, 7th, 15th and 19th, full particulars of which are not given in the table. Nor are given the hourly base line values assigned for the period of large drift resulting from the change of drier after 14h on October 28. The adjustment of the control magnet between 11h and 12h on October 31 increased the V base line value from 44644  $\gamma$  to 44815  $\gamma$ .



ABSOLUTE DETERMINATIONS OF D, I AND H, AND BASE LINE VALUES OF N, W, AND V.

Eskdalemuir:

1925:

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. 3	14 13	15 58	12	11 1	69 39.0		12 10	16657	906.1		813 (21)	254 (52)	787 (819)
6	14 31	15 55	48	12 21	69 39.6		11 42	16668	906.5		820 (20)	255 (52)	814 (21)
9	14 31	15 55	52	11 21	69 39.1		12 1	16674	906.9		789 (81)	254 (52)	839 (24)
13	14 43	15 57	50	10 58	69 39.4		11 39	16669	907.0		784 (80)	251 (52)	811 (28)
16	14 19	15 56	57	10 37	69 39.2		11 17	16682	906.1		778 (80)	253 (52)	829 (30)
22	14 35	15 54	38	11 58	69 40.0		11 2	16672	906.5		789 (79)	251 (52)	878 (36)
27	14 43	15 55	42	11 1	69 39.6		11 42	16667	907.4		770 (78)	249 (52)	817 (40)
30	—	—	—	11 18	69 39.9		—	—	—		—	—	845 (42)
Feb. 3	14 33	15 55	28	11 31	69 39.5		10 45	16674	906.7		784 (76)	252 (52)	858 (46)
6	14 37	15 55	38	11 13	69 40.4		11 53	16664	906.7		776 (75)	250 (52)	879 (49)
10	14 43	15 56	23	11 39	69 40.6		12 17	16667	907.2		782 (74)	253 (52)	870 (52)
12	14 53	15 57	53	11 5	69 39.8		11 45	16662	906.8		775 (73)	252 (52)	869 (54)
17	14 39	15 59	30	11 17	69 39.7		11 58	16649	906.4		759 (72)	251 (52)	829 (58)
20	14 31	15 55	55	11 23	69 40.7		12 1	16657	906.9		769 (71)	254 (52)	876 (60)
24	14 27	15 56	48	12 35	69 39.5		11 45	16676	906.7		771 (69)	256 (52)	866 (62)
27	14 20	15 56	28	11 49	69 40.1		11 1	16658	906.5		764 (68)	252 (52)	858 (63)
Mar. 3	14 21	15 55	43	12 21	69 39.8		11 30	16656	905.6		760 (67)	248 (52)	844 (64)
6	14 5	15 56	35	12 11	69 40.7		11 17	16670	907.0		771 (66)	255 (53)	898 (66)
10	14 33	15 58	17	12 43	69 39.7		11 31	16638	906.7		759 (66)	254 (53)	846 (66)
13	15 2	15 54	44	14 37	69 38.5		12 19	16669	906.6		765 (65)	249 (53)	852 (68)
16	15 32	15 54	25	12 40	69 40.0		11 24	16668	906.5		764 (65)	250 (53)	850 (68)
16	—	—	—	15 2	69 39.6		—	—	—		—	—	856 (68)
20	14 25	16 0	23	12 39	69 40.1		11 30	16666	906.4		766 (65)	255 (53)	865 (70)
24	14 54	15 56	49	12 47	69 39.3		11 39	16670	906.1		765 (64)	255 (53)	869 (71)
27	14 27	16 0	22	10 46	69 40.1		11 26	16701	907.0		776 (64)	255 (53)	892 (72)
31	14 49	15 56	8	10 55	69 39.5		11 10	16666	906.8		767 (65)	253 (53)	863 (74)
Apr. 3	14 23	16 1	33	11 10	69 41.8		11 53	16684	907.8		786 (65)	255 (53)	937 (876)
7	14 19	15 55	30	11 9	69 39.3		11 51	16666	906.3		765 (65)	255 (53)	823 (78)
10	14 25	15 57	18	11 1	69 41.1		11 43	16670	906.8		773 (65)	250 (53)	879 (80)
14	14 51	15 55	10	14 29	69 38.6		11 52	16671	906.2		759 (65)	251 (53)	872 (82)
17	14 33	15 55	52	11 18	69 40.6		11 58	16656	906.3		763 (64)	252 (52)	885 (85)
18	—	—	—	—	—		—	—	—		—	—	to 14 h. (90)
21	14 19	15 56	18	14 0	69 39.4		10 53	16663	906.5		764 (64)	252 (52)	890 (92)
24	14 13	15 53	53	13 53	69 39.2		11 13	16673	906.6		764 (65)	254 (52)	919 (894)
28	13 55	15 54	50	13 35	69 39.3		11 23	16663	906.3		757 (65)	249 (52)	876 (96)
May 1	14 33	15 53	23	14 13	69 39.6		10 47	16666	906.7		764 (65)	252 (52)	898 (98)
5	13 53	15 53	41	13 34	69 40.5		10 55	16653	906.4		766 (66)	251 (52)	899 (99)
8	13 57	15 56	33	13 38	69 39.6		11 18	16672	906.7		768 (67)	248 (52)	922 (00)
12	13 40	15 55	5	10 33	69 40.1		11 9	16662	907.3		780 (68)	253 (52)	905 (00)
19	—	—	—	10 53	69 39.8		—	—	—		—	—	911 (899)
20	14 27	15 56	6	10 19	69 39.9		10 57	16682	906.7		774 (69)	260 (52)	904 (898)
22	13 35	15 56	8	10 19	69 40.3		10 56	16666	906.4		767 (70)	250 (52)	898 (98)
26	13 29	15 55	57	10 23	69 39.9		11 1	16662	906.7		768 (71)	252 (52)	885 (95)
29	14 9	15 53	15	10 20	69 42.0		10 59	16685	907.4		782 (71)	250 (52)	916 (893)
June 2	14 3	15 55	43	10 33	69 41.1		11 10	16657	906.4		771 (72)	250 (52)	895 (89)
5	13 33	15 55	25	10 24	69 40.8		11 2	16686	906.5		772 (73)	248 (52)	894 (87)
9	13 53	15 55	33	10 25	69 41.6		11 3	16675	906.6		776 (74)	250 (52)	877 (83)
10	11 23	15 50	25	8 43	69 40.1		10 36	16659	906.6		782 (74)	250 (52)	924 (882)
12	13 38	15 52	21	9 49	69 39.6		10 49	16639	905.7		759 (75)	247 (52)	826 (80)
12	—	—	—	—	—		14 58	16650	906.2		770 (75)	250 (52)	856 (80)
16	13 45	15 55	32	10 33	69 39.6		11 10	16685	906.8		786 (75)	253 (52)	896 (77)
19	14 27	15 55	56	8 50	69 40.7		10 35	16666	907.7		763 (76)	246 (52)	818 (74)
23	13 39	15 58	1	8 43	69 39.0		10 39	16687	907.0		792 (77)	259 (52)	894 (70)
26	13 57	15 53	43	8 41	69 41.6		10 53	16664	906.0		775 (78)	246 (52)	849 (66)
30	14 11	15 52	5	8 33	69 39.3		10 53	16680	906.4		783 (78)	252 (52)	881 (62)

ABSOLUTE DETERMINATIONS—*continued.*

Date.	Declination.			Inclination.			Horizontal Force.			Base Line Values (deduced and adopted).		
	Mean Time.	D.		Mean Time.	I.		Mean Time.	H.	<i>m.</i>	North.	West.	Vertical.
	h m	° ' "	h m	° ' "	h m	° ' "	h m	γ		15,000 γ +	4,000 γ +	44,000 γ +
July 3	13 53	15 53 10	8 25	69 40.7	10 39	16671	906.5	781 (79)	250 (52)	850 (58)		
7	14 47	15 52 43	8 41	69 40.3	10 48	16700	906.5	781 (79)	255 (52)	865 (54)		
10	13 39	15 53 43	8 33	69 38.2	10 36	16666	906.0	774 (80)	248 (52)	820 (51)		
14	14 31	15 52 13	8 50	69 39.2	10 35	16665	905.9	776 (80)	251 (52)	830 (46)		
17	13 51	15 52 29	8 43	69 40.1	10 49	16661	906.9	770 (81)	246 (52)	824 (44)		
21	14 13	15 55 35	8 37	69 39.3	10 43	16693	905.8	774 (82)	250 (52)	815 (40)		
24	14 13	15 53 23	8 27	69 39.3	11 5	16651	905.3	773 (82)	247 (52)	801 (37)		
28	13 59	15 51 50	8 34	69 39.8	10 36	16658	906.9	791 (83)	254 (52)	865 (34)		
31	14 17	15 51 43	8 32	69 39.3	10 58	16669	906.2	779 (83)	251 (52)	820 (32)		
Aug. 4	13 31	15 55 33	8 47	69 40.8	10 50	16673	906.5	793 (83)	256 (52)	847 (29)		
7	13 37	16 2 40	8 41	69 42.5	10 31	16716	906.9	795 (84)	257 (52)	860 (27)		
11	13 49	15 51 12	8 35	69 40.8	10 39	16649	906.1	780 (84)	250 (52)	832 (25)		
14	13 29	15 54 15	8 30	69 39.1	10 39	16669	906.0	773 (85)	250 (52)	789 (823)		
18	13 31	15 55 30	8 43	69 40.4	10 51	16653	906.0	777 (85)	255 (52)	806 (21)		
21	8 49	15 43 3	8 29	69 41.5	10 31	16630	906.3	786 (85)	254 (52)	823 (20)		
25	13 21	15 56 3	9 9	69 41.5	10 35	16669	906.7	794 (86)	252 (52)	841 (19)		
28	13 17	15 51 25	8 31	69 40.1	10 33	16639	905.8	776 (86)	254 (52)	787 (818)		
Sept. 1	14 1	15 51 18	8 39	69 41.1	10 29	16659	905.4	777 (86)	252 (53)	788 (817)		
4	13 37	15 53 52	9 11	69 41.5	10 29	16658	906.4	789 (87)	251 (53)	822 (16)		
8	14 27	15 49 30	8 59	69 41.9	10 57	16647	906.3	781 (87)	255 (53)	799 (816)		
11	13 55	15 51 58	8 39	69 40.3	10 47	16649	906.3	780 (87)	250 (53)	778 (816)		
15	14 19	15 53 21	8 49	69 40.5	10 54	16666	906.1	784 (87)	251 (53)	778 (815)		
18	13 27	15 52 10	8 49	69 40.8	10 30	16653	906.5	789 (87)	254 (53)	819 (15)		
22	13 33	15 53 16	8 57	69 43.2	10 49	16631	906.5	771 (87)	247 (53)	769 (815)		
22	—	—	13 56	69 41.0	—	—	—	—	—	775 (815)		
25	13 45	15 48 22	8 39	69 41.7	10 43	16637	907.0	791 (87)	253 (53)	819 (15)		
29	13 25	15 49 30	8 45	69 40.9	10 41	16633	905.9	778 (87)	252 (53)	798 (815)		
Oct. 2	13 12	15 50 13	8 49	69 40.4	10 30	16644	906.3	784 (87)	253 (53)	818 (15)		
6	13 37	15 51 23	10 45	69 42.3	11 21	16657	906.3	785 (86)	260 (53)	825 (23)		
7	—	—	15 19	69 39.8	—	—	—	—	—	(23) to 9 h. 890 (70)		
9	13 39	15 52 45	10 49	69 40.7	11 25	16649	906.0	778 (86)	252 (54)	854 (64)		
13	14 11	15 49 42	10 57	69 43.5	11 32	16638	906.3	781 (86)	253 (54)	871 (56)		
16	14 35	15 50 54	10 38	69 41.9	11 15	16648	906.6	784 (86)	253 (54)	857 (45)		
16	—	—	15 22	69 40.5	—	—	—	—	—	854 (45)		
20	14 55	15 52 23	14 33	69 40.4	10 54	16646	906.2	784 (86)	252 (54)	856 (40)		
23	14 15	15 52 13	10 53	69 41.6	11 31	16662	906.8	794 (86)	256 (54)	876 (39)		
27	14 47	15 51 25	10 42	69 41.3	11 20	16676	907.0	793 (85)	259 (54)	868 (38)		
30	14 35	15 48 2	10 40	69 41.5	11 17	16670	906.3	796 (85)	255 (54)	691 (62)		
Nov. 3	14 35	15 47 39	10 41	69 41.1	11 25	16660	907.1	788 (84)	256 (55)	801 (794)		
5	14 21	15 47 1	11 6	69 40.8	11 45	16672	907.0	797 (84)	259 (55)	808 (789)		
10	15 3	15 46 35	10 53	69 41.3	11 31	16635	906.9	785 (83)	256 (55)	780 (79)		
13	14 29	15 48 53	10 39	69 41.3	11 19	16648	907.2	789 (82)	256 (54)	792 (73)		
17	14 37	15 48 7	10 43	69 42.0	11 21	16637	906.0	765 (81)	253 (54)	719 (70)		
20	11 53	15 47 33	10 51	69 40.9	11 28	16668	907.0	791 (80)	258 (53)	801 (775)		
24	14 19	15 50 50	11 1	69 40.2	11 36	16694	906.8	778 (78)	261 (52)	793 (83)		
27	14 39	15 44 34	10 24	69 40.2	11 0	16641	906.7	772 (77)	246 (51)	781 (89)		
Dec. 1	14 39	15 45 20	10 49	69 40.3	11 27	16664	906.4	773 (75)	247 (50)	782 (96)		
4	14 42	15 44 40	10 51	69 39.1	11 29	16670	906.7	770 (73)	246 (50)	792 (800)		
8	14 25	15 45 53	10 59	69 41.5	11 37	16649	906.7	769 (71)	248 (49)	790 (805)		
11	14 15	15 45 8	10 59	69 41.4	11 39	16660	906.9	771 (70)	250 (49)	816 (88)		
12	—	—	—	—	—	—	—	—	—	to 13 h. (18)		
16	14 37	15 45 15	10 43	69 41.0	11 23	16643	906.5	769 (68)	248 (48)	822 (20)		
18	14 17	15 46 40	10 35	69 39.6	11 11	16657	906.4	762 (67)	246 (48)	809 (21)		
22	14 31	15 45 15	11 9	69 40.1	11 45	16656	906.7	765 (66)	252 (48)	825 (23)		
29	14 17	15 44 45	12 47	69 41.5	11 21	16644	906.1	759 (64)	248 (48)	824 (25)		

The hourly readings are obtained from the magnetograms, standardised 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 1925.

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  $\Sigma R^2 \dagger$  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 "characteristic ratio,"  $\rho$ , which is the ratio of the value of  $\Sigma R^2$  for a given day to the mean monthly value of  $\Sigma R^2$ . This ratio is an index of the degree of disturbance or activity on a given day relatively to the other days of the same month.
- (d) the daily magnetic character figures, assigned according to the international scheme wherein "0," "1," "2," respectively, denote quiet, moderately disturbed and highly disturbed conditions.
- (e) the daily values of temperature in the underground magnetograph chamber.

† See also p. 110.

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 262 to 279. In calculating diurnal inequalities the non-cyclic change has been eliminated on the assumption that its time-rate is linear. Inequality values are first calculated to  $0.01\gamma$  and then rounded off to  $0.1\gamma$ . The inequalities of H, D, and I have been computed from those of N, W, and V by means of the formulae :

$$\delta D = \frac{180 \times 60}{\pi} \left( \frac{\delta W \cos D - \delta N \sin D}{H} \right)$$

$$\delta H = \delta N \cos D + \delta W \sin D$$

$$\delta I = \frac{180 \times 60}{\pi} \cos I \left( \frac{\delta V \cos I - \delta H \sin I}{H} \right)$$

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 283. 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 280, and the values of the non-cyclic change of N, W, and V are given in Table 281.

The results of harmonic analysis of the monthly, seasonal<sup>†</sup> and annual diurnal inequalities of N, W, and V are to be found in Tables 284 and 285, 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 summarised in Table 282.

In Table 283 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.

### Review of Results of Magnetic Observations.

*Mean and Extreme Values of the Magnetic Elements, 1925*—The mean values are given on opposite page 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, standardised by means of the absolute observations; those of H, D, I, and T have been deduced from the values of N, W, and V.

<sup>†</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.

TABLE I.

Year.	H.	D. (West).	I.	N.	W.	V.	T.
	$\gamma$	$^{\circ}$ $'$	$^{\circ}$ $'$	$\gamma$	$\gamma$	$\gamma$	$\gamma$
1924 .. ..	16673	16 1·2	69 38·7	16025	4601	44938	47931
1925 .. ..	16665	15 48·4	69 39·3	16035	4539	44943	47933

The decrease in westerly declination exceeds slightly the change from 1923 to 1924, and is the largest change from one year to the next recorded at Eskdalemuir. H continued to decrease, but since 1922 the rate of decrease has been less than during the interval 1912-18. The increase in N continued, and the decrease in W is the largest since records began. The values of I, V, and T are slightly in excess of those of the previous year.

Mean values derived from (a) international quiet days and (b) international disturbed days are as follow: (a) N, 16037  $\gamma$ ; W, 4540  $\gamma$ ; V, 44943  $\gamma$ ; (b) N, 16029  $\gamma$ ; W, 4537  $\gamma$ ; V, 44940  $\gamma$ .

The extreme values of N, W, and V recorded during 1925 are given in Table II.

TABLE II.

Component.	Maximum.			Minimum.			Absolute Annual Range.				
	Value.	Date, 1925.			Value.	Date, 1925.					
North .. ..	$\gamma$ 16190	June	d	h	m	$\gamma$ 15812	June	d	h	m	$\gamma$ 378
West .. ..	4658	Oct.	23	15	50	4353	Oct.	23	22	50	305
Vertical ..	45116	Oct.	21	19	12	44723	June	24	23	52	393

The absolute annual ranges were smaller in 1925 than in 1924. The range in W is the smallest recorded in the period 1914-25.

*Magnetic Character of the Year.*—As an endeavour to obtain magnetic activity estimates free from the effects of variations in personal judgment, to which the character figures assigned in accordance with the international scheme are subject, it has been the practice in recent years to tabulate for each day two quantities which are in some measure indicative of the degree of magnetic activity. These quantities

are (1)  $\Sigma R^2$ ,\* the sum of the squares of the absolute daily ranges of the three geographical components; and (2), the mean of the hourly values of  $\Sigma r^2$ ,† the sum of the squares of the hourly ranges of these components. The magnetic character

TABLE III.

1925.			Mean Value of $\Sigma r^2$ (Unit $100\gamma^2$ ).											
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.														
1	..	..	0.5	3.6	—	4.2	0.8	9.9	9.9	4.5	69.9	5.4	27.0	1.9
2	..	..	0.2	0.5	1.3	4.5	0.6	8.6	5.2	2.1	30.3	1.9	12.8	2.0
3	..	..	0.8	0.6	0.9	7.1	1.7	16.9	5.0	15.2	9.8	1.2	2.1	0.8
4	..	..	0.3	0.5	2.1	0.7	45.6	4.8	2.3	9.5	5.3	17.3	1.2	1.1
5	..	..	2.1	0.7	4.1	4.8	9.7	4.2	4.3	2.8	4.0	6.5	0.7	7.4
6	..	..	0.6	1.3	1.3	7.1	2.1	8.5	2.3	4.5	3.8	3.8	1.7	13.9
7	..	..	1.2	2.0	0.9	5.3	2.9	2.4	1.7	15.6	13.9	—	1.6	7.2
8	..	..	0.4	4.4	0.3	3.4	3.8	—	1.9	25.2	1.4	17.7	8.5	2.1
9	..	..	0.4	14.2	9.9	8.2	6.0	2.1	6.4	8.2	4.2	65.8	59.2	2.5
10	..	..	0.3	1.8	6.2	17.0	1.4	3.1	7.6	4.7	1.5	15.8	25.4	5.2
11	..	..	0.1	1.1	1.8	5.5	0.9	3.1	3.1	1.4	1.2	23.8	13.6	—
12	..	..	0.3	2.5	1.5	6.9	0.7	1.8	—	1.1	1.1	39.5	3.4	—
13	..	..	1.8	3.2	1.0	1.6	1.1	31.8	—	1.3	1.3	8.8	9.3	2.9
14	..	..	—	1.9	0.9	1.3	0.8	4.1	5.6	2.4	62.2	7.5	27.4	1.3
15	..	..	—	0.8	10.5	10.5	0.8	3.3	17.5	1.5	48.3	10.7	7.7	4.2
16	..	..	8.9	2.8	1.0	3.3	0.5	5.8	1.5	2.2	11.2	7.8	1.4	3.5
17	..	..	10.9	3.6	1.7	—	0.7	7.6	0.6	9.7	11.1	2.4	1.4	0.5
18	..	..	8.0	1.1	0.6	—	5.2	4.6	1.5	19.4	3.9	0.8	1.5	8.5
19	..	..	23.1	3.5	1.7	0.9	5.3	2.2	2.9	6.1	1.6	2.0	1.2	2.3
20	..	..	11.3	3.2	3.1	7.9	1.0	1.2	1.3	3.1	2.1	6.1	1.9	3.4
21	..	..	3.9	0.3	0.8	2.7	1.4	0.8	12.5	2.8	68.0	62.5	0.5	0.5
22	..	..	0.4	—	1.6	1.7	2.1	2.5	9.0	23.4	15.4	28.0	0.7	0.7
23	..	..	5.6	—	2.0	1.4	2.2	12.6	5.2	40.1	6.1	85.1	1.6	2.8
24	..	..	3.8	4.6	2.8	1.2	2.5	98.7	3.3	4.4	76.1	95.7	4.0	3.9
25	..	..	0.3	2.0	1.1	1.0	2.4	39.2	7.0	7.5	4.1	6.4	2.4	1.1
26	..	..	0.5	0.3	2.0	2.7	3.1	3.9	23.1	5.2	3.1	3.6	1.3	0.3
27	..	..	0.4	0.3	4.4	4.3	5.5	18.0	19.3	1.9	1.8	6.8	0.5	43.4
28	..	..	0.5	3.6	0.6	1.8	15.0	22.4	12.4	1.4	1.5	—	0.6	24.0
29	..	..	0.7	—	1.8	3.9	2.9	8.9	3.4	3.1	0.8	—	0.5	2.3
30	..	..	1.0	—	1.1	1.7	21.5	7.8	1.4	9.7	0.9	—	0.4	2.8
31	..	..	0.6	—	0.6	—	14.9	—	1.9	5.4	—	—	—	—
Mean	..	..	3.1	2.5	2.3	4.4	5.3	11.8	6.2	7.9	15.5	20.5	7.4	5.4

figure, the value of  $\Sigma R^2$ , and the value of  $\rho^*$  (the "characteristic ratio") for each day appear in the fourth table under each month in this volume. The daily means of  $\Sigma r^2$  are given in Table III above.

\* See p. 107.

†  $r_N, r_W, r_V$ , denoting ranges, for the 60-minutes period centered at the exact hour G.M.T., of N, W, and V,  $\Sigma r^2$  stands for  $r_N^2 + r_W^2 + r_V^2$ . Table III. contains the value of  $\frac{1}{24} \Sigma (\Sigma r^2)$ , where—  

$$\Sigma (\Sigma r^2) = \frac{1}{2} \{ (\Sigma r^2)_0 + (\Sigma r^2)_{24} \} + (\Sigma r^2)_1 + \dots + (\Sigma r^2)_{23}$$

The monthly distribution and the mean values of the magnetic character figures, together with the mean values of  $\Sigma R^2$  and of  $\Sigma r^2$ , are shown in Table IV.

TABLE IV.

Month.	Magnetic Character Figures.			Mean Character Figure.	Mean value of $\Sigma R^2/100.$	Mean value of $\Sigma r^2/100.$
	No. of "0" days.	No. of "1" days.	No. of "2" days.			
1925.					$\gamma^2$	$\gamma^2$
January .. ..	20	7	4	0.48	\$68	3.1†
February ... ..	12	15	1	0.61	*71	2.5*
March .. ..	16	15	0	0.48	§74	2.3§
April .. ..	12	18	0	0.60	‡119	4.4†
May .. ..	15	13	3	0.61	132	5.3
June .. ..	7	18	5	0.93	309	11.8†
July .. ..	13	16	2	0.65	‡157	6.2*
August .. ..	9	20	2	0.77	192	7.9
September ... ..	11	13	6	0.83	308	15.5
October .. ..	8	19	4	0.87	§366	20.5*
November .. ..	13	16	1	0.60	160	7.4
December .. ..	9	21	1	0.74	113	5.4†
Year, 1925 ... ..	145	191	29	0.68	172	7.7
Year, 1924 .. ..	191	153	22	0.54	121	5.4
Year, 1923 .. ..	235	111	19	0.41	115	5.5
Year, 1922 ... ..	174	145	46	0.65	205	11.3

\* Mean for 26 days. † Mean for 28 days. ‡ Mean for 29 days. § Mean for 30 days.

In nine months the number of days to which the character figure "0" was assigned is less in 1925 than in 1924. For the year the mean character figure and the mean value of  $\Sigma R^2$  and of  $\Sigma r^2$  exceed the corresponding values for 1924 and 1923. In April, June, and from August to December the 1925 value of each of these three quantities exceeds the 1924 value.

Table V contains the monthly and annual mean values of  $\Sigma R^2$  and of  $\Sigma r^2$  for "0," "1," and "2" days, and also for the international quiet, Q, and disturbed, D, days. The annual means given in this table are the means of the monthly mean values shown; and therefore in the case of "2" days the annual means are the means of ten monthly means. With the exception of the mean value of  $\Sigma r^2$  for "2" days, the annual means of  $\Sigma R^2$  and of  $\Sigma r^2$  for all classes of day exceed those for 1924, the excess of the 1925 means being relatively greatest for "1" days; and for Q, "1," and D days the mean values of these quantities are greater than those for 1923. It is in the months from June to December that the excess of the 1925 values of  $\Sigma R^2$  and of  $\Sigma r^2$  over those for 1924 is most prominent. Regarding, for a given class of day, the excess of the mean value of  $\Sigma R^2$ , or of  $\Sigma r^2$ , over the Q day value as a measure of the degree of disturbance, it is seen that on the average the "1" and D days, and less definitely the "0" and "2" days, were more disturbed in 1925 than in 1924. For the "1" and D days, the degree of disturbance, thus estimated, was greater in 1925 than in 1924 in April and in each of the months from July to December. Examining, for each month of 1925, the excess of the mean value of  $\Sigma R^2$ , or of  $\Sigma r^2$ , for all days over the mean for Q days, October appears to be the most disturbed month, with September, June, November and August following in the order given. The excess is least in March. Although the mean value of  $\Sigma R^2$  and of  $\Sigma r^2$  for D days exceed the

corresponding values for 1924, the largest daily value of each of these quantities was smaller in 1925 than in 1924. If equal weight be given to individual "2" days the means of  $\Sigma R^2/100$  are 834, 855, 914, 704, 1327, 1683, and of  $\Sigma r^2/100$  are 42.5, 46.3, 53.4, 41.7, 97.3, 92.5 for 1925, 1924, 1923, 1922, 1921, 1920, respectively.

It may be concluded that relatively to 1923 and 1924 the year 1925, and especially the second half thereof, was characterised by increased average magnetic disturbance. The annual means of the observed sunspot relative numbers, as given by Wolfer, for 1923, 1924, 1925, are 5.8, 16.7, 44.3, respectively.

TABLE V.

Month.	Q days.		"0" days.		"1" days.		"2" days.		D days		
	$\Sigma R^2$	$\Sigma r^2$	$\Sigma R^2$	$\Sigma r^2$	$\Sigma R^2$	$\Sigma r^2$	$\Sigma R^2$	$\Sigma r^2$	$\Sigma R^2$	$\Sigma r^2$	
	100	100	100	100	100	100	100	100	100	100	
1925.	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$	$\gamma^2$
January .. ..	11	0.3	14	0.5	72	3.7	313	13.5	276	12.0	
February .. ..	*16	*0.4	21	0.6	84	2.9	381	14.2	167	5.8	
March .. ..	34	0.6	46	1.1	105	3.0	—	—	166	7.0	
April .. ..	†64	†1.0	74	1.3	146	6.1	—	—	233	10.1	
May .. ..	50	0.7	65	1.1	138	5.1	435	27.3	373	21.3	
June .. ..	106	††1.6	105	1.8	175	6.7	1076	42.0	1073	40.9	
July .. ..	74	‡1.3	90	1.9	186	7.2	292	21.2	294	16.3	
August .. ..	69	1.3	80	1.8	200	8.3	620	31.7	502	24.7	
September .. ..	60	1.1	58	1.4	170	7.4	1063	59.1	1139	64.9	
October .. ..	52	§1.3	64	1.9	261	12.0	1388	77.3	1276	69.7	
November .. ..	21	0.6	32	1.0	202	9.4	1150	59.2	613	30.4	
December.. ..	21	0.7	26	0.9	110	5.4	955	43.4	382	19.4	
Year, 1925 .. ..	48	0.9	56	1.3	154	6.4	767	38.9	541	26.9	
Year, 1924 .. ..	39	0.7	43	1.1	113	4.7	715	40.3	424	22.2	
Year, 1923 .. ..	32	0.8	42	1.4	129	6.1	776	44.1	408	22.3	
Year, 1922 .. ..	47	1.5	64	2.5	221	12.5	720	43.2	601	36.1	

\* 26th, 27th substituted for 22nd, 23rd. † 14th substituted for 17th. †† 8th omitted.

‡ 30th substituted for 13th. § 29th, 30th omitted. || 27th substituted for 1st.

*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 262–279, and the corresponding inequality ranges in Table 280. The inequalities of N, W, and V for international quiet and disturbed days are shown graphically in Plates I and II, the representation in the latter plate being in the form of vector diagrams.



**DIURNAL VARIATION IN THE COMPONENTS OF MAGNETIC FORCE ON  
QUIET AND DISTURBED DAYS. ESKDALEMUIR 1925.**

**THE YEAR & THE SEASONS.**

**QUIET DAYS**, dotted lines .....

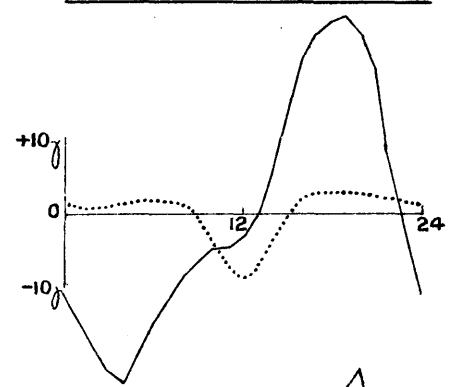
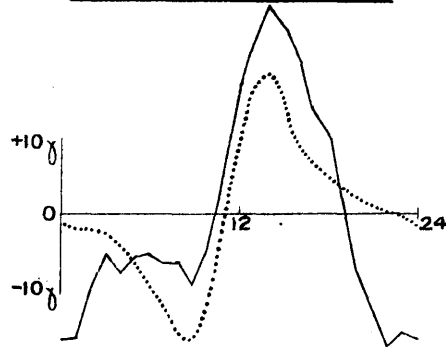
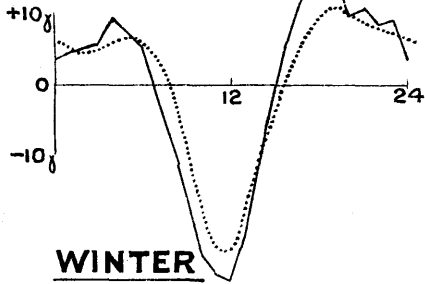
**DISTURBED DAYS**, continuous lines. \_\_\_\_\_

**North Component**

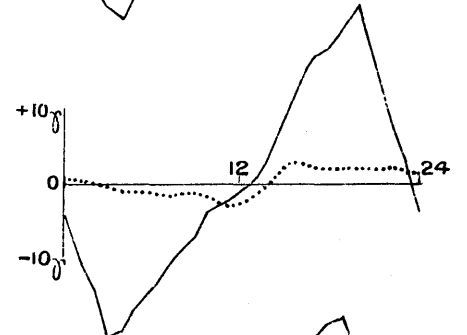
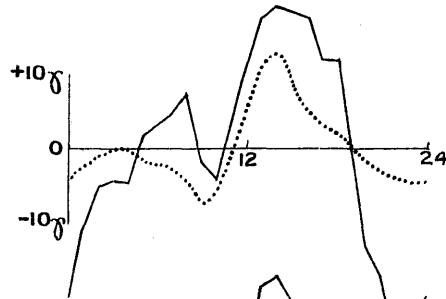
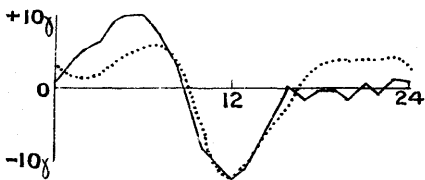
**West Component**

**Vertical Component**

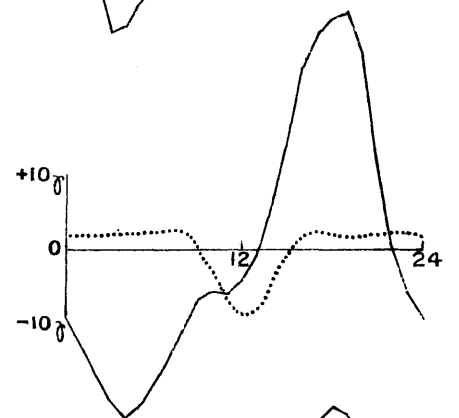
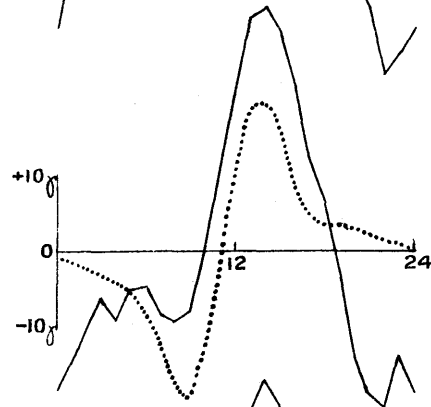
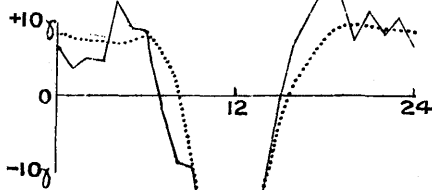
**THE YEAR**



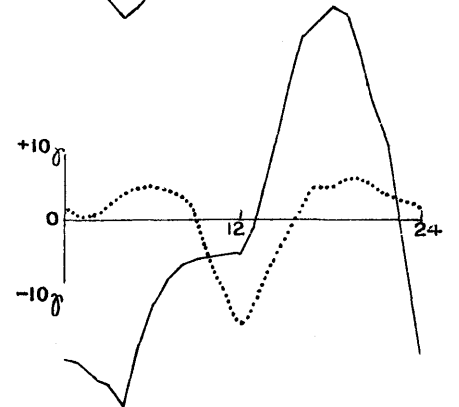
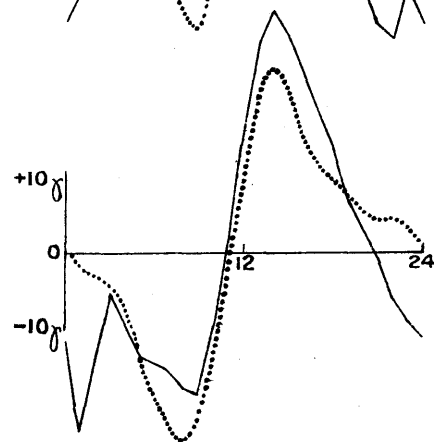
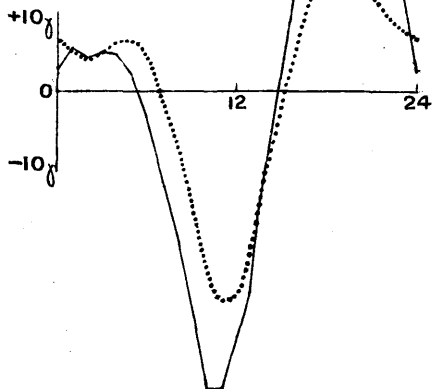
**WINTER**



**EQUINOX**



**SUMMER**



**SCALES: FORCE 1mm. = 1γ; Time 2mm. = 1hr.**





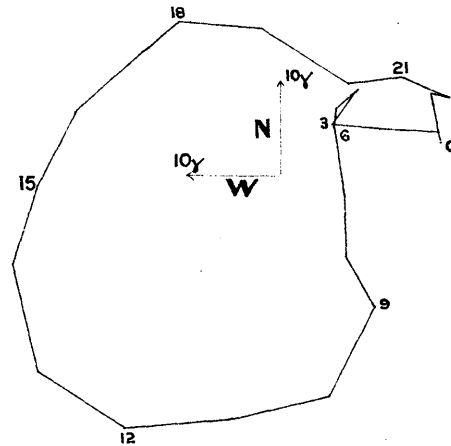
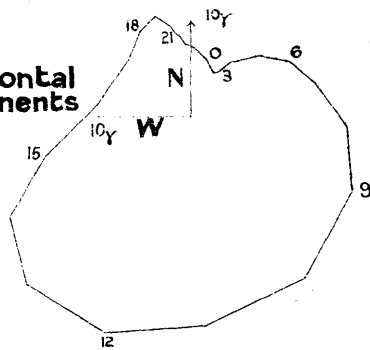
# VECTOR DIAGRAMS ILLUSTRATING DIURNAL VARIATION in MAGNETIC FORCE on QUIET DAYS and DISTURBED DAYS.

ESKDALEMUIR 1925.

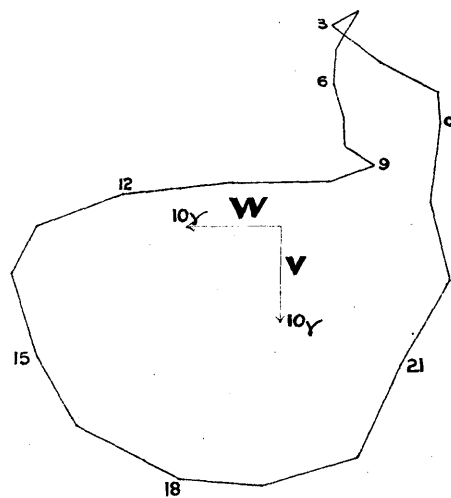
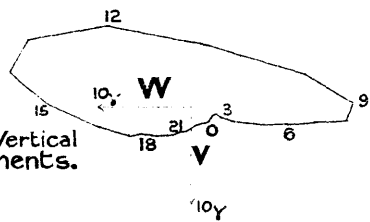
Quiet Days.

Disturbed Days.

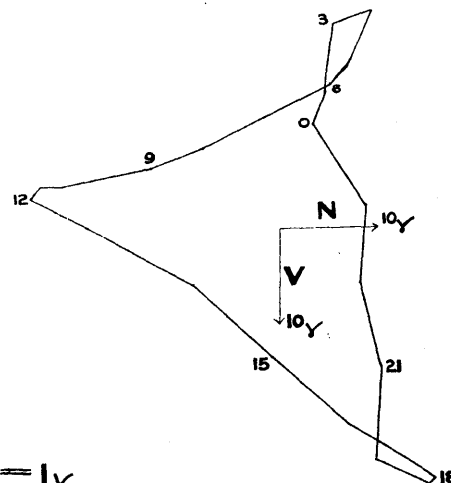
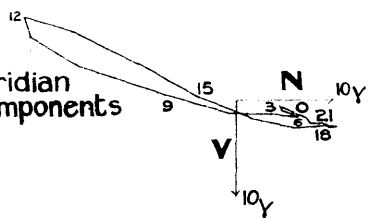
Horizontal  
Components



Prime Vertical  
Components.



Meridian  
Components



SCALE: 0.05 in = 1γ

(1) *Ranges.*

(a) All Days.—With the exception of the range of the mean diurnal inequality in V in June, in every month the range of the N, W, and V inequality is greater than the value for 1924. The general tendency is for the range of the mean inequalities for the seasons to be intermediate between the values for 1920 and 1921. For N and W the increase in range from the 1924 value is relatively greatest in winter.

(b) Quiet Days.—In eight and nine months for N and W, respectively, and in six months for V, the range exceeds the 1924 value. The ranges for the seasons and the year are intermediate in value between those for 1920 and 1921. As in the case of all days the increase in the range, for N and W, from the 1924 value is relatively greatest in winter.

(c) Disturbed Days.—In more than half the months the range shows an increase as compared with the corresponding value for 1924. The range of the mean inequality in V for summer is less than in 1924, but apart from this the ranges for seasons and year are greater than in the previous year. In February and in March the V range is the smallest during the period 1915–25.

(2) *Harmonic Coefficients.*

(a) All Days.—For all three components the value of the amplitude of the 24- and of the 12-hour term, in nearly all months, shows an increase from 1924. As has been noted for the values of the range, the seasonal values of  $c_1$  and  $c_2$  for N and W tend to approximate to the 1920 and 1921 values.  $c_1$  for W in January is, with the 1914 value, the lowest during the period 1911–25. For N the values of  $\alpha_1$  and  $\alpha_2$  tend to be greater, while for W they tend to be less, than in 1924. For V the tendency is for  $\alpha_1$  to be greater and for  $\alpha_2$  to be less than in 1924.

(b) Quiet Days.—For the seasons and year the values of  $c_1$  are greater than in 1924, with the exception of the value for V in summer. The value of  $c_2$  exceeds the 1924 value in all seasons for N, in winter and for the year for W, and in summer for V. Apart from the values for V in winter and for N in summer the values of  $\alpha_1$  and  $\alpha_2$  are less than in the preceding year.

(c) Disturbed Days.—The amplitudes of the two principal terms are less than the corresponding 1924 values only in the cases of  $c_1$  and  $c_2$  for W and V in summer and  $c_2$  for N in winter. Excepting for N in winter and summer the phase of the 24-hour term is accelerated relatively to 1924, but the values of  $\alpha_2$  show a tendency to be less than in 1924.

*Daily Range.*—The values of mean absolute daily range for the months and seasons of the year, together with the corresponding means for 1914–24 are given in Table VI; the ranges are also expressed as percentages of the mean absolute daily range for the year

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

Month.	Mean Absolute Daily Range.						Mean Daily Range expressed as Percentage of Yearly Mean.					
	1925.			Mean 1914-24.			1925.			Mean 1914-24.		
	N.	W.	V.	N.	W.	V.	N.	W.	V.	N.	W.	V.
January ..	7	7	7	7	7	7	%	%	%	%	%	%
February ..	39	46	21	60	65	33	53	64	55	73	81	73
March ..	42	57	20	64	70	34	58	79	53	78	87	76
April ..	55	57	21	90	90	53	75	79	55	110	113	118
May ..	73	67	33	93	85	52	100	93	87	113	106	116
June ..	70	65	43	98	86	56	96	90	113	120	107	124
July ..	103	90	59	89	84	42	141	125	155	109	105	93
August ..	85	76	36	86	82	42	116	106	95	105	103	93
September ..	88	83	43	98	88	54	121	115	113	120	110	120
October ..	98	88	59	94	89	56	134	122	155	115	111	124
November ..	104	103	60	90	88	54	142	143	158	110	110	120
December ..	62	69	36	66	68	36	85	96	95	80	85	80
Winter ..	58	61	27	59	63	31	79	85	71	72	79	69
Equinox ..	50	58	26	62	67	33	68	81	68	76	84	73
Summer ..	83	79	43	92	88	54	114	110	113	112	110	120
Year ..	87	79	45	93	85	49	119	110	118	113	106	109
Year ..	73	72	38	82	80	45	—	—	—	—	—	—

In April and in every month from June to December the mean absolute daily range in N, W, and V, exceeds the 1924 value. The mean values of the range in N and in V in June, September and October, and of the range in W in June, October and November, exceeds the corresponding mean values for the eleven years 1914-24. For each of the three components the annual and seasonal means are definitely in excess of the values for 1924 and 1923, but are less than the 1922 values. In each season the percentage increase of the 1925 value from the mean of the values for 1923 and 1924 is greater for V than for N and W.

The frequency distribution of absolute daily ranges recorded in 1925 is shown in Table VII, which also contains the percentage distribution for the period 1914-1924.

TABLE VII.—FREQUENCY DISTRIBUTION OF ABSOLUTE DAILY RANGE.

Range.	Number of Cases 1925.			Percentage Distribution.					
				N.		W.		V.	
	$\gamma$	N.	W.	V.	1925.	1914-24.	1925.	1914-24.	1925.
0-9	0	0	38	0.0	0.0	0.0	0.1	10.5	6.1
10-19	5	2	80	1.4	2.3	0.6	1.4	22.1	21.5
20-29	25	26	95	6.9	5.6	7.2	5.0	26.2	25.5
30-39	31	27	55	8.5	7.3	7.5	7.3	15.2	13.4
40-49	44	52	29	12.1	10.2	14.4	11.2	8.0	8.1
50-59	55	49	14	15.1	12.9	13.6	12.9	3.9	4.8
60-69	55	57	10	15.1	13.4	15.8	13.1	2.8	4.2
70-79	41	44	7	11.3	9.6	12.2	12.3	1.9	3.1
80-89	24	35	5	6.6	8.3	9.7	8.1	1.4	2.2
90-99	14	13	3	3.9	6.2	3.6	7.1	0.8	2.0
100-109	16	12	4	4.4	5.3	3.3	4.6	1.1	1.0
110-119	11	9	2	3.0	3.7	2.5	3.2	0.6	1.3
120-129	10	1	2	2.8	3.1	0.3	2.7	0.6	0.8
130-139	9	5	3	2.5	2.4	1.4	2.0	0.8	0.7
140-149	5	6	1	1.4	1.6	1.7	2.3	0.3	0.5
150-159	5	3	2	1.4	1.3	0.8	1.1	0.6	0.6
160-169	2	5	1	0.6	1.1	1.4	0.8	0.3	0.5
170-179	0	3	1	0.0	0.9	0.8	1.0	0.3	0.4
180-189	2	1	3	0.6	0.7	0.3	0.7	0.8	0.4
190-199	2	3	1	0.6	0.4	0.8	0.6	0.3	0.2
200+	7	7	6	1.9	3.7	1.9	2.6	1.7	2.6
Days omitted	2	5	3	—	—	—	—	—	—

TABLE VIII.—PRINCIPAL MAGNETIC DISTURBANCES RECORDED AT ESKDALEMUIR, 1925.

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, 15000  $\gamma$ ; W, 4000  $\gamma$ ; V, 44000  $\gamma$ .

No.	From	To.	North Component.					West Component.					Vertical Component.				
			Max.	Time.	Min.	Time.	Range	Max.	Time.	Min.	Time.	Range	Max.	Time.	Min.	Time.	Range.
			$\gamma$	d h m	$\gamma$	d h m	$\gamma$	d h m	$\gamma$	d h m	$\gamma$	d h m	$\gamma$	d h m	$\gamma$	d h m	$\gamma$
1	Jan. 16 16	Jan. 17 9	1067	17 5 35	993	16 21 46	74	616	17 2 18	483	16 20 8	133	972	16 20 39	880	17 5 39	92
2*	Jan. 18 19 43	Jan. 20 10	1061	18 20 50	952	19 19 7	109	596	20 8 4	429	19 22 2	167	1014	19 19 9	848	20 1 32	166
3	Feb. 8 14	Feb. 10 2	1071	8 23 49	982	9 0 55	89	612	9 6 37	443	8 23 40	169	958	9 20 8	879	9 3 23	79
4	Mar. 15 6	Mar. 15 24	1092	15 21 5	952	15 11 50	140	615	15 14 0	517	15 21 30	98	959	15 14 45	925	15 10 55	34
5	Apr. 9 17	Apr. 10 9	1111	9 21 2	968	10 2 53	143	581	10 1 16	511	10 1 55	70	946	9 18 36	867	10 2 53	79
6	Apr. 19 22	Apr. 21 6	1074	20 20 58	952	20 12 15	122	609	20 12 46	491	20 20 45	118	972	20 17 30	929	20 12 48	43
7*	May 3 22 24	May 5 9	1088	4 0 46	949	4 10 45	139	610	4 14 4	505	4 1 23	105	1038	4 15 57	899	5 2 0	139
8	May 27 11	May 28 8	1082	27 14 35	1016	28 3 3	66	603	27 16 58	451	28 0 45	152	989	27 18 30	849	28 3 38	140
9	May 30 10	June 1 6	1161	30 18 17	981	31 6 43	180	605	30 14 10	501	31 1 27	104	1000	30 18 9	891	31 0 1	109
10	June 1 11	June 4 8	1121	3 18 51	971	3 10 9	150	603	1 14 5	505	3 8 17	98	990	1 17 59	902	3 1 18	88
1	June 13 4	June 14 8	1092	13 and 22 31	936	13 7 56	156	607	13 8 12	473	13 7 3	134	993	13 16 35	914	13 23 32	79
2	June 24 12	June 25 8	1190	24 18 56	812	24 23 51	378	644	24 20 43	416	24 22 52	228	1003	24 19 18	723	24 23 52	280
3	July 27 9	June 29 6	1113	28 17 45	976	28 12 48	137	598	28 16 31	483	27 22 21	115	983	28 17 19	843	28 1 59	140
4	July 14 18	July 15 22	1099	14 20 40	961	15 11 41	138	584	15 13 46	452	15 1 0	132	951	15 18 0	875	15 0 40	76
5	July 21 11	July 22 22	1108	21 17 11	971	22 9 47	137	617	21 16 5	497	22 7 40	120	982	21 18 3	924	22 4 30	58
6	July 25 14	July 28 24	1117	27 19 18	976	27 12 19	141	590	27 15 15	483	27 21 48	107	957	27 17 42	879	28 3 12	78
7	Aug. 7 6	Aug. 9 8	1105	8 21 58	965	7 9 43	140	623	7 13 49	458	8 1 1	165	986	7 16 15	868	8 4 10	118
8*	Aug. 22 14 47	Aug. 23 24	1114	22 14 52	945	23 6 4	169	614	23 4 22	458	23 1 53	156	969	22 19 3	764	23 3 18	205
9*	Aug. 31 16 15	Sept. 1 6	1101	31 16 20	1031	31 16 17	70	559	31 16 20	510	1 0 49	49	944	31 20 50	924	1 0 19	20
10*	Sept. 1 17 46	Sept. 2 18	1184	1 20 42	922	2 11 40	262	584	1 19 40	354	1 20 25	230	1076	1 20 20	829	2 4 44	247
1	Sept. 13 20	Sept. 16 8	1102	15 17 30	932	14 22 59	170	577	14 15 51	378	15 1 19	199	1036	14 19 22	764	15 1 16	272
2*	Sept. 21 2 17	Sept. 21 24	1121	21 2 20	833	21 7 16	288	605	21 2 20	432	21 6 52	173	963	21 20 30	862	21 7 30	101
3	Sept. 22 6	Sept. 23 8	1097	22 21 2	961	22 10 38	136	578	22 13 10	472	22 21 41	106	971	22 15 45	913	22 22 20	58
4	Sept. 23 20	Sept. 25 2	1136	24 16 32	925	24 8 8	211	573	24 13 7	427	24 22 2	146	1027	24 16 49	841	24 3 30	186
5	Oct. 8 18	Oct. 10 8	1157	9 18 50	944	10 0 38	213	584	9 15 6	406	8 22 54	178	991	9 18 26	848	10 0 39	143
6	Oct. 11 1	Oct. 12 22	1142	12 17 59	955	12 12 16	187	572	11 13 46	356	12 17 42	216	983	11 16 52	898	12 2 51	85
7	Oct. 21 8	Oct. 22 9	1123	21 19 9	931	21 19 38	192	606	21 19 1	398	21 23 59	208	1116	21 19 12	829	22 1 11	287
8	Oct. 23 10	Oct. 24 24	1119	23 15 44	855	24 7 41	264	658	23 15 50	353	23 22 50	305	1110	23 15 53	784	24 4 56	326
9	Oct. 31 12	Nov. 1 24	1107	1 20 33	979	1 10 52	128	572	31 12 51	418	1 3 49	154	986	31 18 22	869	1 3 5	117
10	Nov. 8 17	Nov. 9 9	1061	8 17 58	927	9 2 50	134	560	9 7 0	373	9 1 6	187	981	8 22 18	795	9 3 20	186
1	Nov. 9 14	Nov. 10 10	1072	9 22 40	934	9 22 3	138	561	10 4 48	354	9 22 23	207	1022	9 18 52	862	10 1 15	160
2	Nov. 10 13	Nov. 11 18	1050	11 1 50	953	11 10 30	97	554	11 13 28	387	10 18 42	167	1026	10 18 40	897	11 0 46	129
3	Nov. 14 1	Nov. 14 24	1081	14 16 25	946	14 20 51	135	599	14 16 30	439	14 20 24	160	1067	14 16 58	948	14 6 40	119
4	Dec. 5 18	Dec. 7 24	1105	5 21 50	961	6 13 45	144	548	6 13 34	414	5 21 45	134	1005	6 16 0	925	6 1 56	80
5	Dec. 27 14	Dec. 29 2	1118	27 21 9	901	28 9 7	217	607	28 7 50	421	27 21 25	186	1101	27 20 7	905	28 8 42	196

The intervals of maximum frequency are 50–59 $\gamma$  and 60–69 $\gamma$  for N, 60–69 $\gamma$  for W, and 20–29 $\gamma$  for V. Thus, relatively to 1924, the mode for each component falls in the next higher interval. The degree of concentration in the mode interval is less than in either 1923 or 1924.

There were 24 days, 13 of which were in September and October, on which the range in either N or W was 160 $\gamma$  or more; the numbers of such days in the years 1919–24 being 55, 36, 27, 32, 11, 10, respectively.

On the days January 2, 4, 8, 9, 10, 11, 22, 31, and December 26, the daily range in either N or W did not exceed 25 $\gamma$ , and on only one of these days did the range in V exceed 10 $\gamma$ .

*Principal Magnetic Storms during 1925.*—Particulars of the principal magnetic storms recorded during the year are given in Table VIII. 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 the Autographic records for Terrestrial Magnetism, 1925.

*January.*—Except for very moderate disturbance on the 5th and 13th conditions were quiet during the first half of the month. The curves for the 11th are very smooth. From the 16th to the 24th, excepting the 22nd, the curves show almost continuous disturbance. Although slight irregularities are apparent during some hours previously, the main part of the disturbance on the 16th began between 19h and 20h with a somewhat sharp decrease in W and a more gradual increase in V. The main disturbance ceased at about 9h on the 17th. There were no very rapid changes. A not very typical "sudden commencement" occurred at 18d 19h 43m. The ensuing disturbance was of a very moderate character for some hours but assumed greater magnitude between 19d 14h and 20d 6h. During the latter interval both N and W were below the respective undisturbed values for several hours. V reached a maximum at 19d 19h 9m and then fell to a minimum at 20d 1h 22m.

*February.*—A very moderate disturbance on the 1st was the only substantial interruption of the comparatively quiet interval extending from January 25 to February 6. The largest disturbance of the month occurred during the night hours of the 8th–9th. There were no particularly noteworthy features. Moderate disturbance was fairly general throughout the period 10th to 20th. There is a certain amount of similarity in the rather small wave-like changes between 20h and 22h on the 14th and 15th. The curves were smoothest on the 4th, 21st, 22nd, 23rd, 26th and 27th.

*March.*—In regard to the season this was a very quiet month. The quietest days were the 8th, 18th, 28th and 31st. The largest disturbances, and they were of a moderate character, occurred on the 9th, 10th and 15th. Fairly prominent peaks are seen in the N curve near 19h and 22h on the 9th and near 22h on the 10th. The main part of the disturbance of the 15th terminated with wave-like movements in N and W between 20h and 22h, during which N reached the maximum and W the minimum value for the day. A comparatively slight disturbance on the 19th and 20th began a few minutes after 18d 12h with a rather abrupt movement which has some resemblance to a "sudden commencement."

*April.*—The first three days were characterised by moderate disturbance which attained its greatest magnitude in the latter part of the 3rd. The 4th was probably the quietest day of the month. There was fairly general disturbance of a moderate character throughout the period 5th to 12th, the chief intervals of unrest being between



6d 17h and 7d 9h, 9d 18h and 10d 6h, 10d 19h and 11d 6h. A further moderate disturbance occurred in the latter part of the 15th. Somewhat prominent small-period oscillations are seen in N and W between 19h and 20h on the 15th; in W the amplitude of the oscillations varies from 5 to 10 $\gamma$  and the period from 2 to 3 minutes. A "sudden commencement," consisting in N and W of a small preliminary decrease followed by a larger increase, occurred at 27d 14h 57m and was followed during the ensuing five hours by comparatively slight disturbance. After several hours of quiet conditions moderate disturbance developed on the 28th and continued until the 29th.

*May.*—The first of the larger disturbances of the month began with a "sudden commencement" at 3d 22h 24m. A smaller movement of this type occurred at 3d 15h 23m. After the abrupt beginning at 22h 24m N remained above the undisturbed value for nearly three hours, W for rather more than one hour, while V continued to decrease for about nine hours and did not again exceed the undisturbed value until after 4d 12h. The major changes in this disturbance occurred between 4d 6h and 5d 4h, but minor disturbance continued throughout the 5th and 6th. There were no large, rapid, oscillatory fluctuations. Maxima in V occurred within a very few minutes of 4d 16h and 18h, and minima near 4d 22h 30m and 5d 2h.

Quiet conditions prevailed from the 11th to the 17th. The curves for the 11th and 12th are especially smooth and show during the day hours greater development of the regular diurnal changes than is apparent on most of the other quiet days in the month.

A fairly large disturbance occurred between 27d 11h and 28d 8h; the range in N, 66 $\gamma$ , being somewhat small relatively to the ranges in W and V, 152 $\gamma$  and 140 $\gamma$ , respectively. A rather disturbed period of several days duration began on the 30th, *i.e.*, 26-27 days after the disturbance which commenced towards the end of May 3. On the 30th and 31st the irregularities in N were more prominent than those in W. Conspicuous undulatory movements in N occurred between 30d 17h and 20h, and between 30d 23h and 31d 2h, the range in the former interval being 94 $\gamma$ .

*June.*—This was one of the most highly disturbed periods of the year. The character figure 0 was assigned to only seven days and of these only the 19th, 20th, 21st approximate to the ideally quiet day. The disturbance which began on May 30 continued until June 4, but conditions remained slightly disturbed until about 5d 15h. Further moderate disturbance occurred on the 6th and 7th. One of the larger disturbances of the month began between 4h and 5h on the 13th, a prominent feature being a large decrease in N, which set in soon after 5h, and was accompanied by short-period oscillations. This disturbance had subsided by about 14d 8h. After 22d 16h disturbance continued, but with some intermission on the 26th, until the end of the month. The most highly disturbed intervals were from 24d 12h to 25d 8h, and from 27d 9h to 29d 6h. In the former interval the largest changes took place between 24d 20h and 25d 2h. Between 24d 20h 40m and 21h 10m there occurred in N a rapid decrease of 239 $\gamma$  which was followed immediately by an increase of 224 $\gamma$ . Whilst these rapid changes in N were in progress there was a partially complete oscillation, of range 186 $\gamma$ , in W, and a sharp decrease of about 65 $\gamma$  and partial recovery in V. In this disturbance the minimum in V, which occurred shortly before 24h, was much more prominent than the maximum. The minimum in N occurred within a minute or two of that in V and was followed in the ensuing sixteen minutes by an increase of about 210 $\gamma$ .

*July.*—In the early days of the month there was, on the whole, a return to much quieter conditions than prevailed in the latter part of June.

A flat plateau or crest in the N curve between 0h 20m and 5h 40m on the 5th is apparently repeated between approximately the same times on the 6th.

A well defined "sudden commencement" occurred at 9d 4h 9m, and consisted of a sharp increase of about 20 $\gamma$  in N and in W, and a decrease of about 2 $\gamma$  in V.

N remained  $15\gamma$  to  $20\gamma$  above the value at 4h 9m for nearly two hours, but W decreased after the initial rise and fell below the original value within half an hour. The disturbance on the 9th was comparatively small, but was greater on the 10th and 11th.

A fairly large disturbance began somewhat abruptly between 18h and 19h on the 14th and continued for about twenty-nine hours. The ranges during the interval of greatest disturbance, 14d 22h to 15d 6h, were N,  $90\gamma$ ; W,  $103\gamma$ ; V,  $61\gamma$ .

An interesting feature of the moderate disturbance of the 21st-22nd is a group of five waves between 13h and 18h on the 21st. The amplitude of the waves is much greater in N than in W, but there is approximate agreement in phase in these two components. The interval between successive maxima in N ranges from about 55 to 66 minutes.

From 25d 14h to 28d 24h there was continuous moderately large disturbance, activity being greatest on the 26th and 27th.

*August.*—There was moderately large disturbance on the 3rd-4th, perhaps the most conspicuous feature being an irregular oscillation in N between 21h 30m and 23h on the 3rd. N increased by about  $100\gamma$  between 3d 21h 50m and 22h 3m.

Further disturbance began at about 7d 6h with a rather pronounced decrease in N, continued throughout the 8th but decreased in intensity on the 9th.

Very slightly disturbed conditions followed a small "sudden commencement" which occurred at 14d 3h 52m. This was the chief interruption in an otherwise comparatively calm interval extending from the 11th to the 16th.

Another period of disturbance extended from about 17d 11h to 19d 6h, the degree of unrest being greater on the 18th than on the 17th.

The largest disturbance since that of June 24-25 began at 22d 14h 47m with a very well developed "sudden commencement." The latter consisted, in N and W, of a sharp preliminary decrease, followed immediately by a much larger increase, the magnitudes of the changes being, N,  $-11\gamma$ ,  $+70\gamma$ ; W,  $-13\gamma$ ,  $+46\gamma$ . In V a barely measurable preliminary increase was followed by a decrease of  $4\gamma$ . The larger changes during this disturbance ceased somewhat suddenly shortly before 12h on the 23rd, but smaller irregularities in the curves are noticed throughout the remainder of that day. N reached its maximum value in the culmination of the "sudden commencement." The maximum in V at 22d 19h 3m is not nearly so prominent a feature as the minimum at 23d 3h 18m. The absolute ranges during this rather moderate storm were N,  $169\gamma$ ; W,  $156\gamma$ ; V,  $205\gamma$ .

Quiet conditions prevailed on the 27th and 28th. A large "sudden commencement" occurred at 31d 16h 15m but the ensuing disturbance was of comparatively small magnitude. In V the "sudden commencement" consisted of an almost imperceptible increase followed by a decrease of about  $3\gamma$ . The changes in the horizontal components were, N,  $-14\gamma$ ,  $+69\gamma$ ; W,  $-7\gamma$ ,  $+40\gamma$ .

It may be noted that each of the two comparatively calm periods referred to above, viz., 11th to 16th, 27th and 28th, is separated by an approximately 27-day interval from a similar period in July, viz., 16th to 20th, 30th and 31st. Also, certain of the disturbances in August appear to belong to series of which the members occur at intervals of approximately 27 days. The series of disturbances which can be made out are:—(a) July 9-10, August 7-8; (b) May 28, June 24-25, July 21-22, August 17-18; (c) May 4, May 30-31, June 27-28, July 26-27, August 22-23.

*September.*—A prominent "sudden commencement" at 1d 17h 46m was followed almost immediately by considerable disturbance. Unlike the similar phenomenon on the preceding day this "sudden commencement" shows no small preliminary change of opposite sign to the principal initial sudden change in field. The magnitudes of the latter were, N,  $+65\gamma$ ; W,  $+33\gamma$ ; V,  $-4\gamma$ . N and W remained well in excess of the respective undisturbed values until about 20h. Prominent changes

took place between 20h and 22h, and in the course of a large wave-like movement N reached a maximum at 20h 42m and decreased by about  $214\gamma$  in the ensuing 26 minutes, W decreased by nearly  $200\gamma$  between 20h 0m and 20h 25m and increased by  $162\gamma$  in the following 35 minutes, and V rose rapidly to a sharp isolated maximum,  $134\gamma$  above the value at 20h 0m, at 20h 20m. After these changes N and W were mainly below the quiet day normal values for some hours. The interval from 22h to midnight was quiet, but further large disturbance occurred between 0h 30m and 7h on the 2nd. In the latter period V was below normal.

Moderate disturbance continued for some days, the degree of unrest on the 7th being somewhat greater than on the preceding two or three days. The 8th, 11th, 12th, 13th were among the quietest days of the month.

A somewhat extensive disturbance began shortly before 13d 20h and continued until the 17th. The intensity was greatest between 14d 8h and 16d 12h, and more particularly in the earlier part of this interval, *i.e.*, on the 14th and 15th. The values of the absolute ranges were, N,  $170\gamma$ ; W,  $199\gamma$ ; V,  $272\gamma$ .

After comparatively quiet conditions on the 19th and 20th there followed from the 21st to the 25th a series of pulses of disturbance separated by quiet intervals of short duration. The first disturbance began at 21d 2h 17m with an extremely sharp "sudden commencement," the magnitudes of the preliminary and principal initial changes being, N,  $-8\gamma$ ,  $+85\gamma$ ; W,  $-24\gamma$ ,  $+107\gamma$ ; V,  $+1\gamma$ ,  $-8\gamma$ . In both N and W the maximum value in this disturbance, which subsided before midnight on the 21st, was reached in the culmination of the "sudden commencement." From 6h until about 17h the value of N was considerably below normal, especially during the first few hours of this interval, when there were rapid, comparatively short-period oscillations. The minimum in all three components occurred between 6h and 8h. After the initial fall V continued to decrease somewhat irregularly until 7h 30m, the subsequent recovery being accompanied by short-period oscillations from 8h to 15h. There was no well-marked maximum in this component. The next of this series of disturbances extended from 22d 6h to 23d 8h, although it was confined mainly to the 22nd. There were moderately prominent changes between 21h and 23h on the 22nd. The last and, as regards duration, most extensive disturbance of the series developed shortly after 23d 20h and continued until the early hours of the 25th. V decreased irregularly and reached the minimum value for the disturbance at 24d 3h 30m; the maximum occurred at 24d 16h 49m and was followed by a secondary minimum at 24d 22h 18m. The range in V was considerably greater than that in the two preceding disturbances while the N and W ranges were intermediate between the ranges in the disturbances of the 21st and 22nd-23rd.

Mainly quiet conditions prevailed during the last four days of the month, especially on the 29th and 30th.

It is of interest to note that the disturbances of August 3-4 and September 1-2 are separated by about 27 days, that the disturbance of September 14-15 appears to be in continuation of the series (b) mentioned in the notes for August, and that the disturbance of September 21 may be a further member of the series (c).

*October.*—There were very few really quiet days. The following were the quietest periods of longest duration:—2d 10h to 3d 20h, 7d 16h to 8d 6h, 18d 1h to 19d 16h, 29d 1h to 29d 19h, 30d 10h to 31d 10h.

A very moderate disturbance on the 1st began at 1d 2h 28m with a "sudden commencement" in which the initial changes in N and W amounted to  $+13\gamma$  and  $+28\gamma$ , respectively.

There was practically continuous disturbance from 3d 21h to 6d 18h, the most prominent changes taking place between 4d 19h and 24h. The ranges in the latter interval were, N,  $124\gamma$ ; W,  $119\gamma$ ; V,  $56\gamma$ .

The first phase of a disturbed period of several days duration developed shortly after 8d 18h; from then until the 18th there were no quiet intervals of more than four or five hours duration. In the first disturbance the more important changes occurred between 8d 21h and 9d 6h, and between 9d 15h and 10d 3h, and during a large part of each of these intervals N and W were, in the main, in defect of the quiet day normal value for the month. V, which was below normal throughout the former interval, reached a not very prominent maximum at 9d 18h 26m, and a sharp but not particularly low minimum at 10d 0h 39m. Perhaps the most noteworthy individual feature of the disturbance is an oscillation in N which took place between 18h and 20h on the 9th. The range in N in this oscillation was  $212\gamma$ , the times of the maximum and minimum values being 18h 50m and 19h 24m, respectively. Auroral glow was observed at Eskdalemuir at about 21h on the 8th and 9th. During disturbance on the 11th and 12th there were prominent changes in N and W between 20h and 23h on the 11th (ranges: N,  $143\gamma$ ; W,  $117\gamma$ ) but the most outstanding feature, which occurred between 17h and 19h on the 12th, consisted of a sharply beginning oscillation in N, a large bay, negative, in W, and a small maximum in V. Between 17h 15m and 17h 29m N decreased by  $67\gamma$ , then increased by  $179\gamma$  to a maximum at 17h 59m, and then returned to near the undisturbed value by about 18h 30m. W decreased by  $158\gamma$  between 17h 16m and 17h 42m and then increased, reaching almost to the undisturbed value by 19h. The changes in V were much smaller; the maximum at 17h 42m was only  $19\gamma$  above the value at 17h 15m and the undisturbed value was reached again by about 18h 40m.

A disturbance of considerable activity extended from 21d 8h to 22d 9h. The most rapid large changes occurred between 19h and 20h on the 21st, in which interval N attained both the maximum and minimum values for the disturbance, W the maximum value, while V reached the absolute maximum for the year. The ranges in this interval were:—N,  $192\gamma$ ; W,  $160\gamma$ ; V,  $132\gamma$ . The oscillatory changes shortly after 19h were followed by a decrease in value of W and also of N, but to a less extent, which continued for about six hours.

One of the largest disturbances of the year developed soon after 23d 10h. There was a rather marked depression in the value of N between 11h and 13h, and from 18h until about 8h on the 24th both N and W were mainly in defect of the quiet day values for the month. V increased fairly steadily until 15h 47m, and then there was a sharp rise of about  $83\gamma$  to the maximum, at 15h 55m, which was followed in the ensuing twelve minutes by a decrease of  $55\gamma$ . Sharp peak maxima occurred in N and W at 15h 44m and 15h 50m, respectively, the corresponding ranges during the interval 15h 30m to 16h 5m being  $100\gamma$  and  $165\gamma$ . Prominent oscillatory changes in N occurred between 22h 30m and 23h 10m, the ranges, during this interval, in N, W, and V, being  $189\gamma$ ,  $139\gamma$ , and  $28\gamma$ , respectively. Between 24d 2h 40m and 3h 42m V decreased by  $112\gamma$  and reached a minimum at 4h 56m. In the interval from about 2h 30m to 7h, during which V was considerably below the quiet day value, there were rather large undulatory changes in N and W, both of the latter tending to increase. The ranges in N and W in this interval were  $203\gamma$  and  $207\gamma$ , respectively. The minimum value in N occurred, at 24d 7h 41m, in a sharp oscillation. Comparatively small fluctuations of short period in all three components continued until 24d 17h, and conditions became much quieter after midnight on the 24th.

It seems doubtful if the larger disturbances in October may be rightly regarded as members of the series the existence of which has been mentioned in the notes for August. The disturbance of October 9 appears to be too early to be a member of the (b) series, while that of October 21 is rather late to be regarded as a further member of series (c). On the other hand, the not very great disturbance of October 4 follows that of September 7 by about 27 days and is followed at about the same interval by disturbance on October 31–November 1.

*November.*—Moderately disturbed conditions which developed about noon on October 31 continued throughout November 1. V reached a maximum shortly after October 31d 18h and a minimum, at November 1d 3h 5m, in the course of a bay-shaped depression between 1h 40m and 4h. In the latter interval W rose in a small crest, decreased by  $149\gamma$  between 2h 43m and 3h 49m and then increased by  $72\gamma$  during the following 30 minutes; the range in N during this interval amounted to  $85\gamma$ .

Further moderate disturbance occurred between 2d 14h and 3d 2h, the more important changes taking place between 17h and 21h. Maxima and minima in N occurred at 18h 26m and 18h 46m, respectively, the range being  $112\gamma$ .

The 5th was one of the quietest days of the month, and conditions on the 4th were equally quiet but for a shallow bay in W and a wave in N between 4d 23h and 5d 1h.

A series of rather large disturbances occurred from the 8th to 11th, and therefore 31 days after the series commencing on October 8th. The value of N was considerably depressed from 8d 20h to 9d 7h, and that of W from 8d 20h to 9d 5h. In V there was a somewhat inconspicuous maximum soon after 8d 22h, but the minimum at 9d 3h 20m was more pronounced. After a few hours during which there were no large changes further activity developed shortly before 9d 14h. Except for occasional brief intervals N remained in defect of the quiet day value throughout the remainder of the 9th and for the first six or seven hours of the 10th, and there was considerable depression in W between 9d 18h and 10d 1h. The largest oscillatory changes in N and W took place between 9d 21h and 23h, the ranges being  $138\gamma$  and  $174\gamma$ , respectively. V reached a maximum at 9d 18h 52m and, after an irregular fall, a minimum at 10d 1h 15m, the range being  $160\gamma$ . At Eskdalemuir, auroral glow and streamers were observed at various times between 18h 30m and midnight on the 9th, the streamer phenomenon being most apparent from 21h 3m to 21h 12m, and again between 22h and 22h 30m. The sequence of events after 10d 13h was somewhat similar to that in the preceding 24 hours, except that the depression in the values of N and W was less marked. A small peak maximum in V occurred at 10d 18h 40m and a minimum at 11d 0h 46m. The absolute ranges during the third of the disturbances were less than in the first two. Quiet conditions persisted for a few hours after 11d 16h, but in the course of a general wave-form movement between 11d 22h and 12d 2h fairly prominent peaks in N and W occurred near 23h 35m. There was moderate disturbance on the 13th and 14th, the larger changes occurring between 15h and 23h on the latter day. There were prominent oscillations or waves in N and in W between 16h and 17h 30m, and between 19h 40m and 22h. The ranges were:—in the former interval, N,  $122\gamma$ ; W,  $130\gamma$ , and in the latter interval, N,  $110\gamma$ ; W,  $105\gamma$ . The maximum in each of the three components fell within the former interval, and the minimum in N and W within the latter. A secondary maximum in V occurred at 20h 30m, but there was no prominent minimum in this component.

In comparison with the earlier part of the month the latter part was mainly quiet.

*December.*—Although there were only two disturbances of any considerable magnitude there were very few really quiet days in this month.

The first disturbance of note began soon after 5d 18h, *i.e.*, 27 days after the first of the series commencing on November 8, and continued throughout the 6th and 7th. The larger changes took place within the first 24 hours of the disturbance. The maximum in N and the minimum in W occurred between 21h 30m and 22h on the 5th, in the course of semi-wave movements; the maximum in V occurred at 6d 16h. 0m.

Moderate disturbance occurred in the following intervals:—10d 14h to 11d 2h, 11d 20h to 11d 24h, 15d 14h to 16d 9h, 18d 14h to 19d 2h, 19d 20h to 20d 8h, 23d 12h to 24d 4h, 24d 12h to 24d 24h, 29d 13h to 30d 2h, 31d 12h to 31d 24h.

The disturbance of the 27th–28th consisted of two main portions separated by a quiet period lasting from 28d 0h to 28d 6h. The first phase began between 14h and 15h on the 28th. N diminished and, except in the course of some oscillations between 19h and 22h, remained below the presumed undisturbed value for several hours. W increased until shortly after 19h when a considerable decrease set in. In a sharp oscillation, between 20h 50m and 21h 30m, the ranges in N and W were  $180\gamma$  and  $156\gamma$ , respectively. After 14h V increased fairly steadily to a maximum at 20h 7m, the value then being about  $163\gamma$  in excess of that at 14h. This was followed by a more rapid decrease, the value at 22h being only about  $20\gamma$  in excess of that at 14h. During the interval from 27d 22h to 28d 6h N and W tended to increase and V to decrease. The second phase of the disturbance began at 28d 6h 40m with a marked fall in N and on this was superimposed a large wave with a crest at about 8h 25m. The minimum value in N occurred at 9h 7m and was about  $137\gamma$  below the value at 6h 40m. Recovery proceeded fairly rapidly until 12h and then more gradually. From 7h 20m, W increased by  $114\gamma$  to its maximum at 7h 50m and then decreased more slowly by about  $148\gamma$  in rather more than two hours, after which there was a gradual irregular increase. V decreased by  $42\gamma$  between 7h 35m and 8h 42m. Following the minimum at the latter time there was a fairly steady recovery, the value at 12h exceeding the minimum by about  $60\gamma$ . No further large changes occurred and disturbance subsided in the early hours of the 29th.

## SEISMOLOGY.

**Notes on Instruments.**—As in previous years, the instrumental equipment consisted of three Galitzin pendulums, with galvanometric registration, arranged to record earth displacements in the north, east and vertical directions, but owing to only one recording drum being available records of the vertical component could not be obtained in 1925. The installation was situated in ground-floor rooms of the principal building of the Observatory, the pendulums being placed on massive concrete pillars which extend down to boulder clay and are independent of the floor. Early in October, 1925, the Galitzin seismographs, which were presented to the Observatory in 1910–11 by Sir Arthur Schuster, and which are the only instruments of the kind in use in the British Isles, were dismantled and were transferred to Kew Observatory, Richmond, on October 9. No seismological records were obtained at Eskdalemuir after that date.

For detailed descriptions of the Galitzin seismographs and for particulars of the interpretation of the records, reference may be made to *Vorlesungen über Seismometrie* by the late Prince B. Galitzin, to *Modern Seismology* by the late G. W. Walker, or to *Dictionary of Applied Physics*, Vol. III.

A standardisation of the horizontal seismographs was carried out in August, 1925. The results obtained are given below, together with the galvanometer periods, which were determined in 1924. The notation is that employed in the publications referred to above.

				North-South Seismograph.	East-West Seismograph.
T <sub>1</sub>	..	..	..	24·6 secs.	24·8 secs.
T <sub>2</sub>	..	..	..	24·0 secs.	23·1 secs.
$\mu^2$	..	..	..	–0·21	–0·02
2Ak	..	..	..	84900	86500

The value of  $l$  was assumed to be the same as in earlier years, viz., 118 m.m. for each of the horizontal component seismographs.

The magnification for long-continued sinusoidal waves and the lag in the time of maximum on the paper behind the maximum in the ground were computed from the constants given above, with the following results :—

Period of Earth Wave, $T_p$ (secs.)	Microns in the ground per millimetre on the paper.		Lag (secs.)	
	N-S. Component	E-W. Component	N-S. Component	E-W. Component
3	3.04	2.96	3.5	3.5
5	1.93	1.87	5.6	5.6
10	1.26	1.19	9.9	10.0
15	1.20	1.12	13.4	13.4
20	1.37	1.25	16.2	16.1
25	1.63	1.51	18.5	18.4
30	2.04	1.91	20.6	20.4
35	2.57	2.43	22.4	22.1

Certain small adjustments were made shortly before the standardisations on August 24, 25, and therefore the constants then derived were used only after the latter date, the values obtained in 1915 being used for the earlier part of the year.

The situation of the Observatory is such that the effect of wind produces undesirably large disturbances on the records, and on occasions the reading of an earthquake record is rendered quite impossible by the large and more or less irregular but persistent wind disturbance.

**Notes on Tables.—Earthquakes.**—The Seismological Diary, Table 288, contains the particulars of the earthquakes recorded by the Galitzin instruments. The notation employed is as follows :—

P is the time of arrival of the first phase (longitudinal waves). S is the time of arrival of the second phase (transverse waves). L is the time of arrival of the long waves (surface waves).

PR<sub>1</sub>, PR<sub>2</sub> . . . are longitudinal waves reflected once, twice . . . at the earth's surface, prior to their arrival at the station. SR<sub>1</sub>, SR<sub>2</sub> . . . similarly denote reflected transverse waves. Any times given for reflected waves refer to the beginning of the disturbance at the observatory.

M<sub>1</sub>, M<sub>2</sub> . . . are the times of successive maxima of the displacement of the ground, corrected, if necessary, for the lag of the instrument.

*i* is the sudden commencement of a phase. *i*P means a sudden commencement of the P phase. *e* means an indistinct commencement of a phase. F is the end.

T, the period in seconds, is the duration of a double oscillation (to-and-fro-movement).  $\mu$  represents a micron (0.001 mm.).

$\Delta$  is the distance in kilometres of the epicentre measured along the arc of the great circle passing through the station.  $\alpha$  is the azimuth of the epicentre (0° to 360°) measured from north through east. The distance is estimated from Klotz's *Seismological Tables* (Publication of the Dominion Observatory, Ottawa, Vol. III, No. 2), which are also used for computing the time at which the disturbance originated. This time of origination is denoted by the letter O.

A<sub>N</sub>, A<sub>E</sub> are the amplitudes of the components of the true displacement of the ground from the position of rest, and are measured in microns. When the displacement shown by the north-south seismographs is to the north a + sign is shown; for a displacement to the south a - sign is used. Similarly + is used for displacement to the east, - for displacements to the west. When the oscillations are of a simple harmonic character no sign is prefixed to the amplitude. (For reasons mentioned in the foregoing, values of A<sub>Z</sub> are not given.)

The suffixes N, E, Z indicate that the estimates refer to the records from the north-south, east-west and vertical seismographs respectively.

*Microseisms.*—Microseisms are the small and often extremely regular tremors which are practically always in evidence on the seismograph records. The periods range to something more than 8 seconds, and the larger periods are generally associated with larger amplitude. At Eskdalemuir the amplitudes are usually confined to the range 0 to  $8\mu$ . These minute tremors attain their greatest development in the winter months, and on occasion render the interpretation of earthquake records exceedingly difficult and sometimes impossible. Microseisms of the type referred to are believed to arise from other than purely local causes, but the precise nature of their origin remains in doubt. Although their period corresponds with that of sea waves there is evidence that the breaking of the latter on coasts does not afford a complete and satisfactory explanation of the known facts with regard to microseismic movement. There is evidence of a relationship between the travel of cyclonic disturbances in eastern seas and microseismic movement in China and Japan\*, and evidence of a somewhat similar nature has been adduced in favour of a connection between microseismic movement and atmospheric pressure gradient in Europe and Canada.

In Table 289 are given the amplitude and period of the microseisms shown by the North component Galitzin seismograph on each day at 0h, 6h, 12h and 18h. 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 two or three waves in that group. The period is derived from a measurement made in the same group.

In computing the mean period occasions of zero amplitude are omitted. For reasons already mentioned there were no records on a number of days.

The mean values of amplitude and period for the months of 1925, together with the means for the years 1911-1924, are given below.

MICROSEISMS. MONTHLY AND ANNUAL MEANS.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.	
1925 {	Amplitude ( $\mu$ ) ..	2.4	2.5	0.9	1.4	0.5	0.5	0.4	0.5	0.9	—	—	—	—
	Period (secs.) ..	6.1	6.4	5.3	5.5	4.4	4.3	4.3	4.4	4.7	—	—	—	—
1911 to 1924 {	Amplitude ( $\mu$ ) ..	2.5	2.3	1.8	1.2	0.7	0.5	0.3	0.5	0.9	1.2*	1.8*	2.3*	1.3
	Period (secs.) ..	6.1	6.0	5.7	5.3	4.7	4.6	4.3	4.5	5.0	5.2*	5.6*	5.9*	5.2

\*Mean for 13 years only.

\* E. Gherzi. *Étude sur les Microséismes.* Observatoire de Zi-ka-wei, 1924.



Readings in millibars at exact hours, Greenwich Mean Time.

113. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

January, 1925.

Table for station 113 showing pressure readings in millibars for each hour of the month. Includes columns for Day, Station Level, and Mean (Station level/Sea level).

114. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

February, 1925.

Table for station 114 showing pressure readings in millibars for each hour of the month. Includes columns for Day, Station Level, and Mean (Station level/Sea level/G.M.T.).

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.

115. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

March, 1925.

Table for March 1925 showing pressure readings at Eskdalemuir. Columns include Day (1-31), Station Level (1-31), Mean (Station level), and Mean (Sea level). Rows show hourly pressure readings in millibars.

116. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

April, 1925.

Table for April 1925 showing pressure readings at Eskdalemuir. Columns include Day (1-30), Station Level (1-30), Mean (Station level), Mean (Sea level), and G.M.T. (1-24, Mean). 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.

117. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

May, 1925.

Table for station 117 showing pressure readings from 1 to 31 May 1925. Columns include Day, Station Level (1-31), and Mean (Station level). Values range from 977 to 1006 mb.

118. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

June, 1925.

Table for station 118 showing pressure readings from 1 to 30 June 1925. Columns include Day, Station Level (1-30), and Mean (Station level). Values range from 991 to 1020 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.

119. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

July, 1925.

Table for July 1925 showing station level pressure (mb.) and mean (Sea level) pressure (mb.) for each day from 1 to 31. Includes a vertical 'Station Level' indicator on the left.

120. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

August, 1925.

Table for August 1925 showing station level pressure (mb.) and mean (Sea level) pressure (mb.) for each day from 1 to 31. Includes a vertical 'Station Level' indicator on the left.

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.

121. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

September, 1925.

Table for September 1925 showing barometric pressure readings at Eskdalemuir. Columns include Day, Station Level (1-30), and Mean (Station level) and Mean (Sea level). Rows show hourly readings from 1 to 30 days.

122. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

October, 1925.

Table for October 1925 showing barometric pressure readings at Eskdalemuir. Columns include Day, Station Level (1-31), and Mean (Station level) and Mean (Sea level). Rows show hourly readings from 1 to 31 days.

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.

123. Eskdalemuir : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 237.3 metres.

November, 1925.

Table for November 1925 at Eskdalemuir. Columns: Day (1-30), Station Level (1-30), Mean (Station level), Mean (Sea level). Rows contain pressure readings in millibars.

124. Eskdalemuir : H<sub>b</sub> = 237.3 metres.

December, 1925.

Table for December 1925 at Eskdalemuir. Columns: Day (1-31), Station Level (1-31), Mean (Station level), Mean (Sea level), G.M.T. (1-24, Mean). Rows contain 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 OF HOURLY VALUES.

131

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

125. Eskdalemuir: Hb = 237.3 metres.

1925.

Table with 25 columns (G.M.T., 1-24, Mean) and 3 rows (Station Level, Sea Level, and another Station Level row). Values range from 982.94 to 983.13.

PRESSURE AT STATION LEVEL; MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

126. Eskdalemuir: Hb = 237.3 metres.

1925.

Table with 25 columns (Month, Mean, Hour 1-24) and 12 rows (Jan. to Dec., Year). Values range from 982.94 to 983.13.

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY.

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

127. Eskdalemuir: Hb = 237.3 metres.

1925.

Large table with 25 columns (Month, Jan-Dec) and 32 rows (Day 1-31, Mean). Values range from 980.5 to 985.9.

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 degrees absolute at exact hours, Greenwich Mean Time.

128. Eskdalemuir : Louvred Hut : h<sub>t</sub> (height of thermometer bulb above ground) = 0.9 metres.

January, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows (Day 1-31). Each cell contains a temperature reading in degrees absolute. The Mean row shows average values for each day.

129. Eskdalemuir : Louvred Hut : h<sub>t</sub> = 0.9 metres.

February, 1925.

Table with 25 columns (Day, 1-24, Mean) and 29 rows (Day 1-29). Each cell contains a temperature reading in degrees absolute. The Mean row shows average values for each day.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is printed 75.0.



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

130. Eskdalemuir : Louvred Hut : h<sub>t</sub> (height of thermometer bulb above ground) = 0.9 metres.

March, 1925.

Table with 25 columns (Day 1-25, Mean) and 25 rows (1-31). Columns 2-25 are labeled 1-24. Each cell contains a temperature reading in degrees absolute. The 'Mean' row at the bottom shows the average for each day.

131. Eskdalemuir : Louvred Hut : h<sub>t</sub> = 0.9 metres.

April, 1925.

Table with 25 columns (Day 1-25, Mean) and 25 rows (1-30). Columns 2-25 are labeled 1-24. Each cell contains a temperature reading in degrees absolute. The 'Mean' row at the bottom shows the average for each day.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is printed 75.0.

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

132. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulb above ground) = 0.9 metres.

May, 1925.

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	76.3	75.9	76.3	76.0	76.3	76.6	76.9	77.3	77.0	78.5	77.1	79.3	79.8	81.0	81.2	79.4	80.0	79.5	78.3	77.2	75.7	74.8	72.8	72.4	77.4	
2	72.2	72.3	72.2	72.1	71.5	72.3	73.1	74.9	77.2	79.5	80.9	81.3	80.7	81.3	81.9	82.0	81.3	81.0	80.3	79.9	79.8	79.7	79.4	79.4	77.6	
3	79.4	79.2	79.3	79.1	79.2	79.9	79.9	80.1	79.9	81.5	81.7	82.7	83.1	82.5	81.9	81.9	81.8	81.4	81.0	81.0	80.9	80.8	80.3	80.0	80.8	
4	79.5	79.0	79.0	79.0	79.2	79.3	79.7	80.0	80.9	81.4	81.9	82.1	82.4	82.6	82.5	83.4	83.0	82.7	82.3	81.1	80.7	79.3	79.5	79.3	80.8	
5	79.5	79.0	78.4	78.2	78.2	78.4	77.0	76.4	76.8	77.4	77.5	78.5	80.0	82.0	82.7	83.9	82.7	82.1	80.0	80.1	79.4	79.1	78.9	78.5	79.4	
6	78.8	78.4	78.7	78.7	78.5	78.4	78.7	78.9	79.2	80.5	82.0	83.7	85.0	84.8	85.0	81.1	81.4	81.8	81.2	80.3	80.5	79.0	79.0	78.9	80.5	
7	78.6	78.9	78.4	78.0	78.4	79.0	79.3	81.1	82.7	82.1	82.8	82.3	81.9	82.3	83.1	82.1	81.3	79.9	78.9	78.9	79.2	79.3	79.2	78.9	80.3	
8	79.4	79.0	79.0	78.9	78.8	79.0	79.9	81.0	82.1	82.0	82.5	81.5	82.5	82.3	79.9	80.4	79.5	79.4	79.0	79.6	79.9	80.6	79.7	78.9	80.0	
9	78.5	78.2	78.0	78.1	78.1	78.7	79.8	80.4	82.2	81.1	81.0	81.5	82.0	81.0	80.0	81.0	81.9	81.6	81.0	80.2	79.9	79.7	79.3	79.1	80.1	
10	79.1	77.9	78.0	78.3	78.7	79.3	80.2	81.2	82.1	82.8	84.7	86.1	87.0	87.1	86.7	87.6	87.0	85.8	83.9	81.5	80.1	79.0	78.9	80.0	82.2	
11	79.9	79.4	79.0	79.0	79.1	80.0	80.6	80.4	79.9	79.9	80.7	81.9	82.0	82.0	84.5	84.8	84.9	84.0	82.7	81.5	81.1	80.9	79.3	80.0	81.1	
12	79.4	79.1	79.4	79.6	79.7	80.0	81.0	81.3	82.0	82.8	82.8	82.8	81.6	81.0	80.8	81.3	82.0	81.8	81.7	81.6	81.6	81.7	81.7	81.3	81.1	
13	80.8	80.3	78.0	77.6	76.7	78.0	80.4	81.3	82.5	83.4	85.4	86.0	86.4	86.4	86.5	86.5	86.2	85.1	84.3	83.3	83.0	81.5	80.4	80.6	82.5	
14	79.0	78.9	78.7	78.6	78.6	79.3	80.5	82.7	83.1	84.1	84.7	84.4	85.2	85.5	86.0	86.0	85.6	84.2	83.3	81.8	81.0	80.4	79.9	79.0	82.1	
15	78.9	78.2	78.8	78.9	79.2	79.5	80.1	81.0	82.8	84.7	86.0	89.0	89.0	88.8	90.2	89.6	88.5	87.1	85.3	84.2	83.4	82.4	81.8	82.0	83.7	
16	82.1	81.9	81.4	81.8	82.0	82.4	82.3	83.1	83.0	83.0	84.0	85.3	87.0	88.1	90.0	89.7	89.7	88.5	87.8	86.3	84.6	84.3	84.0	83.8	84.8	
17	83.2	83.0	82.2	81.7	81.7	81.9	82.0	82.4	83.0	84.2	85.3	85.9	86.3	87.6	87.3	87.0	85.1	85.0	84.2	84.1	83.9	83.5	83.0	82.3	84.0	
18	82.0	82.0	82.0	82.3	83.0	84.0	85.1	86.1	85.9	84.7	84.9	86.0	86.1	86.3	86.0	85.9	86.8	87.0	86.7	86.3	85.8	85.0	84.7	84.0	84.9	
19	84.0	83.8	83.7	83.5	83.8	83.3	83.6	84.2	85.0	85.5	86.2	85.2	86.1	87.7	88.4	88.0	87.8	88.6	88.9	88.0	87.3	86.9	86.9	86.0	85.9	
20	86.0	85.6	85.0	83.9	83.6	84.0	84.4	85.1	85.6	87.0	86.9	86.4	85.0	83.5	84.0	83.2	82.6	82.5	82.6	82.0	81.0	80.4	79.3	78.0	83.8	
21	76.9	77.7	78.5	79.1	79.6	80.2	81.3	81.4	82.0	83.4	85.2	85.5	86.2	86.5	86.0	85.3	86.0	85.5	84.6	81.9	79.1	78.0	76.9	77.3	81.8	
22	76.6	75.5	75.5	75.4	77.0	80.0	82.7	84.1	85.4	85.6	86.1	85.5	86.0	86.0	87.6	87.7	87.1	86.0	84.0	82.9	82.0	81.0	80.5	80.6	82.5	
23	80.4	80.0	79.9	80.2	80.6	81.0	82.5	83.2	83.9	84.7	85.4	85.6	82.9	83.2	82.9	82.9	82.9	82.5	82.5	82.3	82.1	81.8	81.8	81.3	82.3	
24	81.1	81.1	81.0	80.9	80.9	81.0	81.0	80.6	81.0	81.5	81.0	81.0	81.0	80.7	80.9	80.7	80.6	80.8	80.6	80.5	80.4	80.5	80.9	81.0	80.9	
25	81.0	81.1	81.0	81.1	81.2	81.3	82.0	82.2	82.6	83.0	84.0	85.0	84.8	85.5	85.2	85.0	84.4	83.5	83.0	82.5	81.9	81.7	81.4	81.0	82.7	
26	81.0	80.9	80.8	80.5	80.5	81.2	81.5	82.6	84.0	85.0	85.5	87.5	87.4	88.0	86.1	85.0	84.0	83.0	81.7	81.6	81.6	81.6	81.8	81.0	83.1	
27	82.0	82.1	82.2	82.1	82.5	83.4	84.2	84.2	83.6	83.5	83.5	83.3	83.4	84.1	85.4	84.8	84.0	83.6	83.3	81.7	80.6	81.1	81.0	81.0	82.9	
28	80.9	80.6	80.6	80.4	80.2	80.0	78.6	79.0	79.3	81.0	82.5	82.6	80.8	83.0	83.1	82.0	82.0	82.8	81.8	81.7	81.7	79.8	80.5	80.3	81.1	
29	80.8	80.8	80.9	80.7	81.0	81.0	81.4	81.3	81.6	82.0	82.0	83.9	82.9	84.6	83.1	82.7	82.4	81.5	81.4	81.9	82.3	82.6	82.8	83.0	82.0	
30	82.4	81.7	81.6	81.5	81.4	81.5	81.8	82.5	82.1	82.3	82.5	83.2	83.2	82.8	81.6	82.0	81.1	82.0	82.0	78.0	79.9	80.1	80.2	80.2	81.6	
31	80.1	80.0	79.9	79.8	79.6	79.9	80.9	81.1	81.9	82.0	82.0	83.0	82.8	82.4	83.2	83.9	80.3	81.7	82.3	81.4	80.5	80.3	80.5	80.4	81.2	
Mean	...	79.99	79.73	<b>79.27</b>	79.52	79.63	80.09	80.70	81.33	81.96	82.59	83.05	83.75	83.88	84.23	<b>84.36</b>	84.09	83.67	83.30	82.60	81.76	81.33	80.88	80.53	80.35	81.77

133. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

June, 1925.

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	80.1	79.5	79.5	79.9	79.8	80.1	80.8	81.5	82.1	79.5	80.0	80.3	82.4	82.0	81.7	81.6	80.6	81.7	81.2	80.7	80.0	80.0	79.5	78.4	<b>80.6</b>
2	79.0	78.7	79.2	79.7	79.7	80.2	81.0	81.6	82.1	81.8	81.5	83.0	83.4	85.5	84.5	85.5	84.0	84.4	83.5	82.2	81.5	80.0	78.9	78.7	81.6
3	79.5	79.5	79.5	79.5	80.1	81.0	82.0	83.0	82.8	82.0	81.7	81.0	80.8	81.0	81.5	82.0	82.3	82.5	82.5	82.8	82.9	83.1	83.6	83.7	81.6
4	84.0	84.7	84.5	84.4	84.0	84.5	84.6	84.5	84.1	85.0	86.9	86.0	86.0	87.7	88.4	88.5	88.5	88.9	88.3	85.0	83.8	81.3	80.5	80.2	85.3
5	79.4	79.0	78.7	78.2	79.0	81.6	84.3	85.4	86.7	87.8	89.7	90.3	91.0	91.2	92.3	91.1	90.9	89.7	88.8	86.5	85.0	84.1	83.8	84.2	85.7
6	84.1	83.6	84.0	83.8	83.8	83.8	83.5	83.7	87.2	88.2	88.0	88.3	89.4	89.5	90.4	89.7	90.8	90.0	88.1	87.7	85.5	84.8	83.0	82.0	86.4
7	80.3	80.3	80.0	80.0	80.3	83.5	85.5	87.2	88.8	88.8	90.5	91.8	92.0	92.5	92.3	92.7	91.9	90.6	88.5	87.0	85.9	84.8	82.9	81.1	86.6
8	81.1	81.1	80.3	80.0	82.0	85.2	86.0	85.7	87.8	90.2	91.9	92.5	92.9	93.2	93.2	92.3	91.9	91.0	89.2	87.4	86.3	85.3	83.0	82.1	87.1
9	81.9	81.9	81.0	80.3	81.8	84.1	87.4	90.5	92.9	95.0	95.8	96.5	97.0	97.7	97.8	98.1	98.0	97.8	94.1	91.5	88.1	86.9	85.5	84.1	90.2
10	83.0	82.6	82.0	80.9	82.0	85.4	89.0	92.5	95.2	95.9	96.8	97.6	98.9	99.1	99.8	100.1	99.0	98.1	95.4	92.0	90.3	89.1	87.7	86.6	<b>91.6</b>
11	85.8	85.7	84.9	84.0	84.0	86.6	89.9	92.6	95.4	95.9	96.0	97.1	97.6	98.0	98.0	97.6	95.8	93.6	91.5	90.8	88.3	87.4	86.4	85.8	91.2
12	85.1	84.9	84.5	84.0	84.0	84.6	85.9	88.9	89.4	90.6	90.5	90.1	90.2	90.9	91.8	91.9	91.5	89.9	89.8	87.4	85.9	84.0	79.9	79.5	87.4
13	79.3	78.8	77.6	77.8	78.2	80.1	84.2	87.4	88.7	88.7	87.8	86.0	85.0	84.3	84.4	84.3	84.0	84.1	84.1	84.6	84.7	85.0	86.0	84.9	83.6
14	84.1	83.8	83.1	82.1	82.5	84.3	86.7	88.5	89.7	90.5	91.6	92.2	92.8	93.3	94.3	94.0	93.3	91.6	90.8	88.1	86.9	86.8	87.0	87.4	88.5
15	87.0	86.4	85.1	86.9	87.0	87.4	87.0	88.8	89.9	89.0	89.7	89.9	90.0	89.7	88.6	88.6	88.5	88.3	88.5	87.9	87.0	86.1	85.5	84.6	87.9
16	84.0	84.0	83.5	83.0	83.2	83.3	84.0	84.1	84.8	84.8	84.7	85.5	85.9	86.0	84.9	86.1	86.6	84.9	84.5	84.1	83.7	83.4	82.0	82.1	84.3
17	81.3	81.5	80.1	79.1	81.5	81.8	83.8	84.6	85.0	85.9	86.2	87.0	88.4	8											

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

134. Eskdalemuir : Louvred Hut : ht (height of thermometer bulb above ground) = 0.9 metres.

July, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows (1-31). Each cell contains a temperature reading in degrees absolute. The Mean row shows a range from 84.05 to 87.05.

135. Eskdalemuir : Louvred Hut : ht = 0.9 metres.

August, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows (1-31). Each cell contains a temperature reading in degrees absolute. The Mean row shows a range from 83.21 to 85.79.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is printed 75.0.

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

136. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulb above ground) = 0.9 metres.

September, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows (1-30, Mean). Each cell contains a temperature reading in degrees absolute. The Mean row shows a range from 80.26 to 81.98.

137. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

October, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows (1-30, Mean). Each cell contains a temperature reading in degrees absolute. The Mean row shows a range from 79.75 to 81.07.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is printed 75.0.

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

138. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulb above ground) = 0.9 metres.

November, 1925.

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	81.2	81.1	81.2	81.7	81.4	80.3	80.3	80.7	82.1	82.3	83.7	83.4	83.6	83.9	83.0	82.6	82.8	83.5	83.5	82.9	82.5	82.5	82.5	82.4	82.3
2	82.5	82.2	82.2	82.1	82.1	82.0	82.0	81.4	81.7	83.0	82.7	82.5	83.4	83.5	83.0	82.4	81.6	80.7	80.3	80.9	80.9	81.1	81.1	80.7	82.0
3	80.8	80.8	81.0	81.1	81.1	81.1	81.3	81.0	81.1	81.1	81.9	81.9	81.7	81.7	81.6	81.7	81.2	80.9	80.1	80.8	80.8	80.7	80.3	80.0	81.1
4	80.1	80.0	80.0	80.0	78.4	78.1	78.5	78.2	79.5	79.9	80.7	81.3	82.0	82.5	81.9	81.4	81.1	79.9	79.5	79.3	79.1	79.2	79.2	79.3	80.0
5	79.4	79.4	79.5	79.2	79.0	79.1	79.2	79.3	79.8	79.9	80.7	81.7	81.9	82.1	81.3	79.5	78.7	79.0	78.9	79.4	78.9	77.5	79.3	79.2	79.7
6	78.8	77.7	78.8	78.2	77.1	77.5	77.1	77.2	77.0	78.5	78.6	78.9	79.4	79.3	79.0	78.2	78.1	78.0	77.7	77.6	77.5	77.4	77.2	76.0	78.0
7	76.9	77.3	76.3	77.3	76.9	77.0	77.3	77.2	77.2	77.7	77.3	77.1	76.9	76.9	76.4	76.3	76.0	75.7	75.7	75.4	75.6	75.9	75.3	75.1	76.5
8	74.9	74.6	74.9	73.7	73.6	74.0	73.9	73.6	73.2	75.7	74.9	74.7	75.9	75.5	74.9	74.8	74.3	73.7	73.0	72.6	72.4	72.2	72.1	72.1	74.2
9	72.4	71.1	70.5	69.6	69.7	68.8	69.6	68.9	70.4	72.3	74.2	75.8	76.3	76.7	76.0	73.4	71.8	70.1	69.3	68.7	68.2	68.2	67.0	67.0	71.2
10	66.0	66.4	67.0	66.9	66.8	66.5	69.4	69.7	71.9	74.2	75.2	74.9	75.4	75.4	75.5	73.7	73.1	73.1	72.2	74.0	73.7	73.0	71.7	71.0	71.4
11	71.0	71.6	70.7	69.3	68.9	69.0	68.0	69.9	73.0	75.1	77.9	78.5	78.9	77.9	74.6	72.8	71.2	70.0	68.7	68.7	67.7	67.0	67.5	67.5	71.5
12	66.6	66.5	66.0	66.1	65.9	65.5	65.1	64.9	66.5	69.5	72.8	76.2	77.1	77.0	76.0	73.0	71.3	69.8	68.7	67.8	67.2	67.3	66.1	66.7	69.2
13	65.7	66.4	68.1	66.5	66.0	66.0	66.0	65.0	66.7	68.5	71.1	73.0	75.6	76.6	75.2	72.5	72.0	71.6	70.3	69.2	68.2	67.9	67.9	67.9	69.5
14	69.0	68.8	69.5	70.2	70.5	71.1	71.1	71.5	71.7	72.0	72.3	72.8	73.2	73.3	73.8	73.7	73.3	73.5	73.2	73.0	72.9	72.2	70.2	68.6	71.7
15	68.0	67.0	66.0	65.8	66.0	67.7	67.7	68.2	68.9	71.2	73.7	74.7	75.3	75.7	75.8	73.2	71.0	70.2	71.0	70.7	70.2	69.4	69.8	70.0	70.3
16	70.7	70.3	71.2	71.7	72.2	73.0	73.7	74.1	74.6	74.7	75.7	76.9	77.0	76.9	77.1	77.6	77.2	75.8	74.9	76.0	75.1	76.1	76.4	76.1	74.7
17	76.0	74.5	75.0	75.3	75.2	74.7	73.1	73.5	74.7	75.7	76.2	77.9	78.2	78.0	77.1	75.3	74.5	74.6	73.7	73.5	73.2	72.6	73.3	72.5	75.0
18	72.9	71.9	70.8	70.9	71.2	71.4	71.0	71.5	72.1	75.1	77.4	79.0	79.6	79.0	77.2	75.1	73.8	72.4	71.9	71.5	71.6	71.3	70.8	69.9	73.4
19	70.1	68.6	68.7	67.5	67.6	67.1	67.8	68.6	70.7	72.4	74.3	76.5	77.9	76.7	76.7	74.3	72.5	71.0	70.3	68.8	68.1	68.0	67.6	67.3	70.5
20	67.0	66.2	66.0	66.5	66.3	66.2	67.3	66.2	68.4	69.7	71.8	72.9	74.2	77.8	76.6	75.2	74.0	72.0	71.1	71.0	69.9	69.3	68.8	68.8	70.0
21	68.1	68.0	66.7	68.3	70.1	70.7	71.2	72.0	72.8	73.0	73.3	74.1	75.0	75.1	75.2	75.0	74.7	74.5	74.3	74.2	74.1	74.1	74.0	74.0	72.5
22	74.0	74.0	74.0	74.0	74.0	74.3	74.5	74.5	74.6	74.9	75.3	76.0	77.3	76.2	75.9	75.7	75.3	75.2	73.8	73.2	74.1	74.6	74.8	74.0	74.8
23	73.3	72.0	72.5	71.2	72.4	73.9	74.2	74.4	74.8	75.1	75.7	77.5	77.1	77.3	75.2	74.2	72.4	71.8	71.8	71.0	73.3	74.1	74.6	74.6	73.9
24	74.7	74.3	72.4	73.8	70.2	69.8	70.1	70.3	72.7	75.7	75.2	74.1	74.8	74.8	74.6	74.8	75.0	75.8	77.0	77.5	78.1	78.4	78.5	78.9	74.6
25	79.2	76.3	74.9	72.6	71.7	71.8	71.2	71.0	71.3	72.7	72.8	73.1	73.6	73.4	73.4	72.2	71.7	71.1	71.0	70.9	70.0	68.8	68.7	69.1	72.4
26	70.1	69.7	68.6	67.7	66.5	66.1	66.1	64.4	64.8	67.1	69.3	72.0	73.2	72.7	72.2	70.2	71.0	70.7	70.0	72.1	72.0	71.7	73.2	74.9	69.7
27	74.3	73.3	73.5	73.8	73.3	72.5	72.6	72.1	72.9	73.6	74.1	74.2	74.5	74.4	74.0	73.8	73.6	73.6	72.3	72.1	71.7	71.7	71.4	71.9	73.2
28	71.2	71.3	72.3	71.8	71.7	71.4	71.0	71.0	71.7	72.8	73.3	73.8	74.1	73.5	73.1	72.5	72.3	72.0	72.3	72.3	72.5	72.5	72.6	72.6	72.3
29	72.9	73.0	73.1	73.5	72.3	71.7	72.2	71.6	71.9	72.1	72.7	72.1	72.1	72.9	73.1	73.2	73.6	73.7	73.4	73.5	74.0	73.9	73.0	71.8	72.8
30	70.2	70.3	72.0	71.5	72.2	73.2	73.7	73.9	73.5	74.7	75.0	74.8	75.2	74.8	74.3	74.6	74.2	74.1	73.7	73.3	73.5	73.4	73.0	73.3	73.5
Mean	73.27	72.83	72.78	72.59	<b>72.34</b>	72.40	72.51	72.46	73.22	74.44	75.54	76.33	76.88	<b>77.10</b>	76.58	75.51	74.88	74.37	73.91	73.77	73.60	73.43	73.31	73.11	74.05

139. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

December, 1925.

	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	73.4	73.8	73.3	72.9	73.2	71.7	70.7	70.9	71.8	73.2	73.3	73.4	73.0	73.3	72.5	70.8	69.9	69.9	69.7	69.3	69.9	70.1	70.0	69.3	71.7
2	69.3	69.9	70.2	69.3	69.3	70.0	68.7	69.7	69.9	72.0	73.2	73.8	74.0	73.3	73.0	70.9	70.6	72.9	73.0	73.7	74.2	73.3	74.0	74.1	71.7
3	74.3	74.2	73.9	74.0	73.9	74.0	74.1	72.5	71.3	72.0	73.9	75.6	75.8	75.6	75.8	73.2	70.9	69.9	69.8	68.6	69.1	69.7	70.0	70.8	72.7
4	71.2	72.0	72.1	72.3	72.4	72.7	73.0	70.5	69.7	71.5	73.0	74.9	75.1	75.2	73.5	70.0	68.7	67.9	67.1	66.3	67.0	67.1	67.3	67.1	70.8
5	66.7	66.8	65.7	65.8	65.8	66.3	66.6	66.3	67.4	69.0	70.6	71.1	72.2	72.0	69.9	67.4	66.9	65.7	64.2	64.7	63.9	64.0	63.0	63.5	67.0
6	63.0	62.7	62.6	62.6	63.1	63.2	64.0	64.9	65.1	66.0	69.3	71.2	73.8	74.9	73.1	71.7	69.5	68.5	67.9	67.5	67.4	68.8	69.7	70.1	67.4
7	70.1	70.7	71.5	71.4	71.6	72.2	72.9	72.6	72.4	72.7	73.9	74.5	75.1	75.0	76.0	75.7	76.9	77.3	77.4	78.0	78.5	79.1	79.4	80.5	74.6
8	80.5	80.4	81.0	81.3	81.0	81.0	81.0	81.1	81.1	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0
9	75.7	75.2	75.0	75.1	75.0	75.0	75.8	76.3	76.6	75.8	76.2	76.9	77.0	77.5	77.2	77.5	77.2	77.1	77.7	77.1	77.2	77.2	77.2	76.9	76.5
10	76.1	76.0	75.9	76.0	76.0	75.8	76.0	76.9	78.0	78.2	78.8	78.3	78.1	78.1	78.0	77.7	76.9	76.3	76.4	76.1	76.0	75.9	75.7	75.2	76.8
11	74.4	74.0	73.8	73.5	73.0	73.7	73.6	72.1	73.4	74.6	75.1	75.0	76.0	76.1	76.0	75.7	75.3	75.6	76.5	76.2	75.5	75.6	74.9	75.0	74.8
12	75.1	76.0	75.1	75.3	74.9	75.2	74.2	74.7	73.9	74.8	75.0	75.3	75.0	74.7	73.8	71.5	70.7	71.4	70.3	70.0	72.1	70.3	70.1	70.3	73.4
13	69.7	69.7	68.1	68.3	67.9	68.1	69.2	68.1	67.4	68.3	68.1	70.9	74.2	73.7	72.8	7									

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

140. Eskdalemuir : Louvred Hut :  $h_t = 9.0$  metres.

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.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
78.11	78.98	77.89	<b>77.73</b>	77.77	78.04	78.51	79.26	80.08	80.76	81.33	81.89	82.22	<b>82.38</b>	82.28	81.84	81.30	80.74	80.08	79.50	79.07	78.72	78.45	78.26	79.75

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

141. Eskdalemuir : Louvred Hut :  $h_t = .09$  metres.

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.	276.67	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
Feb.	275.19	-0.85	-0.39	-0.54	-0.45	-0.50	-0.59	<b>-0.66</b>	-0.46	-0.48	-0.14	+0.25	+0.75	+1.14	+1.11	+0.95	+0.66	+0.33	+0.12	+0.01	+0.08	-0.15	-0.26	-0.29	-0.19
Mar.	276.40	-1.35	-1.27	-1.43	-1.54	-1.68	-1.65	-1.60	-0.75	+0.18	+0.93	+1.51	+1.91	+2.36	<b>+2.42</b>	<b>+2.42</b>	+1.97	+1.37	+0.58	-0.16	-0.43	-0.46	-0.80	-1.02	-1.31
April	277.74	-1.90	-2.32	-2.29	-2.44	<b>-2.62</b>	-2.39	-1.76	-0.41	+0.98	+1.62	+2.00	+2.67	+3.08	+2.99	<b>+3.18</b>	+2.61	+2.02	+1.55	+0.28	-0.70	-1.16	-1.41	-1.75	-1.85
May	281.77	-1.72	-1.99	<b>-2.45</b>	-2.21	-2.10	-1.65	-1.04	-0.42	+0.21	+0.83	+1.29	+1.98	+2.10	+2.45	<b>+2.57</b>	+2.30	+1.87	+1.50	+0.79	-0.05	-0.49	-0.94	-1.30	-1.49
June	285.73	-3.68	-3.85	-4.31	<b>-4.67</b>	-3.93	-2.57	-1.09	+0.34	+1.52	+2.02	+2.69	+3.22	+3.66	+3.94	<b>+4.13</b>	+4.03	+3.64	+2.88	+1.73	+0.24	-1.27	-2.25	-2.99	-3.35
July	287.05	-3.03	-3.38	-3.64	<b>-3.68</b>	-3.43	-2.48	-1.28	+0.09	+1.16	+1.96	+2.58	+3.14	+3.36	<b>+3.76</b>	+3.53	+3.24	+2.70	+2.09	+1.19	+0.01	-1.10	<del>-1.75</del>	-2.27	-2.70
Aug.	285.79	-2.55	-2.61	-2.79	-2.85	<b>-2.91</b>	-2.40	-1.47	-0.13	+0.95	+1.47	+2.04	+2.68	+2.90	<b>+3.00</b>	+2.84	+2.79	+2.37	+1.67	+0.97	-0.09	-0.76	-1.31	-1.73	-2.20
Sept.	281.98	-1.79	-1.80	-1.97	-2.17	-2.29	<b>-2.43</b>	-1.70	-0.54	+0.63	+1.59	+2.25	+2.60	+2.83	<b>+3.00</b>	+3.22	+2.56	+1.79	+0.69	-0.29	-0.77	-1.08	-1.28	-1.47	-1.60
Oct.	281.07	-1.32	-1.31	-1.51	-1.49	-1.48	<b>-1.67</b>	-0.82	+0.20	+1.03	+1.47	+2.07	+2.33	<b>+2.53</b>	+2.44	+1.98	+1.07	+0.30	-0.13	-0.44	-0.55	-0.79	-1.07	-1.27	-1.27
Nov.	274.05	-0.90	-1.33	-1.37	-1.55	<b>-1.79</b>	-1.59	-1.63	-0.86	+0.37	+1.48	+2.28	+2.84	<b>+3.07</b>	+2.56	+1.50	+0.88	+0.39	-0.06	-0.19	-0.35	-0.51	-0.62	-0.81	-0.81
Dec.	273.60	-0.41	-0.35	-0.52	-0.62	<b>-0.64</b>	-0.51	-0.48	-0.54	-0.32	+0.21	+0.70	+1.27	+1.58	<b>+1.76</b>	+1.33	+0.37	+0.03	-0.10	-0.37	-0.46	-0.45	-0.60	-0.47	-0.41
Year	279.75	-1.65	-1.78	-1.95	<b>-2.03</b>	-1.99	-1.72	-1.25	-0.49	+0.33	+1.00	+1.57	+2.14	+2.47	<b>+2.63</b>	+2.53	+2.08	+1.54	+0.99	+0.33	-0.25	-0.68	-1.03	-1.30	-1.49

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

142. Eskdalemuir : Louvred Hut :  $h_t = 0.9$  metres.

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.												
1	80.7	73.2	78.4	72.6	77.3	74.3	80.0	72.9	81.8	72.0	83.5	78.4	94.1	80.6	89.1	80.8	86.9	81.0	89.5	76.1	<b>84.2</b>	80.0	74.0	67.6
2	81.2	74.3	80.2	76.0	78.5	73.8	79.4	70.6	83.6	<b>70.6</b>	86.0	78.2	94.2	81.7	90.2	80.4	86.7	80.8	88.4	80.7	83.7	80.0	74.2	68.6
3	77.2	72.7	81.0	75.9	77.3	72.6	79.7	<b>68.0</b>	83.7	79.0	83.7	78.7	91.9	80.5	86.5	78.6	87.5	78.6	88.4	82.4	82.1	79.7	76.4	68.4
4	76.0	71.9	79.9	74.9	81.0	70.8	80.9	69.2	83.6	78.7	89.1	79.5	92.1	82.2	90.2	80.3	85.3	76.7	85.6	80.6	82.9	77.9	75.5	66.0
5	76.3	74.2	81.1	74.7	81.0	71.3	79.7	74.8	84.1	76.3	92.3	77.6	94.5	79.1	91.0	77.4	86.2	79.0	<b>93.1</b>	81.1	82.5	77.5	72.6	62.9
6	77.2	71.5	76.7	72.0	81.5	77.1	81.7	73.9	86.1	78.2	91.3	82.0	89.5	81.4	91.2	81.9	87.7	78.7	86.2	82.3	79.6	76.0	75.1	62.0
7	79.3	77.2	77.3	72.0	79.4	72.2	85.8	73.3	83.9	77.9	93.2	79.5	90.0	81.4	88.0	82.9	85.9	79.4	83.2	74.7	77.5	74.9	80.5	69.5
8	80.8	76.6	<b>81.9</b>	74.3	75.0	68.3	83.3	73.2	83.2	78.6	93.5	80.0	89.5	81.0	91.5	82.0	87.4	80.8	78.0	73.4	76.0	72.0	81.5	74.5
9	80.7	72.7	77.6	74.9	76.5	68.1	85.6	76.3	82.2	78.0	98.6	80.3	89.0	82.8	90.0	83.8	84.7	75.5	86.0	72.1	77.1	66.5	78.2	74.7
10	79.8	73.0	81.0	74.0	76.6	69.3	84.8	76.2	87.8	77.8	<b>100.2</b>	80.8	89.1	83.5	90.2	81.8	86.2	78.0	88.0	70.9	76.0	65.6	79.0	75.1
11	79.7	76.9	74.6	72.9	77.8	73.3	83.3	73.7	85.6	79.0	98.4	82.9	96.8	84.0	88.9	81.0	84.3	77.4	87.0	77.1	79.1	67.0	76.6	72.1
12	70.9	75.3	75.5	72.6	77.2	69.9	85.3	71.1	83.2	79.1	92.1	79.5	96.1	88.3	84.0	85.9	74.0	81.2	77.9	77.2	64.9	76.0	68.9	68.9
13	81.7	74.0	77.0	71.6	79.7	72.3	82.4	76.7	87.4	75.6	89.0	77.2	96.0	83.9	91.3	84.8	86.2	71.0	79.6	73.1	76.9	64.9	74.3	67.0
14	<b>82.1</b>	76.0	74.9	72.3	80.8	78.0	81.5	75.0	86.3	78.1	94.5	81.2	93.9	80.3	91.3	83.3	85.9	82.0	80.2	73.4	73.8	67.9	74.5	67.3
15	79.3	73.9	75.3	72.7	<b>85.6</b>	76.1	81.3	73.2	90.4	78.1	90.5	84.4	91.8	80.1	93.0	78.4	80.3	78.8	79.3	72.3	76.4	65.3	73.8	70.1
16	77.7	75.2	76.4	74.1	82.8	76.2	84.7	74.4	<b>91.9</b>	81.3	87.0	82.0	88.6	<b>77.0</b>	<b>94.2</b>	75.9	89.2	74.8	80.5	77.9	70.0	77.9	70.0	77.9
17	81.2	77.5	78.0	74.7	84.1	76.4	83.8	77.0	87.8	81.4	89.7	79.1	89.1	84.2	93.9	81.0	85.8	80.7	82.8	74.1	79.7	69.9	80.0	71.5
18	81.2	77.5	77.7	71.5	81.9	72.7	80.5	75.4	87.3	81.8	90.0	79.0	91.1	82.0	91.0	81.3	86.9	80.7	82.8	74.1	79.7	66.7	72.3	69.9
19	80.1	76.0	78.1	70.7	85.0	75.3	80.5	71.3	89.0	83.2	90.3	78.2	93.5	79.1	89.7	82.9	84.2	77.0	80.6	74.0	77.9	66.7	72.3	69.9
20	78.8	75.6	77.2	69.3	78.3	72.1	<b>86.0</b>	69.0	87.3	78.0	92.2	83.1	91.6	82.4	90.7	83.8	85.2	77.6	83.9	77.1	77.3	65.4	74.1	71.9
21	76.2	74.8	74.8	71.9	75.3	<b>67.6</b>	85.5	69.7	87.0	76.6	89.0	78.0	<b>98.7</b>	84.9	90.8	85.2	86.8	76.9	85.7	83.9	75.3	66.3	73.1	71.8
22	75.0	<b>69.8</b>	73.4	<b>63.7</b>	77.0	69.3	81.0	78.8	88.3	75.0	91.9	<b>75.1</b>	94.5	86.2	89.5	84.9	82.6	78.5	85.0	83.3	77.4	72.7	72.7	69.6
23	78.2	73.4	74.7	71.9	81.0	70.3	80.0	74.2	86.0	79.9	89.0	81.7	95.9	86.7	91.0	83.7	86.0	78.1	84.6	82.4	77.8	70.9	72.7	66.1
24	79.2	75.8	74.7	71.4	80.3	71.4	81.2	74.2	81.5	80.4	90.8	78.2	90.8	85.4	89.0	80.6	85.0	75.5	84.7	78.0	78.9	69.3	72.6	68.1
25	77.8	74.7	77.2	73.3	79.9	73.1	82.6	73.6	85.6	80.9	90.1	77.4	96.1	84.8	91.0	77.2	83.1	71.9	85.0	77.7	79.3	68.5	71.0	63.2
26	77.3	74.2	78.0	74.0	79.4	74.0	83.1	74.7	88.1	80.4	88.4	80.0	89.6	80.0	88.2	<b>75.0</b>	83.5	79.8	84.1	80.8	75.0	<b>64.2</b>	77.5	70.1
27	76.7	73.7	77.9	75.0	83.0	69.2	81.2	75.3	85.4	80.5	89.4	77.1	90.3	77.9	90.0	81.2	85.9	77.0	82.5	79.6	74.9	71.2	79.1	77.0
28	76.5	73.1	79.0	74.8	80.5	74.0	82.1	74.7	83.9	78.6	92.3	76.9	91.0	80.2	89.9	79.7	87.0	80.9	83.2	79.0	74.3	70.8	81.4	77.0
29	81.0	73.7	—	—	83.0	77.0	81.0	73.7	84.9	80.3	90.8	81.6	89.4	81.0	88.0	83.4	89.0	81.9	85.0	80.2	74.2	71.4	<b>82.2</b>	77.0
30	82.0	74.6	—	—	81.2	77.0	80.2	70.0	84.0	77.2	92.0	83.0	91.0	84.3	88.0	83.0	<b>89.3</b>	77.4	84.0	81.9	75.3	70.0	79.9	75.7
31	82.0	73.2	—	—	79.7	74.3	—	—	—	79.2	—	—	88.5	81.3	90.9	83.0	—	86.0	80.6	—	—	—	78.7	69.2
Mean.	79.0	74.4	77.5	72.9	79.9	72.8	82.3	73.5	85.6	78.4	91.0	79.7	92.2	82.0	90.2	81.2	85.9	77.6	84.4	77.8	77.9	70.7	76.4	70.3

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is printed 75.0.

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

143. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres.

January, 1925.

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.	Vapour Pressure.*
1	80	81	83	83	82	82	81	84	84	95	94	93	89	91	93	98	94	88	91	86	78	72	73	74	85.5	6.6
2	76	77	76	79	79	82	86	84	92	87	95	94	79	87	79	77	71	75	74	76	80	75	75	71	80.3	6.2
3	72	72	71	71	77	82	87	84	93	88	89	78	84	79	84	77	83	82	83	84	82	85	90	93	81.6	5.8
4	94	95	92	91	90	88	89	83	82	81	82	82	84	89	92	95	96	95	94	94	96	95	94	95	90.3	5.8
5	90	87	88	86	85	79	89	84	88	92	96	86	86	87	84	84	87	91	87	88	89	87	91	84	87.5	6.1
6	83	83	82	82	82	79	80	79	78	74	74	63	62	69	80	85	91	90	93	93	92	89	89	92	81.7	5.5
7	92	95	87	87	87	88	88	86	84	88	86	89	86	85	88	87	90	91	91	90	90	88	84	80	88.0	7.6
8	80	80	85	88	89	90	95	96	96	92	89	95	95	96	94	95	94	98	96	87	97	100	91	88	91.7	7.9
9	88	86	87	82	78	80	80	82	84	84	78	74	73	71	74	76	83	85	90	93	94	95	95	94	83.5	6.3
10	94	94	95	94	88	88	88	89	93	86	86	86	93	93	90	88	89	90	91	96	96	96	97	92	91.5	8.0
11	96	94	93	95	94	94	92	90	93	95	95	92	93	92	93	82	78	89	91	90	92	91	92	91	91.6	8.2
12	89	90	89	93	87	86	91	91	89	93	98	90	90	87	87	89	89	87	87	86	86	87	90	91	89.3	6.8
13	92	88	89	87	92	92	94	90	91	93	93	91	91	89	89	90	88	85	83	77	75	74	75	85	87.3	8.2
14	89	93	97	92	92	93	97	74	78	82	72	68	73	82	74	78	80	85	87	83	90	95	95	90	84.8	7.9
15	95	87	86	84	85	85	82	78	85	82	75	84	74	76	75	78	84	87	86	88	91	91	96	85	84.2	6.8
16	87	87	88	89	83	84	84	79	80	76	76	78	79	82	84	88	95	96	96	96	94	98	98	100	87.1	6.9
17	98	100	98	100	100	99	97	97	98	94	94	95	97	96	97	97	96	97	96	97	96	96	98	97	97.2	9.4
18	95	100	100	100	100	100	100	97	97	96	93	93	95	94	95	96	96	93	95	93	95	98	98	99	96.5	9.5
19	100	97	97	91	88	89	93	94	87	87	87	87	87	90	84	86	85	90	89	91	91	90	91	89	89.0	8.1
20	91	87	91	92	89	89	95	97	95	95	94	91	91	91	89	91	93	93	91	89	95	95	94	95	92.1	7.5
21	95	96	98	98	95	94	96	96	98	97	97	95	92	90	92	91	91	92	93	93	90	88	88	88	93.6	6.9
22	90	87	92	93	92	90	88	85	84	80	80	80	76	81	82	83	86	85	82	85	91	94	94	94	86.3	5.1
23	92	92	95	95	94	98	97	87	92	92	92	95	92	89	89	90	96	95	89	89	87	89	87	89	91.9	7.2
24	87	89	89	88	86	81	87	88	88	92	89	86	81	84	86	92	92	89	90	92	95	85	79	79	87.9	7.2
25	80	84	84	82	85	84	84	81	83	82	81	86	85	85	85	81	82	82	84	84	89	87	86	86	83.7	6.3
26	84	79	87	88	88	88	88	91	91	94	87	88	84	80	78	83	83	84	77	78	79	76	75	75	83.7	6.3
27	73	76	79	76	76	75	79	76	75	79	73	71	76	77	76	73	78	83	85	79	80	81	82	83	77.4	5.5
28	84	85	85	86	87	94	96	95	94	94	96	95	95	91	90	95	97	97	95	92	82	89	79	91	91.6	6.3
29	94	93	92	88	94	93	96	98	97	100	95	90	84	78	82	84	78	84	79	76	89	82	79	75	87.6	6.8
30	84	77	75	85	85	82	87	87	90	92	94	100	89	89	88	88	90	92	93	96	96	95	97	89	88.9	7.9
31	80	74	77	85	84	85	90	88	89	95	91	89	89	89	88	91	89	87	90	89	87	88	83	81	86.7	6.9
Mean ...	87.9	87.3	88.0	88.1	87.5	87.5	89.5	87.4	88.7	88.0	87.7	86.6	85.4	85.6	85.9	86.5	88.0	88.9	88.9	88.1	89.3	89.2	88.7	87.2	87.8	7.0†
Vapour Pressure* ...	mb. 6.8	mb. 6.7	mb. 6.7	mb. 6.8	mb. 6.7	mb. 6.6	mb. 6.8	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. 7.2	mb. 7.1	mb. 7.1	mb. 7.0	mb. 7.0	mb. 6.9	mb. 6.9	mb. 6.8	mb. 6.8	7.0†	

144. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

February, 1925.

	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	92	85	80	81	82	79	78	77	77	78	80	78	81	76	75	79	86	85	85	86	90	80	87	87	82.1	6.1
2	88	89	93	92	88	90	92	91	91	90	90	94	94	94	95	84	74	73	80	85	85	86	91	87	87.5	7.4
3	90	94	92	94	90	90	92	94	94	89	90	84	89	92	96	88	90	81	83	84	78	80	77	82	88.3	7.8
4	84	84	84	82	84	87	84	86	94	88	92	84	84	80	84	88	87	75	79	89	93	86	95	90	85.8	6.9
5	90	93	92	88	93	94	96	93	87	84	78	72	76	87	82	88	85	84	84	91	84	86	85	84	86.6	7.5
6	88	87	88	91	91	88	88	89	88	88	87	91	80	80	86	82	89	91	86	83	82	84	86	85	86.5	6.0
7	85	85	83	83	82	80	83	84	78	70	71	70	68	68	71	75	89	96	92	90	84	85	90	92	81.3	5.5
8	93	96	96	100	99	93	91	88	86	90	92	96	97	96	97	96	87	80	81	85	76	77	82	84	90.1	8.4
9	81	83	85	89	90	90	89	90	81	77	83	82	79	79	87	92	89	90	91	85	92	93	92	95	86.6	6.7
10	92	88	91	87	85	85	91	89	86	94	93	90	84	89	82	91	83	74	88	89	86	93	94	90	87.4	7.7
11	97	96	96	92	92	92	92	91	98	98	99	98	98	99	100	97	98	97	97	91	91	91	91	91	94.9	6.0
12	89	91	91	90	89	89	86	87	87	88	85	86	82	81	79	83	87	92	92	91	91	91	91	91	87.9	5.6
13	91	91	91	91	91	87	85	89	91	93	94	93	86	87	81	83	86	88	88	90	91	91	88	86	89.0	5.8
14	87	88	90	90	91	96	96	96	96	93	90	92	90	95	93	93	93	97	96	96	91	91	91	91	92.5	5.8
15	91	91	91	91	91	91	91	91	91	91	94	95	95	95	95	96	96	91	87	85	86	95	95	91	91.5	5.9
16	93	93	96	96	93	91	91	91	92	91	94	89	86	84	85	87	84	85	88	88	88	89	88	91	89.8	6.4
17	90	88	88	88	87	84	85	84	85	84	82	84	83	83	82	81	78	81	85	96	86	84	84	84	85.0	6.3
18	84	85	84	84	79	79	80	85	79	84	81	83	80	80	74	78	82	76	81	81	82	85	86	86	81.6	5.9
19	83	87	81	83	83	82	83	83	83	83	82	77	77	75	74	75	78	83	83	85	88	90	88	82.1	5.6	
20	88	89	91	89	88	88	91	96	92	87	84	71	71	75	77	81	72	91	89	84	84	84	83	87	84.7	5.3
21	90	88	88	88	86	85	85	85	83	82	81	82	89	96	97	96	96	95	92	92	91	91	91	91	89.3	5.6
22	91	91	91	91	90	89	88	88	88	89	90	91	91	91	91	90	90	90	90	89	81	80	78	77	88.4	4.4
23	79	77	76	91	90	90	90	90	88	79	91	96	96	96	97	98	100	98	96	91	90	96	97	96	90.8	5.7
24	100	100	100	91	90	90	89	89	77	77	79	79	78	77	89	89	90	90	89	90	93	92	92	92	88.3	5.6
25	92	91	93	92	91	90	93	89	90	80	80	76	78	77	80	84	85	87	89	89	94	93	93	93	87	

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

145. Eskdalemuir : Louvred Hut :  $h_t$  (height of thermometer bulbs above ground) = 0.9 metres.

March, 1925.

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.	Vapour Pressure.*	
1	89	93	94	98	93	90	89	91	96	95	90	95	89	89	89	88	85	86	98	94	87	93	94	94	91.6	7.0	
2	95	90	96	89	84	84	87	84	84	80	80	81	84	82	76	73	79	85	85	84	84	88	85	84	84.5	6.2	
3	87	85	82	89	88	86	85	88	88	84	80	95	84	76	82	77	80	75	80	79	79	75	80	83	82.8	5.8	
4	82	82	84	82	82	83	84	86	84	70	67	69	63	66	68	78	78	81	82	85	86	88	90	93	79.5	5.9	
5	93	93	91	84	82	82	83	79	78	74	74	71	73	73	73	76	75	77	79	76	80	84	85	85	80.2	7.0	
6	86	86	85	85	84	85	84	84	91	78	80	79	78	79	78	72	76	78	78	77	74	75	76	77	80.4	8.0	
7	78	73	75	75	74	77	74	74	75	76	74	81	86	71	73	76	76	79	84	85	87	84	79	84	77.7	6.0	
8	84	82	82	83	82	81	79	84	94	85	73	65	63	63	61	65	77	70	72	79	79	81	81	81	81	76.6	4.4
9	80	82	82	79	78	77	77	78	76	71	70	70	65	64	62	61	64	65	69	71	73	73	71	72	72.3	4.5	
10	72	73	74	79	82	75	78	78	72	72	75	70	69	77	90	94	94	93	93	93	87	87	85	86	80.9	5.0	
11	81	81	78	77	77	76	82	82	86	92	88	82	72	72	72	75	72	73	79	80	82	80	82	82	79.4	5.4	
12	83	84	85	85	84	83	82	80	69	63	61	66	54	49	48	47	56	59	72	76	79	77	71	74	70.0	4.3	
13	73	75	76	78	80	84	88	89	93	86	90	88	88	81	82	77	81	79	80	82	84	85	88	86	82.8	6.4	
14	87	93	87	86	88	84	89	87	86	90	82	85	85	84	83	85	86	90	94	90	89	88	89	89	89	87.3	8.4
15	93	90	91	90	88	89	91	91	83	76	73	66	67	69	75	77	78	83	73	80	82	84	85	90	81.8	8.8	
16	86	88	92	91	97	94	97	94	97	96	88	83	72	74	73	73	79	82	89	83	81	82	83	76	85.7	8.0	
17	78	78	76	77	82	87	87	85	90	92	89	88	81	78	75	80	78	83	85	87	86	87	93	92	83.6	8.5	
18	96	96	96	92	91	91	90	95	96	94	74	73	77	77	69	65	69	74	70	73	72	77	79	80	82.2	7.0	
19	85	87	87	91	95	90	86	83	82	77	68	66	59	60	64	66	72	74	80	80	83	84	85	74	78.4	8.0	
20	81	88	89	89	88	88	94	88	86	83	79	71	78	86	83	87	84	88	96	90	90	94	94	93	86.6	6.3	
21	88	86	82	83	80	78	78	77	73	81	81	80	76	85	85	80	84	85	82	82	85	85	84	83	82.0	4.4	
22	84	83	83	81	78	75	74	70	68	66	64	60	58	56	55	56	60	63	70	78	84	85	86	85	71.7	4.2	
23	85	80	80	81	82	86	88	89	87	87	90	90	82	63	69	74	71	77	79	82	82	83	86	88	81.6	5.9	
24	88	84	84	89	88	92	90	88	78	84	71	61	61	62	63	67	75	76	79	79	80	78	84	81	78.6	5.9	
25	82	84	82	82	76	75	75	72	69	65	83	80	73	91	87	81	74	83	87	84	85	84	85	96	80.3	5.9	
26	91	89	89	89	86	85	85	84	80	85	74	73	66	68	72	74	77	80	82	84	82	82	83	84	81.3	6.0	
27	85	89	94	93	94	94	95	93	76	64	63	63	61	57	56	60	63	76	80	93	82	91	93	77	79.0	6.4	
28	79	81	81	85	85	82	78	71	62	62	56	57	53	56	54	56	60	66	69	72	77	80	80	81	70.0	5.6	
29	82	81	82	84	83	83	78	75	71	72	70	73	71	67	68	82	81	76	81	81	82	81	79	83	77.7	7.2	
30	92	89	93	92	92	91	92	93	89	79	77	75	75	72	70	72	80	87	88	86	83	84	83	83	83	84.0	7.6
31	84	83	82	84	85	87	88	88	91	90	90	89	94	92	92	89	93	87	88	89	87	82	79	83	87.3	7.6	
Mean	84.8	84.8	85.0	85.2	84.8	84.3	84.7	83.9	82.3	79.7	76.6	75.3	72.8	72.2	72.5	73.7	76.0	78.4	81.4	82.2	82.3	83.2	83.8	83.8	80.6	6.4†	
Vapour Pressure*	mb. 6.0	mb. 6.0	mb. 6.0	mb. 5.9	mb. 5.8	mb. 5.8	mb. 5.9	mb. 6.2	mb. 6.5	mb. 6.6	mb. 6.6	mb. 6.8	mb. 6.7	mb. 6.6	mb. 6.7	mb. 6.6	mb. 6.5	mb. 6.3	mb. 6.2	mb. 6.2	mb. 6.2	mb. 6.1	mb. 6.0	mb. 5.9	mb. 16.3		

146. Eskdalemuir : Louvred Hut :  $h_t$  = 0.9 metres.

April, 1925.

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.	Vapour Pressure.*
1	84	83	83	83	79	80	80	74	70	67	67	56	57	54	53	63	64	73	76	84	83	83	85	86	73.5	5.6
2	81	82	85	85	85	86	89	86	91	95	93	94	90	93	87	89	93	98	97	91	79	75	75	75	87.5	6.7
3	74	74	76	75	79	79	82	83	78	74	74	77	68	62	63	68	65	70	71	78	84	91	93	93	75.9	4.8
4	92	92	91	87	82	79	78	76	70	65	64	55	56	51	53	57	63	63	70	72	70	72	69	70	71.2	5.2
5	73	76	79	80	85	85	85	85	88	91	88	89	89	86	87	84	88	90	90	90	89	88	90	93	85.8	7.1
6	90	90	90	89	93	90	90	90	86	91	93	93	85	77	74	75	74	72	83	88	87	88	90	91	86.3	8.0
7	91	91	90	92	94	88	91	89	86	75	64	64	61	58	70	67	76	79	81	86	87	91	78	86	80.8	7.8
8	89	87	92	85	90	91	98	93	95	89	90	87	84	85	83	74	74	75	80	77	87	88	90	92	86.8	7.5
9	90	88	89	91	90	89	93	87	75	68	66	70	62	58	62	61	85	90	72	79	83	80	81	81	79.0	8.2
10	82	83	83	86	86	86	87	83	85	79	71	75	69	66	64	62	63	66	76	76	84	86	87	85	77.8	8.1
11	85	85	77	85	93	95	90	90	88	88	88	82	82	79	77	76	67	71	83	87	93	90	94	93	84.8	7.8
12	91	91	91	91	91	90	90	85	75	73	66	70	65	66	59	57	65	65	80	88	96	95	96	93	80.4	7.2
13	89	90	91	90	90	88	92	96	97	86	84	69	60	61	59	57	68	73	80	92	82	83	85	82	81.3	7.6
14	80	85	82	83	100	85	88	80	76	78	69	65	71	60	63	63	72	79	80	78	88	97	96	95	79.4	6.9
15	86	75	82	87	86	81	81	83	74	74	74	69	65	77	72	71	86	71	77	92	85	88	92	94	80.1	6.5
16	88	88	86	85	88	82	84	77	77	69	60	71	62	64	63	66	66	75	78	80	81	77	77	76	76.2	7.3
17	76	74	79	73	75	79	75	71	68	65	63	71	58	69	66	77	73	88	81	88	92	91	97	97	76.5	7.3
18	98	96	94	95	95																					



Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

147. Eskdalemuir : Louvred Hut : h<sub>t</sub> (height of thermometer bulbs above ground) = 0.9 metres.

May, 1925.

Table with 30 rows (days 1-31) and 27 columns (hours 1-24, Mean, Vapour Pressure\*). Each cell contains percentage values. Mean row shows 89.7, 89.3, 89.8, 90.0, 88.6, 86.7, 85.8, 82.8, 80.3, 78.3, 76.3, 75.7, 74.0, 72.2, 74.7, 76.6, 78.1, 82.4, 86.0, 87.5, 88.4, 89.4, 89.1, 83.4, 9.4†. Vapour Pressure\* row shows mb. values from 8.9 to 9.3†.

148. Eskdalemuir : Louvred Hut : h<sub>t</sub> = 0.9 metres.

June, 1925.

Table with 30 rows (days 1-30) and 27 columns (hours 1-24, Mean, Vapour Pressure\*, G.M.T.). Each cell contains percentage values. Mean row shows 84.7, 86.3, 85.5, 85.8, 84.6, 82.5, 78.5, 73.2, 68.2, 66.7, 64.9, 63.0, 62.0, 62.0, 62.5, 63.3, 65.3, 67.9, 71.9, 76.6, 79.2, 81.6, 82.9, 83.7, 74.3, 10.9†. Vapour Pressure\* row shows mb. values from 9.7 to 10.8†. G.M.T. row shows hours 1-24 and Mean.

\* Computed from the mean temperatures and the mean relative humidities. † Mean of the column. ‡ Mean of the row.



Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

151. Eskdalemuir : Louvred Hut : h<sub>t</sub> (height of thermometer bulbs above ground) = 0.9 metres.

September, 1925.

Table with 26 columns (Day 1-24, Mean, Vapour Pressure) and 31 rows (Days 1-30, Mean, Vapour Pressure). Data includes relative humidity percentages and vapour pressure in millibars.

152. Eskdalemuir : Louvred Hut : h<sub>t</sub> = 0.9 metres.

October, 1925.

Table with 26 columns (Day 1-24, Mean, Vapour Pressure) and 31 rows (Days 1-30, Mean, Vapour Pressure). Data includes relative humidity percentages and vapour pressure in millibars.

\* Computed from the mean temperatures and the mean relative humidities.

† Mean of the column.

‡ Mean of the row.

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

153. Eskdalemuir : Louvred Hut : h<sub>t</sub> (height of thermometer bulbs above ground) = 0.9 metres.

November, 1925.

Table for November 1925 showing relative humidity percentages and vapour pressure for Eskdalemuir. Columns include Day (1-30), hours (1-24), Mean, and Vapour Pressure (mb.).

154. Eskdalemuir : Louvred Hut : h<sub>t</sub> = 0.9 metres.

December, 1925.

Table for December 1925 showing relative humidity percentages and vapour pressure for Eskdalemuir. Columns include Day (1-31), hours (1-24), Mean, and Vapour Pressure (mb.).

\* Computed from the mean temperatures and the mean relative humidities.

† Mean of the column.

‡ Mean of the row.

HUMIDITY: ANNUAL MEANS OF HOURLY VALUES.

From the monthly means for exact hours, Greenwich Mean Time.

155. Eskdalemuir: (Louvred Hut) ht = 0.9 metres.

1925.

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	88.0	88.2	88.5	88.4	88.4	87.7	87.1	84.9	82.7	81.1	78.9	77.0	75.8	75.6	76.0	77.6	79.7	81.3	83.5	85.4	86.6	87.1	87.5	87.8	83.5
Vapour Pressure (in millibars)	7.9	7.9	7.8	7.8	7.8	7.9	8.1	8.3	8.6	8.8	8.9	9.0	9.1	9.1	9.1	9.1	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	8.5

RELATIVE HUMIDITY: MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

156. Eskdalemuir: (Louvred Hut) ht = 0.9 metres.

1925.

G.M.T.	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.
Jan.	87.8	+0.1	-0.5	+0.2	+0.3	-0.3	-0.3	+1.7	-0.4	+0.9	+1.1	-0.1	-1.2	-2.4	-2.2	-1.9	-1.2	+0.2	+1.2	+1.2	+0.3	+1.6	+1.4	+0.9	-0.6
Feb.	87.7	+1.9	+1.9	+1.9	+2.0	+1.5	+0.7	+1.0	+1.2	-0.3	-1.6	-1.1	-1.8	-3.0	-2.1	-1.5	-0.9	-0.5	-0.7	-0.1	+0.6	-0.5	-0.3	+0.4	+1.3
Mar.	80.6	+4.1	+4.1	+4.3	+4.5	+4.1	+3.7	+4.1	+3.2	+1.7	-0.9	-4.0	-5.3	-7.7	-8.3	-8.1	-6.9	-4.5	-2.1	+0.9	+1.7	+1.9	+2.8	+3.4	+3.4
April	81.0	+5.6	+5.9	+6.1	+6.1	+7.3	+6.0	+6.3	+2.6	-1.9	-2.6	-6.3	-8.4	-12.1	-10.9	-12.1	-8.8	-5.1	-3.6	-0.6	-3.4	+5.4	+5.4	+6.1	+6.1
May	83.4	+6.3	+5.9	+6.3	+6.5	+6.6	+5.2	+3.2	+2.4	-0.6	-3.1	-5.1	-7.1	-7.7	-9.4	-11.1	-8.7	-6.8	-5.3	-1.0	+2.6	+4.1	+5.0	+6.0	+5.8
June	74.3	+10.4	+12.0	+11.3	+11.5	+10.3	+8.2	+4.2	-1.1	-6.1	-7.6	-9.4	-11.3	-12.3	-12.3	-11.8	-11.0	-9.0	-6.3	-2.4	+2.3	+4.9	+7.3	+8.6	+9.5
July	80.0	+8.6	+9.8	+9.5	+9.2	+9.8	+8.1	+5.4	+0.3	-2.9	-6.2	-8.4	-9.4	-9.7	-11.3	-11.6	-10.5	-8.3	-6.6	-3.1	+0.9	+4.9	+6.3	+7.2	+7.9
Aug.	84.8	+5.5	+5.2	+5.1	+5.0	+5.9	+5.6	+5.3	+1.4	-3.1	-4.6	-5.9	-9.2	-8.7	-10.3	-7.4	-8.1	-5.7	-1.9	+1.6	+4.3	+4.8	+5.1	+4.9	+5.4
Sept.	82.1	+4.4	+4.9	+5.4	+5.2	+5.4	+5.3	+3.8	+1.2	-0.7	-3.1	-7.1	-9.0	-8.9	-9.2	-10.0	-7.0	-3.5	-1.9	+1.6	+2.7	+4.4	+5.2	+5.3	+5.7
Oct.	85.6	+3.7	+3.2	+3.4	+4.6	+4.5	+5.0	+5.0	+3.5	+0.3	-1.9	-5.0	-7.6	-7.5	-7.7	-7.7	-5.6	-2.1	+0.4	+0.9	+1.3	+1.5	+1.6	+2.7	+3.5
Nov.	87.5	+2.4	+3.4	+2.9	+3.1	+3.2	+2.6	+2.0	+1.5	+1.2	-0.2	-3.7	-5.6	-8.0	-8.3	-5.3	-1.7	-0.4	+0.3	+0.2	+1.7	+1.9	+2.1	+2.4	+2.4
Dec.	87.7	+1.4	+1.0	+1.0	+0.9	+0.5	+0.5	+0.8	+0.8	+1.5	+1.1	+0.4	-2.6	-4.2	-3.3	-1.9	-1.1	+0.1	+0.3	-0.1	+0.7	+1.5	+0.4	-0.3	+0.5
Year	83.5	+4.5	+4.7	+4.8	+4.9	+4.9	+4.2	+3.6	+1.4	-0.8	-2.5	-4.6	-6.5	-7.7	-7.9	-7.5	-6.0	-3.8	-2.2	-0.1	+1.3	+3.0	+3.5	+4.0	+4.2

RAINFALL: ANNUAL TOTALS OF HOURLY VALUES.

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

157. Eskdalemuir: H<sub>r</sub> = 242.0 metres + 0.4 metres.

1925.

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	63.3	57.8	61.6	56.5	48.1	69.4	67.3	67.2	68.1	54.8	78.5	70.0	54.5	58.3	73.6	74.8	80.7	79.9	66.3	69.2	59.9	64.1	55.6	48.3	1547.8
Duration	49.4	49.7	52.6	48.2	45.9	55.9	56.2	47.1	49.6	38.1	41.5	46.5	43.8	45.8	47.9	43.9	49.7	53.9	52.2	53.1	51.0	44.1	43.4	45.0	1154.5

† The totals and durations for individual months are printed in the tables on the following pages.

NOTES ON RAINFALL.

158. Eskdalemuir.

1925.

Notable Falls of the Year.

(a) The greatest amount in a 60-minute period was 10.8 mm., which was recorded between 15h. and 16h., July 26th. There were a number of occasions when 4, 5, 6 or 7 mm. were recorded in the space of an hour.

(b) Details of the greatest continuous falls are as follows:—

Date.	Amount. mm.	Duration. hrs.
January 1st	38	10.2
January 29th	33	7.8
February 14th	30	23.3
April 18th..	41	20.5
April 22nd	38	11.5
May 27th ..	47	19.3
May 29th ..	25	7.6
August 12th	31	11.3

Wet Periods.

(a) There were three "rain spells" (i.e., periods of fifteen or more consecutive days on each of which 0.2 mm. or more of rain fell), viz., January 28th to February 18th, April 22nd to May 9th, and October 20th to November 8th.

(b) No period merits description as a "wet spell" (i.e., a period of fifteen or more consecutive days on each of which 1.0 mm. or more of rain fell), but the period December 18th to December 31st, with fourteen days, was nearly a wet spell. The total fall during this period amounted to 107.6 mm., the maximum and minimum daily falls being 22.3 mm. and 1.0 mm. respectively.

Dry Periods.

(a) There were two periods of "absolute drought" (i.e., fifteen or more consecutive days on each of which less than 0.2 mm. of rain fell), viz., June 7th to June 29th, and November 9th to November 23rd.

(b) There was one period of "partial drought" (i.e., twenty-nine or more consecutive days, the mean rainfall of which did not exceed 0.2 mm. per day), viz., June 4th to July 8th.

RAINFALL.

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

159. 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. January, 1925

Table for January 1925 rainfall data at Eskdalemuir. Columns include Day (0-1 to 24), rainfall in mm for each hour, and Total Duration in hr. Summary row shows 7.0 hr total for 31 days.

160 Eskdalemuir : H\_r = 242.0 metres + 0.4 metres.

February, 1925.

Table for February 1925 rainfall data at Eskdalemuir. Columns include Day (1 to 28), rainfall in mm for each hour, and Total Duration in hr. Summary row shows 10.0 hr total for 28 days.



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

163. 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. May, 1925.

Table with columns: Day, 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. Rows 1-31 and Sum. Total Duration. G.M.T.

164. Eskdalemuir : H<sub>r</sub> = 242.0 metres + 0.4 metres.

June, 1925.

Table with columns: 1-31, mm., hr., G.M.T. Rows 1-31 and Sum. Total Duration. G.M.T.



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

165. 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. **July, 1925.**

Day.	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
	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	0.5
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	3	1	...	...	0.9	3.5
7	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.9
8	...	...	...	...	...	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	1.2
9	...	...	...	...	...	...	...	5	...	1	...	...	...	...	...	...	...	4	4	4	...	5	8	2	3.3	5.8
10	2	3	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	3.3
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2	4.0
15	...	2	...	1.0	...	1	6	5	...	...	...	1	7	...	...	...	...	...	...	...	...	...	...	...	1.0	3.1
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	1	3	1	...	...	...	...	...	...	3.9	8.8
17	1	1	2	2	4	5	4	3	3	...	...	...	...	2	1.1	1	...	...	...	...	...	...	...	...	1.7	1.1
18	...	...	...	...	...	...	1.0	2	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.2
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	1.0	1.3	...	...	...	...	...	...	...	...	...	...	...	2.3	1.2
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.4	3.4	1.0
26	3.0	1.5	1.5	1.3	2.1	2.0	2.4	8	1.0	...	...	...	...	...	10.8	4.4	2.9	2.2	1.0	...	...	...	...	...	36.9	13.5
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	0.2	0.5
29	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1.9	3	4	...	1.3	1	...	...	...	...	4.4	2.4
30	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	0.2	0.1
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	3.4	2.1	2.3	2.6	2.5	3.3	4.5	2.3	1.3	0.1	0.0	1.3	2.0	0.8	3.7	11.3	5.6	3.4	2.8	3.0	0.4	0.6	0.8	3.6	63.7	51.1
Total Duration.	hr. 2.8	hr. 2.5	hr. 3.2	hr. 3.3	hr. 2.0	hr. 3.3	hr. 4.2	hr. 3.2	hr. 1.7	hr. 0.2	hr. 0.0	hr. 0.7	hr. 1.4	hr. 1.1	hr. 2.2	hr. 2.2	hr. 2.4	hr. 2.7	hr. 3.0	hr. 3.8	hr. 1.4	hr. 1.2	hr. 1.0	hr. 1.6	hr. 51.1	

166. Eskdalemuir :  $H_r = 242.0$  metres + 0.4 metres.

**August, 1925.**

	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	1.4	8	2	...	...	...	...	...	4.0	2.7
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	2	1	...	...	...	...	...	...	4.0	2.0
3	...	...	...	...	...	...	...	...	...	...	1.1	3	1	5	6	4	1	...	3	4	...	2	...	...	4.0	5.3
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	1	...	2	4	4	1.4	3.7	...
6	4	1	8	1.4	9	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.7	4.6	
7	...	...	...	...	...	...	...	...	...	...	...	1	7	2	5	2.1	2.2	1.5	6.8	1.4	1	...	1	4	16.1	7.6
8	1.9	1.1	2	...	...	...	...	...	...	...	5	1	...	...	...	...	...	...	...	...	...	...	...	...	3.8	3.1
9	3	6	1.3	4.1	3.8	4.5	4.1	1.4	4	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	20.8	8.3
10	3.1	6.0	4	4	1	1.8	1	...	1	...	...	2.6	...	4	...	3.2	3.8	1.8	...	...	...	...	...	...	23.8	5.6
11	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	1	0.6	0.7
12	1	7	8	1.0	1.2	1.1	2.3	7.5	5.5	5.8	3.2	1.4	9	6	2	1	1	1	4	6.7	6	1	7	2	41.3	17.4
13	4	4	2	1	3	2.5	6	7	...	...	...	...	...	1.9	5	2.1	...	...	...	...	2.0	9	1	12.9	9.8	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	0.2	0.7
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	0.3	0.2
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	1.1
21	...	1	1	5	1	...	...	...	...	1.2	2	...	...	3	...	9	...	...	2	1	...	3	1.4	5.4	4.0	
22	5	2	1	...	3	...	1	...	...	...	...	...	...	9	4	1	...	...	...	2	6	...	...	3.4	6.0	
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	...	...	7	...	...	...	...	1.4	1.6	
24	...	...	...	...	...	...	...	...	...	...	...	2	1.0	...	...	...	...	2	1	...	...	...	...	1.5	2.3	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	(.5)	8	1.1	4	7	8	4	2.8	...	...	...	...	...	...	7.5	5.8	
27	1	1.0	1	...	...	...	...	...	5	...	...	2	...	...	...	...	...	...	...	...	...	...	...	1.9	2.3	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4	2	1.2	8	2	...	...	...	2.9	2.8	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	2	3	...	4	3	2	4	4	1	...	...	...	2.3	6.2	
31	...	...	...	1	1	2	...	...	7	8	5	2	2	...	7	2	4	7	...	...	...	...	...	4.8	7.3	
Sum.	6.8	10.2	4.0	7.6	6.8	10.2	7.2	9.7	7.2	8.3	6.8	6.5	2.7	5.6	4.5	6.2	11.0	9.9	11.8	12.4	2.3	3.3	2.4	2.6	166.0	111.1
Total Duration.	hr. 5.1	hr. 5.3	hr. 6.5	hr. 5.1	hr. 4.8	hr. 4.7	hr. 3.5	hr. 2.8	hr. 3.6	hr. 2.6	hr. 5.0	hr. 4.3	hr. 3.5	hr. 5.0	hr. 4.3	hr. 5.2	hr. 7.1	hr. 5.3	hr. 6.0	hr. 7.5	hr. 4.6	hr. 2.4	hr. 2.7	hr. 4.2	hr. 111.1	
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.

167. 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.

September, 1925.

Day.	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
	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	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1.2	...	...	...	...	...	...	...	...	...	...	0.7
3	...	7	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	6	3	...	...	...	...	2.8
4	...	...	...	...	...	6	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	0.6
9	...	...	...	...	...	...	...	...	...	...	(.1)	(...)	...	...	...	...	...	...	...	...	4	...	...	...	...	0.3
10	...	2	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	7.8
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3
12	...	...	...	...	...	...	...	...	...	...	...	...	...	7	...	...	1	...	...	...	...	...	...	...	...	0.8
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	3	...	6	1	1	2	2	1	1	...	...	...	...	...	...	4	...	...	...	...	5.7
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	1.0	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9
17	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	1	5	1	1	...	...	...	...	...	...	4.5
18	...	1	4	2	3	...	...	...	...	...	...	...	(.1)	(...)	...	...	...	...	...	...	2	...	...	...	...	2.8
19	2.9	2	2.0	1	...	...	...	...	...	...	...	...	...	...	...	...	9	1.9	1.5	2	...	...	...	...	...	6.2
20	...	4	1.6	2.4	1.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.2
21	...	1	2.2	1.7	4	9	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8
22	...	...	...	...	...	1.8	2.7	1.4	1.6	3	2.1	1.2	...	...	...	...	...	...	...	...	...	...	...	...	...	12.5
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	2	3	...	...	...	0.2
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	9	2.2	2.2	2.6	1.0	2	1	9.4	8.0
26	...	...	...	...	...	1	...	1	1	1	4	4	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	1	...	2	3	3	...	...	...	...	...	...	1	1	...	3	4	1	1	2	...	...	...	...	6.2
29	...	...	...	...	...	7	5	8	5	...	8	5	...	...	...	...	...	...	...	...	...	...	...	...	...	5.2
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum	4.0	4.0	6.6	3.1	2.0	4.8	4.0	3.6	2.3	1.2	8.0	2.5	0.4	1.6	1.5	0.4	2.1	3.6	8.9	7.0	5.0	9.5	7.7	2.2	96.0	81.5
Total Duration.	hr. 2.8	hr. 2.8	hr. 4.3	hr. 2.3	hr. 1.4	hr. 5.0	hr. 3.0	hr. 4.0	hr. 3.6	hr. 2.0	hr. 3.7	hr. 3.7	hr. 1.8	hr. 2.6	hr. 1.3	hr. 1.0	hr. 3.7	hr. 4.1	hr. 5.5	hr. 6.9	hr. 4.0	hr. 4.2	hr. 4.9	hr. 3.2	hr. 81.5	

168. Eskdalemuir :  $H_r$  = 242.0 metres + 0.4 metres.

October, 1925.

	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.
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	1	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	2	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0
6	...	...	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	4	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.0
13	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(.1)	(...)	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	8	1.7	2.5	1.4	2.6	3.4	1.0	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.3
18	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	4	2	1	...	2	1.4	1.9	2	1.5	...	...	...	1.7	1.2	1.7	2.4	1.9	1.4	4	2	2	1.2	1	1	18.4	17.9
21	1	2	1	1.6	8	...	3	1	2	1	...	...	...	...	...	...	3	6	1.2	...	...	...	1	...	...	9.0
22	...	...	...	...	2	1.3	1.5	4.4	4	8	4.4	7	7	...	7	6	3	2	...	...	...	5	1.0	1.1	18.8	9.6
23	2	8	2	8	...	2.0	8	9	1.1	8	...	...	...	...	2	5.6	1.2	9	1	...	...	...	...	...	...	9.1
24	...	...	1	4	...	2	...	...	...	...	8	...	...	4	6	8	...	...	...	...	...	...	...	...	...	2.7
25	...	...	...	...	4	...	...	1	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	1.2
26	2	...	1.8	1.5	2.2	2.2	1.3	4	...	...	9	2.5	1.7	5.1	3.0	1	...	...	...	...	...	...	1.3	8	25.0	10.8
27	...	1	...	...	5	5.8	3	...	...	1.8	4.6	2.4	2.0	1	1.8	6	1	4	...	...	...	...	...	...	...	7.7
28	...	...	...	...	2	1	1	...	...	...	...	...	...	...	...	...	2	1.1	5	2.0	2.5	4.4	2.2	13.3	8.1	
29	5	6	2.0	6	...	...	...	...	...	...	...	3	1.2	2.7	2.4	2.6	1.3	3	...	2	2.3	1.0	4	18.4	12.5	
30	6	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2
31	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	8	1.8	...	...	...	...	...	...	...	...	3.2
Sum.	2.3	1.9	5.5	7.0	7.2	14.9	9.5	9.7	4.3	3.9	10.7	5.8	6.5	8.2	11.0	13.3	8.0	4.7	3.0	2.7	3.2	7.0	8.8	5.4	164.5	117.2
Total Duration.	hr. 4.3	hr. 3.4	hr. 5.8	hr. 6.2	hr. 6.1	hr. 7.2	hr. 8.7	hr. 7.0	hr. 5.1	hr. 3.0	hr. 3.0	hr. 3.3	hr. 3.6	hr. 3.9	hr. 5.2	hr. 5.6	hr. 4.4	hr. 4.4	hr. 3.6	hr. 3.6	hr. 3.2	hr. 4.4	hr. 6.2	hr. 6.0	hr. 117.2	
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	—







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

175. Eskdalemuir :  $h_s$  (height of recorder above ground) = 1.5 metres.

May, 1925.

Day.	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	11 to	Noon	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	4.	5.	6.	7.	8.	9.	10.	11.	Noon to 13.	14.	15.	16.	17.	18.	19.	20.	21.	Time G.M.T.			Inten-sity.	$p/p_0$ sec. Z.	Sky.	
	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	—	...	...	...	1	...	4	4	...	3	9	3	3	2	...	...	...	—	2.9	19	...	...	...	
2	—	...	...	...	...	...	...	...	...	4	5	2	...	4	...	...	...	—	1.5	10	...	...	...	
3	—	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	—	3	2	...	...	...	
4	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	...	...	...	...	...	
5	—	...	...	...	...	...	...	...	...	3	1.0	8	1.0	4	2	...	...	—	3.7	24	...	...	...	
6	—	...	...	...	...	...	...	...	1	8	7	6	2	2	1	...	...	—	3.4	22	...	...	...	
7	—	...	...	1	7	1.0	6	9	4	1	5	6	...	...	...	...	...	—	4.9	31	...	...	...	
8	—	...	...	4	3	1	4	...	...	...	...	...	...	...	...	...	...	—	1.2	8	...	...	...	
9	—	...	...	5	2	3	1	...	...	...	...	...	...	5	...	...	...	—	1.6	10	...	...	...	
10	—	...	...	...	5	3	8	8	1.0	1.0	9	6	8	1.0	8	...	...	—	8.5	54	...	...	...	
11	—	...	...	...	...	...	...	...	...	...	...	9	4	9	9	...	...	—	3.1	20	...	...	...	
12	—	...	...	6	1	2	3	...	...	...	...	...	...	...	...	...	...	—	1.2	7	...	...	...	
13	—	...	8	9	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	1	...	...	...	—	10.5	66	...	...	...	
14	—	...	...	2	1.0	1.0	1.0	9	7	9	8	9	9	4	3	...	...	—	9.0	56	...	...	...	
15	—	...	...	...	...	2	1	1	7	6	8	1.0	8	1	...	...	...	—	4.4	27	...	...	...	
16	...	...	...	...	...	...	...	...	...	1	9	9	...	...	...	...	...	...	1.0	6	...	...	...	
17	...	...	...	4	4	1	1	9	1.0	8	1.0	6	1	...	...	...	...	...	5.4	33	...	...	...	
18	...	...	3	1.0	1.0	6	...	...	...	...	...	...	...	1	...	...	...	...	3.0	18	...	...	...	
19	...	...	...	...	...	6	5	5	...	...	...	3	...	...	5	...	...	...	2.4	15	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
21	...	...	...	2	...	1	6	7	9	1.0	1.0	1.0	9	1.0	1.0	1.0	2	...	9.6	58	...	...	...	
22	...	...	...	2	2	5	2	...	...	...	...	6	6	1	3	...	...	...	2.7	16	...	...	...	
23	...	...	...	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	5	3	...	...	...	
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25	...	...	...	...	...	...	...	...	2	...	1	4	2	1	...	...	...	...	1.0	6	...	...	...	
26	...	...	...	...	...	7	4	4	8	9	8	4	...	...	...	...	...	...	4.4	26	...	...	...	
27	...	...	...	...	...	...	...	...	...	4	6	9	1.0	9	8	1.0	2	...	5.8	35	...	...	...	
28	...	...	...	...	...	...	1	5	2	2	5	1.0	3	...	...	...	...	...	2.8	17	...	...	...	
29	...	...	...	...	...	...	...	1	5	1	5	...	...	...	...	...	...	...	1.2	7	...	...	...	
30	...	...	...	...	8	6	7	7	5	3	6	4	1	...	...	...	...	...	4.8	29	...	...	...	
31	...	...	...	1	6	3	2	3	3	4	2	3	...	...	...	...	...	...	2.7	16	...	...	...	
Sum.	...	...	1.1	5.0	6.8	7.6	7.6	8.3	9.7	9.5	12.2	13.5	8.9	6.0	4.9	2.0	4	...	103.5	—	—	—	—	
Mean.	...	...	.04	.16	.22	.25	.25	.27	.31	.31	.39	.44	.29	.19	.16	.06	.01	...	3.34	21	—	—	—	

176. Eskdalemuir :  $h_s$  = 1.5 metres.

June, 1925.

Day.	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	11 to	Noon	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	4.	5.	6.	7.	8.	9.	10.	11.	Noon to 13.	14.	15.	16.	17.	18.	19.	20.	21.	Time G.M.T.			Inten-sity.	$p/p_0$ sec. Z.	Sky.	
	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	...	...	...	5	7	5	2	3	7	6	4	4	...	...	4	1	...	...	4.8	28	...	...	...	
2	...	1	...	1	...	3	3	6	2	9	9	9	1.0	7	8	1.0	3	...	8.1	48	...	...	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	...	...	...	...	...	...	...	...	...	...	2	6	5	4	7	7	4	...	3.5	21	...	...	...	
5	...	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	2	...	...	...	10.9	64	...	...	...	
6	...	...	...	...	1	1.0	8	4	...	4	4	5	3	1.0	7	8	1	...	6.5	38	...	...	...	
7	...	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	1.0	1.0	1.0	1.0	1.0	4	...	14.5	85	...	...	...	
8	...	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	1.0	3	...	15.2	89	...	...	...	
9	...	1	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	...	14.4	84	...	...	...	
10	...	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	1.0	1.0	1	...	14.7	85	11.59	59	1.18 Clear.	
11	...	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	1.0	7	4	...	...	...	12.0	69	...	...	...	
12	...	...	...	4	1.0	1.0	9	6	1	3	8	5	7	4	2	1.0	9	...	8.8	51	...	...	...	
13	...	...	6	9	1.0	9	6	3	...	...	...	...	...	...	...	...	...	...	4.3	25	...	...	...	
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	1.0	8	...	15.7	91	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	...	...	...	...	1	...	...	...	...	1	...	6	7	2	...	...	...	1.7	10	...	...	...	
17	...	1.0	8	1.0	1.0	9	9	3	8	7	1.0	6	5	8	1.0	9	...	...	12.2	70	...	...	...	
18	...	1.0	1.0	8	1.0	1.0	9	1.0	8	1.0	9	9	9	1.0	1.0	1.0	4	...	14.6	84	...	...	...	
19	...	...	3	1.0	1.0	7	1.0	1.0	2	...	...	...	...	...	...	...	...	...	5.2	30	...	...	...	
20	...	...	...	...	...	...	...	...	...	...	4	6	1.0	7	5	...	...	...	3.2	18	...	...	...	
21	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	9	9	1.0	1.0	1.0	8	...	15.5	89	...	...	...	
22	...	9	1.0	1.0	1.0	1.0	9	1.0	9	1.0	8	8	9	1.0	1.0	8	2	...	14.2	82	...	...	...	
23	...	2	...	2	5	1.0	9	1.0	1.0	8	1.0	1.0	1.0	1.0	1.0	1.0	6	...	12.2	70	...	...	...	
24	...	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	2	...	...	14.0	81	...	...	...	
25	...	1	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	...	...	...	12.8	74	...	...	...	
26	...	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...	...	...	8	5	...	...	...	
27	...	...	...	...	...	2	9	6	1.0	1.0	9	9	1	9	9	...	...	...	7.5	43	...	...	...	
28	...	...	2	1.0	1.0	1.0	1.0	1.0	1.0	1	...	...	...	1	...	...	4	...	6.8	39	...	...	...	
29	...	...	...	...	1	...	1	3	2	6	7	1.0	1.0	6	5	...	...	...	5.2	30	...	...	...	
30	...	...	...	...	...	3	2	1	...	5	4	1	...	...	...	...	...	...	1.7	10	...	...	...	
Sum.	...	8.1	13.9	16.9	18.4	20.0	19.5	18.6	17.4	17.4	18.5	18.3	18.1	18.6	17.1	14.1	6.1	...	261.0	—	—	—	—	
Mean.	...	.27	.46	.56	.61	.67	.65	.62	.58	.58	.62	.61	.60	.62	.57	.47	.20	...	8.70	50	—	—	—	
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.	hr.	hr.	hr.	hr.	hr.	hr.	%	h. m.	mw/cm <sup>2</sup>		

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

177. Eskdalemuir :  $h_s$  (height of recorder above ground) = 1.5 metres.

July, 1925.

Day.	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 Angström Pyrheliometer.			
	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>	Sky.
1	...	...	...	5	1.0	1.0	1.0	6	9	6	9	1	2	1	1	...	...	...	7.0	41	...	...	...	
2	...	...	...	...	...	2	8	1.0	1.0	8	9	7	7	9	1.0	1.0	8	...	9.8	57	...	...	...	
3	...	...	...	...	...	...	1.0	7	6	3	9	3	7	3	3	6	...	...	5.7	33	...	...	...	
4	...	...	...	...	...	1	4	4	2	7	2	...	...	...	...	...	...	...	2.0	12	...	...	...	
5	...	6	1.0	1.0	1.0	9	1.0	8	6	9	9	...	2	...	...	...	...	...	8.9	52	...	...	...	
6	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...	...	
7	...	...	...	...	...	...	5	7	6	2	4	2	6	2	1.0	8	2	...	5.4	51	...	...	...	
8	...	...	...	5	1.0	1.0	1.0	1.0	1.0	4	7	2	5	1	...	...	...	...	7.4	43	...	...	...	
9	...	...	...	...	...	...	...	6	4	6	3	...	...	...	...	...	...	...	1.9	11	...	...	...	
10	...	...	...	...	...	...	...	1	...	3	1.0	3	...	...	3	1	2	...	2.3	13	...	...	...	
11	...	...	...	7	3	8	6	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	...	11.7	69	...	...	...	
12	...	...	...	...	...	...	6	1.0	1.0	9	9	1.0	7	9	7	4	...	...	8.1	47	...	...	...	
13	...	...	...	...	...	5	5	8	3	1	7	5	1.0	7	9	7	4	...	7.1	42	...	...	...	
14	...	...	4	1.0	1.0	1.0	1.0	1.0	1.0	3	4	2	2	9	2	...	...	...	8.6	51	11 27	72	1 22	Ci-St.
15	...	...	...	...	...	...	...	...	...	...	3	1	2	3	...	1	...	...	1.0	6	...	...	...	
16	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	3	2	...	...	...	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	...	...	...	...	...	2	6	7	4	6	4	1.0	4	2	3	1	2	...	5.1	31	...	...	...	
19	...	4	8	3	7	1.0	1.0	7	7	8	1.0	9	7	5	6	3	...	...	10.4	63	...	...	...	
20	...	...	1	6	9	4	4	...	...	...	...	...	...	...	...	...	...	...	2.4	15	...	...	...	
21	...	...	...	...	1	6	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3	...	...	9.8	59	11 57	77	1 21	Clear.
22	...	...	4	1.0	9	6	1	...	...	3	6	2	8	1	8	...	...	...	5.8	35	...	...	...	
23	...	...	1	2	7	6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	...	...	...	11.3	69	...	...	...	
24	...	...	...	...	...	...	...	...	...	2	9	1.0	1.0	3	...	...	...	...	3.4	21	...	...	...	
25	...	...	3	9	9	1.0	8	2	7	1.0	1.0	...	2	...	...	...	...	...	7.4	45	...	...	...	
26	...	...	...	...	...	...	...	...	...	5	1	...	...	...	...	...	...	...	6	4	...	...	...	
27	...	...	1	8	9	1.0	1.0	8	9	1	5	1.0	7	3	4	5	6	...	9.6	59	...	...	...	
28	...	...	7	1.0	1.0	1.0	1.0	3	6	...	...	...	...	...	...	...	...	...	5.6	35	...	...	...	
29	...	...	...	...	1	4	8	5	...	...	...	...	1	3	...	...	...	...	2.2	14	...	...	...	
30	...	...	...	1	2	4	7	6	4	2	2	1.0	5	4	3	6	...	...	5.6	35	...	...	...	
31	...	1	9	...	4	1	...	...	...	...	...	...	...	1	7	3	...	...	2.6	16	...	...	...	
Sum.	...	1.1	4.8	8.8	11.1	12.8	16.7	14.9	14.3	12.1	16.0	12.8	11.7	10.2	10.2	8.2	3.4	...	169.1	—	—	—	—	—
Mean.	...	.04	.15	.28	.36	.41	.54	.48	.46	.39	.52	.41	.38	.33	.33	.26	.11	...	5.45	33	—	—	—	—

178. Eskdalemuir :  $h_s$  = 1.5 metres.

August, 1925.

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 Angström Pyrheliometer.			
	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>	Sky.
1	...	...	...	...	...	...	...	1	3	...	1	...	...	...	...	...	...	...	5	3	...	...	...	
2	...	4	5	5	8	1.0	...	2	2	...	4	3	1	...	...	...	...	...	4.4	28	...	...	...	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	
4	...	...	...	2	...	...	...	1	1	1	...	...	...	...	...	...	...	...	5	3	...	...	...	
5	...	...	...	5	1.0	1.0	7	5	2	...	...	...	...	...	...	...	...	...	3.9	25	...	...	...	
6	...	...	...	...	...	...	...	...	...	6	5	7	8	1.0	7	...	...	...	4.3	28	...	...	...	
7	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	
8	...	...	...	...	...	...	...	...	3	6	4	3	1.0	1.0	3	...	...	...	3.9	25	...	...	...	
9	...	...	...	...	...	...	...	7	9	5	6	1.0	1.0	9	4	...	...	...	6.0	39	...	...	...	
10	...	...	...	...	1	3	...	1	...	...	7	3	...	...	...	...	...	...	1.5	10	...	...	...	
11	...	...	...	...	7	1	1	1	5	6	1	1	5	...	...	...	...	...	2.8	18	...	...	...	
12	...	...	...	...	...	...	...	...	...	6	...	...	1	2	...	...	...	...	9	6	...	...	...	
13	...	...	...	...	...	...	...	2	1	3	4	8	1	...	...	...	...	...	1.9	13	...	...	...	
14	...	...	...	2	1.0	7	1.0	4	3	1.0	1.0	1.0	8	1.0	1.0	9	...	...	10.3	69	...	...	...	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	...	...	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	8	...	...	13.5	90	...	...	...	
17	...	...	5	1.0	1.0	1.0	1.0	1.0	1.0	8	1.0	1.0	1.0	1.0	7	2	...	...	12.2	82	...	...	...	
18	...	...	...	4	5	1	...	...	...	1	7	2	2	...	...	...	...	...	2.2	15	...	...	...	
19	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	1	...	...	...	
20	...	...	...	...	...	...	...	...	...	4	2	...	...	...	...	...	...	...	6	4	...	...	...	
21	...	...	...	...	...	...	...	...	1	5	...	1	...	...	...	...	...	...	7	5	...	...	...	
22	...	...	...	...	...	2	9	2	2	...	...	...	...	...	...	...	...	...	1.4	10	...	...	...	
23	...	...	...	...	2	1.0	3	3	4	7	1	...	...	...	...	...	...	...	3.0	21	...	...	...	
24	...	...	...	1	1.0	7	1	...	...	...	...	...	...	...	...	...	...	...	1.9	13	...	...	...	
25	...	...	...	...	8	8	4	8	1.0	1.0	7	1.0	9	6	1	3	...	...	8.4	59	...	...	...	
26	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	
27	...	...	...	2	...	2	1	4	5	9	2	4	1	...	...	...	...	...	3.0	2	...	...	...	
28	...	...	...	...	8	6	6	3	5	5	...	...	...	...	...	...	...	...	3.3	2	...	...	...	
29	...	...	...	...	5	9	6	9	6	5	1	8	7	...	...	...	...	...	5.6	40	...	...	...	
30	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	
31	...	...	...	...	...	...	...	...	1	6	3	...	...	...	...	...	...	...	1.0	7	...	...	...	
Sum.	...	4	1.7	4.2	7.7	9.1	6.4	7.3	7.5	11.2	10.7	8.1	7.9	8.2	5.4	2.6	...	...	98.4	—	—	—	—	—
Mean.	...	.01	.05	.14	.25	.29	.21	.24	.24	.36	.35	.26	.25	.26	.17	.08	...	...	3.17	21	—	—	—	—

DURATION OF BRIGHT SUNSHINE.

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

September, 1925.

179. Eskdalemuir :  $h_s$  (height of recorder above ground) = 1.5 metres.

Day.	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.	hr.	hr.	hr.	hr.	hr.			Time G.M.T.	Inten-sity.	$p/p_0$ sec. Z.	Sky.
1	—	—	...	...	...	...	...	...	2	1	1	...	3	3	4	...	—	—	1.4	10	...	...	...	...
2	—	—	2	7	5	5	...	...	...	...	...	3	...	...	...	...	—	—	2.2	16	...	...	...	...
3	—	—	2	1.0	1.0	1.0	1.0	1.0	7	1.0	1.0	1.0	8	5	2	...	—	—	9.2	67	...	...	...	...
4	—	—	...	1	9	1.0	9	9	1.0	1.0	1.0	1.0	1.0	1.0	5	1	—	—	10.4	77	...	...	...	...
5	—	—	...	...	...	6	1.0	1.0	1.0	6	3	...	1	2	...	...	—	—	4.8	36	11 37	74	1.49	Cu.
6	—	—	1	8	1.0	9	...	2	9	9	9	7	3	4	...	...	—	—	7.1	53	...	...	...	...
7	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
8	—	—	...	...	...	1	1	...	4	4	8	7	5	9	1	...	—	—	4.0	30	...	...	...	...
9	—	—	...	...	...	...	...	1	5	7	3	9	2	...	...	...	—	—	2.7	21	...	...	...	...
10	—	—	...	9	1.0	1.0	5	3	1	4	4	6	2	8	7	...	—	—	6.9	53	...	...	...	...
11	—	—	...	...	...	5	...	...	...	...	...	2	2	...	...	...	—	—	0.9	7	...	...	...	...
12	—	—	...	4	1.0	1.0	1.0	...	6	4	3	...	2	5	...	...	—	—	5.4	42	...	...	...	...
13	—	—	...	...	...	4	9	4	1	1	2	6	6	6	...	...	—	—	3.9	30	...	...	...	...
14	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
15	—	—	...	...	...	3	1.0	3	7	2	6	...	...	...	...	...	—	—	3.1	24	...	...	...	...
16	—	—	...	...	...	1	6	9	4	1.0	1.0	1.0	1.0	8	...	...	—	—	6.8	54	...	...	...	...
17	—	—	...	3	1.0	8	5	6	...	...	...	...	...	...	...	...	—	—	3.2	25	...	...	...	...
18	—	—	...	3	7	2	9	8	5	2	3	9	4	2	...	...	—	—	5.4	43	...	...	...	...
19	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
20	—	—	...	2	8	1.0	8	9	6	9	1.0	8	4	...	...	...	—	—	7.4	60	...	...	...	...
21	—	—	...	2	...	4	1.0	8	1.0	1.0	9	5	5	4	...	...	—	—	6.7	55	...	...	...	...
22	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
23	—	—	...	3	1.0	1.0	1.0	1.0	1.0	6	3	1	6	...	...	...	—	—	6.9	57	...	...	...	...
24	—	—	...	5	5	1.0	1.0	1.0	9	7	6	5	9	3	...	...	—	—	7.9	65	...	...	...	...
25	—	—	...	...	...	5	1	...	...	...	...	...	...	...	...	...	—	—	6	5	...	...	...	...
26	—	—	...	...	...	...	...	...	...	...	...	...	3	...	...	...	—	—	3	3	...	...	...	...
27	—	—	...	3	1.0	1.0	1.0	1.0	1.0	8	1.0	1.0	1.0	3	...	...	—	—	9.4	79	...	...	...	...
28	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
29	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
30	—	—	...	...	...	1	9	1.0	1.0	5	1	2	5	...	...	...	—	—	4.3	37	...	...	...	...
Sum.	—	—	5	5.1	9.8	11.6	12.9	13.0	13.1	11.6	11.2	11.4	9.8	7.7	3.1	1	—	—	120.9	—	—	—	—	—
Mean	—	—	.02	.17	.33	.39	.43	.43	.44	.39	.37	.38	.33	.26	.10	.00	—	—	4.03	32	—	—	—	—

180. Eskdalemuir :  $h_s$  = 1.5 metres.

October, 1925.

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.	hr.	hr.	hr.	hr.	hr.			Time G.M.T.	Inten-sity.	$p/p_0$ sec. Z.	Sky.
1	—	—	—	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	9	9	...	...	—	—	9.5	82	...	...	...	...
2	—	—	—	...	4	3	1	...	...	...	...	9	1.0	4	...	...	—	—	5.3	46	...	...	...	...
3	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
4	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
5	—	—	—	...	...	...	...	4	9	1.0	1.0	9	4	1	...	...	—	—	4.7	42	...	...	...	...
6	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
7	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
8	—	—	—	...	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	7	...	...	—	—	8.7	79	...	...	...	...
9	—	—	—	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	...	...	—	—	9.8	90	...	...	...	...
10	—	—	—	...	...	5	3	...	1.0	1.0	1.0	1.0	1.0	6	...	...	—	—	6.4	59	...	...	...	...
11	—	—	—	...	...	3	9	7	1.0	2	5	1.0	1.0	3	...	...	—	—	5.9	55	...	...	...	...
12	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
13	—	—	—	...	...	1.0	1.0	1.0	4	2	4	5	1	...	...	...	—	—	3.6	34	...	...	...	...
14	—	—	—	...	9	1.0	1.0	4	...	2	7	5	...	...	...	...	—	—	4.7	45	...	...	...	...
15	—	—	—	...	6	1.0	7	6	...	...	...	...	...	...	...	...	—	—	2.9	28	...	...	...	...
16	—	—	—	...	7	1.0	1.0	1.0	1.0	1.0	1.0	7	...	...	...	...	—	—	7.4	71	...	...	...	...
17	—	—	—	...	...	...	...	...	3	8	1.0	9	3	...	...	...	—	—	3.3	32	...	...	...	...
18	—	—	—	...	...	1	7	6	4	3	8	7	4	...	...	...	—	—	4.0	39	...	...	...	...
19	—	—	—	...	...	2	4	1.0	6	3	...	...	...	...	...	...	—	—	2.5	25	...	...	...	...
20	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
21	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
22	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
23	—	—	—	...	...	...	...	...	1	1	...	...	...	...	...	...	—	—	0.2	2	...	...	...	...
24	—	—	—	...	...	1	2	1	5	1	...	...	...	...	...	...	—	—	1.0	10	...	...	...	...
25	—	—	—	...	...	...	6	2	7	2	3	8	...	...	...	...	—	—	2.8	29	...	...	...	...
26	—	—	—	...	...	...	...	...	...	...	...	...	1	...	...	...	—	—	0.1	1	...	...	...	...
27	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
28	—	—	—	...	...	...	2	1	...	1	...	...	...	...	...	...	—	—	0.4	4	...	...	...	...
29	—	—	—	...	...	...	1	2	2	...	...	...	...	...	...	...	—	—	0.5	5	...	...	...	...
30	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	...	...	...	...	...	...
31	—	—	—	...	1	1	1.0	8	...	...	...	...	...	...	...	...	—	—	2.0	21	...	...	...	...
Sum.	—	—	—	1	4.8	7.6	11.2	10.2	11.1	9.3	10.0	10.5	7.1	3.8	...	...	—	—	85.7	—	—	—	—	—
Mean.	—	—	—	.00	.15	.25	.36	.33	.36	.30	.32	.34	.23	.12	...	...	—	—	2.76	27	—	—	—	—



DURATION OF BRIGHT SUNSHINE.

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

181. Eskdalemuir :  $h_s$  (height of recorder above ground) = 1.5 metres.

November, 1925.

Day.																					Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	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.	Time G.M.T.	Inten- sity.			$p/p_0$ sec. Z.	Sky.		
	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	—	—	—	—	...	.5	.6	.1	.3	.2	.7	...	...	...	—	—	—	—	—	—	2.4	26	...	...	...	
2	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	.1	1	...	...	...	
3	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
4	—	—	—	—	...	.3	...	.7	.3	.1	.5	.1	...	...	—	—	—	—	—	—	2.0	22	...	...	...	
5	—	—	—	—	...	...	...	...	...	...	.3	.1	.3	...	...	—	—	—	—	—	.7	8	...	...	...	
6	—	—	—	—	...	...	.1	.5	...	...	...	...	...	...	—	—	—	—	—	—	.6	7	...	...	...	
7	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
8	—	—	—	—	...	.1	1.0	1.0	.4	.3	1.0	1.0	.6	...	—	—	—	—	—	—	5.4	62	...	...	...	
9	—	—	—	—	...	.9	.7	.7	1.0	1.0	1.0	1.0	.7	...	—	—	—	—	—	—	7.0	81	...	...	...	
10	—	—	—	—	...	.9	1.0	1.0	.8	.4	.1	.9	.5	...	—	—	—	—	—	—	5.6	65	...	...	...	
11	—	—	—	—	...	.8	1.0	1.0	1.0	1.0	1.0	1.0	.6	...	—	—	—	—	—	—	<b>7.4</b>	<b>86</b>	...	...	...	
12	—	—	—	—	...	.1	1.0	1.0	1.0	1.0	1.0	.9	.3	...	—	—	—	—	—	—	6.3	74	12 23	51	3.46 Ci-haze	
13	—	—	—	—	...	...	...	...	.7	1.0	1.0	.9	...	...	—	—	—	—	—	—	3.6	43	...	...	...	
14	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
15	—	—	—	—	...	...	.4	.6	.9	1.0	.6	.9	.2	...	—	—	—	—	—	—	4.6	55	...	...	...	
16	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
17	—	—	—	—	...	.4	.9	...	...	...	...	...	...	...	—	—	—	—	—	—	1.3	16	...	...	...	
18	—	—	—	—	...	(.3)	(1.0)	1.0	1.0	1.0	1.0	.7	...	...	—	—	—	—	—	—	6.0	74	12 5	53	3.76 Clear.	
19	—	—	—	—	...	...	.6	.9	1.0	1.0	1.0	1.0	.4	...	—	—	—	—	—	—	5.9	73	...	...	...	
20	—	—	—	—	...	...	...	...	...	...	1.0	1.0	.3	...	—	—	—	—	—	—	2.3	29	...	...	...	
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
22	—	—	—	—	...	...	...	...	.4	1.0	.7	...	...	...	—	—	—	—	—	—	2.1	27	...	...	...	
23	—	—	—	—	...	...	...	...	.1	1.0	.8	1.0	.8	...	—	—	—	—	—	—	3.7	47	12 11	73	4.00 Clear.	
24	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
25	—	—	—	—	...	.5	1.0	1.0	1.0	1.0	1.0	.6	...	...	—	—	—	—	—	—	6.1	79	...	...	...	
26	—	—	—	—	...	...	.7	1.0	.8	...	...	.5	...	...	—	—	—	—	—	—	3.0	39	...	...	...	
27	—	—	—	—	...	.3	1.0	1.0	1.0	1.0	.9	.7	...	...	—	—	—	—	—	—	5.9	77	...	...	...	
28	—	—	—	—	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	.1	...	—	—	—	—	—	—	6.8	89	...	...	...	
29	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
30	—	—	—	—	...	...	...	...	...	...	.3	...	...	...	—	—	—	—	—	—	.3	4	...	...	...	
Sum.	—	—	—	—	...	5.8	12.0	12.7	13.6	13.1	<b>14.8</b>	13.1	4.0	...	—	—	—	—	—	—	89.1	—	—	—	—	
Mean.	—	—	—	—	...	.19	.40	.42	.45	.44	<b>.49</b>	.44	.13	...	—	—	—	—	—	—	2.97	36	—	—	—	

182. Eskdalemuir :  $h_s$  = 1.5 metres.

December, 1925.

Day.																					Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	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.	Time G.M.T.	Inten- sity.			$p/p_0$ sec. Z.	Sky.		
	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	—	—	—	—	...	...	...	...	...	...	...	.3	.8	...	—	—	—	—	—	—	1.1	15	...	...	...	
2	—	—	—	—	...	.5	1.0	1.0	1.0	1.0	.9	.9	...	...	—	—	—	—	—	—	<b>6.3</b>	85	12.47	49	4.54 Clear.	
3	—	—	—	—	...	...	.6	.9	1.0	.9	.6	1.0	.1	...	—	—	—	—	—	—	5.1	69	...	...	...	
4	—	—	—	—	...	.5	1.0	1.0	1.0	1.0	.8	...	...	...	—	—	—	—	—	—	<b>6.3</b>	86	...	...	...	
5	—	—	—	—	...	...	...	...	.6	1.0	1.0	.3	...	...	—	—	—	—	—	—	2.9	40	...	...	...	
6	—	—	—	—	...	...	.4	1.0	1.0	1.0	1.0	.9	...	...	—	—	—	—	—	—	5.3	73	...	...	...	
7	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
8	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
9	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
10	—	—	—	—	...	...	...	.6	.2	.9	.9	.5	...	...	—	—	—	—	—	—	3.1	43	...	...	...	
11	—	—	—	—	...	.4	1.0	1.0	.4	.8	.8	.8	...	...	—	—	—	—	—	—	5.2	73	...	...	...	
12	—	—	—	—	...	.4	1.0	1.0	.9	.3	...	.7	...	...	—	—	—	—	—	—	4.3	61	11.53	52	4.92 Ci-Cu.	
13	—	—	—	—	...	...	.1	.7	.9	.9	.3	...	...	...	—	—	—	—	—	—	2.4	34	...	...	...	
14	—	—	—	—	...	.3	1.0	1.0	1.0	1.0	1.0	1.0	...	...	—	—	—	—	—	—	<b>6.3</b>	<b>89</b>	...	...	...	
15	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
16	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
17	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
19	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
20	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
22	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
23	—	—	—	—	...	.2	.7	.9	.1	...	...	...	...	...	—	—	—	—	—	—	1.9	27	...	...	...	
24	—	—	—	—	...	.1	.8	1.0	1.0	1.0	1.0	.3	...	...	—	—	—	—	—	—	5.2	74	...	...	...	
25	—	—	—	—	...	...	...	...	.1	...	...	...	...	...	—	—	—	—	—	—	0.1	1	...	...	...	
26	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
27	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
28	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
29	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...	...	...	...	
30	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	0.2	31	...	...	...	
31	—	—	—	—	...	...	.1	...	...	...	...	...	...	...	—	—	—	—	—	—	0.1	1	...	...	...	
Sum.	—	—	—	—	...	2.4	7.7	9.6	9.2	<b>10.0</b>	8.5	7.5	0.9	...	—	—	—	—	—	—	55.8	—	—	—	—	
Mean.	—	—	—	—	...	.08	.25	.31	.30	<b>.32</b>	.27	.24	.03	...	—	—	—	—	—	—	1.80	25	—	—	—	
Annual Total.	...	9.6	23.4	47.2	77.4	108.6	130.6	134.3	133.6	132.0	136.4	126.2	90.4	70.1	49.7	29.4	9.9	...	...	1308.8	—	—	—	—	—	
Annual Mean.	...	0.03	0.06	0.13	0.21	0.30	0.36	0.37	0.36	0.37	0.37	0.35	0.25	0.18	0.12	0.07	0.03	...	...	3.59	29	—	—	—	—	
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.									

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

183. Eskdalemuir :

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

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	230	12.6	230	11.0	230	12.4	220	10.4	220	8.6	210	8.6	200	8.5	200	7.4	180	8.1	180	7.8	170	6.5	190	11.1
2	230	17.0	230	16.5	230	14.9	230	13.0	220	8.6	210	3.1	—	0.5	180	4.5	150	5.1	140	9.5	150	9.9	180	13.6
3	210	17.2	220	18.5	220	16.1	230	13.5	230	12.2	230	9.9	220	8.3	220	5.1	200	1.7	210	7.5	210	8.7	210	10.6
4	—	0.4	10	2.1	—	1.4	—	1.4	60	3.5	10	6.1	360	6.5	350	4.9	330	2.5	300	5.0	280	3.1	290	4.1
5	220	4.7	230	7.0	220	7.8	210	7.4	220	5.6	230	7.2	220	6.9	240	6.6	230	7.0	210	6.0	210	5.2	220	7.0
6	290	8.2	300	6.6	300	5.6	290	5.6	290	5.0	290	2.6	290	4.5	290	4.3	—	1.5	—	1.5	290	2.7	—	1.0
7	220	9.4	230	11.0	240	11.1	230	9.6	230	10.3	210	9.4	220	8.1	230	9.0	230	9.8	240	12.7	240	10.6	230	9.1
8	210	4.4	210	5.0	210	5.1	210	5.1	200	5.4	180	5.1	190	10.0	190	11.4	190	11.5	190	12.1	190	10.0	190	9.4
9	270	7.0	290	11.8	310	10.0	310	7.6	300	5.8	300	6.1	280	2.0	—	1.0	—	0.9	270	1.8	270	3.7	270	4.9
10	160	2.0	190	2.5	190	4.5	190	6.0	200	7.4	190	7.0	190	7.0	190	6.8	200	6.2	200	8.6	200	8.9	210	9.1
11	190	5.2	800	6.1	210	7.3	210	6.2	220	7.5	220	6.1	210	5.5	200	2.7	180	2.1	180	2.8	190	4.0	190	6.1
12	190	5.4	190	5.0	190	4.3	180	2.5	180	2.2	190	2.5	170	2.6	190	2.0	190	2.7	190	2.6	160	2.8	160	2.4
13	170	2.1	180	3.6	180	4.6	160	2.6	150	5.0	160	4.9	170	8.5	190	12.1	200	13.9	200	13.8	190	11.0	190	12.0
14	170	15.1	160	13.2	160	10.4	170	16.1	180	21.7	190	21.2	200	16.8	240	12.5	230	9.6	210	8.0	210	10.2	210	12.4
15	200	3.1	220	6.8	230	8.0	240	8.0	230	6.4	240	7.9	240	9.5	230	7.2	190	3.2	230	5.5	210	5.1	220	4.5
16	250	6.9	230	6.7	210	5.9	230	6.5	240	6.5	240	7.0	240	7.6	240	8.0	240	7.7	240	7.5	240	8.0	240	8.4
17	230	3.4	230	2.9	230	2.2	210	3.5	220	5.0	220	2.7	200	1.6	—	1.5	220	3.2	220	6.3	220	8.3	220	7.7
18	230	7.4	210	4.4	210	4.6	200	6.0	200	5.6	210	6.9	210	7.4	220	8.3	220	11.0	220	10.8	220	11.4	230	11.5
19	—	0.4	—	0.4	—	0.5	—	1.5	350	2.1	—	0.6	350	2.4	350	4.5	350	3.1	—	1.5	†	2.0	—	1.1
20	190	2.7	190	2.6	200	2.1	190	2.0	—	1.0	—	1.4	170	2.6	180	1.9	—	0.7	—	0.9	—	0.2	—	0.4
21	—	0.8	—	1.0	—	1.4	180	2.3	180	2.9	180	2.6	180	2.5	180	2.0	180	2.7	180	2.6	190	3.0	180	3.6
22	150	2.4	—	0.2	—	0.3	—	0.7	—	0.5	—	0.4	—	0.4	—	0.6	—	0.8	—	0.1	—	0.0	—	1.4
23	—	0.5	—	0.2	—	0.5	—	0.2	170	2.1	150	3.0	210	6.0	230	7.0	220	9.4	210	10.9	210	12.1	220	14.0
24	290	7.0	290	7.3	290	6.4	310	2.5	360	4.0	310	3.0	320	2.6	—	1.0	—	1.0	—	0.8	360	2.9	50	3.4
25	350	2.5	350	2.1	350	3.1	350	3.9	350	3.8	—	1.3	—	1.5	—	1.1	—	1.5	340	4.0	340	5.1	340	5.3
26	60	3.1	30	4.9	30	4.5	30	4.5	40	2.1	20	2.5	10	2.8	10	2.6	50	3.5	60	2.4	90	3.7	100	5.9
27	100	4.6	90	2.0	100	3.1	100	4.1	90	4.9	110	5.4	110	5.0	100	3.7	100	4.4	100	4.2	110	6.2	100	5.9
28	—	0.3	—	0.1	—	0.1	—	0.4	170	2.0	170	2.0	—	1.1	—	0.7	—	0.5	—	0.6	—	0.6	—	1.1
29	220	7.0	220	6.9	200	5.0	180	4.6	180	6.7	200	12.7	190	12.8	190	13.3	190	12.7	210	15.0	230	16.6	260	12.5
30	260	11.5	250	9.8	250	12.0	250	9.2	240	10.7	240	10.5	240	10.8	250	10.9	250	12.4	260	11.8	250	10.8	250	12.4
31	270	11.0	260	9.4	260	8.6	250	8.5	250	7.2	230	8.1	240	5.7	260	6.0	260	7.8	270	7.1	260	8.1	260	8.5
Mean ...	—	6.0	—	6.1	—	5.9	—	5.7	—	5.9	—	5.7	—	5.7	—	5.5	—	5.4	—	6.2	—	6.5	—	7.1

184. Eskdalemuir : H<sub>a</sub> = 235 metres + 15 metres.

	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	300	9.0	290	8.1	280	7.9	280	8.0	290	12.3	300	12.9	300	14.0	310	14.6	300	13.8	300	12.9	†	8.4	†	5.6
2	200	5.2	210	5.4	180	5.6	200	5.6	230	10.1	230	9.4	210	7.1	210	6.5	200	6.9	220	8.0	220	12.2	230	13.1
3	160	3.0	170	4.2	180	4.6	170	3.0	180	2.5	200	5.1	210	7.0	210	5.9	210	7.0	230	12.1	230	14.1	230	12.2
4	260	10.9	250	8.7	250	9.1	260	9.4	250	9.2	250	6.2	230	4.7	170	2.9	190	3.6	200	3.9	210	5.2	220	6.1
5	230	14.6	220	12.5	230	14.5	230	15.0	220	13.0	220	14.1	220	1.45	230	13.1	270	8.0	270	6.1	270	8.0	260	7.7
6	230	7.2	240	7.0	240	7.7	230	8.4	230	7.5	240	8.9	240	9.1	240	8.6	230	8.6	230	9.5	230	8.8	230	9.9
7	290	8.9	290	8.0	280	7.3	290	8.1	300	10.0	310	10.5	310	6.5	—	1.3	290	3.2	330	1.8	—	1.4	—	1.4
8	190	8.9	190	8.7	200	10.0	210	10.5	230	11.5	230	10.6	240	10.0	250	10.9	230	10.4	230	10.0	220	10.5	220	10.3
9	250	11.4	250	10.0	230	8.6	220	8.4	230	10.1	230	9.5	240	10.1	260	8.1	250	11.5	240	10.1	230	9.0	230	8.9
10	210	9.5	210	10.8	210	12.5	210	12.4	220	10.9	200	10.3	200	10.9	200	12.3	200	13.6	200	16.6	200	16.0	210	17.7
11	200	3.9	200	4.1	200	3.7	200	3.6	200	3.4	200	3.4	200	1.9	—	1.3	200	2.0	200	2.0	160	1.6	180	2.5
12	250	2.2	220	2.1	230	3.3	230	6.6	230	6.3	220	7.0	230	10.8	220	12.1	220	13.5	240	13.7	220	11.6	240	13.1
13	—	0.2	—	0.0	—	0.1	—	0.8	110	2.4	70	4.9	60	6.5	70	6.9	90	7.5	130	(5.8)	160	4.1	170	4.0
14	—	0.8	—	1.4	—	1.2	350	3.6	360	2.7	340	2.3	360	3.1	—	1.4	360	2.1	350	1.7	350	1.7	—	1.4
15	220	2.3	220	1.6	—	1.0	180	2.7	160	2.4	160	4.1	160	3.1	160	2.0	—	0.8	—	0.6	—	1.0	150	3.1
16	350	4.8	350	6.6	350	6.0	340	3.8	350	4.4	360	4.5	360	3.8	350	3.5	350	5.6	360	5.6	360	4.9	350	3.6
17	300	10.5	300	10.6	300	10.3	300	9.6	290	9.5	290	10.0	290	10.1	290	11.0	290	12.9	280	11.7	280	11.9	290	11.8
18	310	8.3	310	7.9	310	9.0	310	8.0	310	8.5	310	7.9	310	7.1	310	6.5	310	7.6	310	6.9	300	4.4	310	3.5
19	—	0.3	—	0.6	—	0.2	330	4.0	310	6.2	320	5.2	330	5.2	350	2.1	—	1.1	350	2.6	350	3.3	350	5.4
20	—	1.5	—	0.1	—	0.2	—	1.2	—	1.5	—	1.0	—	0.4	—	0.2	—	0.1	—	0.0	—	0.0	—	1.1
21	—	0.5	—	1.0	—	0.2	—	0.9	140	2.1	140	2.4	140	3.5	140	3.6	150	4.0	150	4.6	140	4.6	150	5.1
22	—	0.2	—	0.1	—	0.3	—	0.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1
23	140	8.1	130	9.1	130	9.5	120	8.0	120	6.5	110	4.5	120	4.5	110	5.0	120	6.9	130	7.9	130	7.5	140	5.9
24	—	0.0	—	0.1	—	1.2	150	1.7	—	1.0	—	0.2	—	0.2	130	1.9	110	5.8	110	8.0	110	7.8	110	9.0
25	—	0.2	—	0.2	—	0.1	—	0.1	—															

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

January, 1925.

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 235 metres + 15 metres.

Table with columns for days 13-24, Mean, and Day. Each day has multiple rows of wind speed data in m/s and degrees.

February, 1925.

Table with columns for days 13-24, Mean, and Day. Each day has multiple rows of wind speed data in m/s and degrees.

† Defective Record.

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

185. Eskdalemuir :

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

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	360	6.0	360	6.6	360	8.1	360	9.1	360	10.0	360	11.1	360	12.0	360	11.8	360	11.1	360	10.4	360	9.6	360	8.0
2	20	8.6	20	8.1	20	5.6	360	10.1	360	10.1	360	10.9	360	9.4	360	7.0	360	8.0	360	6.1	10	8.5	360	6.1
3	360	4.1	360	4.1	360	7.8	360	7.4	360	5.6	360	5.8	360	5.2	360	5.0	360	5.9	360	6.0	360	6.6	360	6.7
4	340	2.6	—	0.8	—	0.2	330	3.5	320	3.6	—	0.2	—	0.2	—	0.1	—	0.2	—	0.1	340	2.5	340	2.4
5	—	0.3	—	1.1	270	5.2	280	2.6	270	5.0	250	4.4	280	4.2	250	6.2	220	6.5	160	8.0	230	5.7	190	6.4
6	270	9.6	270	11.0	270	9.5	270	6.0	270	6.9	270	9.1	270	8.9	270	7.5	270	7.1	270	7.1	270	5.2	260	4.9
7	270	5.5	270	7.5	270	7.5	270	8.4	270	9.5	270	8.3	270	9.5	270	7.5	270	9.1	270	9.5	270	9.4	270	8.7
8	260	7.0	260	7.6	270	7.5	270	7.4	280	7.9	290	7.8	290	8.6	300	9.8	330	8.0	340	11.6	340	11.4	330	10.9
9	290	7.1	290	6.5	290	6.2	300	7.3	290	9.9	290	8.6	290	10.5	290	11.7	290	11.0	290	9.4	290	9.4	300	8.8
10	320	6.6	320	5.2	300	5.0	300	4.7	300	4.9	340	3.4	310	2.4	300	2.5	310	3.0	290	4.5	280	4.6	270	5.5
11	310	7.0	320	7.2	330	5.4	340	5.4	340	2.0	340	3.3	330	2.7	340	4.0	360	4.8	30	4.8	40	5.2	50	4.0
12	350	4.0	340	4.0	350	5.2	350	4.1	350	4.5	350	4.5	350	4.1	360	4.9	360	5.0	60	5.5	70	3.4	90	2.1
13	240	6.0	230	7.8	210	5.5	210	3.5	210	4.9	200	3.9	190	5.2	200	6.9	190	5.0	210	7.8	210	7.9	210	6.7
14	260	4.1	270	5.6	260	6.1	260	7.0	260	7.4	260	6.5	260	9.1	260	9.5	270	12.5	270	9.8	280	8.5	270	7.0
15	—	0.5	—	0.9	—	0.4	—	0.5	280	2.1	290	3.3	—	0.5	—	0.6	310	1.8	310	3.1	—	0.5	310	2.1
16	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	1.5	200	5.0	200	5.4	210	5.2	210	6.0	320	6.5
17	230	1.7	250	3.0	270	3.1	280	6.2	270	4.6	260	3.4	260	2.6	260	3.1	260	3.5	270	3.6	270	3.5	270	3.1
18	—	0.1	—	0.8	—	0.7	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	220	2.1	210	2.6
19	—	0.7	—	0.3	—	1.5	250	1.6	—	1.5	260	2.0	—	3.9	260	5.0	250	5.1	260	6.6	260	7.7	270	8.0
20	290	5.1	300	4.4	340	4.6	360	3.9	360	2.5	360	1.6	—	0.7	—	0.5	—	0.6	300	2.7	340	2.0	350	1.8
21	330	2.2	340	4.0	330	3.1	330	2.5	330	3.7	340	2.0	—	0.6	340	2.0	340	3.1	340	6.5	330	6.9	340	5.4
22	350	5.6	350	5.5	360	4.5	360	4.6	360	5.9	360	7.0	350	5.0	350	3.7	350	4.7	350	4.9	340	4.0	340	3.5
23	—	0.1	210	3.1	230	3.5	—	1.1	—	1.0	230	6.4	210	5.5	180	4.6	220	7.5	200	6.5	210	8.0	230	9.1
24	240	3.4	260	2.6	270	4.6	240	3.1	230	4.6	230	4.5	250	3.4	250	3.8	290	4.6	310	6.0	310	6.5	310	8.5
25	330	6.2	330	7.5	330	7.4	340	6.6	350	7.6	360	6.7	350	7.9	360	8.8	360	10.8	360	13.6	360	12.1	360	9.9
26	40	7.9	40	6.9	40	6.0	40	5.4	40	5.3	40	7.0	30	7.2	30	5.9	40	4.5	50	4.4	50	4.7	50	3.7
27	—	1.3	—	0.8	—	0.5	—	0.5	—	0.2	—	0.1	—	0.1	—	0.1	—	0.4	80	1.8	—	1.0	—	0.9
28	50	6.5	40	5.0	30	7.0	40	7.1	40	4.9	30	5.1	30	5.5	30	6.1	30	6.1	40	5.4	30	5.1	30	5.4
29	310	7.0	280	3.8	310	5.4	310	9.9	320	11.7	320	12.8	310	10.9	270	5.5	260	3.4	240	3.6	260	3.5	240	3.9
30	230	8.0	220	7.4	210	7.0	230	9.9	230	9.5	230	10.0	240	9.9	230	9.2	240	10.0	230	11.8	230	13.0	230	14.5
31	230	12.1	230	11.3	230	10.5	230	12.0	230	12.1	220	9.1	220	9.5	220	9.6	220	10.2	220	9.4	210	10.0	210	10.1
Mean ...	—	4.7	—	4.9	—	5.0	—	5.2	—	5.5	—	5.5	—	5.4	—	5.4	—	5.8	—	6.3	—	6.3	—	6.0

186. Eskdalemuir : H<sub>a</sub> = 235 metres + 15 metres.

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	330	8.1	330	6.5	340	4.2	360	3.5	360	4.4	360	2.3	—	0.5	—	1.1	240	2.5	240	5.5	240	6.1	240	6.3
2	230	9.4	230	9.9	220	9.4	220	8.5	230	11.0	220	11.4	220	11.2	220	11.0	220	10.6	230	11.1	240	10.5	260	8.1
3	—	0.1	—	0.5	—	0.5	—	0.2	—	0.1	—	0.1	—	0.1	—	0.5	170	3.0	200	4.5	230	5.0	240	4.9
4	—	0.0	—	0.0	—	0.3	180	1.6	190	4.2	200	5.0	200	4.9	190	5.8	170	9.0	170	10.6	170	11.1	170	10.5
5	140	5.0	140	5.0	140	5.1	150	6.1	140	4.9	150	5.5	140	5.1	130	6.2	130	6.5	140	6.0	140	6.0	150	6.4
6	90	4.2	90	4.9	80	6.1	90	6.0	110	7.1	120	7.0	130	6.9	130	6.0	140	5.4	160	3.6	160	3.6	200	3.9
7	340	1.9	340	1.6	—	1.4	—	1.5	350	1.9	—	1.5	340	1.7	—	0.4	—	1.3	60	2.5	60	2.2	—	0.8
8	—	0.7	—	0.4	—	0.5	—	0.3	—	0.5	—	0.2	—	0.1	—	0.0	—	0.0	—	0.1	—	0.1	—	0.8
9	350	2.1	350	2.3	350	3.2	350	4.0	350	3.0	350	3.4	—	0.9	180	2.1	160	5.5	160	5.5	160	5.5	160	6.6
10	170	4.0	170	2.0	—	0.4	—	1.0	180	1.9	170	3.2	170	4.0	170	4.1	180	2.9	200	2.5	210	1.7	210	3.0
11	—	1.5	—	1.1	350	2.8	340	2.9	340	2.3	—	1.2	—	0.5	340	1.6	360	1.6	40	1.6	50	1.7	—	0.9
12	—	0.0	—	0.0	—	0.0	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	—
13	220	4.8	210	5.3	200	6.5	180	6.7	180	5.1	180	4.6	190	8.0	190	7.6	200	10.6	240	8.1	260	7.6	250	8.8
14	260	6.8	270	7.0	260	4.6	220	4.0	230	3.5	240	3.7	240	3.9	240	4.6	230	5.1	230	5.8	230	6.8	230	6.9
15	240	13.6	250	12.2	240	10.7	230	11.9	250	12.0	250	13.4	240	13.5	250	14.4	260	16.6	260	15.0	260	14.5	270	15.5
16	250	14.1	250	15.4	260	14.0	270	11.0	280	9.5	320	9.9	340	12.5	350	10.6	340	8.8	320	9.7	310	7.6	300	6.1
17	300	10.9	300	11.6	300	7.6	170	2.0	300	5.2	290	7.6	280	6.8	280	5.5	270	6.5	280	9.0	280	7.8	280	5.2
18	200	7.6	210	8.4	210	8.4	220	9.0	210	9.8	220	9.3	220	9.6	220	8.6	210	7.5	220	5.0	150	5.6	30	7.4
19	40	7.8	40	8.9	30	8.5	30	9.6	30	8.0	30	8.5	30	10.9	30	12.4	30	11.8	40	11.0	40	10.2	40	6.6
20	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	0.1	—	0.1	—	0.4	—	0.6	350	2.0	350	2.1
21	—	0.2	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	1.9	200	3.6	200	4.0	200	4.7
22	220	10.2	220	9.5	220	8.4	230	9.8	250	9.9	260	5.4	250	4.6	220	5.1	220	6.9	240	6.9	230	8.1	220	10.2
23	270	8.1	260	7.7	260	7.7	260	7.5	260	6.5	250	6.6	240	9.5	250	9.3	250	10.0	260	9.0	250	9.6	240	10.0
24	190	2.5	190	3.8	210	3.1	230	4.8	230	4.5	240	4.6	230	5.1	250	7.0	280	6.2	270	6.5	280	5.9	300	7.4
25	230	2.5	230	3.5	250	3.4	250	4.5	250	3.0	190	1.9	200	2.0	220	3.1	260	3.3	290	6.4	280	5.8		

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, 1925.

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.	
360	7.6	360	9.1	360	9.0	360	11.1	360	11.5	360	11.9	360	12.5	360	11.0	360	11.3	360	10.6	360	9.6	360	9.2	9.8	1
40	7.5	20	6.6	360	6.5	360	6.5	360	4.9	360	5.0	360	4.1	360	6.5	360	6.5	360	4.9	360	5.5	360	4.6	7.1	2
360	6.4	360	6.1	360	5.5	360	5.4	360	4.4	360	4.0	360	3.5	360	3.6	360	3.4	360	3.4	360	2.5	—	1.3	5.1	3
300	2.9	290	4.1	300	5.6	310	3.4	290	3.1	—	1.4	—	0.6	—	0.1	—	0.4	—	0.2	—	0.1	—	0.1	1.6	4
260	6.9	280	13.7	270	11.0	270	9.5	260	6.1	240	3.5	240	5.9	250	8.6	270	11.2	250	10.0	250	9.5	260	8.4	6.5	5
260	6.0	270	7.5	270	8.4	270	9.7	270	7.1	270	5.1	260	6.1	270	10.4	270	9.9	270	6.2	270	5.5	270	7.8	7.6	6
280	8.3	270	8.9	270	9.0	270	9.8	260	8.9	270	9.0	250	7.9	250	7.1	250	8.0	260	8.1	260	8.2	270	7.0	8.4	7
320	9.6	320	7.4	300	8.1	300	7.9	300	7.0	310	6.6	320	6.5	310	6.0	300	6.0	290	6.3	280	6.2	290	6.6	7.9	8
300	9.9	310	8.6	310	9.9	320	9.5	320	8.2	320	8.0	320	7.0	330	6.6	320	6.6	320	7.1	320	8.9	310	8.1	8.5	9
270	4.0	270	4.2	230	4.4	180	3.8	190	4.0	180	4.0	190	1.8	—	1.0	300	5.5	290	7.4	290	5.7	290	5.2	4.4	10
30	4.0	10	4.5	360	4.3	350	4.4	340	3.4	340	2.0	330	2.6	340	3.2	340	2.7	350	3.7	340	3.8	350	3.0	4.1	11
120	1.6	—	1.5	190	1.8	—	1.5	230	3.4	230	2.6	—	0.4	—	0.5	—	0.5	—	1.5	220	3.6	210	3.0	3.1	12
240	7.0	260	7.5	260	5.9	280	6.6	280	6.4	270	6.5	270	9.3	270	10.0	270	7.4	260	5.2	250	6.2	250	5.0	6.4	13
270	4.9	270	6.7	280	6.5	270	5.5	270	5.2	270	5.8	280	6.0	290	5.2	290	6.4	300	4.9	290	5.1	300	4.6	6.7	14
—	1.1	260	3.5	250	5.0	260	3.8	260	4.2	260	5.2	300	5.1	300	3.9	—	0.9	250	2.0	—	1.5	—	0.0	2.3	15
250	5.4	260	5.1	260	4.6	260	4.9	250	4.5	250	4.0	260	3.4	260	3.2	270	4.3	170	1.8	—	0.9	—	1.1	3.0	16
280	5.9	270	4.6	280	4.1	280	5.5	280	4.5	280	3.9	270	4.0	270	4.8	270	2.7	—	0.6	—	0.2	—	0.0	3.4	17
230	3.9	220	4.4	260	3.4	260	4.0	260	3.0	—	1.0	260	1.6	—	1.2	250	2.0	240	2.5	260	2.1	260	1.7	1.5	18
280	9.1	280	8.2	280	8.1	270	6.2	210	2.5	230	2.2	250	2.6	230	2.8	250	3.5	260	4.0	—	0.9	300	3.5	4.0	19
350	3.2	290	2.5	270	3.0	290	3.4	—	1.0	—	0.8	—	0.5	—	1.5	20	2.8	10	3.5	20	3.4	350	2.5	2.5	20
340	4.2	340	6.1	360	3.5	360	4.8	360	4.8	360	1.8	—	0.6	—	1.4	320	3.7	330	3.4	340	5.8	350	4.9	3.6	21
340	3.0	320	2.5	320	2.1	320	1.6	—	0.5	—	0.1	—	0.1	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	3.0	22
280	6.5	310	7.1	310	6.0	290	5.3	300	4.4	300	4.0	300	3.1	280	1.6	280	3.4	280	2.5	250	2.5	240	3.8	4.4	23
320	9.6	320	10.5	310	7.8	310	3.6	310	4.1	—	0.5	310	3.7	340	4.0	360	2.8	360	1.8	360	3.6	330	7.8	4.7	24
360	9.9	20	10.1	30	10.1	30	10.9	40	12.6	40	11.6	40	9.6	40	9.4	40	7.9	40	8.4	40	7.8	50	8.3	9.2	25
50	2.8	60	3.0	80	4.1	90	3.1	80	2.4	—	1.1	—	0.4	—	0.8	—	1.1	10	1.6	10	2.1	20	1.9	4.0	26
—	0.2	—	1.2	320	3.0	340	3.1	340	3.1	340	3.5	340	3.7	300	4.0	—	1.0	360	2.5	50	4.9	50	5.0	1.7	27
30	4.6	10	3.6	350	3.0	310	3.1	300	5.0	290	4.8	300	4.6	300	4.0	—	1.0	280	2.3	300	6.4	300	5.8	4.9	28
250	4.0	270	6.5	260	8.0	270	10.0	270	10.7	270	10.6	270	11.5	260	11.3	250	8.0	260	8.9	250	6.1	230	5.6	7.6	29
230	16.1	230	17.0	230	16.4	230	16.2	220	14.0	220	14.6	220	14.4	220	13.1	230	12.9	230	14.8	230	13.0	230	12.4	12.2	30
210	10.5	210	11.6	210	13.0	210	13.2	210	13.6	250	6.5	220	2.4	230	2.4	350	4.8	350	4.9	340	7.5	320	9.0	9.5	31
—	6.0	—	6.6	—	6.5	—	6.4	—	5.8	—	4.9	—	4.7	—	4.7	—	4.9	—	4.7	—	4.8	—	4.7	5.4	

April, 1925.

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.		
240	6.0	240	6.9	230	8.2	220	9.5	220	8.1	220	6.6	210	5.7	200	7.6	210	8.2	210	7.5	200	7.2	200	6.1	5.8	1	
290	4.7	320	4.5	350	3.7	360	4.0	360	3.4	360	2.1	20	1.8	20	2.1	10	2.2	—	0.5	—	1.4	—	0.4	6.5	2	
250	4.8	260	4.9	270	4.8	280	3.0	270	3.3	280	3.2	270	1.9	—	1.0	240	3.0	210	2.2	—	1.0	—	0.2	2.2	3	
180	9.2	170	8.6	170	8.6	170	7.4	160	6.2	170	4.9	150	2.6	150	3.0	150	5.0	140	4.5	140	4.9	140	4.5	5.4	4	
150	6.5	150	5.6	150	6.6	150	7.9	160	5.4	160	3.8	170	2.5	—	1.4	—	0.1	—	0.0	—	1.20	1.6	80	3.2	4.7	5
210	2.9	210	4.4	220	4.0	220	4.3	210	4.1	190	2.6	—	1.5	—	0.5	—	0.4	—	0.9	—	0.2	—	0.5	3.9	6	
60	1.7	—	0.1	20	2.0	90	2.2	80	2.3	—	0.9	—	0.9	—	1.0	—	0.7	—	1.5	—	1.1	—	0.5	1.4	7	
—	1.5	—	0.7	—	0.1	—	0.1	—	0.3	—	0.4	—	0.1	—	0.7	—	1.0	350	2.6	350	2.5	350	1.6	0.6	8	
150	6.2	140	6.6	120	8.0	120	9.4	160	4.4	130	2.5	130	5.7	120	6.4	140	3.5	150	2.7	150	4.8	160	4.6	4.5	9	
200	2.4	220	1.7	—	1.5	—	0.5	—	0.2	—	0.1	—	0.5	—	0.6	340	2.4	350	1.8	—	0.3	350	1.8	1.9	10	
180	2.2	—	1.2	200	3.0	220	4.5	240	4.6	240	2.8	240	1.8	—	0.1	—	0.2	—	0.1	—	0.1	—	0.0	1.7	11	
240	4.7	240	4.6	220	5.2	210	5.5	220	5.2	230	4.2	210	3.3	120	1.6	—	0.0	—	0.0	—	0.1	210	5.0	2.2	12	
260	9.7	250	9.5	250	11.6	250	11.2	250	10.9	240	9.8	240	9.0	250	9.7	250	9.4	250	10.2	260	8.9	260	7.1	8.3	13	
210	8.2	210	8.4	200	8.0	200	8.4	210	6.6	210	5.2	190	3.4	180	4.7	160	5.5	160	6.6	170	7.1	180	8.5	5.9	14	
270	14.7	270	14.4	260	13.5	260	12.0	250	9.6	250	10.2	250	8.9	230	6.9	220	6.5	220	9.5	220	12.3	230	13.5	12.2	15	
310	5.5	300	6.0	300	6.6	300	7.9	300	8.0	300	8.5	300	8.5	300	10.0	300	10.6	300	11.3	310	10.5	300	12.6	9.8	16	
270	6.5	270	6.5	270	6.0	280	4.4	240	7.5	260	5.5	240	6.2	210	4.8	210	2.6	200	3.9	200	4.5	200	5.6	6.4	17	
30	8.0	30	8.6	30	10.0	30	11.6	30	12.4	30	12.3	30	12.7	30	10.9	30	10.4	30	9.6	30	10.4	30	8.8	9.2	18	
50	6.3	40	7.0	50	6.9	50	6.0	50	5.0	50	3.8	—	1.0	—	0.8	—	1.4	360	1.8	—	1.4	—	0.4	6.7	19	
—	1.5	—	1.4	60	2.1	60	5.5	60	6.1	50	4.8	—	0.5	—	0.4	—	1.4	—	1.0	—	1.0	—	0.5	1.3	20	
210	5.5	210	6.4	220	7.4	220	7.0	220	4.9	210	3.0	200	3.4	—	0.5	—	1.4	220	4.7	200	5.0	200	7.9	2.9	21	
210	11.5	210	12.9	210	14.9	210	15.6	210	17.3	210	17.3	210	18.6	210	17.6	210	15.9	230	13.6	260						

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

187. Eskdalemuir :

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

Day.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		12.	
	°	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	20	5.5	20	4.4	20	6.4	20	6.5	20	7.0	20	7.6	20	8.0	20	7.2	20	6.6	40	6.6	30	5.2	40	4.9
2	—	0.1	—	0.0	—	0.1	—	0.3	—	0.3	—	0.0	—	0.0	—	0.0	—	0.8	210	2.3	220	4.5	220	5.9
3	230	2.9	220	3.1	220	3.0	220	2.0	220	3.1	220	3.5	220	4.0	210	4.9	210	6.1	220	7.1	210	7.0	210	5.6
4	170	3.4	160	3.6	160	3.0	160	2.5	160	3.4	160	3.6	160	4.0	160	3.9	160	4.9	160	4.5	170	4.0	170	3.8
5	200	2.0	—	1.5	—	0.2	—	0.0	—	0.0	—	0.6	250	3.4	280	2.6	270	2.2	—	1.5	260	2.2	—	1.5
6	30	1.6	20	3.5	20	3.8	30	3.9	50	4.2	40	5.5	50	5.1	50	4.1	50	4.4	—	1.4	110	1.6	120	2.9
7	70	2.0	80	3.4	70	6.2	50	4.7	50	5.0	60	5.8	50	5.5	60	7.7	70	9.5	70	7.5	70	8.4	60	9.9
8	70	3.1	—	1.5	60	3.6	60	4.4	50	4.7	50	4.8	60	6.6	60	5.1	70	5.4	80	5.3	90	3.7	110	4.7
9	—	1.1	—	1.4	—	0.9	—	0.8	—	0.4	—	0.4	—	0.9	50	1.6	60	2.6	70	3.4	90	2.1	—	0.9
10	50	1.7	50	2.1	—	1.5	—	1.4	20	2.0	—	0.8	20	1.6	40	2.6	60	2.5	—	1.5	—	0.6	—	1.1
11	210	4.0	200	4.0	190	3.1	190	3.6	190	5.1	200	8.0	200	9.4	200	11.0	200	11.9	210	10.9	210	11.1	220	11.6
12	200	3.2	220	5.0	220	5.1	220	4.9	230	4.6	220	4.0	220	4.5	220	4.9	220	6.0	220	8.0	210	9.5	210	10.0
13	300	2.5	290	3.1	—	0.9	—	0.6	—	0.2	—	0.3	—	1.5	—	1.4	—	1.5	—	1.5	210	2.9	190	2.4
14	10	3.0	360	4.7	350	2.6	360	2.4	—	0.1	—	0.1	350	1.6	350	3.2	30	4.0	60	2.9	80	3.0	90	2.7
15	30	2.1	30	2.4	20	1.8	10	2.5	—	1.4	20	2.0	—	1.5	—	1.5	—	0.8	—	0.8	170	2.4	190	4.9
16	220	4.6	—	1.5	210	2.3	220	2.4	—	0.5	230	3.6	210	4.9	210	3.1	200	3.1	—	1.0	—	0.6	—	0.8
17	220	8.9	220	9.6	210	6.6	200	5.5	210	4.5	230	4.9	220	4.9	230	3.5	210	3.1	220	3.6	220	3.5	240	3.3
18	40	7.0	20	4.6	20	4.5	20	4.2	20	4.5	20	4.6	30	4.0	30	4.8	40	5.5	50	2.6	40	3.5	30	4.6
19	30	3.1	20	4.5	20	3.2	20	4.5	20	5.9	40	5.6	50	9.2	50	7.0	50	6.0	40	6.6	30	5.1	40	5.5
20	—	1.0	—	1.1	—	1.1	—	1.5	—	0.5	—	0.2	—	0.2	—	1.1	—	1.0	—	0.5	200	2.8	220	3.2
21	—	0.5	—	0.4	—	0.4	—	0.4	—	0.5	—	0.3	210	2.4	210	3.6	210	3.8	220	4.4	210	6.0	210	6.3
22	—	0.3	—	0.4	—	0.8	—	0.4	—	0.5	—	0.7	—	0.3	—	0.3	190	2.1	200	2.7	210	2.4	210	2.3
23	360	2.4	360	4.2	360	4.7	360	4.0	350	3.9	350	5.2	50	6.5	50	6.7	50	7.2	60	6.5	100	5.9	90	7.6
24	60	5.2	50	6.3	50	6.4	50	7.3	50	7.3	50	9.3	50	10.7	50	10.6	40	9.9	50	11.2	50	11.7	50	10.5
25	360	3.5	360	3.6	360	2.8	350	2.4	360	3.2	350	3.0	360	2.6	350	3.5	350	3.6	360	4.0	360	4.0	360	4.6
26	10	1.8	30	2.0	30	2.3	20	1.9	—	1.4	—	1.1	—	1.4	—	1.0	—	0.9	—	1.4	180	2.7	200	4.9
27	190	9.0	190	8.4	160	4.7	160	4.7	160	4.7	160	5.4	170	8.0	190	11.5	200	11.2	210	10.0	220	9.9	240	9.5
28	160	5.4	180	5.4	180	5.7	180	6.0	180	5.6	190	5.4	170	5.4	180	6.0	220	5.6	220	6.8	250	10.0	230	9.8
29	210	11.3	210	11.3	210	13.1	210	12.2	220	11.1	230	12.1	230	12.8	230	11.0	230	11.6	240	10.1	250	10.1	240	10.0
30	250	9.5	240	8.9	240	10.3	210	12.0	230	12.3	240	12.0	240	13.5	240	15.8	230	15.1	240	15.5	230	14.0	230	14.7
31	230	11.7	230	11.8	230	14.5	230	14.7	240	12.8	230	9.3	240	12.0	240	12.3	240	12.3	240	10.8	230	10.9	230	10.5
Mean ...	—	4.0	—	4.1	—	4.1	—	4.0	—	3.9	—	4.2	—	5.1	—	5.3	—	5.5	—	5.3	—	5.5	—	5.8

188. 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	220	6.4	240	4.9	230	3.5	220	5.6	220	6.5	230	7.1	230	8.2	230	8.7	240	8.1	240	7.3	230	8.0	230	10.0
2	240	4.2	240	5.0	240	4.6	230	3.2	230	3.5	220	3.6	240	5.0	230	5.3	240	7.3	240	7.5	260	7.0	260	7.5
3	230	2.3	230	2.4	210	2.7	210	3.1	210	4.3	220	4.8	200	6.3	200	8.7	210	10.5	210	9.8	210	11.1	210	10.0
4	210	3.4	230	4.9	230	3.5	200	3.0	210	5.5	220	4.2	210	5.6	210	6.5	210	5.6	220	4.8	200	5.3	210	6.0
5	—	0.0	—	0.1	—	0.5	—	0.8	—	0.4	220	2.0	210	4.8	200	3.6	200	4.0	200	4.2	190	5.3	200	5.0
6	—	1.5	—	1.3	—	1.4	—	0.5	340	2.1	350	1.6	—	1.1	—	1.2	—	0.8	—	1.5	230	3.1	240	2.9
7	360	3.0	360	3.1	360	3.4	360	2.5	360	2.6	360	2.9	360	2.3	360	2.6	360	2.9	50	2.6	60	2.2	80	2.2
8	—	1.0	—	1.1	350	2.0	—	1.4	350	3.0	350	2.6	360	2.6	360	2.2	360	4.4	60	4.1	60	4.5	70	5.2
9	—	1.3	—	1.0	360	2.8	360	3.0	360	1.9	—	0.4	—	0.1	—	0.0	—	0.4	150	2.2	150	2.9	150	3.0
10	—	0.0	—	0.1	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	—	1.1	230	2.8	230	3.5	240	3.6	240	4.0
11	350	3.0	360	2.1	—	1.5	—	1.5	—	0.8	—	0.1	—	0.1	—	0.0	310	3.6	290	3.8	290	4.0	280	4.5
12	350	2.8	350	2.8	360	2.7	360	1.8	—	1.4	360	2.1	360	1.9	—	1.0	—	1.3	60	2.0	40	2.4	70	2.5
13	—	0.0	—	0.0	—	0.0	—	0.1	—	0.1	—	0.1	200	2.1	290	6.4	280	5.9	290	5.6	280	5.7	280	5.4
14	280	7.0	310	5.0	—	0.9	—	1.0	—	0.1	—	0.0	—	0.0	—	0.8	—	0.6	—	1.0	340	2.1	350	2.8
15	280	2.2	300	2.0	—	1.5	260	2.5	250	3.7	250	4.2	190	2.6	220	4.4	220	5.1	230	6.3	220	5.7	230	5.3
16	260	3.3	270	4.2	260	3.0	220	3.5	220	3.7	260	4.9	270	4.7	290	6.0	270	4.5	290	6.5	270	7.5	270	8.5
17	310	4.3	310	5.1	310	5.9	—	0.8	—	1.2	320	4.5	320	6.0	330	4.5	340	4.3	340	3.8	350	3.2	320	3.0
18	310	2.1	290	4.9	280	3.2	130	3.0	330	3.5	330	3.4	350	5.4	350	7.3	360	8.9	340	6.3	340	6.9	340	6.0
19	60	1.9	—	0.4	—	0.1	—	0.3	—	0.6	—	0.5	—	0.7	100	2.2	170	2.4	230	3.9	240	4.0	250	4.0
20	230	1.6	260	3.1	260	2.0	290	3.3	290	3.2	290	3.6	280	4.6	290	6.1	300	6.5	300	3.5	320	5.1	320	4.1
21	330	3.7	330	1.6	—	1.0	—	1.3	—	1.0	330	3.3	320	5.0	340	6.9	360	6.4	360	8.1	360	8.4	360	7.0
22	350	2.1	340	2.1	—	0.1	—	0.5	—	0.0	—	0.4	340	4.3	330	4.5	360	4.7	30	4.8	20	4.0	40	4.0
23	350	2.9	—	1.5	30	1.7	20	1.9	10	3.5	10	3.7	10	4.5	30	5.1	20	6.1	30	7.5	30	7.2	20	8.0
24	350	3.5	320	3.1	330	3.7	330	2.8	340	2.3	20	5.4	10	7.0	10	7.3	10	8.7	30	7.6	20	7.4	20	7.6
25	350	2.4	360	1.9	350	2.0	—	1.2	—	0.5	50	4.0	40	4.8	30	5.5	30	5.2	30	5.2	40	5.6	40	5.6
26	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	1.5	310	2.1	340	3.1	340	4.5	360	6.8	360	5.8
27	20	3.3	20	5.2	350	4.0	10	3.2	20	4.1	20													



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

189. Eskdalemuir :

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

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	—	0.5	—	0.1	—	0.8	—	0.1	—	0.0	—	0.1	—	0.1	—	1.0	—	0.9	—	1.5	—	0.5	—	1.3
2	—	1.2	10	3.0	30	3.9	20	5.0	360	6.4	350	4.9	30	4.5	50	6.4	50	8.1	50	4.7	60	7.0	60	7.3
3	40	6.0	10	4.3	20	4.0	40	4.2	30	4.3	30	4.7	30	5.8	50	5.6	60	6.1	60	6.0	70	7.0	60	7.1
4	40	2.7	50	3.6	40	3.5	50	3.4	60	3.5	60	3.1	60	3.2	50	4.1	50	4.3	70	3.3	80	3.3	70	3.5
5	—	1.5	—	1.1	340	1.6	—	0.7	—	0.5	—	0.5	—	1.2	70	2.6	80	2.5	70	3.5	70	1.9	100	1.6
6	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	180	1.8	220	3.0	210	3.1	200	4.4	200	6.4	190	7.4
7	290	2.1	260	3.5	270	4.0	270	3.6	280	4.8	280	4.0	300	6.4	300	9.6	330	6.1	270	4.0	280	7.3	280	8.0
8	250	3.4	240	2.0	280	2.8	260	4.0	240	2.7	230	2.3	270	3.8	270	6.1	270	6.2	270	5.6	270	6.6	270	6.6
9	270	4.1	270	4.2	240	2.8	250	2.0	220	3.9	220	3.5	240	4.0	260	4.6	250	4.9	270	5.1	270	7.0	270	6.4
10	210	9.7	210	9.1	210	7.0	230	5.5	240	4.8	230	4.1	270	5.9	260	4.1	270	4.4	280	6.0	290	5.6	290	6.6
11	270	2.3	290	4.0	300	5.5	130	3.4	200	7.1	230	3.6	190	3.8	240	3.9	280	6.5	290	6.6	230	3.4	290	3.9
12	—	0.3	—	0.0	—	0.1	—	0.2	—	0.6	—	0.0	—	0.0	—	1.0	190	3.1	180	3.5	210	4.8	220	5.2
13	—	0.0	—	0.6	—	0.2	—	0.1	—	0.3	—	0.6	—	0.3	120	1.6	150	3.0	200	3.9	200	4.8	190	4.8
14	—	0.5	—	0.4	—	0.6	—	0.3	—	0.3	—	0.4	—	0.5	160	2.6	190	5.4	200	8.4	200	8.1	210	8.8
15	200	6.3	200	7.4	200	6.9	200	6.0	190	6.2	190	6.5	200	7.0	190	6.6	200	6.6	200	5.0	200	5.1	200	6.2
16	—	0.3	—	0.2	—	0.3	—	0.2	—	0.2	—	0.1	—	0.1	180	2.5	200	3.4	190	2.6	200	3.9	190	4.0
17	210	2.6	200	4.5	180	4.4	170	4.1	160	2.5	160	1.8	160	2.5	160	2.9	170	4.0	170	3.4	170	4.5	180	6.4
18	—	0.6	—	0.6	—	0.8	140	2.1	140	5.3	170	6.8	180	5.5	180	6.7	180	7.0	180	7.0	190	7.5	180	6.5
19	—	1.0	—	1.0	—	1.0	—	1.1	330	2.0	—	1.4	—	0.1	130	2.6	140	4.0	150	3.6	150	3.5	150	5.2
20	360	3.5	360	4.0	360	3.5	360	3.0	360	3.0	360	2.5	30	4.3	60	5.7	50	5.0	60	5.5	60	5.6	60	7.4
21	360	1.8	360	2.9	360	1.8	—	0.7	50	3.0	50	1.9	50	2.1	30	3.1	60	2.4	80	1.9	70	1.9	140	1.7
22	—	1.5	—	1.3	360	2.6	350	3.0	350	3.6	50	1.7	50	4.9	50	6.9	50	6.7	20	6.0	20	5.1	30	4.0
23	360	2.1	30	4.4	360	5.5	20	5.0	20	7.0	360	4.8	20	5.2	40	8.6	40	9.5	40	8.1	50	9.5	50	8.9
24	40	11.2	30	10.0	360	4.5	10	5.0	30	7.5	40	10.2	40	10.0	30	8.4	30	7.4	30	7.5	30	8.3	30	6.0
25	20	4.7	10	4.6	10	4.1	10	4.0	360	3.6	360	2.7	60	3.0	20	1.6	—	0.6	190	1.7	200	3.1	220	4.9
26	210	7.0	250	6.7	240	2.5	—	0.4	—	0.2	—	0.8	—	1.0	—	0.9	150	2.2	160	3.6	200	3.6	200	2.6
27	—	0.1	—	0.4	—	1.4	350	2.4	360	2.0	360	3.6	40	5.5	50	4.8	60	5.0	70	5.0	60	4.5	30	4.5
28	360	2.6	360	2.5	360	2.0	—	0.9	—	0.2	—	0.3	—	1.5	150	1.8	160	2.6	220	4.8	220	5.1	230	5.3
29	260	3.1	210	2.9	260	3.9	210	2.4	—	1.1	190	2.9	230	2.4	240	2.0	210	3.4	230	5.1	230	5.5	230	5.4
30	220	2.6	240	1.7	290	1.7	—	0.1	—	0.8	—	1.1	280	2.0	290	3.6	270	3.9	270	3.9	270	5.0	200	4.6
31	250	2.5	260	1.6	—	0.2	190	3.0	170	3.5	220	4.0	270	3.6	270	3.5	270	3.9	270	4.9	290	4.6	290	5.1
Mean ...	—	2.8	—	3.0	—	2.7	—	2.5	—	2.9	—	2.7	—	3.3	—	4.1	—	4.6	—	4.7	—	5.2	—	5.4

190. Eskdalemuir : H<sub>a</sub> = 235 metres + 15 metres.

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	290	3.4	—	1.4	240	2.5	260	3.6	250	3.8	240	4.7	220	3.6	220	2.9	240	4.0	270	3.8	290	5.0	280	4.9
2	20	3.0	70	2.0	80	2.7	360	2.5	—	0.4	—	1.1	320	5.8	320	5.1	340	2.9	350	3.1	340	3.0	350	3.6
3	—	1.0	—	1.1	—	0.1	—	0.2	—	0.7	—	0.8	180	3.0	200	3.4	190	3.5	200	4.0	200	3.7	200	6.1
4	320	2.5	—	0.1	—	0.1	—	0.2	—	1.0	—	0.5	—	1.4	250	2.0	270	2.6	280	1.7	290	2.4	310	2.9
5	—	0.1	—	0.1	—	0.5	—	0.1	—	0.5	—	0.0	—	0.0	—	1.4	150	2.9	150	4.0	190	4.9	190	4.6
6	160	5.0	160	4.9	150	4.5	150	4.4	180	5.2	200	6.1	210	4.8	210	4.0	†	†	†	†	†	†	†	†
7	—	1.2	180	4.5	170	3.0	180	4.0	180	7.5	170	4.2	180	5.1	170	5.9	170	7.1	190	8.1	200	10.0	190	9.5
8	—	0.0	—	0.0	180	2.0	200	4.2	210	2.9	190	2.0	—	1.3	—	0.4	230	2.1	200	3.1	190	3.0	200	2.5
9	—	1.4	—	0.8	—	1.5	160	3.6	160	4.9	170	4.3	180	5.9	220	9.9	210	10.2	10.2	(10.4)	220	10.6	210	11.6
10	200	4.4	190	6.3	210	6.5	200	5.5	200	5.4	230	4.6	220	4.8	230	5.0	230	5.5	210	4.5	230	5.1	230	6.1
11	270	2.5	260	3.3	—	0.6	—	1.1	210	2.6	150	2.0	220	2.4	270	2.9	270	3.6	250	3.5	230	5.0	230	5.4
12	180	7.0	180	7.5	170	7.9	170	7.4	180	10.5	180	10.6	190	10.5	190	9.9	190	9.0	190	(9.0)	200	10.0	200	8.5
13	190	4.4	200	4.0	200	3.2	190	2.4	190	2.7	190	3.9	200	4.5	200	4.1	200	4.1	210	5.2	230	5.5	210	4.6
14	360	3.5	360	4.0	10	3.6	10	3.4	360	3.4	360	1.9	—	1.4	50	2.5	60	2.3	70	2.1	90	1.9	11.0	1.7
15	10	2.1	10	3.0	—	1.4	—	1.0	—	1.0	—	0.2	—	0.0	130	2.1	220	3.5	260	4.0	310	3.2	250	4.0
16	—	0.1	—	0.0	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	—	1.5	160	3.2	240	4.5	240	5.2	230	4.9
17	—	0.1	—	0.1	—	0.2	—	0.1	—	0.0	—	0.0	—	0.0	—	0.6	—	0.5	—	1.5	—	2.4	—	2.0
18	10	2.0	10	1.6	10	3.4	360	4.4	360	2.9	350	2.7	—	1.1	60	4.3	60	3.9	90	3.6	120	3.8	110	3.6
19	30	1.6	—	1.5	40	1.6	50	2.5	50	3.1	20	3.0	40	3.4	50	3.5	50	3.1	50	2.1	50	2.1	50	2.4
20	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	—	1.0	160	2.8	180	2.4
21	—	0.3	—	0.6	—	1.3	—	0.8	—	0.9	40	2.0	60	4.4	70	5.2	70	4.8	90	4.1	110	3.4	130	4.5
22	70	5.1	60	5.9	50	5.6	50	5.2	50	6.1	50	5.6	50	6.5	50	7.3	50	9.7	60	10.2	60	10.1	60	9.5
23	40	3.1	30	3.4	50	3.5	40	3.1	30	3.4	30	2.7	60	5.0	60	5.2	60	4.6	60	5.0	30	3.2	50	3.9
24	—	0.2	—	0.0	—	0.0	—	0.2	—	0.0	—	0.2	—	0.0	—	0.3	—	1.5	140	1.6	210	3.1	—	1.0
25	350	3.4	10	2.2	20	1.6	20	2.0	20	1.7	10	2.5	20	3.0	10	1.9	30	1.6	—	1.0	360	2.1	—	1.2
26	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.5	180	5.3	190	5.0	190	5.5	190	5.3
27	—	0.5	—	0.2	210	3.5	21																	





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

191. Eskdalemuir :

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

Table with columns for Day (1-30) and sub-columns for wind speed (m/s) in 12 directions (I, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, Noon). Includes a 'Mean ...' row at the bottom.

192. Eskdalemuir : H<sub>a</sub> = 235 metres + 15 metres.

Table with columns for Day (1-30) and sub-columns for wind speed (m/s) in 12 directions (I, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, Noon). Includes a 'Mean ...' row and a 'G.M.T.' row at the bottom.

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.

September, 1925.

Table for September 1925 showing wind direction and speed data for days 1 through 30. Columns include day numbers (13-24), wind speed in m/s, and mean values.

October, 1925.

Table for October 1925 showing wind direction and speed data for days 1 through 31. Columns include day numbers (13-24), wind speed in m/s, and mean values.

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

193. Eskdalemuir :

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

Table with 23 columns (Day, 1-11, Noon) and 2 rows per day (° and m/s). Contains wind speed data for Eskdalemuir.

194. Eskdalemuir : H<sub>a</sub> = 235 metres + 15 metres.

Table with 23 columns (Day, 1-11, Noon, Annual Mean) and 2 rows per day (° and m/s). Contains wind speed data for Eskdalemuir at a higher height.

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, 1925.

Table with 14 columns (13-24) and 30 rows of wind data for November 1925, including wind speed in m/s and observation height.

December, 1925.

Table with 14 columns and 30 rows of wind data for December 1925, including wind speed in m/s and observation height.

## HIGHEST INSTANTANEOUS WIND SPEED RECORDED EACH DAY BY THE DINES TUBE ANEMOGRAPH.

195. Eskdalemuir :  $H_a = 235$  metres + 15 metres.

1925.

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. 30	h. m. 10 0	23	5 10	21	19 0	13	0 20	13	6 30	19	15 35	9	16 30	m/s. 10	h. m. 11 05	15	8 10	m/s. 9	h. m. 8 20	16	21 0	m/s. 13	h. m. 4 45
2	30	18 20	20	12 55	18	0 50	17	9 50	12	15 15	14	8 45	15	16 20	10	6 30	21	18 10	10	23 55	15	14 20	11	14 40
3	31	1 35	22	17 50	12	3 20	9	14 0	10	9 45	19	10 50	11	11 25	12	12 30	21	1 50	16	7 20	10	23 30	7	1 10
4	11	0 20	24	23 40	9	14 50	17	11 25	9	21 10	10	11 30	9	14 25	6	15 10	17	16 50	17	1 30	11	2 30	3	18 55
5	11	17 0	23	5 45	25	13 55	13	14 45	11	18 15	9	11 50	9	16 25	12	16 0	10	5 25	7	16 30	8	23 30	5	11 40
6	14	0 30	15	16 15	21	1 35	12	5 15	18	15 45	6	11 20	11	12 50	11	19 20	13	4 25	7	12 50	7	0 35	4	16 45
7	19	10 35	17	5 35	18	9 20	5	10 30	15	11 45	9	18 55	15	17 0	19	14 25	16	19 30	12	8 50	21	14 25	16	24 0
8	18	9 40	29	17 5	19	9 55	5	22 35	14	10 25	8	16 55	13	14 15	9	15 30	11	17 5	5	9 30	21	4 35	24	12 15
9	19	2 25	18	0 30	18	7 25	13	15 50	7	14 10	6	14 0	14	23 30	19	15 30	18	23 55	13	9 25	5	14 20	23	15 15
10	15	13 35	29	12 30	12	0 25	7	8 0	8	15 55	7	16 50	16	17 25	10	2 10	19	0 45	7	15 55	10	12 0	22	11 45
11	12	2 50	7	0 1	12	0 55	7	15 20	19	8 25	10	12 40	13	9 0	12	16 35	9	13 40	15	22 40	4	14 20	22	12 40
12	10	0 45	19	10 10	9	9 20	9	14 40	18	17 10	7	19 45	9	16 30	17	5 10	7	10 15	11	1 20	7	12 35	12	4 5
13	21	9 40	16	8 30	15	19 25	18	16 55	7	12 45	21	17 35	9	15 55	11	21 10	12	14 25	15	21 55	5	13 5	9	17 30
14	31	5 10	11	18 5	18	9 0	14	0 5	8	1 30	13	1 45	13	14 10	8	0 20	12	15 50	19	8 55	4	18 5	11	8 35
15	17	7 30	10	22 0	8	16 30	29	12 25	11	14 55	13	14 10	10	1 45	9	14 30	15	14 15	7	12 50	4	14 40	7	1 5
16	13	12 30	16	23 50	11	14 30	24	2 10	11	23 35	18	16 15	11	15 10	9	14 55	13	1 15	8	11 25	7	20 40	8	16 15
17	14	21 55	19	9 15	10	13 10	19	0 40	14	1 55	12	16 50	13	19 15	6	16 15	5	14 0	24	22 45	7	10 50	20	22 25
18	18	11 35	14	5 5	10	16 25	20	19 10	11	0 35	14	9 0	15	14 55	7	8 10	13	13 15	21	2 30	6	13 0	19	0 10
19	9	8 55	10	13 25	15	10 45	19	8 40	14	7 0	12	17 55	9	11 50	6	7 15	9	10 55	13	23 10	3	17 5	12	23 15
20	5	0 30	6	14 5	10	15 25	10	16 15	11	15 55	11	20 35	11	12 30	5	11 0	17	13 0	10	5 15	3	15 30	21	8 50
21	6	12 30	8	12 10	13	14 10	11	23 55	10	12 55	13	9 55	6	18 50	12	16 0	12	16 0	17	13 25	3	15 50	12	15 10
22	5	0 35	12	23 10	12	1 20	28	18 45	9	20 20	10	19 50	13	14 25	17	10 25	9	9 50	16	12 30	6	13 0	19	16 0
23	21	12 20	16	1 5	17	13 50	17	15 10	14	12 30	12	12 30	19	19 05	13	13 35	14	10 55	15	11 15	6	23 5	15	13 0
24	12	2 25	19	17 35	18	12 25	16	14 0	19	10 50	14	13 35	17	15 35	9	16 55	15	14 15	11	3 0	19	23 35	17	15 25
25	12	16 35	13	20 5	22	10 5	17	10 5	9	15 15	11	16 15	10	00 01	8	13 45	9	24 0	12	17 25	23	5 35	5	0 5
26	13	20 55	14	7 10	12	1 5	15	16 0	16	20 5	12	11 20	13	1 25	9	17 20	18	7 40	22	15 20	13	22 30	14	22 20
27	10	11 55	12	8 10	11	21 30	13	18 15	18	8 20	12	9 55	10	14 10	13	14 25	12	10 35	23	19 20	18	5 0	19	18 35
28	11	22 35	10	22 15	15	23 10	12	20 40	22	21 15	7	12 15	11	16 40	17	13 50	13	22 40	18	20 10	19	10 20	21	3 0
29	27	11 25	—	—	19	19 20	9	15 45	22	3 45	15	16 15	10	14 40	24	10 25	17	1 20	21	16 45	14	3 45	21	23 35
30	25	22 35	—	—	23	15 30	11	17 5	24	13 20	12	8 30	11	15 0	17	3 35	9	17 55	10	11 55	16	18 5	22	0 10
31	26	0 25	—	—	21	16 35	—	—	20	13 5	—	—	12	18 45	18	14 15	—	—	6	10 30	—	—	22	3 35

## DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES TUBE ANEMOGRAPH.

196. Eskdalemuir :  $H_a = 235$  metres + 15 metres.

1925.

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. 9	13	hr. 98	hr. 259	hr. 268	hr. 110	hr. 0	°	m/s. 22	day. 14	hour. 5	m/s. 31	day. 14	h. 5	m. 10
Feb. ...	1st, 2nd, 3rd, 14th	2	12	68	250	211	140	1	220	18	10	13	29	8	17	5
Mar. ...	—	0	10	54	287	298	105	0	230	17	30	14	25	5	13	55
April ...	22nd	4	9	50	250	263	153	0	210	19	22	19	29	15	12	25
May ...	—	0	8	68	185	348	143	0	240	16	30	8	24	30	13	20
June ...	—	0	2	2	183	384	151	0	210	11	3	11	21	13	17	5
July ...	—	0	2	9	216	390	129	0	50	13	24	16	19	23	19	5
Aug. ...	—	0	4	15	157	380	184	8	230	14	9	16	24	29	10	25
Sept. ...	—	0	7	13	279	297	131	0	230	12	29	1	21	2	18	10
Oct. ...	—	0	10	57	224	298	165	0	240	15	17	23	24	17	22	45
Nov. ...	—	0	6	37	126	246	311	0	50	14	7	13	23	25	5	35
Dec. ...	—	0	13	87	290	184	183	0	180	11	8	7	24	8	12	15
Year ...	6	15	96	558	2,706	3,567	1,905	9	180	22	Jan. 14	5	31	Jan. 14	5	10

MINIMUM TEMPERATURE "ON THE GRASS" DURING THE INTERVAL 18H. TO 7H. G.M.T.

Readings, in degrees absolute.

197. Eskdalemuir.

1925.

Day.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>
1	72.7	71.1	73.9	69.9	74.1	78.1	78.9	78.2	80.1	72.5	78.2	68.2
2	73.0	74.0	74.0	75.0	<b>68.2</b>	75.9	79.0	76.2	78.0	75.3	81.0	64.3
3	73.2	74.2	72.0	<b>66.1</b>	78.4	76.0	76.3	75.0	76.7	81.7	78.1	71.0
4	70.9	73.4	68.9	67.1	78.5	82.1	83.2	75.1	73.1	81.0	74.5	65.0
5	72.5	76.2	69.2	73.5	76.3	74.5	75.1	73.8	76.3	78.1	78.1	62.0
6	69.5	73.9	78.8	76.0	77.1	81.0	78.8	84.0	74.5	82.6	73.9	<b>60.0</b>
7	74.0	72.0	74.7	71.1	76.8	77.1	81.8	78.1	75.0	79.5	73.7	65.8
8	75.2	73.0	70.0	72.0	77.5	76.2	77.4	85.1	80.1	71.5	71.2	76.8
9	72.9	75.1	67.1	73.1	77.3	79.1	81.2	79.8	77.5	68.2	65.5	73.2
10	69.7	73.5	68.1	76.7	76.5	77.9	83.1	83.0	75.0	67.5	62.6	73.3
11	78.7	73.0	69.8	73.5	75.8	81.0	81.7	77.1	77.5	72.9	62.9	68.8
12	75.0	71.9	69.4	68.7	76.9	83.0	—	82.1	70.0	78.2	61.3	70.8
13	73.0	71.5	67.6	72.4	73.1	74.5	81.4	86.5	69.5	75.1	62.3	65.1
14	78.5	71.0	76.3	73.6	77.0	77.9	77.6	82.0	76.8	70.1	64.2	63.0
15	74.2	72.8	75.0	76.2	76.9	81.3	85.9	79.0	74.7	68.0	<b>61.2</b>	65.4
16	72.0	73.0	73.4	72.2	79.1	81.2	—	<b>71.5</b>	80.3	<b>65.5</b>	65.9	67.9
17	76.5	73.4	75.3	75.7	81.0	74.1	84.0	73.0	69.8	69.5	69.9	75.3
18	79.5	74.0	70.2	77.0	80.6	74.0	83.9	77.6	78.7	79.1	68.0	76.7
19	74.7	69.0	73.0	74.2	82.5	74.1	75.6	82.2	80.7	70.8	63.0	70.9
20	76.1	68.1	73.8	66.7	83.1	83.0	79.0	81.6	73.8	76.1	65.0	70.9
21	74.9	70.3	<b>63.5</b>	66.6	72.6	79.6	83.8	84.9	73.2	81.0	64.0	71.7
22	<b>67.9</b>	<b>64.5</b>	65.3	73.2	72.7	<b>71.6</b>	81.2	84.1	72.8	83.0	73.3	71.6
23	68.5	70.4	69.0	73.4	78.5	—	86.1	83.7	73.0	81.0	67.8	63.1
24	74.6	68.0	72.9	72.8	80.5	76.7	85.3	77.7	73.5	80.9	67.2	66.8
25	73.1	72.2	68.3	72.3	80.0	73.8	84.5	77.1	<b>68.8</b>	73.2	69.9	65.5
26	73.1	73.2	72.7	71.7	79.3	79.7	83.6	72.1	78.3	79.5	61.9	65.7
27	74.0	74.3	66.5	73.6	81.0	74.2	<b>75.0</b>	78.2	72.8	79.5	67.9	74.1
28	72.8	73.0	73.5	74.0	78.0	73.9	75.9	74.1	76.5	77.0	69.0	76.0
29	73.2	—	75.0	73.0	78.9	77.3	78.0	82.1	85.2	78.1	69.1	76.7
30	73.0	—	76.5	68.6	79.9	83.1	81.9	80.5	78.2	80.3	68.4	75.0
31	75.0	—	77.6	—	75.9	—	78.9	84.3	—	78.1	—	75.0
Mean ...	73.6	72.1	71.7	72.3	77.5	77.7	80.6	79.3	75.7	76.0	68.6	69.5

NOTES.—(1) The initial 2 or 3 of the readings is omitted, i.e., 275.0 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. Mean for June is for 29 days only. Mean for July is for 29 days only.  
 (3) Annual Mean 274.5.

198. Eskdalemuir.

January, 1925.

Table for January 1925 with columns for Day, Cloud Forms, Cloud Amount (All Forms), Weather, and Remarks. Includes data for days 1 through 31.

199. Eskdalemuir.

February, 1925.

Table for February 1925 with columns for Day, Cloud Forms, Cloud Amount (All Forms), Weather, and Remarks. Includes data for days 1 through 28.

Summary table for February 1925 with columns for Day, Cloud Forms, Cloud Amount (All Forms), Weather, and Remarks.



200. Eskdalemuir.

Table for March 1925 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-31.

Summary row for March 1925: Mean Cloud Am't. 6.6, 6.7, 7.3, 7.6, 7.0, 6.9.

201. Eskdalemuir.

Table for April 1925 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-30.

Summary row for April 1925: Mean Cloud Am't. 7.6, 7.6, 8.3, 8.0, 7.0, 6.5.

Header row for the bottom section: Day, Cloud Forms, Cloud Amount (All Forms), Weather, Remarks.



204. Eskdalemuir.

July, 1925.

Table for July 1925 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-31 show various cloud types like Cu., St., Nb., and weather conditions like y, ∞, d.

205. Eskdalemuir.

August, 1925.

Table for August 1925 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-31 show various cloud types like St., Nb., Cu., and weather conditions like p, ∞, d.



208. Eskdalemuir.

Table for station 208, Eskdalemuir, covering the month of November 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. The table contains detailed meteorological data for each day of the month.

209. Eskdalemuir.

Table for station 209, Eskdalemuir, covering the month of December 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. The table contains detailed meteorological data for each day of the month, including mean cloud amount and annual cloud amount at the bottom.

210. Eskdalemuir.

Day.	January. Factor 6.29.				February. Factor 6.31.				March. Factor 6.34.			
	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.
1	v/m. 92	v/m. z±	v/m. -1048	v/m. - 88	v/m. 258	v/m. 239	v/m. 204	v/m. 142	v/m. z+	v/m. *	v/m. *	v/m. *
2	96	292	23	154	227	142	77	485	*	*	151	197
3	84	300	*	353	231	- 73	- 27	58	77	81	147	135
4	81	346	687	461	58	39	150	77	224	414	321	1022
5	173	96	84	134	42	- 604	108	177	279	66	163	112
6	161	269	649	276	69	166	115	131	66	93	112	151
7	88	115	238	192	123	154	366	266	116	120	263	186
8	81	- 142	- 315	- 111	- 454	69	-1105	169	337	z+	255	379
9	111	180	*	468	58	62	73	219	399	325	290	422
10	338	115	192	88	z±	- 316	- 50	35	457	244	271	317
11	134	388	257	415	450	320	246	789	600	190	151	236
12	326	465	465	730	z+	354	169	358	228	174	197	453
13	545	280	380	326	431	z+	185	462	147	213	50	182
14	- 891	123	223	622	397	35	z+	z±	120	104	112	197
15	219	357	96	403	- 4	z±	z+	z+	286	159	174	426
16	200	227	150	680	239	-62	389	119	135	147	93	271
17	426	84	- 211	154	- 678	123	212	77	205	151	163	306
18	108	165	134	465	250	177	362	450	163	341	228	166
19	200	353	461	303	639	535	347	527	203	232	201	306
20	104	108	242	468	189	308	258	354	- 128	120	z±	z+
21	265	115	280	442	320	312	616	1063	344	356	70	557
22	346	376	434	511	805	462	585	489	275	263	271	375
23	- 180	46	- 96	-1225	285	- 115	- 127	431	135	155	159	263
24	146	261	207	257	397	273	508	z±	143	213	224	z+
25	150	134	154	127	200	412	427	212	151	317	†	228
26	115	100	250	207	77	154	312	512	213	174	128	77
27	200	88	261	330	50	z-	46	- 947	155	205	275	457
28	165	131	269	92	50	150	z-	z+	85	190	224	302
29	77	- 941	- 84	z±	-	-	-	-	116	112	128	81
30	92	- 180	108	- 315	-	-	-	-	35	89	147	166
31	77	108	- 330	z-	-	-	-	-	74	- 39	- 581	441
(a)	181	208	271	346	254	224	274	330	208	194	184	300
(b)	131	181	216	238	182	134	180	343	208	182	150	304
Mean ...	(a) 251. (b) 191.				(a) 271. (b) 210.				(a) 221. (b) 211.			

Day.	April. Factor 6.28.				May. Factor 6.26.				June. Factor 6.30.			
	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.	3 h.	9 h.	15 h.	21 h.
1	v/m. 184	v/m. 349	v/m. 153	v/m. 77	v/m. - 49	v/m. *	v/m. z+	v/m. 273	v/m. 81	v/m. z-	v/m. z±	v/m. 238
2	- 31	- 502	- 38	295	673	*	107	109	154	z+	171	95
3	494	341	138	264	257	6	131	113	122	106	97	223
4	195	230	241	214	199	253	72	z±	215	494	217	156
5	191	- 57	77	260	185	z-	117	441	294	274	201	173
6	-3447	38	157	280	232	z-	z+	191	26	171	130	246
7	188	337	191	237	150	160	146	94	183	85	97	81
8	318	138	100	295	125	211	z+	59	128	120	187	335
9	341	230	153	84	230	160	z-	449	349	128	219	236
10	249	149	111	253	511	218	121	388	455	254	158	252
11	149	146	203	575	271	z-	138	215	317	240	177	359
12	230	169	149	352	156	121	39	195	280	122	130	227
13	184	- 184	157	- 211	185	140	156	60	130	138	122	150
14	42	146	203	- 77	57	160	129	242	246	120	217	286
15	69	77	54	272	131	215	291	195	236	207	57	164
16	- 253	276	226	107	211	158	78	193	203	79	97	217
17	157	146	157	-2830	215	146	78	111	173	201	130	252
18	-1245	- 766	-2218	- 333	144	353	283	421	240	171	167	301
19	- 234	38	138	157	- 70	513	131	470	284	311	315	315
20	149	153	195	257	183	367	51	423	41	110	232	250
21	123	188	299	529	312	164	174	228	426	207	197	201
22	-1333	253	- 640	-1000	127	218	181	156	185	299	158	221
23	103	92	z-	234	351	148	107	156	32	150	154	156
24	157	z±	237	326	300	59	- 14	z-	240	177	238	321
25	107	165	268	303	115	115	78	49	455	195	93	91
26	287	157	z+	z+	45	64	119	97	0	81	136	242
27	50	84	z±	92	- 294	- 585	137	224	81	55	116	118
28	123	100	146	z+	166	z-	175	z-	85	134	73	221
29	23	115	z+	203	- 27	- 449	- 29	z-	156	118	158	250
30	272	712	z±	19	- 12	80	z±	55	122	193	197	- 120
31	-	-	-	-	43	94	43	216	-	-	-	-
(a)	183	193	171	247	214	181	129	216	198	176	160	220
(b)	- 127	90	26	15	149	146	131	212	204	176	160	212
Mean ...	(a) 199. (b) 1.				(a) 185. (b) 159.				(a) 189. (b) 188.			

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.  
 \* Defective record. (a) Mean of all positive readings. (b) Mean from all complete days using both positive and negative readings.

Day.	July. Factor 6'31.				August. Factor 6'29.				September. Factor 6'33				
	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	229	118	75	268	154	250	164	65	154	118	81	177	
2	128	77	120	195	274	142	181	193	173	150	20	99	
3	270	128	128	223	118	154	199	396	85	214	187	427	
4	89	97	77	250	191	201	160	201	134	238	173	215	
5	156	114	87	177	295	142	93	321	102	142	162	510	
6	124	79	104	223	140	221	87	203	*	*	*	*	
7	173	199	160	195	171	266	87	394	158	272	112	162	
8	195	140	138	108	106	215	138	402	*	*	*	*	
9	104	97	77	138	z-	120	175	276	126	154	z±	z-	
10	134	124	128	201	195	357	187	374	177	345	242	z-	
11	260	274	215	733	290	225	118	234	179	250	156	173	
12	167	*	146	120	75	z-	451	z+	256	162	164	333	
13	140	158	154	335	353	623	81	181	*	*	*	*	
14	496	252	152	118	221	144	118	179	75	288	252	221	
15	41	203	240	294	148	380	313	321	246	453	221	242	
16	211	164	47	138	238	195	229	232	z-	292	221	327	
17	124	167	171	187	118	118	128	229	128	219	71	10	
18	95	221	134	118	433	266	213	114	*	*	*	*	
19	256	165	85	160	534	270	152	126	z-	416	14	221	
20	*	*	*	*	*	*	*	*	*	*	*	*	
21	195	207	138	508	*	*	*	*	628	197	138	309	
22	804	274	201	195	*	*	*	*	321	z-	288	z±	
23	*	*	*	*	169	203	z-	213	136	193	175	65	
24	364	386	112	138	142	128	81	110	158	140	209	455	
25	221	63	57	z±	368	171	138	319	236	569	156	-116	
26	- 69	171	z+	z+	118	59	250	337	429	30	75	260	
27	240	408	177	175	238	128	53	217	278	138	179	390	
28	264	195	140	136	102	146	32	37	195	471	299	392	
29	181	148	z-	z±	102	89	61	160	*	*	*	*	
30	193	189	154	193	120	77	110	217	396	333	179	329	
31	179	*	97	274	136	193	z-	197	-	-	-	-	
(a)	215	178	130	223	206	203	154	231	197	262	178	279	
(b)	220	185	134	225	215	207	141	232	152	238	156	244	
Mean ...	(a) 187. (b) 191.				(a) 199. (b) 199.				(a) 229. (b) 197.				
Day.	October. Factor 6'35.				November. Factor 6'33.				December. Factor 6'30.				
	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	160	180	255	147	404	380	276	- 116	*	*	*	*	
2	168	368	196	123	- 388	301	236	512	176	512	527	943	
3	145	343	218	178	z±	331	252	510	800	292	314	529	
4	158	210	152	533	97	276	335	z-	347	233	390	551	
5	339	410	335	1006	205	435	820	494	453	457	574	760	
6	*	*	*	*	- 49	498	97	256	433	602	953	686	
7	*	*	*	*	453	55	- 55	154	581	508	527	131	
8	156	198	190	451	z+	z±	290	414	69	73	z-	253	
9	434	123	386	380	615	353	378	745	114	106	z±	73	
10	164	178	261	416	390	380	510	463	- 8	118	108	194	
11	202	176	238	196	*	*	*	*	147	155	167	659	
12	141	85	77	- 49	*	*	*	*	298	133	196	310	
13	111	279	184	376	*	*	*	*	216	241	127	353	
14	188	141	218	212	*	*	*	*	274	216	272	237	
15	277	125	123	196	*	*	*	*	296	1098	294	296	
16	*	*	*	*	*	*	471	650	276	414	521	378	
17	- 748	263	117	97	648	441	197	733	63	133	196	125	
18	61	149	69	200	751	611	424	642	55	80	z-	z+	
19	77	119	299	246	451	463	451	772	351	*	545	*	
20	85	- 44	46	168	264	278	359	341	182	1413	1221	1235	
21	366	398	253	172	181	329	689	731	161	172	357	615	
22	139	216	- 69	174	493	768	944	1149	182	413	953	z+	
23	147	z-	z-	335	158	177	642	1036	204	380	278	257	
24	57	281	z-	372	286	427	- 471	175	308	594	915	298	
25	238	121	119	131	114	175	221	453	329	427	359	218	
26	208	337	42	279	118	169	349	530	304	233	506	z-	
27	z+	97	z-	123	z±	140	229	392	94	z-	131	82	
28	79	192	174	- 822	203	185	199	311	16	61	255	z-	
29	- 49	400	z-	77	309	173	258	z+	47	- 12	229	- 231	
30	*	*	*	*	164	z-	z-	197	133	z-	z±	849	
31	289	372	- 59	430	-	-	-	-	- 10	204	z-	171	
(a)	183	230	188	281	332	334	392	530	350	356	437	425	
(b)	149	215	166	228	294	357	348	521	284	404	426	427	
Mean ...	(a) 221. (b) 189.				(a) 397. (b) 380.				(a) 367. (b) 385.				
Annual Means ...									(a)	218	228	222	302
									(b)	172	210	186	267
									(a) 243.		(b) 209.		

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.  
 \*Defective record. (a) Mean from all positive readings. (b) Mean of 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.

211. Eskdalemuir.

\* 0a DAYS ONLY.

1925.

Month and Season.	Hour																								Non-cyclic change 24-o.	No. of Days used.	Mean Values.
	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.			
	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.
Jan. ...	-46	-55	-53	-45	-36	-21	-9	-34	-41	-47	-40	-34	-18	+6	-17	-1	+30	+45	+141	+116	+102	+66	+20	-20	+103	11	284
Feb. ...	-27	+59	+71	-14	-29	-41	-51	+18	+79	-40	-44	-76	-56	-63	-38	-67	+2	+60	-16	+46	+102	+49	+51	+16	-6	2	341
Mar. ...	-36	-33	+7	+41	-21	-31	+12	+18	-40	-36	-55	-68	-85	-84	-78	-89	-31	+59	+155	+157	+152	+75	+25	-5	-10	6	306
April ...	+33	+8	-27	-43	-49	-19	-2	-15	-27	-59	-52	-49	-31	-44	-54	-61	-54	-10	+61	+108	+86	+114	+113	+84	+22	7	253
May ...	+105	+103	+100	-47	-12	-26	-17	-10	-9	-53	-75	-72	-67	-38	-25	-26	-38	-52	-50	-23	+56	+63	+184	+36	+18	2	228
June ...	+37	+50	+52	+42	+9	+8	+8	-5	-13	-22	-22	-32	-40	-38	-35	-35	-37	-28	-16	-4	+13	+31	+45	+41	+11	15	208
July ...	+50	+66	+33	+2	+6	+48	+16	+10	-10	-28	-34	-44	-54	-57	-63	-65	-34	-38	-9	+29	+74	+55	+37	+22	+40	10	191
Aug. ...	+19	+13	+45	+13	+57	+99	+99	+63	-16	-47	-66	-76	-73	-64	-51	-37	-20	-4	+24	+12	-15	+15	-1	+15	-8	8	233
Sept. ...	-15	-40	-32	-47	-49	-51	+61	+48	+53	+28	-2	-43	-37	-26	-52	-22	+29	+32	+58	+28	+62	+13	-13	+19	+42	6	260
Oct. ...	+22	-14	-27	-38	-30	-16	+29	+3	-48	-66	-70	-52	-43	-48	-32	+9	-7	+48	+70	+58	+92	+44	+65	+48	+29	10	263
Nov. ...	-87	-73	-106	-95	-112	-121	-140	-94	-99	-81	-71	-107	-118	-96	+6	+95	+102	+215	+327	+308	+234	+151	+11	-41	-66	11	469
Dec. ...	-37	-65	-57	-91	-123	-115	-123	-106	-46	-4	-22	+5	+28	+1	+39	+44	+66	+101	+99	+146	+162	+103	+9	-14	-22	10	368
Year ...	+1	+2	+1	-27	-32	-24	-10	-9	-18	-38	-46	-54	-49	-46	-33	-21	+1	+36	+70	+82	+93	+65	+45	+17	-	-	284
Winter	-49	-33	-36	-61	-75	-75	-81	-54	-27	-43	-44	-53	-41	-38	-2	+18	+50	+105	+138	+154	+150	+92	+23	-15	-	-	366
Equinox	+1	-20	-20	-22	-37	-29	+25	+13	-15	-33	-45	-53	-49	-51	-54	-41	-16	+32	+86	+88	+98	+61	+47	+37	-	-	271
Summer	+53	+58	+57	+3	+15	+32	+27	+15	-12	-37	-49	-56	-59	-49	-43	-41	-32	-31	-13	+3	+32	+41	+66	+29	-	-	215

212. Eskdalemuir.

\* 1a AND 2a DAYS ONLY.

1925.

Month and Season.	Hour																								Non-cyclic change 24-o.	No. of Days used.	Mean Values.
	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.			
	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.
Jan. ...	-48	-42	-75	-60	-45	-37	-27	-44	-36	-22	-11	-23	-26	-57	-67	+35	+57	+38	+48	+90	+93	+98	+115	+53	-180	5	197
Feb. ...	+16	+121	+149	+92	-22	-56	-43	-18	+1	-139	-54	-26	-20	-43	-126	-91	-28	+5	+75	+3	+219	+28	-60	+26	+250	1	172
Mar. ...	-45	-24	-56	-59	-74	-39	-10	-23	-41	-47	-3	+2	+35	+27	+28	-13	+17	+100	+111	+60	+91	+4	-4	-28	-89	5	163
April ...	-29	+3	+40	+8	+30	-71	+86	+111	+77	+4	-19	-12	-17	-29	-34	-23	-18	-23	-27	-39	+4	-6	+15	-36	-20	2	169
May ...	+4	+32	+44	+59	+66	+19	+32	-34	+16	+18	-12	-41	-38	-43	-18	-55	-37	-20	-11	-15	+19	+18	+3	-6	-31	5	140
June ...	+5	+9	-25	-22	-12	-30	-30	-26	-17	-47	-21	-47	-41	-28	-20	-8	-5	+7	+37	+68	+31	+45	+98	+70	-36	10	179
July ...	-18	0	-8	-23	-9	-45	-28	-1	+19	+68	+24	-7	-29	-4	-27	-7	-26	+15	+10	+46	+29	+38	-6	-5	+24	7	166
Aug. ...	+12	-11	+8	+14	0	+65	+67	+32	-18	-60	-71	-78	-58	-51	-67	-40	-3	+13	+4	+26	+65	+89	+36	+23	-13	8	163
Sept. ...	+56	-13	-25	-32	-28	+2	+5	+33	+57	-33	-35	-28	-15	-9	-56	-17	+20	+25	+12	-95	+17	+59	+22	+79	-133	5	175
Oct. ...	+66	+83	+77	+86	+64	+38	+76	+60	+128	+60	+8	-32	-38	-88	-138	-148	-121	-62	-48	-73	-28	-31	+27	+41	+334	4	199
Nov. ...	-33	-112	-176	-219	-152	+12	-16	+109	+55	-33	+112	+73	-125	-156	-274	+13	+279	+256	+174	+127	+24	+64	+17	-9	-687	2	263
Dec. ...	-38	-105	-3	+52	+9	-26	-21	-38	-41	-22	+1	-17	-49	-29	-32	-2	+8	+6	+177	+124	+50	-49	+21	+28	+73	2	175
Year ...	-4	-5	-4	-9	-14	-14	+8	+13	+17	-21	-7	-20	-35	-43	-69	-30	+12	+30	+47	+27	+51	+30	+24	+20	-	-	180
Winter	-26	-35	-26	-34	-53	-27	-27	+2	-5	-54	+12	+2	-55	-59	-125	-11	+79	+76	+119	+86	+97	+35	+23	+25	-	-	202
Equinox	+12	+12	+9	+1	-2	-17	+39	+45	+55	-4	-12	-17	-9	-25	-50	-50	-25	+10	+12	-37	+21	+7	+15	+14	-	-	177
Summer	+1	+7	+5	+7	+11	+2	+10	-7	0	-5	-20	-43	-41	-31	-33	-27	-18	+4	+10	+31	+36	+47	+33	+21	-	-	162

\* NOTE.—For explanation of 0a, 1a and 2a Days, see page 181.



## ELECTRICAL CHARACTER OF EACH DAY.

213. Eskdalemuir.

1925.

Day.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2c	1b	*	1a	2b	2c	1b	2c	1a	oa	1a	*
2	1b	1a	*	*	2b	1b	oa	1b	1a	oa	2b	oa
3	1b	2c	1b	oa	1b	1a	oa	1a	1b	1a	2c	oa
4	1b	1b	oa	oa	1b	oa	oa	oa	1b	oa	2b	oa
5	1b	2c	1a	2b	2b	oa	oa	1a	oa	oa	1b	oa
6	*	1b	1a	2b	2c	1b	oa	1a	*	*	2b	oa
7	oa	1b	1b	oa	1b	oa	1a	2c	1a	*	2b	1b
8	2c	2c	1c	1b	2b	oa	*	1b	*	oa	1b	2c
9	*	1b	oa	1b	2b	oa	1b	2b	2c	oa	oa	2c
10	1a	2c	1b	1a	oa	oa	oa	2c	2b	oa	oa	1a
11	oa	1b	oa	oa	2b	1a	oa	1a	1b	oa	*	oa
12	oa	1b	oa	oa	1b	1a	*	2b	oa	2b	*	1a
13	1b	1b	2b	2c	1b	1a	1a	1b	*	1a	*	oa
14	2b	2c	1b	1b	1b	oa	oa	oa	oa	oa	*	oa
15	1a	2c	oa	2c	oa	1a	1a	oa	oa	oa	*	ob
16	oa	2b	1b	2c	1a	oa	1a	oa	1b	*	*	oa
17	1a	2b	*	2c	1a	oa	oa	oa	2b	2b	oa	oa
18	oa	1b	oa	2c	1b	oa	1a	oa	*	1a	oa	2c
19	oa	oa	1b	1b	1b	1a	1a	oa	2c	1b	oa	*
20	oa	oa	2c	oa	1b	oa	*	*	*	2b	oa	ob
21	oa	1b	1b	oa	1a	oa	oa	*	1c	1b	oa	ob
22	oa	ob	1b	2c	1a	oa	1b	*	2c	2c	oa	ob
23	2c	2b	1b	2c	2b	1a	*	2b	1b	2c	oa	1b
24	2a	2b	1b	1b	2c	oa	oa	1b	1b	2b	1a	1b
25	oa	ob	1b	1b	1a	oa	1b	oa	1a	1b	1b	1b
26	1a	2c	1b	1c	1b	1a	2c	1b	2b	2c	oa	2c
27	oa	2c	1a	2c	2b	*	oa	1a	1a	2c	1b	1b
28	2b	2c	1a	1b	2c	*	1b	1a	oa	2b	oa	2b
29	2c	—	1a	1b	2c	1a	1c	1a	*	2b	1b	2c
30	2c	—	1b	2b	2c	1a	1b	1a	oa	*	1c	2c
31	2c	—	1c	—	2c	—	*	1b	—	1a	—	2b
Mean ... ..	0.93	1.32	0.86	1.14	1.39	0.50	0.62	0.93	1.00	1.00	0.75	0.79
No of days used...	29	28	28	29	31	28	26	28	24	27	24	29

Annual Mean Character Figure 0.94. \* Defective Record.

*Explanatory Note.*—The electric 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 one or more excursions of limited duration to the negative side of the scale.

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.

TERRESTRIAL MAGNETIC FORCE: NORTH COMPONENT.

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

214. Eskdalemuir. (X.)

15,000 γ (-15 C.G.S. unit) +

January, 1925.

Table with 25 columns (Hour, G.M.T., 0-24, Mean) and 31 rows (Day 1-31). Values range from 1010 to 1035.

TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

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

215. Eskdalemuir. (-Y.)

4,000 γ (-04 C.G.S. unit) +

January, 1925.

Table with 25 columns (Hour, G.M.T., 0-24, Mean) and 31 rows (Day 1-31). Values range from 545 to 577.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279. \* Gas failed. † Mean of 29 days; 14th and 15th omitted

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

216 Eskdalemuir. (Z.)

44,000 γ (-44 C.G.S. unit) +

January, 1925.

Table with columns for Hour G.M.T., 0-24, and Mean. Rows are labeled 1-30 and 31. Values range from 939 to 966.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE:

217. Eskdalemuir.

MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

January, 1925.

Large table with columns for Day, Terrestrial Magnetic Force (North, West, Vertical Components), Character Figures (ΣR², ρ), Magnetic Character of Day, and Temperature in Magnet House. Rows 1-31.

\* Mean of 29 days; 14th and 15th omitted

For explanation see page 107. Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of ... les 268-279.

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

218. Eskdalemuir. (X.)

February, 1925.

15,000  $\gamma$  (.15 C.G.S. unit) +

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 25 rows (Day 1-25, 26-28D, Mean). Values range from 1011 to 1037.

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

219. Eskdalemuir. (-Y.)

February, 1925.

4,000  $\gamma$  (.04 C.G.S. unit) +

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 25 rows (Day 1-25, 26-28D, Mean). Values range from 549 to 588.

† Mean of 26 days; 22nd and 23rd omitted. \* Burner sooted up.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

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

220. Eskdalemuir. (Z.)

44,000 γ (·44 C.G.S. unit) +

February, 1925.

Table with 25 columns (Hour, G.M.T., 0 to 24, Mean) and 28 rows (Day 1 to 28). It contains numerical values for the vertical component of terrestrial magnetic force.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE: MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

221. Eskdalemuir.

February, 1925.

Large table with multiple columns: Day, North Component (Maximum, Minimum, Range), West Component (Maximum, Minimum, Range), Vertical Component (Maximum, Minimum, Range), Character Figures (ΣR², ρ), Magnetic Character of Day, and Temperature in Magnet House. It includes daily data for 28 days and a summary row.

§ For explanation see page 107. † Mean for 26 days; 22nd and 23rd omitted. Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

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

222. Eskdalemuir. (X.)

15,000 γ (·15 C.G.S. unit) +

March, 1925.

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day, 1D-31Q). Values range from 973 to 1036.

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

223. Eskdalemuir. (-Y.)

4,000 γ (·04 C.G.S. unit) +

March, 1925.

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day, 1D-31Q). Values range from 543 to 585.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

† Mean of 30 days; 1st omitted \* light tailed.

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

224. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

March, 1925.

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day 1D-31Q). Each cell contains a numerical value representing magnetic force components.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE:  
MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

225. Eskdalemuir.

March, 1925.

Table with 15 columns (Day, North Component, West Component, Vertical Component, ΣR², ρ, Magnetic Character of Day, Temperature in Magnet House) and 31 rows (Day 1-31). It provides daily extremes and character figures for the magnetic force components.

§ For explanation see page 107.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

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

226. Eskdalemuir. (X.)

15,000 γ (.15 C.G.S. unit) +

April, 1925.

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day 1-30, Mean †). Values range from 987 to 1059.

TERRESTRIAL MAGNETIC FORCE; WEST COMPONENT.

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

227. Eskdalemuir. (-Y.)

4,000 γ (.04 C.G.S. unit) +

April, 1925.

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day 1-30, Mean †). Values range from 530 to 588.

† Mean of 28 days; 17th and 18th omitted.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.



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TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT.

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

228. Eskdalemuir. (Z.)

44,000 γ (44 C.G.S. unit) +

April, 1925.

Table with 25 columns (Hour G.M.T. to Mean) and 30 rows (Day 1 to 30). It shows hourly magnetic force readings for the vertical component at Eskdalemuir.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE: MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

229. Eskdalemuir.

April, 1925.

Table with 19 columns (Day, North Component, West Component, Vertical Component, Character Figures, Magnetic Character of Day, Temperature) and 30 rows (Day 1 to 30). It provides daily extremes and character figures for the magnetic force components.

† Mean of 28 days; 17th and 18th omitted. \* Lamp out of position. § For explanation see page 107. Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

TERRESTRIAL MAGNETIC FORCE: NORTH COMPONENT.

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

230. Eskdalemuir. (X.)

15,000 γ (-15 C.G.S. unit) +

May, 1925.

Table with 26 columns (Hour G.M.T., 0-24, Mean) and 26 rows (Day, 1-25). Values range from 1032 to 1059.

TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

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

231. Eskdalemuir. (-Y.)

4,000 γ (-04 C.G.S. unit) +

May, 1925.

Table with 26 columns (Hour G.M.T., 0-24, Mean) and 26 rows (Day, 1-25). Values range from 537 to 577.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

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

232. Eskdalemuir. (Z.)

44,000 γ (-44 C.G.S. unit) +

May, 1925.

Table with 25 columns (Hour G.M.T. to Mean) and 31 rows (Day 1 to 31). Contains magnetic force data for Eskdalemuir.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE: MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

233. Eskdalemuir.

May, 1925.

Table with 19 columns (Day, North Component, West Component, Vertical Component, Character Figures, Magnetic Character, Temperature) and 31 rows (Day 1 to 31). Contains daily extremes of magnetic force and temperature.

For explanation see page 107. Q denotes an 'International Quiet Day,' while D denotes a disturbed day used for the computation of Tables 268-279.

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

June, 1925.

234. Eskdalemuir. (X.)

15,000 γ (-15 C.G.S. unit) +

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day 1-31). Values range from 985 to 1072.

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

June, 1925.

235. Eskdalemuir. (-Y.)

4,000 γ (.04 C.G.S. unit) +

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day 1-31). Values range from 485 to 585.

† Mean of 29 days: 8th omitted.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.



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

238. Eskdalemuir. (X.)

15,000 γ (·15 C.G.S. unit) +

July, 1925.

Table with 25 columns (Hour C.M.T. 0-24) and 31 rows (Day 1-31). Values range from 1011 to 1069. Includes a 'Mean' column at the end.

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

239. Eskdalemuir. (-Y.)

4,000 γ (·04 C.G.S. unit) +

July, 1925.

Table with 25 columns (Hour G.M.T. 0-24) and 31 rows (Day 1-31). Values range from 496 to 558. Includes a 'Mean' column at the end.

† Mean of 29 days: 12th and 13th omitted.

\* Gas failed.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

TERRESTRIAL MAGNETIC FORCE : VERTICAL COMPONENT.

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

240. Eskdalemuir. 2 (Z.)

44,000 γ (·44 C.G.S. unit) +

July, 1925.

Table with 25 columns (Hour G.M.T. to Mean) and 31 rows (Day 1 to 31). Contains magnetic force data for Eskdalemuir.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE : MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

July, 1925.

241. Eskdalemuir.

Table with 15 columns (Day, North Component, West Component, Vertical Component, Character Figures, Magnetic Character, Temperature). Contains daily extremes of magnetic force and temperature for Eskdalemuir.

† Mean of 29 days: 12th and 13th omitted.

\* Gas failed.

§ For explanation see page 107.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

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

242. Eskdalemuir. (X.)

15,000 γ (·15 C.G.S. unit) +

August, 1925.

Table with 26 columns (Hour G.M.T., 0-24, Mean) and 32 rows (Day 1-31). Values range from 1022 to 1062.

243. Eskdalemuir. (-Y.)

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

4,000 γ (·04 C.G.S. unit) +

August, 1925.

Table with 26 columns (Hour G.M.T., 0-24, Mean) and 32 rows (Day 1-31). Values range from 509 to 568.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.



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TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT.

197

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

244. Eskdalemuir. (Z.)

44,000 γ (·44 C.G.S. unit) +

August, 1925.

Table with 25 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day 1-31). Contains hourly magnetic force readings for the vertical component at Eskdalemuir.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE: MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

245. Eskdalemuir.

August, 1925.

Table with 15 columns (Day, North Component, West Component, Vertical Component, Character Figures, Magnetic Character, Temperature). Contains daily extremes and character figures for the magnetic force components and temperature in the magnet house at Eskdalemuir.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279. § For explanation see page 107.

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

246. Eskdalemuir. (X.)

15,000 γ (·15 C.G.S. unit) +

September, 1925.

Table with 25 columns (0-24 hours) and 30 rows (Day 1-30). Includes a 'Mean.' row at the bottom. Values range from 97 to 1044.

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

247. Eskdalemuir. (-Y.)

4,000 γ (·04 C.G.S. unit) +

September, 1925.

Table with 25 columns (0-24 hours) and 30 rows (Day 1-30). Includes a 'Mean.' row at the bottom. Values range from 486 to 581.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT.

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

248. Eskdalemuir. (Z.)

44,000 γ (·44 C.G.S. unit) +

September, 1925.

Table with 24 columns (Hour G.M.T., 0-24, Mean) and 31 rows (Day 1-30 Q). Each cell contains a numerical value representing the magnetic force component.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE: MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

249. Eskdalemuir.

September, 1925.

Table with 21 columns (Day, North Component, West Component, Vertical Component, Character Figures, Magnetic Character, Temperature) and 31 rows (Day 1-30). Includes sub-headers for Maximum and Minimum values and Range for each component.

§ For explanation see page 107.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Table 268-279.

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

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

250. Eskdalemuir. (X.)

15,000 γ (.15 C.G.S. unit) +

October, 1925.

Table with 25 columns (0-24) and 31 rows (Day 1-31, Mean†). Values range from 976 to 1047.

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

251. Eskdalemuir. (-Y.)

4,000 γ (.04 C.G.S. unit) +

October, 1925.

Table with 25 columns (0-24) and 31 rows (Day 1-31, Mean†). Values range from 466 to 538.

† Mean of 30 days; 7th omitted.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.



TERRESTRIAL MAGNETIC FORCE: NORTH COMPONENT.

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

November, 1925.

254. Eskdalemuir. (X.)

15,000 γ (.15 C.G.S. unit) +

Table with 25 columns (Hour G.M.T. 0-24) and 25 rows (Day 1-30). Values range from 972 to 1037. Mean value is 1032.

TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

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

November, 1925.

255. Eskdalemuir. (-Y.)

4,000 γ (.04 C.G.S. unit) +

Table with 25 columns (Hour G.M.T. 0-24) and 25 rows (Day 1-30). Values range from 470 to 533. Mean value is 515.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.

TERRESTRIAL MAGNETIC FORCE : VERTICAL COMPONENT.

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

256. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

November, 1925.

Table with 25 columns (Hour, G.M.T., 0-24, Mean) and 30 rows (Day 1-30). Contains magnetic force data for Eskdalemuir.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE : MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

257. Eskdalemuir.

November, 1925.

Table with 14 columns (Day, North Component, West Component, Vertical Component, Character Figures, Magnetic Character, Temperature). Contains daily extremes for Eskdalemuir.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279. § For explanation see page 107.

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

258. Eskdalemuir. (X.)

15,000 γ (-15 C.G.S. unit) +

December, 1925.

Table with 25 columns (Hour G.M.T. 0-24) and 32 rows (Day 1-31). Values range from 1017 to 1048. Includes a 'Mean' row at the bottom.

TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

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

259. Eskdalemuir. (-Y.)

4,000 γ (-04 C.G.S. unit) +

December, 1925.

Table with 25 columns (Hour G.M.T. 0-24) and 32 rows (Day 1-31). Values range from 477 to 518. Includes a 'Mean' row at the bottom.

\* Instrument under Adjustment.

† Mean of 28 days; 11th, 12th and 31st omitted.

Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 268-279.





DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE.—“ ALL ” DAYS.

(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 mean of the day adjusted for non-cyclic change.

Table for NORTH COMPONENT (all days except Jan. 14, 15; Feb. 22, 23; Mar. 1; Apr. 17, 18; June 8; July 12, 13; Oct. 7; Dec. 11, 12, 13). 262. Eskdalemuir. 1925. Columns: Hour, G.M.T. 1-24, and rows for months (Jan-Dec), Year, Winter, Equinox, Summer.

WEST COMPONENT (all days except Jan. 14, 15; Feb. 22, 23; Mar. 1; Apr. 17, 18; June 8; July 12, 13; Oct. 7; Dec. 11, 12, 13)

Table for WEST COMPONENT (all days except Jan. 14, 15; Feb. 22, 23; Mar. 1; Apr. 17, 18; June 8; July 12, 13; Oct. 7; Dec. 11, 12, 13). 263. Eskdalemuir. 1925. Columns: Hour, G.M.T. 1-24, and rows for months (Jan-Dec), Year, Winter, Equinox, Summer.

VERTICAL COMPONENT (all days except Jan. 14, 15; Feb. 22, 23; Mar. 1; Apr. 17, 18; June 8; July 12, 13; Oct. 7; Dec. 11, 12, 13).

Table for VERTICAL COMPONENT (all days except Jan. 14, 15; Feb. 22, 23; Mar. 1; Apr. 17, 18; June 8; July 12, 13; Oct. 7; Dec. 11, 12, 13). 264. Eskdalemuir. 1925. Columns: Hour, G.M.T. 1-24, and rows for months (Jan-Dec), Year, Winter, Equinox, Summer.

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 265: Declination (measured positive towards the West) for Eskdalemuir, 1925. Columns include months (Jan-Dec), Year, Winter, Equinox, and Summer. Rows show magnetic components (1-24) and declination values.

1.75

INCLINATION (all days except Jan. 14, 15; Feb. 22, 23; Mar. 1; Apr. 17, 18; June 8; July 12, 13; Oct. 7; Dec. 11, 12, 13).

266. Eskdalemuir.

1925.

Table 266: Inclination for Eskdalemuir, 1925. Columns include months (Jan-Dec), Year, Winter, Equinox, and Summer. Rows show magnetic components (1-24) and inclination values.

HORIZONTAL FORCE (all days except Jan. 14, 15; Feb. 22, 23; Mar. 1; Apr. 17, 18; June 8; July 12, 13; Oct. 7; Dec. 11, 12, 13).

267. Eskdalemuir.

1925.

Table 267: Horizontal Force for Eskdalemuir, 1925. Columns include months (Jan-Dec), Year, Winter, Equinox, and Summer. Rows show magnetic components (gamma 1-24) and horizontal force values.

1.9

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE.—  
INTERNATIONAL QUIET DAYS.

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

Table 268: Eskdalemuir. NORTH COMPONENT (Quiet Days). 1925. Columns include Hour (G.M.T.) 1-24 and rows for months (Jan-Dec), Year, Winter, Equinox, and Summer. Values range from -11.5 to 11.5.

Table 269: Eskdalemuir. WEST COMPONENT (Quiet Days). 1925. Columns include Hour (G.M.T.) 1-24 and rows for months (Jan-Dec), Year, Winter, Equinox, and Summer. Values range from -11.9 to 11.9.

Table 270: Eskdalemuir. VERTICAL COMPONENT (Quiet Days). 1925. Columns include Hour (G.M.T.) 1-24 and rows for months (Jan-Dec), Year, Winter, Equinox, and Summer. Values range from -11.1 to 11.1.

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 for 271. Eskdalemuir. 1925. Declination (measured positive towards the West) (Quiet Days). Columns: Hour (G.M.T. 1-24), Month and Season, and values for each hour from Jan to Dec, plus Year, Winter, Equinox, and Summer averages.

Table for 272. Eskdalemuir. 1925. Inclination (Quiet Days). Columns: Hour (G.M.T. 1-24), Month and Season, and values for each hour from Jan to Dec, plus Year, Winter, Equinox, and Summer averages.

Table for 273. Eskdalemuir. 1925. Horizontal Force (Quiet Days). Columns: Hour (G.M.T. 1-24), Month and Season, and values for each hour from Jan to Dec, plus Year, Winter, Equinox, and Summer averages.

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE.—SELECTED DISTURBED DAYS.

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

Table for NORTH COMPONENT (Disturbed Days) at Eskdalemuir, 1925. Columns include Hour (1-24), G.M.T., and monthly/seasonal data for the North Component.

Table for WEST COMPONENT (Disturbed Days) at Eskdalemuir, 1925. Columns include monthly/seasonal data for the West Component.

Table for VERTICAL COMPONENTS (Disturbed Days) at Eskdalemuir, 1925. Columns include monthly/seasonal data for the Vertical Components.

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 for Declination (measured positive towards the West) (Disturbed Days). 277. Eskdalemuir. 1925. Columns: Hour (1-24), G.M.T. (1-24), Month and Season (Jan-Dec, Year, Winter, Equinox, Summer). Rows: Monthly data and summary statistics.

Table for Inclination (Disturbed Days). 278. Eskdalemuir. 1925. Columns: Hour (1-24), G.M.T. (1-24), Month and Season (Jan-Dec, Year, Winter, Equinox, Summer). Rows: Monthly data and summary statistics.

Table for Horizontal Force (Disturbed Days). 279. Eskdalemuir. 1925. Columns: Hour (1-24), G.M.T. (1-24), Month and Season (Jan-Dec, Year, Winter, Equinox, Summer). Rows: Monthly data and summary statistics.

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS, YEAR, AND SEASONS OF 1925.

NOTE.—The ranges are those shown in Tables 262 to 279, in the preparation of which the non-cyclic change has been eliminated.

280. Eskdalemuir.

1925.

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 19.2	γ 24.8	γ 10.0	γ 17.5	γ 17.6	γ 4.8	γ 20.1	γ 56.1	γ 37.1	γ 5.37	γ 1.24	γ 16.8	γ 3.83	γ 1.09	γ 15.9	γ 10.78	γ 2.79	γ 30.6
February ...	21.3	30.1	12.3	19.9	21.3	7.2	29.8	45.7	21.4	6.78	1.14	17.6	4.72	1.15	17.6	10.09	1.61	22.4
March ...	35.5	41.8	15.3	31.6	33.9	10.9	48.2	46.2	24.3	8.93	1.79	29.2	7.50	1.63	26.9	11.13	2.25	37.1
April ...	45.3	51.1	23.7	38.8	44.2	16.8	63.3	57.9	44.6	10.79	2.51	44.7	9.47	2.30	38.9	12.33	2.99	51.6
May ...	47.9	47.0	28.9	40.2	38.8	23.3	68.7	57.4	60.2	9.73	2.77	49.2	8.19	2.25	40.7	12.69	3.92	70.7
June ...	60.7	57.8	27.8	56.8	64.7	19.3	81.6	61.1	72.0	11.24	3.67	63.8	12.86	3.54	57.5	12.81	4.89	87.0
July ...	56.4	54.2	24.6	42.3	50.0	19.0	79.7	48.2	46.2	10.95	3.48	59.5	10.45	2.52	42.4	11.59	4.72	79.1
August ...	55.7	58.5	21.5	48.3	49.4	16.9	78.0	75.7	67.9	11.53	3.58	59.1	9.99	3.15	49.9	15.51	5.23	80.1
September ...	47.1	45.9	24.6	41.3	46.2	17.2	63.5	56.4	73.3	9.45	2.67	44.5	9.99	2.53	38.5	13.16	3.48	64.3
October ...	38.9	44.3	28.7	39.0	39.9	8.5	56.6	76.8	95.5	9.91	2.44	33.8	8.27	2.54	39.1	15.60	4.38	50.7
November ...	27.1	32.0	19.0	22.6	22.5	6.6	30.7	62.0	83.9	7.33	1.72	24.3	4.81	1.25	20.0	12.37	3.60	35.0
December ...	19.8	29.2	15.6	17.4	21.4	7.3	35.1	42.0	49.1	6.58	1.15	16.9	4.88	.91	15.5	8.79	2.55	36.7
Year ...	35.8	39.4	17.9	32.7	36.0	11.6	36.6	46.3	49.5	8.11	1.97	35.6	7.52	1.93	32.4	10.25	2.45	41.8
Winter ...	21.6	27.7	13.0	18.5	20.2	5.6	22.3	45.6	45.0	6.12	1.28	18.2	4.40	1.02	15.6	9.41	2.05	19.6
Equinox ...	39.0	43.3	19.8	36.1	39.6	11.7	48.3	54.2	54.8	9.28	2.15	36.3	8.56	2.18	35.5	12.24	2.89	42.3
Summer ...	55.1	54.4	25.4	46.5	50.7	19.2	74.0	57.0	54.0	10.78	3.34	57.3	10.28	2.84	47.4	12.20	4.37	77.4

NON-CYCLIC CHANGE (24h.—0h.).

MEAN VALUE OF THE SQUARES OF THE ABSOLUTE DAILY RANGES. (Unit, 100γ².)

281. Eskdalemuir.

1925.

282. Eskdalemuir.

1925.

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 +0.1	γ -0.4	γ -0.7	γ +1.6	γ +1.2	γ -0.2	γ -4.2	γ -5.6	γ +0.6	19.1	*35.1	12.7	*54.6	*67.7	0.48
February ...	+0.1	-0.7	-0.3	+1.2	+0.3	-1.0	-4.2	-6.0	+2.4	19.4	†43.9	6.5	†64.4	†71.3	0.61
March ...	+0.7	0.0	-0.7	+3.0	+2.6	-1.0	-6.0	-1.0	-1.4	*33.9	34.9	5.4	*68.3	*73.6	0.48
April ...	-0.1	-0.3	0.0	+9.0	+3.8	-3.7	-5.4	-4.4	-3.8	57.3	47.0	†13.2	104.2	†119.0	0.60
May ...	-0.6	0.0	+0.3	+4.2	+0.8	-1.0	-10.6	+13.2	+5.2	56.7	47.1	28.1	103.7	131.8	0.61
June ...	0.0	-0.1	+1.2	+1.0	+0.6	+2.3	-7.4	-9.2	-0.8	142.5	94.4	72.0	236.9	308.9	0.93
July ...	-0.3	-0.1	+0.4	+3.8	+1.0	-1.7	-3.8	+9.6	+5.8	*78.2	†61.7	*16.1	†141.1	†157.0	0.65
August ...	+0.2	-0.2	+0.3	-1.4	0.0	+1.2	-7.8	+4.6	-3.0	84.2	77.9	29.9	162.1	192.0	0.77
September ...	-0.5	-0.2	+0.4	+4.4	+2.8	+2.2	-19.8	-16.2	+0.2	131.0	104.4	72.2	235.4	307.5	0.83
October ...	0.0	-0.4	+1.1	+2.2	+1.4	+2.2	-18.4	-0.8	+5.6	139.7	145.8	*72.8	285.5	*365.5	0.87
November ...	+0.6	+0.2	-0.4	+3.2	+7.8	-2.8	-3.8	+8.8	-6.4	50.0	70.7	39.3	120.7	160.1	0.60
December ...	-0.6	-0.6	-0.5	+0.2	-1.0	-0.8	-9.2	-4.0	+8.4	45.5	49.9	17.2	95.4	112.7	0.74
Year 1925...	—	—	—	—	—	—	—	—	—	71.5	67.7	32.1	139.4	172.3	0.68

\* Mean of 30 days; † Mean of 26 days; ‡ Mean of 29 days.

MEAN MONTHLY AND ANNUAL VALUES OF TERRESTRIAL MAGNETIC ELEMENTS. (All days except those noted in monthly tables.)

1925.

283. Eskdalemuir.

Month.	North.	West.	Vertical	Total.	Declination (West).	Inclination (North).	Horizontal Force.
	-15	-4	-41	-43			-15
January ...	γ 16029	γ 4565	γ 44940	γ 47931	15	53.8	γ 16666
February ...	16029	4562	44943	47933	15	53.2	16666
March ...	16031	4560	44936	47927	15	52.7	16667
April ...	16035	4554	44939	47931	15	51.3	16669
May ...	16042	4550	44954	47947	15	50.1	16675
June ...	16043	4544	44952	47945	15	48.9	16674
July ...	16045	4538	44939	47933	15	47.5	16668
August ...	16040	4533	44932	47924	15	46.8	16654
September ...	16028	4524	44938	47925	15	45.7	16653
October ...	16028	4519	44937	47923	15	44.7	16656
November ...	16032	4515	44954	47940	15	43.7	16657
December ...	16035	4510	44947	47934	15	42.5	16665
Year 1925 ...	16035	4539	44943	47933	15	48.4	16665



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° 12' W.)

284. Eskdalemuir.

1925.

Month and Season.	North Component.								West Component.								Vertical Component.							
	$a_1.$	$b_1.$	$a_2.$	$b_2.$	$a_3.$	$b_3.$	$a_4.$	$b_4.$	$a_1.$	$b_1.$	$a_2.$	$b_2.$	$a_3.$	$b_3.$	$a_4.$	$b_4.$	$a_1.$	$b_1.$	$a_2.$	$b_2.$	$a_3.$	$b_3.$	$a_4.$	$b_4.$
<i>"All" Days.</i>																								
Jan.	+3.8	+2.9	-4.6	-1.1	+1.4	-0.6	-0.3	+0.9	-5.5	-1.6	-0.9	+6.1	-1.1	-0.5	+1.2	+1.8	-0.4	-5.0	-0.5	-1.0	0.0	-0.3	-0.4	-0.5
Feb.	+5.7	+3.9	-4.6	-1.2	+2.5	-0.2	-0.7	-0.1	-8.5	-6.0	-1.8	+5.4	-1.2	-2.4	+0.6	+2.3	+2.7	-5.0	-1.5	-1.1	+0.8	-0.1	-0.6	-0.5
Mar.	+12.6	+1.3	-8.2	-1.3	+3.7	-1.3	-0.9	+0.7	-6.9	-9.2	+3.3	+8.3	-2.9	-4.1	+1.0	+2.2	+3.2	-3.4	-3.2	-0.3	+2.1	+0.4	-0.8	0.0
April	+16.6	-2.7	-11.2	+0.1	+4.3	-2.5	-0.2	+1.4	-5.0	-12.7	+4.1	+11.3	-2.6	-4.7	+1.8	+1.5	+3.9	-5.6	-5.4	-2.1	+2.0	+0.8	-0.4	+0.2
May	+14.4	-8.3	-10.5	+0.7	+1.6	+0.6	-0.8	+0.7	-5.3	-20.9	+4.6	+8.3	-2.3	-2.8	+0.9	-0.2	+4.4	-6.8	-7.1	-1.9	+1.3	-0.3	-0.7	+0.1
June	+15.6	-13.8	-13.6	+2.4	+0.9	+0.7	+0.3	0.0	-6.8	-15.9	+3.1	+10.1	-3.0	-3.0	+1.5	+1.8	+1.7	-9.9	-7.8	-2.2	+0.0	+0.2	-1.1	-0.9
July	+15.4	-10.1	-12.8	+1.5	+2.1	+0.4	+1.2	+0.4	-5.0	-20.0	+3.6	+10.7	-3.2	-2.3	-0.5	+0.7	+3.8	-5.7	-5.9	-2.8	+0.3	+0.8	-0.2	+0.5
Aug.	+17.0	-10.9	-10.3	+3.9	+2.2	-2.6	+0.3	+1.4	-7.6	-17.3	+5.7	+10.1	-4.7	-3.9	+0.7	+1.2	+0.6	-6.5	-6.6	-2.5	+2.3	-0.3	-0.6	-0.4
Sept.	+17.1	-7.9	-8.4	+3.5	+1.4	-2.3	+0.1	+0.7	-9.0	-9.4	+7.2	+7.2	-4.4	-3.3	+1.1	+0.8	-1.5	-9.2	-5.6	-1.5	+1.8	+0.7	-0.6	+0.5
Oct.	+13.0	+0.2	-9.3	+1.0	+3.3	-1.6	+1.4	-0.1	-12.9	-8.3	-1.1	+10.4	-1.7	-4.1	+1.4	+2.2	-2.4	-11.5	-4.0	-2.3	+1.3	+2.3	-0.9	+0.4
Nov.	+8.6	+0.9	-6.7	-0.5	+3.2	-1.3	+1.1	+0.8	-9.1	-3.6	-0.6	+7.8	-1.2	-2.2	+1.3	+1.8	-1.6	-7.5	-1.5	-2.6	+0.9	+0.3	-0.2	+0.1
Dec.	+6.8	+1.8	-4.4	-0.4	+1.4	-1.3	+0.2	+0.3	-8.5	-5.0	-1.9	+5.2	-0.5	-0.3	+1.0	+2.5	+1.8	-6.5	-1.3	-0.3	-0.1	0.0	-0.3	+0.3
Year	+12.2	-3.5	-8.7	+0.7	+2.3	-1.0	+0.1	+0.6	-7.5	-10.8	+2.1	+8.4	-2.4	-2.8	+1.0	+1.5	+1.3	-6.9	-4.2	-1.7	+1.1	+0.4	-0.6	0.0
W. Eq. S.	+6.2	+2.4	-5.1	-0.8	+2.1	-0.8	-0.5	+0.5	-7.9	-4.1	-1.3	+6.1	-1.0	-1.3	+1.0	+2.1	+0.6	-6.0	-1.2	-1.2	+0.4	0.0	-0.4	-0.2
	+14.8	-2.3	-9.3	+0.8	+3.2	-1.9	-0.6	+0.7	-8.5	-9.9	+3.4	+9.3	-2.9	-4.0	+1.3	+1.7	+0.8	-7.4	-4.5	-1.5	+1.8	+1.0	-0.7	+0.3
	+15.6	-10.8	-11.8	+2.1	+1.7	-0.2	+0.7	+0.6	-6.1	-18.4	+4.2	+9.8	-3.3	-3.0	+0.6	+0.9	+2.6	-7.2	-6.8	-2.3	+1.0	+0.1	-0.7	-0.2
<i>Quiet Days.</i>																								
Year	+11.5	-2.2	-7.8	+0.1	+2.3	-1.0	-0.3	+0.6	-2.8	-10.0	+3.3	+6.9	-2.5	-3.2	+0.8	+1.2	+3.2	-0.6	-2.9	-0.3	+1.5	0.0	-0.7	-0.2
W. Eq. S.	+5.7	+1.1	-4.5	-1.5	+1.7	-0.7	-0.2	+0.3	-3.6	-3.3	+0.5	+4.8	-1.3	-1.9	+0.5	+1.5	+1.1	-1.9	-0.7	+0.2	+0.7	-0.1	-0.5	-0.2
	+14.0	-1.1	-8.5	+0.5	+3.6	-1.5	-0.8	+1.2	-2.4	-10.1	+3.9	+7.2	-3.3	-4.4	+1.5	+1.5	+3.5	+0.3	-2.8	-0.2	+2.0	+0.2	-0.8	-0.3
	+14.9	-6.7	-10.4	+1.4	+1.6	-0.8	0.0	+0.4	-2.3	-16.7	+5.4	+8.8	-3.0	-3.2	+0.5	+0.7	+5.0	-0.3	-5.2	-1.0	+1.9	-0.1	-0.8	+0.1
<i>Disturbed Days.</i>																								
Year	+13.4	-5.9	-10.1	+2.8	+1.9	-0.7	-0.1	-0.7	-15.2	-8.9	-1.0	+10.0	-1.3	-2.1	+1.0	+1.4	-3.8	-20.5	-6.3	-4.3	+0.6	+1.3	-0.4	+0.6
W. Eq. S.	+5.6	+4.3	-5.0	+1.6	+1.4	-1.0	-0.3	+0.1	-14.8	-1.9	-5.3	+8.8	+0.9	+0.3	+1.7	+3.4	-1.2	-17.6	-2.8	-5.4	-0.1	+0.1	+0.1	+0.4
	+14.5	-4.3	-10.7	+2.3	+3.0	-1.0	-0.9	-2.0	-18.4	-7.8	+1.7	+11.8	-1.3	-2.2	+1.7	+0.8	-4.0	-22.7	-7.3	-3.0	+0.9	+3.6	-0.1	+1.3
	+20.0	-17.6	-14.5	+4.4	+1.4	-0.2	+0.8	-0.2	-12.3	-17.1	+0.5	+9.4	-3.6	-4.3	-0.4	+0.2	-6.3	-21.2	-8.8	-4.4	+1.1	+0.1	-1.2	+0.1

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.

285. Eskdalemuir.

1925.

Month and Season.	North Component.								West Component.								Vertical Component.							
	$c_1.$	$\alpha_1.$	$c_2.$	$\alpha_2.$	$c_3.$	$\alpha_3.$	$c_4.$	$\alpha_4.$	$c_1.$	$\alpha_1.$	$c_2.$	$\alpha_2.$	$c_3.$	$\alpha_3.$	$c_4.$	$\alpha_4.$	$c_1.$	$\alpha_1.$	$c_2.$	$\alpha_2.$	$c_3.$	$\alpha_3.$	$c_4.$	$\alpha_4.$
<i>"All" Days.</i>																								
Jan.	4.8	56	4.7	263	1.5	122	0.9	355	5.8	257	6.2	358	1.2	255	2.2	46	5.0	188	1.1	213	0.3	185	0.6	213
Feb.	6.9	59	4.8	262	2.5	103	0.7	272	10.4	238	5.7	348	2.7	216	2.4	27	5.7	154	1.9	242	0.8	108	0.8	241
Mar.	12.7	87	8.3	268	4.0	119	1.1	319	11.5	220	9.0	28	5.0	225	2.4	37	4.7	140	3.2	271	2.1	88	0.8	283
April	16.8	103	11.2	277	5.0	130	1.4	5	13.6	205	12.0	26	5.3	219	2.3	64	6.8	149	5.8	255	2.2	79	0.4	304
May	16.6	123	10.5	280	1.7	79	1.1	64	16.8	202	9.5	35	3.7	229	0.9	115	8.1	150	7.3	261	1.3	111	0.7	294
June	20.8	135	13.8	286	1.1	62	0.3	95	21.5	201	10.5	24	4.2	234	2.3	53	10.0	174	8.1	261	0.2	358	1.4	243
July	18.4	127	12.9	283	2.2	90	1.3	85	20.6	207	11.2	25	3.9	244	0.9	335	6.8	150	6.5	251	0.9	31	0.5	346
Aug.	20.2	126	11.0	297	3.4	150	1.4	25	18.9	207	11.6	36	6.1	240	1.4	44	6.5	178	7.1	256	2.3	107	0.7	253
Sept.	18.8	118	9.1	299	2.7	157	0.7	22	13.1	227	10.3	51	5.5	243	1.4	67	9.4	192	5.8	261	1.9	77	0.8	325
Oct.	13.0	92	9.4	283	3.6	125	1.4	277	15.3	241	10.5	1	4.5	213	2.6	44	11.7	195	4.6	247	2.6	40	1.0	309
Nov.	8.7	87	6.7	272	3.5	122	1.3	318	9.8	252	7.9	2	2.5	219	2.3	49	7.7	195	3.0	217	0.9	84	0.2	309
Dec.	7.0	79	4.4	271	1.9	142	0.4	46	9.9	243	5.5	346	0.6	248	2.7	35	6.8	168	1.3	265	0.1	272	0.4	323
Year	12.7	109	8.7	281	2.5	123	0.6	25	13.2	218	8.7	21	3.7	230	1.8	46	7.0	172	4.5	254	1.1	81	0.6	281
W. Eq. S.	6.7	72	5.1	267	2.3	120	0.6	327	8.9	246	6.3	355	1.7	226	2.4	39	6.0	177	1.7	231	0.4	105	0.4	258
	15.0	102	9.3	282	3.7	131	0.9	331	13.1	224	9.9	26	5.0	226	2.1	51	7.5	177	4.8	258	2.1	70	0.7	305
	18.9	128	12.0	286	1.7	108	0.9	60	19.4	202	10.7	30	4.5	142	1.1	50	7.7	163	7.2	257	1.0	94	0.7	269
<i>Quiet Days.</i>																								
Year	11.8	104	7.8	277	2.5	123	0.7	345	10.4	199	7.7	32	4.0	228	1.5	46	3.3	104	2.9	270	1.5	100	0.7	267
W. Eq. S.	5.8	82	4.8	259	1.8	122	0.4	340	4.8	231	4.8	13	2.3	223	1.5	27	2.2	152	0.7	294	0.7	107	0.5	260
	14.0	98	8.5	280	3.9	123	1.4	340	10.4	197	8.2	35	5.5	226	2.2	57	3.5	88	2.8	272	2.0	94	0.9	261
	16.4	117	10.5	284	1.8	126	0.4	14	16.8	191	10.3	38	4.4	233	0.9	51	5.0	97	5.3	264	1.9	103	0.8	287
<i>Disturbed Days.</i>																								
Year	14.6	117	10.4	292	2.0	121	0.7	204	17.7	243	10.1	1	2.5	222	1.7	47	20.9	194	7.6	242	1.4	36	0.7	338
W. Eq. S.	7.1	56	5.3	294	1.7	136	0.3	295	15.0	266	10.3	336	1.0	79	3.8	39	17.7	187	6.1	213	0.2	335	0.4	23
	15.2	110	11.0	289	3.1	119	2.2	217	20.0	250	11.9	15	2.6	219	1.9	77	23.1	193	7.9	254	3.7	23	1.3	367
	26.7	135	15.1	293	1.4	107	0.8	116	21.0	219	9.4	9	5.6	229	0.4	307	22.2	200	9.8	250	1.1	94	1.2	287

MEAN VALUES, FOR THE YEARS SPECIFIED, OF THE MAGNETIC ELEMENTS AT OBSERVATORIES IN COMMUNICATION WITH THE ROYAL OBSERVATORY, GREENWICH.

Place.	Latitude.	Longitude.	1925.				1924.				1923.			
			Declination.	Inclination.	Horizontal Force.	Vertical Force.	Declination.	Inclination.	Horizontal Force.	Vertical Force.	Declination.	Inclination.	Horizontal Force.	Vertical Force.
	N.	°	°	° N.	γ	γ	°	° N.	γ	γ	°	° N.	γ	γ
Sodankylä, Finland ...	67 22	26 39E.	1 52·5E.	75 48·4	12440	49186	1 41·2E.	75 45·4	12490	49204	1 30·6E.	75 42·6	12529	49189
*Lerwick, Shetland Islands ...	60 9	1 11W.	15 17·7W.	72 37·2	14621	46712	15 30·6W.	72 35·7	14642	46708	15 44·5W.	72 33·6	14655	46650
Pavlovsk, Leningrad, Russia	59 41	30 29E.	3 25·3E.	71 27·1	15770	46999	3 16·1E.	71 23·4	15817	46970	3 7·1E.	71 20·0	15858	46943
Sitka, Alaska ...	57 3	135 20W.	30 27·2E.	74 22·2	15524	55488	30 28·7E.	74 22·0	15536	55519	30 28·9E.	74 22·1	15549	55573
†Ekaterinburg, Russia	56 50	60 36E.	11 1·0E.	72 3·0	16513	50974	11 0·8E.	71 58·4	16578	50942	11 0·7E.	71 54·2	16638	50915
Rude Skov, Denmark ...	55 51	12 27E.	6 57·7W.	69 6·8	17030	44626	7 10·4W.	69 5·1	17053	44621	7 22·6W.	69 3·6	17073	44615
Kasan, Russia ...	55 50	48 51E.	8 56·9E.	70 12·8	17252	47953	8 53·5E.	70 7·6	17310	47888	8 50·4E.	70 2·4	17367	47819
Eskdalemuir, Scotland ...	55 19	3 12W.	15 48·4W.	69 39·3	16665	44943	16 1·2W.	69 38·7	16673	44938	16 13·8W.	69 38·8	16676	44954
Meanook, Alberta ...	54 37	113 21W.	...	...	...	...	27 17·7E.	77 53·6	12866	59984	27 23·3E.	77 53·2	12881	60025
Stonyhurst, Lancs., England	53 51	2 28W.	14 53·4W.	68 42·2	17263	44282	15 5·4W.	68 41·7	17276	44281	15 17·6W.	68 41·6	17308	44377
Irkutsk (Zouy), Siberia ...	52 28	104 2E.	0 45·5E.	71 15·6	19070	56212	...	...	...	...	...	...	...	...
Potsdam, Prussia ...	52 23	13 4E.	6 33·0W.	66 39·7	18532	42951	6 45·0W.	66 38·0	18550	42935	6 56·9W.	66 36·5	18565	42919
Seddin, Prussia ...	52 17	13 1E.	6 34·3W.	66 36·7	18570	42936	6 46·8W.	66 35·0	18589	42922	6 58·6W.	66 33·6	18603	42906
Swider, Poland ...	52 7	21 15E.	...	...	...	...	2 58·0W.	66 42·0	18645	43294	3 9·5W.	66 39·0	18672	43251
De Bilt, Utrecht, Holland ...	52 5	5 11E.	10 25·4W.	66 53·5	18359	43026	10 38·3W.	66 52·7	18372	43024	10 50·2W.	66 52·6	18378	43038
*Valentia, Cahirciveen, Ireland	51 56	10 15W.	18 22·4W.	68 0·0	17849	44177	18 34·9W.	68 0·1	17854	44214	18 46·5W.	68 1·5	17852	44242
Bochum, Prussia ...	51 29	7 14E.	9 25·9W.	...	...	...	9 36·6W.	...	...	...	9 46·8W.	...	...	...
Kew, Richmond, Surrey, England.	51 28	0 19W.	...	...	...	...	13 45·1W.	66 56·5	18392	43205	13 57·3W.	66 57·0	18394	43230
Greenwich, London, England	51 28	0 0	13 9·9W.	66 51·4	18414	43080	13 22·8W.	66 51·6	18426	43112	13 35·1W.	66 51·8	18432	43137
Uccle, Belgium ...	50 48	4 21E.	10 52·7W.	...	...	...	11 3·8W.	...	...	...	11 15·1W.	...	...	...
Prague, Bohemia ...	50 5	14 25E.	5 34·9W.	...	...	...	5 48·1W.	...	...	...	6 0·4W.	...	...	...
Val Joyeux, near Paris, France	48 49	2 1E.	11 55·8W.	64 38·7	19659	41485	12 7·9W.	64 38·9	19663	41501	12 20·2W.	64 39·0	19664	41504
Munich, Bavaria ...	48 9	11 37E.	7 6·7W.	...	...	...	7 17·5W.	...	...	...	7 29·1W.	...	...	...
Nantes, France ...	47 15	1 34W.	12 59·6W.	63 39·0	20234	40880	13 11·6W.	63 41·6	20420	40940	13 23·5W.	63 45·8	20212	41009
†Odessa, Russia ...	46 26	30 46E.	1 36·4W.	63 18·9	21213	42206	1 44·6W.	63 15·1	21246	42154	1 53·1W.	63 11·5	21272	42098
Pola, Istria, Italy ...	44 52	13 51E.	...	...	...	...	...	...	...	...	...	...	...	...
Agincourt, Ontario ...	43 47	79 16W.	7 9·7W.	74 44·2	15728	57628	7 5·8W.	74 44·3	15752	57733	7 0·9W.	74 44·3	15784	57849
Tortosa, Spain ...	40 49	0 30E.	11 8·8W.	57 28·4	23367	36642	11 20·2W.	57 30·5	23359	36678	11 30·6W.	57 32·7	23328	36680
Coimbra, Portugal ...	40 12	8 25W.	14 38·2W.	58 13·9	23143	37368	14 45·6W.	58 14·1	23128	37353	14 54·2W.	58 18·9	23110	37433
Cheltenham, Maryland ...	38 44	76 50W.	6 39·2W.	71 0·5	18870	54826	6 35·8W.	70 59·0	18927	54920	6 32·0W.	70 58·3	18976	55018
*†San Miguel, Azores	37 46	25 39W.	18 56·5W.	60 2·6	23256	40378	19 1·6W.	60 7·4	23245	40459	19 5·5W.	60 11·9	23205	40514
San Fernando, Spain ...	36 28	6 12W.	13 15·1W.	53 40·0	25032	34035	13 23·5W.	53 46·8	25016	34155	13 32·6W.	53 48·7	25027	34210
Tucson, Arizona ...	32 15	110 50W.	13 45·3E.	59 30·6	26687	45323	13 46·4E.	59 29·4	26745	45388	13 47·3E.	59 28·8	26794	45450
Lukiapang, Shanghai, China	31 19	121 2E.	...	...	...	...	3 28·4W.	...	...	...	3 25·9W.	...	...	...
Dehra Dun, near Simla, India	30 19	78 3E.	1 30·5E.	45 21·0	32948	33353	1 34·6E.	45 17·0	32943	33270	1 38·6E.	45 12·5	32927	33167
Helwan, Egypt ...	29 52	31 21E.	...	...	...	...	0 52·3W.	...	29979	...	1 0·3W.	...	29973	26366
Hongkong, China ...	22 18	114 10E.	0 27·2W.	30 41·8	37325	22159	0 23·8W.	30 42·8	37294	22155	0 23·2W.	30 44·7	37295	22183
Honolulu, Hawaii ...	21 19	158 4W.	10 1·8E.	39 25·9	28708	23607	10 0·2E.	39 24·5	28745	23619	9 58·9E.	39 23·9	28772	23635
Teoluyucan, Mexico ...	19 45	99 11W.	9 14·6E.	46 30·4	31600	33308	9 14·4E.	46 48·3	31555	33612	9 13·1E.	46 35·6	31704	33425
Toungoo, Burma ...	18 56	96 27E.	...	...	...	...	...	...	...	...	†0 31·9W.	†23 6·1	†39207	†16725
Alibab, Bombay, India	18 39	72 52E.	...	...	...	...	...	...	...	...	0 7·9E.	25 8·4	37017	17376
Vieques, Porto Rico ...	18 9	65 26W.	...	...	...	...	4 15·5W.	51 42·2	27565	34908	4 8·3W.	51 38·1	27629	34902
Kodai-Kanal, India ...	10 14	77 28E.	...	...	...	...	...	...	...	...	†2 0·7W.	†4 41·3	†37950	†03112
Batavia, Java ...	6 11	106 49E.	0 53·1E.	32 7·6	36834	23130	0 52·9E.	32 4·3	36821	23073	0 52·2E.	32 0·9	36805	23012
*Huancayo, Peru ...	12 3	75 20W.	7 59·1E.	1 1·5	29750	00532	8 1·7E.	0 54·6	29762	00473	8 4·6E.	0 45·6	29784	00395
Apia, Samoa ...	13 48	171 46W.	10 22·8E.	30 7·6	35239	20453	10 19·2E.	30 7·5	35249	20453	10 16·3E.	30 6·6	35248	20440
Mauritius ...	20 6	57 33E.	11 9·6W.	52 31·0	22906	29867	10 59·7W.	52 32·2	22943	29940	10 49·2W.	52 33·7	22982	30017
*La Quiaca, Jujuy, Argentina	22 8	65 43W.	5 29·1E.	12 28·2	26435	05848	5 33·3E.	12 29·3	26481	05863	5 40·2E.	12 29·5	26505	05881
Vassouras, Brazil ...	22 24	43 39W.	...	...	...	...	...	...	...	...	11 42·8W.	15 53·7	24407	06950
Watheroo, Australia ...	30 19	115 53E.	4 17·7W.	64 7·9	24719	50977	4 18·3W.	64 5·2	24750	50941	4 19·5W.	64 3·0	24777	50914
Pilar, Cordova, Argentina ...	31 40	63 53W.	7 6·2E.	25 41·3	25012	12031	7 14·4E.	25 39·3	25084	12048	7 23·1E.	25 38·4	25139	12066
*Toolangi, Australia ...	37 32	145 28E.	8 12·1E.	67 44·4	22954	56079	8 11·3E.	67 42·6	22980	56060	8 10·7E.	67 40·6	22995	56013
Christchurch, New Zealand...	43 32	172 37E.	17 21·1E.	68 14·2	22166	55522	17 16·4E.	68 12·7	22188	55508	17 11·7E.	68 12·0	22209	55526

NOTES.—\*Results derived from absolute observations only. † A local anomaly is known to exist at the site of the Observatory. ‡ Mean values for the 9 months January to September.

ADDITIONAL VALUES FOR EARLIER YEARS.

Place.	Latitude.	Longitude.	1922.				1921.				1920.			
			Declination.	Inclination.	Horizontal Force.	Vertical Force.	Declination.	Inclination.	Horizontal Force.	Vertical Force.	Declination.	Inclination.	Horizontal Force.	Vertical Force.
	N.	°	°	° N.	γ	γ	°	° N.	γ	γ	°	° N.	γ	γ
Bochum, Prussia ...	51 29	7 14E.	9 58·8W.	...	...	...	10 10·4W.	...	...	...	10 19·9W.	...	...	...
Uccle, Belgium ...	50 48	4 21E.	11 28·2W.	66 3·5	...	...	11 39·0W.	66 3·7	...	...	11 50·6W.	66 4·1	...	...
Prague, Bohemia ...	50 5	14 25E.	6 12·1W.	...	...	...	6 24·2W.	...	...	...	6 35·6W.	...	...	...
†Odessa, Russia ...	46 26	30 46E.	2 1·3W.	63 8·0	...	...	...	...	...	...	...	...	...	...
San Miguel, Azores ...	37 46	25 39W.	19 10·8W.	60 17·0	23189	40630	19 15·9W.	60 20·8	23132	40621	19 20·2W.	60 26·0	23123	40759
Lukiapang, Shanghai, China	31 19	121 2E.	3 25·1W.	45 30·5	33204	33799	3 24·0W.	45 30·6	33188	33784	...	...	...	...
Helwan, Egypt ...	29 52	31 21E.	1 7·8W.	41 17·9	29957	26316	1 15·9W.	41 15·4	29947	26269	...	...	...	...
Teoluyucan, Mexico ...	19 45	99 11W.	9 11·2E.	46 30·7	32160	33903	9 11·7E.	...	...	...	9 9·6E.	...	...	...
Batavia, Java ...	6 11	106 49E.	0 49·0E.	31 58·7	36840	22978	...	...	...	...	...	...	...	...
La Quiaca, Argentina ...	22 8	65 43W.	5 49·2E.	12 30·9	26511	05884	5 57·3E.	12 37·9	26557	05949	6 3·3E.	12 39·6	26621	05979
Watheroo, W. Australia ...	30 19	115 53E.	4 20·8W.	64 1·1	24799	50885	4 21·5W.	63 58·2	24842	50865	4 22·1W.	63 54·8	24888	50832



288. Eskdalemuir.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.		△ km.	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.		△ km.	Remarks.
				A <sub>N</sub> .	A <sub>E</sub> .							A <sub>N</sub> .	A <sub>E</sub> .		
May 3	?eP	17 36 19	...	...	...	?10620		May 23	e	21 31	...	...	...		
	PR <sub>1</sub>	17 41 2	...	...	...				F	23 30	...	...	...		
	?eS	17 47 44	...	...	...				e	1 48	...	...	...		
	SR	17 56	...	...	...				L	2 6	...	...	...		
	L	17 8	...	...	...				MN	2 13	25	17	...		
	MN	18 24	28	+117	...				ME	2 13	25	...	19		
	MN	18 29	25	+105	...				MN	2 21	17	15	...		
	ME	18 29	24	...	+70				ME	2 21	17	...	9		
F	21	...	...	...	F	3	...	...	...						
3	P	23 13 13	...	...	...	Record defective after 23h. 50m.	June 4	?e	1 46	...	...	...	...		
	PR <sub>1</sub>	23 17 28	...	...	...			L	2 4	...	...	...			
	?eS	23 23 38	...	...	...			F	2 30	...	...	...			
	i	23 23 56	...	...	...			e	12 23 40	...	...	...			
	e	23 26 5	...	...	...			L	12 33	...	...	...			
4	SR	23 32	...	...	...	Traces of waves.	4	F	13 15	...	...	...	...		
	L	23 43	...	...	...			e	23 53 33	...	...	...			
	F	?	...	...	...			iS	0 3 5	...	...	...			
	...	...	...	...	...			SR	0 8	...	...	...			
5	?e	10 20 51	...	...	...	Waves of very small amp- litude.	7 8	L	0 20	...	...	...	...	8250	
	e	10 24 1	...	...	...			F	1	...	...	...			
	S	10 30 45	...	...	...			e	13 56 9	...	...	...			
	L	10 55	...	...	...			e	14 1 2	...	...	...			
	ME	11 6	23	...	+61			e	14 8	...	...	...			
5	L	12 47	...	...	...	Small waves.	9	?S	14 11	...	...	...	Maxima confused.		
	ME	13 5 6	19	...	+6			?SR	14 17	...	...	...			
	F	14	...	...	...			L	14 30	...	...	...			
5	...	19 10 to 19 35	...	...	...	Waves of small amplitude.	20	F	17 30	...	...	...	Traces of disturbance.		
	e	23 35 45	...	...	...			e	19 55	...	...	...			
6	e	23 40 15	...	...	...	Slight disturbance.	28	F	20 15	...	...	...	5500		
	SE	23 49 30	...	...	...			iP <sub>E</sub>	13 13 2	...	...	...			
	L	0 10	...	...	...			iS	13 20 11	...	...	...			
	ME	0 29	22	...	20			i	13 21 27	...	...	...			
	MN	0 30	20	...	20			F	14	...	...	...			
6	F	2 30	...	...	...	Waves of small amplitude.	23	...	4 40 to 6	...	...	...	6860		
	...	9 25 to 10 20	...	...	...			P	1 31 30	...	...	...			
7	...	13 to 13 25	...	...	...	Slight disturbance.	28	PR <sub>1</sub>	1 33 42	...	...	...	9340		
	L	15 20	...	...	...			PR <sub>2</sub>	1 35 24	...	...	...			
7	F	16 15	...	...	...	Waves of small amplitude.	13	S	1 39 52	...	...	...	8370		
	...	9 to 9 30	...	...	...			SR <sub>1</sub>	1 44	...	...	...			
13	...	9 to 9 30	...	...	...	Waves of small amplitude.	13	L	1 49	...	...	...	+52 +77		
	L	23 7	...	...	...			MN	1 54 10	25	...	...			
13	F	23 30	...	...	...	Traces of waves of low amplitude.	28	F	1 57 0	18	...	...	9340		
	e	0 17 31	...	...	...			eP	6 26 46	...	...	...			
14	e	0 23 16	...	...	...	Traces of waves of low amplitude.	28	e	6 30	...	...	...	9340		
	L	0 36	...	...	...			S	6 37 13	...	...	...			
	F	1 15	...	...	...			L	6 56	...	...	...			
	...	12 21 14	...	...	...			F	8 0	...	...	...			
15	e	12 23 39	...	...	...	Traces of waves of low amplitude.	28	e	14 5	...	...	...	8370		
	e	13 30	...	...	...			e	14 10	...	...	...			
	F	13 30	...	...	...			L	14 21	...	...	...			
20	e	11 17 49	...	...	...	Traces of waves of low amplitude.	28	F	15 15	...	...	...	8370		
	e	11 21 14	...	...	...			...	between 16 and 17	...	...	...			
	e	11 28 30	...	...	...			L	23 4	...	...	...			
	L	11 49	...	...	...			F	23 20	...	...	...			
20	...	23 to	...	...	...	Traces of waves of low amplitude.	28	...	23 4	...	...	...	8370		
	...	I	...	...	...			...	23 20	...	...	...			
22	iE(S)	10 3 52	...	...	...	Traces of waves of low amplitude.	29	P	14 54 12	...	...	...	8370		
	L	10 25	...	...	...			eS	15 3 50	...	...	...			
	F	11 30	...	...	...			SR <sub>1</sub>	15 8 5	...	...	...			
23	i(S)	2 32 22	...	...	...	Traces of waves of low amplitude.	28	L	15 18	...	...	...	8370		
	L	2 47	...	...	...			L	15 18	...	...	25			
	MN	2 57	20	18	...			ME	15 27	17	...	...			
	ME	2 57	...	...	22			MN	15 27	19	18	...			
	F	4 15	...	...	...			F	18	...	...	...			
23	...	23 to	...	...	...	Traces of waves of low amplitude.	30	L	4 49	...	...	...	8370	Small waves.	
	...	I	...	...	...			F	5 30	...	...	...			

SEISMOLOGICAL DIARY :—continued. Instruments.—Two horizontal Galitzin Seismographs with galvanometric registration.

Lat. 55° 19' N. Long. 3° 12' W. Height above M.S.L. 242 metres.

288. Eskdalemuir.

1925.

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>N</sub>	A <sub>E</sub>		
July 4	...	h. m. s. 9 0 to 9 15	...	μ	μ	km.	Small waves.	July 28	e L F	5 7 5 32 6 15	...	μ	μ	km.	
4	e e e L F	9 31 14 9 40 9 49 10 5 12	...	...	...	...		29	?e e L F	5 22 5 42 6 23 7 30	...	...	...	...	
4	e e L F	22 42 4 22 45 20 23 6 24	...	...	...	...		30	e e F	18 58 49 19 2 19 30	...	...	...	...	
5	e e (?S) L	7 11 19 7 18 37 7 24	...	...	...	?5660		31	i i F	9 8 5 9 11 32 10	...	...	...	...	
6	...	11 to 12	...	...	...	...	Traces of waves.	Aug. 4	e L F	0 29 45 0 35 0 45	...	...	...	...	
6	P S L F	12 21 6 12 25 19 12 28 13	...	...	...	2600	Initial impulses small; azimuth 125° or 305°.	5	e L F	5 12 18 5 17 5 35	...	...	...	...	
6	L F	17 29 18	...	...	...	...		5	e L F	20 28 36 20 40 21 5	...	...	...	...	
7	eP S SR L M <sub>E</sub> F	14 24 52 14 35 I 14 46 14 51 15 0 ?	...	...	...	8980		7	e (P) eS i L M <sub>N</sub> M <sub>E</sub> F	6 52 38 6 57 29 6 57 44 7 1 7 2 42 7 2 43 7 40	...	...	...	3110 or 3320	
7	L M <sub>E</sub>	15 31 15 37	...	...	...	7		7	e <sub>E</sub> S L F	7 59 59 8 9 51 8 24 9 30	...	...	...	...	
7	?S L M <sub>E</sub> M <sub>N</sub> M <sub>E</sub> F	18 1 30 18 10 18 16 18 18 18 19 20	...	...	...	...	Very regular sinusoidal waves on E 18h. 14m.— 21m.	7	e <sub>E</sub> L F	17 29 23 17 33 17 50	...	...	...	...	
8	...	2 to 3	...	...	...	...	Small waves	7	e <sub>E</sub> L F	17 29 23 17 33 17 50	...	...	...	...	
8	...	5 45 to 6 15	...	...	...	...	Small waves.	8	...	3 18 to 3 35	...	...	...	...	Small waves.
8	...	15 to 16	...	...	...	...	Small waves.	11	L F	17 34 17 50	...	...	...	...	
8	...	19 to 19 35	...	...	...	...	Small waves.	11	e L F	20 10 20 32 21 30	...	...	...	...	
11	e L F	2 12 5 2 22 3	...	...	...	...		12	?e S L M <sub>E</sub> F	7 7 5 7 13 41 7 18 7 21 8	...	...	...	13	
17	L F	18 3 18 30	...	...	...	...		14	L F	2 31 2 35	...	...	...	...	
17	e ?eS L F	21 28 8 21 37 58 22 4 ?	...	...	...	...		14	e e e e L M <sub>N</sub> F	4 34 4 40 4 44 4 54 ? 5 44 7	...	...	...	9	
17	e (?S) L F	23 4 33 23 22 24	...	...	...	...		16	e L F	2 45 41 3 5 3 50	...	...	...	...	
19	L F	21 15 21 35	...	...	...	...		16	e L F	21 10 11 21 15 21 35	...	...	...	...	
19	...	23 26 to 23 34	...	...	...	...	Traces of waves.	19	iP <sub>N</sub> iS	12 18 35 12 27 44	...	...	...	7790	
21	L F	14 8 14 30	...	...	...	...									
26	?e L F	3 6 3 15 3 30	...	...	...	...									

SEISMOLOGICAL DIARY :—*continued.* Instruments.—Two horizontal Galitzin Seismographs with galvanometric registration.  
 Lat. 55° 19' N. Long. 3° 12' W. Height above M.S.L. 242 metres.

288. Eskdalemuir.

1925.

Date.	Phase.	Time.		Period	Amplitudes.		$\Delta$	Remarks.	Date.	Phase.	Time.		Period	Amplitudes.		$\Delta$	Remarks.
		h. m. s.	s.		$\mu$	$\mu$					h. m. s.	s.		$\mu$	$\mu$		
Aug. 19	SR	12 32.5	...	...	...	...	...		Sept. 29	S	17 51 36	...	...	...	...		
	L	12 41	...	...	...	...	...			L	18 0	...	...	...	...		
	M <sub>N</sub>	12 44 43	24	54	...	...	...			M <sub>E</sub>	18 4	20	...	6	...		
	M <sub>E</sub>	12 53 17	18	...	35	...	...			F	19 30	...	...	...	...		
	M <sub>N</sub>	12 57 26	17	39	...	...	...										
	M <sub>N</sub>	12 8 35	18	46	...	...	...										
	L	14 28	...	...	...	...	...										
F	16 30	...	...	...	...	...											
20	e	23 8 2	...	...	...	...		Oct. 5	e	4 21	...	...	...	...			
	e	23 14 18	...	...	...	...			S	4 30 9	...	...	...	...			
	e	23 22 20	...	...	...	...			SR	4 35	...	...	...	...			
	L	23 29	...	...	...	...			?L	4 39	...	...	...	...			
F	24 30	...	...	...	...	...	F	7	...	...	...	...					
26	...	16 44 to 17 0	...	...	...	...	Traces of waves.	6	?e	4 8.5	...	...	...	...			
									e	4 15	...	...	...	...			
29	L	23 13	...	...	...	...	Confused by microseisms.		L	4 23	...	...	...	...			
	F	23 50	...	...	...	...			F	4 30	...	...	...	...			
31	L	4 18.5	...	...	...	...											
	F	4 30	...	...	...	...											
31	?L	10 5	...	...	...	...											
	F	10 12	...	...	...	...											
31	L	10 30	...	...	...	...											
	M <sub>N</sub>	10 34	...	...	...	...											
		35	25	16	...	...											
	M <sub>E</sub>	10 34	25	...	11	...											
F	11 35	...	...	...	...	...											
Sept. 1	L	8 30	...	...	...	...	Confused by microseisms.										
	F	9	...	...	...	...											
5	...	7 52 to 8	...	...	...	...	Slight disturbance.										
5	e (?S)	16 51	...	...	...	...											
	L	17 1	...	...	...	...											
	F	18 30	...	...	...	...											
10	...	14 to 14 30	...	...	...	...	Waves.										
11	L	4 49	...	...	...	...											
	F	5 15	...	...	...	...											
11	L	6 0	...	...	...	...											
	F	6 30	...	...	...	...											
12	?e	1 6 28	...	...	...	...											
	e	1 11	...	...	...	...											
	L	1 19	...	...	...	...											
	F	2	...	...	...	...											
15	L	5 30	...	...	...	...											
	F	5 50	...	...	...	...											
22	...	7 6 to 7 15	...	...	...	...	Very slight disturbance.										
24	e	4 55	...	...	...	...	Confused by microseisms.										
	L	5 5	...	...	...	...											
	F	5 40	...	...	...	...											
24	...	13 43 to 13 50	...	...	...	...	Traces of waves.										
24	...	23 54 to 24 15	...	...	...	...	Traces of waves.										
25	...	9 to 10 30	...	...	...	...	Waves.										
25	...	20 30 to 21	...	...	...	...	Traces of waves.										
26	...	18 40 to 19	...	...	...	...	Waves.										
29	?e	17 43	...	...	...	...											
	e	17 45 9	...	...	...	...											

Records discontinued.

Derived from readings, for the period of thirty minutes centering at the exact hour, Greenwich Mean Time.

289. Eskdalemuir.

1925.

Day.	January.								February.								March.							
	0 h.		6 h.		12 h.		18 h.		0 h.		6 h.		12 h.		18 h.		0 h.		6 h.		12 h.		18 h.	
	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.
1	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.
1	5.4	7.5	5.6	7	3.1	8.5	4.2	6	2.2	7	2.4	6	2.3	6.5	2.4	7	1.0	5.5	0.9	5	0.9	5	0.7	5
2	3.2	7	...	...	4.1	6	3.3	6.5	1.5	7	2.1	7	1.8	6	1.6	6	0.8	4.5	0.5	4	0.3	4.5	0.3	4
3	3.3	6	3.4	7	3.1	6	2.6	5.5	2.0	7	2.7	6	3.1	7	...	...	0.5	5	0.2	5	0.1	4	0.2	4
4	2.7	6	3.0	5.5	2.7	5.5	...	...	4.3	7	3.3	7.5	2.9	8	3.5	7	0.2	4	0.2	4	0.4	4.5	0.7	5
5	1.8	5	1.8	5	1.7	5.5	...	...	3.1	7.5	5.0	7	4.2	7	3.6	7	0.5	5	0.8	4.5	0.8	5.5	...	...
6	1.7	5.5	...	...	1.7	5.5	2.4	5.5	4.2	7	3.8	6.5	3.9	7	3.5	7	1.6	6	2.3	6	2.0	6	1.2	6
7	1.9	5	2.3	6	2.7	6	...	...	3.9	6	1.7	6	2.4	6	2.5	6	1.5	6	1.0	5.5	1.5	6	2.1	5
8	2.4	6	2.0	7	1.6	6	2.0	5	3.9	6	3.1	6	3.1	6	3.0	6.5	1.9	5.5	2.7	6	1.8	5	1.7	5.5
9	1.9	5	2.1	4	1.5	4	...	...	3.9	8	4.9	9	5.0	7.5	4.9	7	1.5	6	1.5	6	1.5	6	1.5	6
10	1.0	5	1.2	6.5	1.6	6	1.9	6	4.1	6.5	2.9	7	4.6	6	4.8	6	1.3	6	0.9	6	0.8	5.5	0.8	5.5
11	1.9	8	2.2	6.5	2.8	7	2.1	7	4.5	6	3.9	6	3.0	6.5	2.8	6	0.9	4.5	...	...	0.6	4.5	0.3	4.5
12	2.5	7	1.5	7	1.6	6	1.7	6	3.1	6	3.1	6	2.2	6.5	2.4	6	0.4	5	0.3	5	0.5	4.5	0.4	5
13	1.5	6.5	1.7	6	1.7	5.5	2.5	6	2.3	5.5	1.6	5.5	1.6	6	1.7	5	0.4	5	0.6	5.5	0.5	6	...	...
14	3.1	6	3.1	6	7.2	6	6.2	6	1.8	5	2.2	5.5	2.7	5	2.3	6	0.8	6	...	...	0.8	6	...	...
15	5.9	6	...	...	5.2	7	3.5	7	2.3	5.5	2.7	5.5	2.4	5.5	1.7	5.5	0.8	6	...	...	0.6	5	0.5	6
16	4.1	6	3.9	6	3.5	6	3.5	7	1.8	5	1.1	6	0.9	5	1.0	5	0.7	5.5	...	...	0.9	5	0.8	5
17	4.4	6.5	1.5	6.5	3.0	6.5	3.1	6	1.4	5	1.7	5	1.6	5	1.1	5	0.8	5	0.8	5	0.8	5	0.6	5
18	2.2	6.5	2.2	7.5	2.9	7	2.1	7.5	1.5	5	1.6	5.5	1.0	5.5	1.0	5	0.7	6	0.7	5.5	0.8	6	0.8	6
19	2.4	6	2.1	6	1.5	6	1.6	6	1.0	5	0.9	5	0.9	5	0.9	4.5	0.7	5.5	...	...	...	...	...	...
20	1.6	6	1.6	6	...	...	...	...	0.9	6	0.8	6	0.8	5.5	0.8	5.5	...	...	...	...	0.8	5.5	0.7	5.5
21	...	...	...	...	2.2	6.5	2.2	6.5	0.8	6	1.2	10	2.4	7.5	2.5	8	0.8	5	...	...	0.7	4.5	0.7	5.5
22	3.1	7	2.6	6.5	2.4	6.5	2.4	5.5	1.9	8	2.1	8	1.4	7	...	...	0.6	4.5	...	...	0.4	4.5	...	...
23	1.6	6	2.2	6	1.6	6	...	...	2.0	8.5	2.3	8	3.4	7.5	4.2	8	0.5	5	0.5	5	...	...	...	...
24	0.8	6	0.9	5	0.7	5.5	0.8	5.5	3.3	8	3.1	8	3.2	8	4.2	7	1.2	6	0.9	6	1.0	5.5	1.8	5
25	0.9	5	0.9	5	0.8	6	0.8	5	3.3	7.5	3.6	8	3.1	8.5	...	...	1.5	6	1.1	6	1.1	5	0.9	5
26	0.9	5	0.9	5	1.0	4.5	0.9	6	2.4	6.5	...	...	2.3	8	2.5	8	0.8	5	0.8	5	0.6	5	...	...
27	0.9	6	0.8	6.5	1.2	5.5	...	...	2.5	8	2.3	6	3.1	6.5	3.1	6	0.3	4.5	0.3	4	0.5	5	0.5	5
28	0.9	6	...	...	0.9	6	1.0	6	2.3	6	1.6	6	1.8	5	0.9	6	0.9	6	0.9	6.5	1.6	6	1.6	6
29	1.1	6	1.8	6	2.7	6	4.0	6.5	...	...	...	...	...	...	...	...	1.6	6.5	1.3	6.5	1.7	6	...	...
30	4.2	7	4.5	7	3.6	7	3.5	6	...	...	...	...	...	...	...	...	1.6	6	...	...	...	...	2.2	6
31	3.7	6.5	3.0	6.5	2.8	5.5	2.7	6	...	...	...	...	...	...	...	...	2.3	6	...	...	1.7	6	...	...
Mean ...	A = 2.4 $\mu$ ; T = 6.1 s.								A = 2.5 $\mu$ ; T = 6.4 s.								A = 0.9 $\mu$ ; T = 5.3 s.							
Normal, 1911-24.	A = 2.5 $\mu$ ; T = 6.1 s.								A = 2.3 $\mu$ ; T = 6.0 s.								A = 1.8 $\mu$ ; T = 5.7 s.							

Day.	April.								May.								June.							
	0 h.		6 h.		12 h.		18 h.		0 h.		6 h.		12 h.		18 h.		0 h.		0 h.		12 h.		18 h.	
	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.	A.	T.
1	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.	$\mu$	s.
1	1.5	5.5	...	...	...	...	...	...	0.2	4.5	...	...	0.1	3	...	...	0.8	5.5	...	...	0.9	5	0.9	5
2	1.7	5.5	...	...	1.7	5.5	2.4	5.5	0.1	4	...	...	0.1	4	0.1	4	0.8	5.5	...	...	0.8	5	0.9	4
3	2.3	6	...	...	...	...	...	...	0.1	4	...	...	0.2	4	...	...	0.4	4.5	...	...	0.5	4.5	0.9	4
4	...	...	...	...	5.5	5.5	4.9	6	...	...	...	...	0.6	4	0.4	4.5	0.6	4.5	...	...	0.9	4.5	0.9	5
5	6.6	6	3.3	6	2.0	5	1.8	5	0.6	4	...	...	...	...	0.9	4	1.0	4.5	...	...	...	...	...	...
6	1.6	5.5	1.7	5.5	0.9	5.5	...	...	...	...	...	...	0.5	4	0.9	4	...	...	...	...	0.9	5	0.8	5.5
7	1.0	5	...	...	0.9	5	...	...	0.6	4	...	...	0.2	4	0.2	4	0.9	5	...	...	0.9	5	...	...
8	0.8	4.5	...	...	0.4	4.5	0.6	5	0.3	4	...	...	...	...	...	...	0.8	6	...	...	0.8	6	0.7	6
9	0.7	5.5	...	...	0.8	6	0.8	6	0.2	4	...	...	0.3	4	0.2	4.5	0.7	4.5	...	...	0.5	4.5	0.6	4.5
10	0.9	6	...	...	0.9	6	1.0	7	0.1	4	...	...	0.1	4	0.1	3.5	...	...	...	...	0.8	4.5	...	...
11	0.8	6	...	...	...	...	0.7	5.5	0.1	3.5	...	...	0.3	4	0.3	4	0.9	4.5	...	...	...	...	...	...
12	0.7	5.5	...	...	0.8	6	...	...	0.3	5	...	...	1.0	5	0.9	5.5	...	...	...	...	...	...	...	...
13	1.1	5.5	...	...	...	...	...	...	0.9	4.5	...	...	0.8	4.5	0.3	4.5	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	0.2	5	...	...	0.1	4	0.1	4.5	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	3.9	6	0.1	4	...	...	0.1	4.5	0.1	4.5	...	...	...	...	...	...	...	...
16	2.6	6.5	...	...	2.2	7	1.4	6	0.5	5	...	...	0.8	4.5	...	...	...	...	...	...	...	...	...	...
17	1.6	6	...	...	0.8	6	0.8	5.5	0.8	4.5	...	...	0.6	5.5	0.7	5.5	...	...	...	...	...	...	...	...
18	0.6	5.5	...	...	0.7	4	0.9	4	0.8	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	0.6	4.5	...	...	0.6	4.5	0.4	4.5	0.2	4	...	...	0.1	4.5	...	...	0.1	4.5	...	...	0.1	4	...	...
20	0.6	5	...	...	0.3	4.5	0.6	4.5	0.1	4	...	...	...	...	0.1	4.5	...	...	...	...	0.2	4.5	0.5	4
21	0.8	5.5	...	...	...	...	1.2	6	...	...	0.1	4	0.1	4	0.1	4	0.5	5	0.6	4	0.5	5	0.5	4
22	1.7	5.5	...	...	2.9	7.5	2.1	7	0.3	4.5	0.4	5	0.3	4	0.2	4.5	0.3	4	0.2	4	0.2	4	0.2	4
23	2.0	7	...	...	...	...	1.7	6.5	0.2	4	0.3	4.5	0.5	4.5	...	...	0.2							





M.O. 299  
(Cahirciveen)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1925

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  
METEOROLOGICAL COMMITTEE



LONDON:  
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

1927

## 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

## 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 a hill 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 1923 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 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 is satisfactory.

*Wind, Speed and Direction.*—The Robinson Cup Anemograph is placed on the roof of the Observatory tower. The exposure is satisfactory except for winds between south and south-west. Winds from these directions are liable to be deviated and reduced in speed because of the sheltering action of the roof and chimney. The Dines Tube Anemograph stands in an open field, about 250 metres S E by E of the Observatory tower. The field falls to the north towards the river Cahir. About 1 mile ( $1\frac{1}{2}$  km.) to the south-east and in an approximately direct line with the highest point (1,245 feet) is the hill Bantee which extends for some little distance in a northerly and south-westerly direction. A description of the surrounding country has already been given.

*Minimum Temperature on the Grass.*—The grass minimum thermometer is of the type described on p. 12. 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.

**Notes on the Meteorological Summaries.**

*Pressure.*—The mean pressure for the year was only 0·1 millibar below normal. Of the monthly mean pressures five were higher and seven were lower than normal. The departures were in some cases considerable ; March, for example, having an excess of about 14 millibars and June about 7 millibars, while February showed a deficiency of about 10 millibars.

The highest pressure of the year, 1,038·6 millibars, was recorded on the 4th March and the lowest, 957·2 millibars, on the 26th February, giving a total range for the year of 81 millibars. January, February, October, November and December all had ranges of more than 50 millibars. The smallest range for any month was 15·2 millibars, recorded in June.

The diurnal inequality of pressure for the year as a whole shows the usual well marked double oscillation with maxima at 11h and 22h of which the second is the principal one ; and minima at 5h and 16h, the principal of these two being the morning one. In the inequalities for the individual months it is found that the double

oscillation is much more prominent in some months than in others. The greatest constancy is seen in the morning minimum which is the principal one for nine months of the twelve and occurs always at 4h, 5h or 6h, excepting in December, when it occurs at 7h. The afternoon minima in the winter and equinoctial months occur always at 15h, 16h or 17h; in the summer months the time is 17h or 18h. For eight months the morning maximum appears either at 11h or 12h, and in three of the summer months it occurs at 9h; while in August it is as late as 14h. The night maximum in nine months out of the twelve occurs at 21h or 22h; in January and March it appears at 23h and in November at midnight.

The range of the mean inequality for the year is .75 mb. while for the months considered individually it varies from .63 mb. for July to 1.58 mb. for December. These ranges represent only the regular periodic changes in pressure and are small compared with the ranges obtained from the mean values of the daily maximum and minimum pressures found in Table 299, which vary from 2.87 mb. for June to 11.54 mb. for January.

Comparison of diurnal inequalities may be made by means of analysis into harmonic components. The details of the Fourier analysis of the diurnal inequalities for the year 1924 are given in Table A. The figures in the line immediately following the monthly values are the arithmetic means for the year of the monthly amplitudes. On account of the very large changes in phase throughout the year in some of the terms the amplitudes obtained from the annual inequality are not adequate as measures of the effectiveness of such terms relative to others whose phase angles show less variation from month to month. In these cases comparison of the arithmetic means of the monthly amplitudes is more satisfactory.

The most important terms are the 24-hour and 12-hour terms. For the year considered as a whole the amplitude of the 24-hour term is slightly higher than for the period 1871-1882 whereas the arithmetic mean for the twelve months is markedly lower than for the same period which points apparently to a smaller variation than usual in the 24-hour term phase angles throughout the year. The seasonal amplitudes show a considerable variation, the winter one being the highest and that for summer the lowest. The 24 hour term always shows wide and somewhat irregular variations from month to month both in phase and amplitude.

The 12-hour term is more nearly constant during the year, both in amplitude and phase. For 1924 the amplitudes are higher than average. The highest phase angle appears in winter and the lowest in summer. The high winter phase angle appears to be the normal state of affairs at Valentia which differs in this respect from most British stations.

In the mean inequality for the year the 8-hour term appears almost negligible when its amplitude is compared with those of the two terms already considered, but that this is due mainly to the very wide variations in phase of this term during the year is seen quite clearly by reference to the individual months. For all the winter months the 8-hour term amplitude is of the same order of magnitude as the 24-hour term amplitude. At other seasons it is relatively unimportant. The phase of this term has a fairly regular seasonal variation, hanging somewhat rapidly at the equinoxes by approximately two right angles. The effect of the phase variation at this season is seen in the very small amplitude which appears for the equinoctial mean. In the 6-hour term amplitudes are small throughout and for this reason not very much weight can be attached to the individual phase angles. Nevertheless it is possible to detect an annual variation in the latter in which the movement is generally in the opposite sense to that of the 8-hour term.

*Temperature.*—The mean temperature for the year 1925 was  $0.31a$  ( $0.56^{\circ}$  F.) below normal. The highest temperature of the year,  $296.5a$  ( $74.3^{\circ}$  F.), was registered on the 9th June. Very low temperatures were not common, the freezing point being passed only on seven days. The lowest temperature,  $270.8a$  ( $28.0^{\circ}$  F.), was registered on the 2nd December. The full range of temperature for the year was thus  $25.7a$  ( $46.3^{\circ}$  F.). For the individual months mean temperatures did not differ greatly from normal. November, with a deficiency of  $1.88a$  ( $3.38^{\circ}$  F.) showed the greatest departure. The monthly ranges of temperature varied from  $10.2a$  ( $18.4^{\circ}$  F.) in January to  $16.8a$  ( $30.2^{\circ}$  F.) in June.

The mean diurnal inequality for the year shows a single oscillation in the 24 hours with its maximum at 14h and its minimum at 4h and with a range of  $2.63a$  ( $4.73^{\circ}$  F.). Each of the monthly inequalities has a well marked single oscillation with its maximum at 13h, 14h or 15h, except that for June which has its maximum at 16h. The time of minimum does not show the same constancy. In January it is 21h and in succeeding months we find it varying from 2h in February and September to 7h in March and October. In the summer months it occurs at 4h or 5h, in November, December and April at 5h.

The harmonic analysis of the monthly and seasonal diurnal inequalities of temperature is given in Table B. The 24-hour term is in all cases predominant. Neither in the 24 hour term nor in the 12-hour term is there any very large variation in phase angle throughout the year, the effect of this being seen in each case in the slight differences between the mean amplitude for the year and the amplitude computed directly from the annual inequality. The highest of the seasonal amplitudes for the 24-hour term is found in summer, as is usual, but this amplitude is itself below normal, the difference between the amplitudes at equinox and summer being usually more pronounced. The phase angle is least at equinox and greatest in summer whereas winter should normally have a slightly larger phase angle than equinox and summer should have the least. In the present case the winter phase angle is rather below normal while summer and equinox have each approximately the phase angle which is normal for the other. For the 12-hour term the seasonal values follow the normal sequence in amplitude; but here again the summer value is very decidedly low. Phase angles both for equinox and summer, normally about the same, are high, the summer one in particular having a value nearly twice the normal.

The 8-hour term amplitude for the year is so small as to be negligible compared with the other terms but this is due in large measure to the variations of phase angle in this term from month to month. There is approximate opposition of phase as between winter and summer while for the equinoctial months a rapid change takes place from winter to summer values. The equinoctial amplitude thus appears much smaller than those for the individual months which make up this season. The winter and summer amplitudes are comparable in magnitude with those of the corresponding 12-hour terms, the summer 8-hour term amplitude being, in fact, greater than the 12-hour term amplitude. The seasonal changes in the 8-hour term accord fairly well with those found in a normal year.

The 6-hour term amplitude is greatest at the equinoctial seasons and smallest in summer but variable phase angle has much to do with the small winter and summer amplitudes.

*Relative Humidity.*—The highest mean daily value of the relative humidity was 98.1 per cent., recorded for the 29th September. The lowest value was 63.3 per cent. for the 7th June. The highest mean daily vapour pressure was 16.0 millibars for the 24th July and the 5th October and the lowest was 5.3 millibars for the 2nd December. The mean relative humidity for the year was 1.8 per cent. below normal and the mean hourly values for the year show a range of 7.5 per cent. as compared

with a normal range of 8·8 per cent. Of the separate months, all except May, July, August and October had mean relative humidities less than normal, the deficiency for March being as much as 6 per cent. and for December 5 per cent. The greatest excess, on the other hand, was 2·7 per cent. for October. The diurnal inequality for the year shows a maximum in the early morning and a minimum in the afternoon; neither of these is very sharply defined as to time of occurrence. There is only one well marked oscillation in the 24 hours. The individual months show, on the whole, similar features but there is some slight indication in most cases of a secondary maximum.

*Rainfall.*—The total rainfall for the year was 8 per cent. lower than normal, the actual deficiency being 111 millimetres. The month with the highest rainfall was January, with 208 millimetres, or 39 per cent. more than normal. February had 52 per cent. more than normal. The lowest monthly total was that for June, the 8 millimetres which fell during that month being only 9 per cent. of the normal amount. The rainfall for March was also very low being 31 per cent. of normal. The greatest hour's rainfall was 18·5 millimetres which fell between 7h and 8h on the 22nd January.

*Bright Sunshine.*—The total amount of bright sunshine for the year 1925 was about 5 per cent. less than the normal. Seven months had more than average sunshine, the greatest excess being about 25 per cent., for June. The most notable deficiency was for July, the total sunshine for this month being little more than one-third the average amount. The greatest recorded sunshine for any one day was 15·6 hours, on the 7th and 22nd June. There were eight other days during June on which 12 hours bright sunshine was experienced. The day with the greatest proportion of the total possible sunshine was the 7th June with 95 per cent., the actual sunshine recorded on this day being, as noted above, 15·6 hours.

*Wind Speed.*—The mean monthly wind speeds were mostly higher than average in the first half of the year and below normal in the second half, the exceptions being March and June which had wind speeds below normal, and September which had a wind speed slightly above normal. Gales were experienced on three days in January, one day in February and two days in December.

The highest hourly wind speed recorded was 22 metres per second (49 miles per hour) on the 30th December, with which was associated the highest gust of the year 37 metres per second (83 miles per hour).

*Grass Minimum Temperature.*—The mean of the monthly means given in Table 374 is 79·0a (42·8° F.). For no single month is the mean grass minimum temperature lower than the freezing point of water. The lowest value recorded in five months out of the twelve is below the freezing point and in no month is the lowest value as much as 6 degrees absolute higher than this point.

*Cloud and Weather.*—The mean amount of cloud at all observation hours was 7·4. The most cloudy month was July, with a mean cloud amount of 8·6. The month with least cloud was November with a mean of 5·8. The mean values at the individual observation hours for the whole year show a steady fall in cloud amount from 7h to 18h. The number of occasions of cloudless sky during 1925 amounted to 69 in more than 2,000 observations; on only three days throughout the year was the sky without cloud at all observation hours, but there were three other days on which the only cloud observed was one-tenth at only one hour of observation.

## IDENTIFICATION NUMBERS OF INSTRUMENTS IN USE IN 1925.

Standard Fortin Barometer .. .. .	M.O. 463
Standard Dry Bulb Thermometer .. .. .	M.O. 1701
Standard Wet Bulb Thermometer .. .. .	M.O. 1702
Recording Beckley Raingauge .. .. .	—
Control Raingauge .. .. .	M.O. 402
Glass for Control Raingauge .. .. .	M.O. 1330
Campbell Stokes Sunshine Recorder .. .. .	M.O. 5
Robinson Cup Anemograph .. .. .	Beck 46
Dines Tube Anemograph .. .. .	—
Grass Minimum Thermometer .. .. .	M.O. 17634

TABLE A.

*Diurnal Variation of Barometric Pressure, 1925. 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 reckoning in hours from midnight.

Month or Season.	$c_1$	$\alpha_1$	$c_2$	$\alpha_2$	$c_3$	$\alpha_3$	$c_4$	$\alpha_4$
	mb.	°	mb.	°	mb.	°	mb.	°
January ... ..	.225	136	.318	145	.206	5	.062	250
February ... ..	.199	161	.329	149	.083	35	.038	20
March ... ..	.119	213	.420	148	.025	335	.044	25
April ... ..	.202	129	.337	148	.058	185	.069	345
May ... ..	.169	175	.246	150	.076	150	.059	355
June ... ..	.086	202	.266	149	.102	165	.027	320
July ... ..	.120	252	.250	149	.087	155	.030	330
August ... ..	.327	234	.253	140	.051	160	.056	330
September ... ..	.346	153	.403	153	.027	150	.029	300
October ... ..	.071	95	.307	155	.084	20	.029	340
November ... ..	.249	161	.294	145	.100	30	.031	190
December ... ..	.481	96	.404	171	.201	0	.066	205
Arithmetic Mean ... ..	.216	—	.319	—	.092	..	.045	..
Year ... ..	.147	157	.316	151	.029	35	.026	330
Winter ... ..	.254	128	.332	154	.145	10	.031	225
Equinox ... ..	.155	150	.366	151	.008	60	.041	350
Summer ... ..	.158	219	.253	147	.079	165	.042	340

TABLE B.

*Diurnal Variation of Temperature, 1925. 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.	$c_1$	$\alpha_1$	$c_2$	$\alpha_2$	$c_3$	$\alpha_3$	$c_4$	$\alpha_4$
	a.	°	a.	°	a.	°	a.	°
January ... ..	.373	268	.297	39	.099	220	.068	95
February ... ..	.563	256	.197	50	.075	285	.080	165
March ... ..	1.366	229	.393	59	.059	315	.083	215
April ... ..	1.670	235	.388	74	.172	45	.042	225
May ... ..	1.538	245	.167	124	.208	60	.056	70
June ... ..	2.257	245	.068	161	.316	75	.071	0
July ... ..	1.461	242	.156	91	.129	75	.053	295
August ... ..	1.762	244	.218	102	.179	45	.029	210
September ... ..	1.229	250	.323	73	.043	23	.095	240
October ... ..	1.395	234	.420	68	.131	275	.048	205
November ... ..	1.143	236	.537	69	.154	235	.018	175
December ... ..	.783	227	.304	45	.189	195	.062	20
Arithmetic Mean ... ..	1.295	..	.289	..	.146	..	.059	..
Year ... ..	1.277	241	.254	73	.041	55	.016	230
Winter ... ..	.681	241	.323	54	.114	225	.029	110
Equinox ... ..	1.403	236	.348	75	.055	355	.065	225
Summer ... ..	1.749	244	.143	111	.203	65	.020	350

NOTE.—The seasonal means are derived from the following grouping of months:—*Winter*: January, February, November and December; *Equinox*: March, April, September, October; *Summer*: May to August, inclusive.



## TERRESTRIAL MAGNETISM.

**Notes on the Magnetic Observations for the Year 1925.**

Absolute observations of declination, horizontal force and inclination were made weekly at the Valentia Observatory during the year 1925. The instruments in use were the same as in previous years, namely, the Dover unifilar, No. 139, with collimator magnet 139A and mirror magnet 139C, and the Dover dip circle, No. 118. The mean times of observation were 10.21 for the declination, 11.40 for the horizontal force and 14.31 for the inclination, all according to Greenwich Mean Time. In the individual observations the greatest departure from the mean time in any element was 3 minutes. The deflection of the mirror magnet was measured for two distances of the collimator magnet, namely, 30cm. and 40cm., and single distribution constant, P, was calculated. The complete deflection observation consisted of eight readings of the mirror magnet. The extreme variation in P found for the year 1925 is equivalent to  $1\gamma$  in the value of H. The mean value of P was 7.54. The moment of the collimator magnet has decreased at the rate of about 1 unit per annum.

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 quarterly list of daily "magnetic characters" published by authority of the International Meteorological Committee, 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  $12'.5$  as compared with 1924. From 1923 to 1924 the decrease was  $11'.6$  and in the previous 12 months  $10'.5$ . The average annual decrease for the five years 1915-1920 was  $9'.2$ , and for the five years 1910-1915 it was  $8'.2$ . During the five years ending in 1925 the average annual decrement is  $11'.1$  so that the rate of the eastward movement of the magnetic needle appears to be increasing slowly.

Northerly inclination decreased by  $0'.6$  from 1924 to 1925. The corresponding change for the preceding year was  $-0'.9$ , and for the year previous to that  $-1'.5$ . From 1910 to 1915 the average yearly decrease was  $1'.0$  and from 1915 to 1920  $0'.5$ . For the five years 1920-1925 the average change per year is  $-1'.1$ . Inclination, therefore, continues to diminish at a slow rate.

It was remarked in these notes for the year 1922, that since the year 1920 the horizontal force had appeared to be increasing slowly whereas previously it had shown a steady decline from year to year. For the five-year period 1910-1915 the average annual decrease was about  $5\gamma$  and for the period 1915-1920 about  $6\gamma$ , while from 1920 to 1921 an increase of  $8\gamma$  appeared, followed the next year by a further increase, but only of  $1\gamma$ . The mean for 1924 showed a further increase of  $2\gamma$  over that for 1923, but the mean value of H for 1925 is lower by  $5\gamma$  than that for 1924, so that the slow rise in the horizontal force observed for the last four years is apparently checked.

Reference to the last column of Table D shows that the reversal of the annual change in the horizontal force from 1920 onwards was not accompanied by any such reversal in the total force. From 1910 to 1915 the average yearly change in the total force was  $-49\gamma$ , and from 1915 to 1920 it was  $-33\gamma$ . From 1920 to 1925 the mean annual change is again  $-32\gamma$ , so that the total force has continued to decrease at a fairly uniform rate. The individual changes from year to year as shown in the table 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  $0.1$  in  $I$  would give an error of 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 since 1920 was not a true increase in the magnetic field but merely a component increase arising from the continued 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 recent years.

TABLE C.

*Cahirciveen (Valentia Observatory). Absolute Magnetic Observations, 1925.*

Latitude 50° 56'. Longitude 10° 15'W.

Date.	Westerly Declination	Horizontal Force	Northerly Inclination	Date.	Westerly Declination	Horizontal Force	Northerly Inclination
January 2 ..	18 29.0	17860	67 59.4	July 1 ..	18 20.3	17843	68 0.1
" 7 ..	18 29.3	17860	67 59.6	" 8 ..	18 17.3	17843	68 0.3
" 15 ..	18 29.2	17851	67 59.6	" 15 ..	18 21.9*	17821*	68 0.9*
" 21 ..	18 29.7	17853	68 0.6	" 22 ..	18 24.1*	17852*	68 0.6*
" 29 ..	18 27.4	17860	68 0.4	" 29 ..	18 21.9	17846	67 59.6
February 4 ..	18 26.5	17864	67 59.1	August 6 ..	18 18.1	17853	67 59.3
" 11 ..	18 28.7	17853	68 0.1	" 19 ..	18 22.7	17860	67 59.1
" 18 ..	18 26.9	17860	68 0.8	" 27 ..	18 18.4	17832	68 0.7
" 26 ..	18 27.2	17855	68 0.3	September 3 ..	18 21.3*	17827*	68 0.3*
March 5 ..	18 26.3	17841	67 59.4	" 9 ..	18 20.2	17841	67 59.3
" 12 ..	18 26.1	17846	67 59.8	" 16 ..	18 22.7*	17845*	68 1.3*
" 19 ..	18 25.2	17854	68 1.9	" 23 ..	18 23.2*	17822*	68 0.7*
" 26 ..	18 23.8	17858	67 59.4	October 8 ..	18 18.3	17855	67 59.5
April 2 ..	18 26.6	17866	68 0.8	" 15 ..	18 19.9*	17818*	68 1.3*
" 8 ..	18 25.3	17846	68 0.4	" 22 ..	18 18.5*	17826*	68 1.0*
" 16 ..	18 26.3	17856	68 1.1	" 29 ..	18 17.7	17836	68 0.7
" 23 ..	18 24.3	17835	68 1.2	November 5 ..	18 20.3	17846	67 59.7
May 1 ..	18 26.1	17850	68 0.1	" 12 ..	18 19.8	..	..
" 7 ..	18 24.9	17841	68 0.6	" 13 ..	..	17834*	68 0.8*
" 14 ..	18 22.5	17843	67 59.8	" 19 ..	18 19.4	17840	68 1.0
" 21 ..	18 23.3	17853	68 0.6	" 26 ..	18 19.3	17853	68 0.2
" 28 ..	18 21.2*	17846*	68 0.3*	December 2 ..	18 18.7	17854	67 59.8
June 4 ..	18 23.1	17841	67 59.1	" 10 ..	18 17.4	17852	68 0.0
" 11 ..	18 22.3	17848	67 59.1	" 17 ..	18 15.9	17843	68 0.3
" 18 ..	18 21.6	17854	67 59.7	" 24 ..	18 18.7	17852	68 1.1
" 25 ..	18 19.3*	17828*	67 59.8*	" 31 ..	18 17.9	17860	67 59.5

\* Disturbance at these times. Values not utilised in computing means given in Table D.

TABLE D.

*Valentia Observatory, Cahirciveen.*

Magnetic Data for the Year 1925.

1925.			Declination (West).		Inclination (North).		Horizon- tal Force.	North.	West.	Vertical.	Total.
			°	'	°	'	γ	γ	γ	γ	γ
January	..	..	18	29.0	67	59.9	17857	16936	5661	44194	47665
February	..	..	18	27.3	68	0.1	17858	16939	5653	44200	47671
March	..	..	18	25.3	68	0.2	17850	16935	5641	44188	47657
April	..	..	18	25.6	68	0.9	17851	16936	5643	44216	47684
May	..	..	18	24.2	68	0.3	17847	16934	5635	44185	47653
June	..	..	18	22.3	67	59.3	17848	16938	5625	44150	47621
July	..	..	18	19.8	68	0.0	17844	16938	5612	44165	47633
August	..	..	18	19.7	67	59.7	17848	16943	5613	44164	47634
September	..	..	18	20.2	67	59.3	17841	16935	5613	44133	47603
October	..	..	18	18.0	68	0.1	17845	16943	5603	44157	47627
November	..	..	18	19.7	68	0.3	17846	16941	5612	44181	47650
December	..	..	18	17.7	68	0.2	17852	16948	5604	44190	47660
Year, 1925	..	..	18	22.4	68	0.0	17849	16939	5626	44177	47646
Year, 1924	..	..	18	34.9	68	0.6	17854	16923	5689	44213	47682
Year, 1923	..	..	18	46.5	68	1.5	17852	16902	5746	44242	47707
Year, 1922	..	..	18	57.0	68	3.0	17849	16882	5796	44289	47750
Year, 1921	..	..	19	6.5	68	3.4	17848	16865	5842	44299	47760
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.

290. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres.

January, 1925.

Table for station 290 showing pressure readings in millibars for each hour of January 1925. Columns include Day, Station Level (1-31), and Mean (Station level). Rows show hourly readings from 00:00 to 23:00 for each day.

291. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

February, 1925.

Table for station 291 showing pressure readings in millibars for each hour of February 1925. Columns include Day, Station Level (1-28), and Mean (Station level). Rows show hourly readings from 00:00 to 23:00 for each day.

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.

292. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres.

March, 1925

Table with 25 columns (Day 1-25) and 31 rows (Station Level 1-31). Includes mean values for station and sea level.

293. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

April, 1925.

Table with 25 columns (Day 1-25) 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.

294. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres.

May, 1925.

Table for Cahirciveen (Valentia Observatory) in May 1925. Columns include Day (1-31), Station Level (1-31), and Mean (Station level) and Mean (Sea level). Rows show hourly pressure readings in millibars.

295. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

June, 1925.

Table for Cahirciveen (Valentia Observatory) in June 1925. Columns include Day (1-30), Station Level (1-30), and Mean (Station level) and Mean (Sea level). Rows show hourly pressure readings in millibars.

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.

296. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres.

July, 1925.

Table with 25 columns (Day 1-24, Mean) and 31 rows (Station Level 1-31). Columns 1-24 contain hourly pressure readings in millibars. Summary rows at the bottom show Mean (Station level) and Mean (Sea level) for each day.

297. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

August, 1925.

Table with 25 columns (Day 1-24, Mean) and 31 rows (Station Level 1-31). Columns 1-24 contain hourly pressure readings in millibars. Summary rows at the bottom show Mean (Station level) and Mean (Sea level) for each day, along with G.M.T. times.

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.

298. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres.

September, 1925.

Table with 25 columns (Day 1-25) and 25 rows (Station Level 1-25). Includes mean values for station and sea level.

299. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

October, 1925.

Table with 25 columns (Day 1-25) and 25 rows (Station Level 1-25). 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.

300. Cahirciveen (Valentia Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 13.7 metres.

November, 1925.

Table for station 300 showing hourly pressure readings from 1 to 30, with mean values for station level and sea level.

301. Cahirciveen (Valentia Observatory) : H<sub>b</sub> = 13.7 metres.

December, 1925.

Table for station 301 showing hourly pressure readings from 1 to 31, with mean values for station level and sea level, and G.M.T. times.

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.



305. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

January, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows (1-31). Contains temperature readings in degrees absolute for each hour of the month.

306. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

February, 1925.

Table with 25 columns (Day, 1-24, Mean) and 28 rows (1-28). Contains temperature readings in degrees absolute for each hour of the month.

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.

307. Cahirciveen (Valentia Observatory) : North Wall Screen : ht (height of thermometer bulbs above ground) = 1.3 metres.

March, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows (1-31). Contains temperature readings in degrees absolute for each hour of the month.

308. Cahirciveen (Valentia Observatory) : North Wall Screen : ht = 1.3 metres.

April, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows (1-31). Contains temperature readings in degrees absolute for each hour of the month.

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.

309. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

May, 1925.

Table with 25 columns (1-24) and 31 rows (1-31) showing temperature readings for May 1925. Includes a 'Mean' row at the bottom and a 'G.M.T.' row at the very bottom.

310. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

June, 1925.

Table with 25 columns (1-24) and 31 rows (1-31) showing temperature readings for June 1925. Includes a 'Mean' row at the bottom and a 'G.M.T.' row at the very bottom.

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.

311. Cahirciveen (Valentia Observatory) : North Wall Screen : ht (height of thermometer bulbs above ground) = 1.3 metres.

July, 1925.

Table with 26 columns (Day, 1-24, Mean) and 31 rows (1-31). Contains temperature readings in degrees absolute. The table is organized into three vertical sections for days 1-10, 11-20, and 21-31.

312. Cahirciveen (Valentia Observatory) : North Wall Screen : ht = 1.3 metres.

August, 1925.

Table with 26 columns (Day, 1-24, Mean) and 31 rows (1-31). Contains temperature readings in degrees absolute for August 1925. The table is organized into three vertical sections for days 1-10, 11-20, and 21-31.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 27.5° degrees absolute is written 75.0.

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

313. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

September, 1925.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Each cell contains a temperature reading in degrees absolute. The Mean row shows a range from 84.1 to 85.6.

314. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

October, 1925.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Each cell contains a temperature reading in degrees absolute. The Mean row shows a range from 84.1 to 85.0.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is written 75.0.





TEMPERATURE: ANNUAL MEANS OF HOURLY VALUES.

From readings in degrees absolute at exact hours, Greenwich Mean Time.

317. Cahirciveen (Valentia Observatory) : North Wall Screen : ht = 1.3 metres.

1925.

Table with 25 columns (1-24 hours + Mean) and 12 rows (Jan-Mar, Apr-Jun, July-Sept, Oct-Dec, Year) containing temperature readings in degrees absolute.

TEMPERATURE: MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

318. Cahirciveen (Valentia Observatory) : North Wall Screen : ht = 1.3 metres.

1925

Table with 26 columns (Month, Mean, Hour 1-24) and 12 rows (Jan-Mar, Apr-Jun, July-Sept, Oct-Dec, Year) showing monthly means and diurnal inequalities.

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

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

319 Cahirciveen (Valentia Observatory) : North Wall Screen : ht = 1.3 metres.

1925.

Large table with 23 columns (Month, Day, Max, Min) and 31 rows (Days 1-31) showing absolute temperature extremes for each day.

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. Determined as explained on page 14.

322. Cahirciveen (Valentia Observatory) : North Wall Screen : h<sub>t</sub> (height of thermometer bulbs above ground) = 1·3 metres.

March, 1925.

Table with 26 columns (Day, 1-24, Mean, Vapour Pressure) and 31 rows (1-31). Contains percentage data for relative humidity and mb values for vapour pressure.

323. Cahirciveen (Valentia Observatory) : North Wall Screen : h<sub>t</sub> = 1·3 metres.

April, 1925.

Table with 26 columns (Day, 1-24, Mean, Vapour Pressure) and 31 rows (1-31). Contains percentage data for relative humidity and mb values for vapour pressure.

\* Computed from the mean temperatures and the mean relative humidities.

† Mean of the column.

‡ Mean of the row.

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

324. Cahirciveen (Valentia Observatory) : North Wall Screen : ht (height of thermometer bulbs above ground) = 1.3 metres.

May, 1925.

Table with 25 columns (1-24 for hours, Mean, Vapour pressure) and 31 rows (1-31 for days). Data includes relative humidity percentages and vapour pressure in mb.

325. Cahirciveen (Valentia Observatory) : North Wall Screen : ht = 1.3 metres.

June, 1925

Table with 25 columns (1-24 for hours, Mean, Vapour pressure) and 31 rows (1-31 for days). Data includes relative humidity percentages and vapour pressure in mb.

\* Computed from the mean temperatures and the mean relative humidities.

† Mean of the column.

‡ Mean of the row.

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

326. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  (height of thermometer bulbs above ground) = 1.3 metres.

July, 1925.

Table with 25 columns (Days 1-25) and 24 rows (Hours 1-24). Columns include relative humidity percentages and Vapour Pressure (mb.). Includes a 'Mean' row and a 'Vapour Pressure\*' row.

327. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t$  = 1.3 metres.

August, 1925.

Table with 25 columns (Days 1-25) and 24 rows (Hours 1-24). Columns include relative humidity percentages and Vapour Pressure (mb.). Includes a 'Mean' row, a 'Vapour Pressure\*' row, and an 'Hour G.M.T.' row.

\* Computed from the mean temperatures and the mean relative humidities.

† Mean of the column.

‡ Mean of the row.

Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

328. Cahirciveen (Valentia Observatory) : North Wall Screen : ht (height of thermometer bulbs above ground) = 1.3 metres.

September, 1925.

Table with 25 columns for days (1-25) and 24 columns for hours (1-24), plus Mean and Vapour Pressure\* columns. Data represents relative humidity percentages.

329. Cahirciveen (Valentia Observatory) : North Wall Screen : ht = 1.3 metres.

October, 1925.

Table with 25 columns for days (1-25) and 24 columns for hours (1-24), plus Mean and Vapour Pressure\* columns. Data represents relative humidity percentages.

\* Computed from the mean temperatures and the mean relative humidities.

† Mean of the column.

‡ Mean of the row.





From the monthly means for exact hours, Greenwich Mean Time.

332. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t = 1.3$  metres.

1925.

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 ...	% 84.8	% 85.1	% 85.4	% 85.7	% 85.7	% 85.6	% 84.9	% 84.2	% 82.8	% 81.1	% 80.1	% 79.1	% 78.5	% 78.2	% 78.6	% 78.9	% 79.2	% 79.9	% 81.3	% 82.6	% 83.3	% 83.7	% 84.2	% 84.3	% 82.4
Vapour Pressure in millibars ...	mb. 9.9	mb. 9.8	mb. 9.9	mb. 9.8	mb. 9.8	mb. 9.9	mb. 10.0	mb. 10.1	mb. 10.2	mb. 10.4	mb. 10.5	mb. 10.6	mb. 10.6	mb. 10.6	mb. 10.7	mb. 10.6	mb. 10.5	mb. 10.3	mb. 10.3	mb. 10.2	mb. 10.1	mb. 10.0	mb. 10.0	mb. 10.0	mb. 10.2

RELATIVE HUMIDITY : MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

333. Cahirciveen (Valentia Observatory) : North Wall Screen :  $h_t = 1.3$  metres.

1925.

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.	% 83.4	% -0.03	% +0.13	% +0.99	% +1.02	% +0.39	% +0.94	% +1.31	% +0.60	% +0.78	% +0.84	% +0.25	% -0.37	% -1.24	% -1.51	% -1.29	% -1.33	% +0.22	% -1.18	% -1.60	% -0.07	% +0.22	% +0.56	% +0.85	% -0.42
Feb.	% 80.4	% +0.67	% +0.69	% +0.49	% +0.01	% +0.24	% +0.89	% -0.02	% +0.61	% -0.83	% -0.53	% -0.98	% -1.97	% -1.34	% -1.08	% +0.40	% -1.08	% -1.13	% +0.07	% +1.01	% +1.42	% +1.54	% +0.34	% +0.43	% +0.16
Mar.	% 78.0	% +3.98	% +4.57	% +4.45	% +5.98	% +4.44	% +3.90	% +5.24	% +4.87	% +2.97	% -0.82	% -2.88	% -5.45	% -6.60	% -8.33	% -7.74	% -6.18	% -5.08	% -4.31	% -1.76	% -0.33	% +0.49	% +1.92	% +3.64	% +2.94
April	% 79.6	% +3.20	% +4.10	% +4.76	% +4.69	% +5.06	% +4.36	% +3.15	% +2.75	% +0.68	% -1.29	% -2.63	% -3.90	% -5.50	% -4.94	% -4.74	% -3.94	% -4.64	% -4.08	% -1.55	% -0.38	% +0.82	% +1.25	% +1.21	% +1.57
May	% 81.9	% +2.26	% +2.86	% +4.01	% +4.17	% +4.80	% +4.50	% +2.04	% +0.22	% -2.05	% -3.02	% -4.03	% -2.59	% -2.89	% -2.97	% -2.20	% -2.47	% -3.51	% -3.01	% -2.21	% -0.35	% +1.22	% +1.89	% +1.72	% +1.68
June	% 79.4	% +5.79	% +6.04	% +6.16	% +6.11	% +6.37	% +6.02	% +2.04	% 0.00	% -1.88	% -3.29	% -4.54	% -5.55	% -5.43	% -6.12	% -6.13	% -7.57	% -7.35	% -4.82	% -2.78	% -0.49	% +2.34	% +3.85	% +5.11	% +6.16
July	% 84.2	% +3.53	% +2.99	% +3.84	% +3.78	% +3.61	% +3.69	% +2.24	% +1.16	% -1.32	% -3.43	% -4.54	% -4.28	% -4.52	% -4.29	% -3.75	% -3.48	% -2.54	% -1.82	% -0.65	% +0.47	% +1.83	% +1.91	% +2.30	% +3.25
Aug.	% 86.1	% +4.75	% +4.92	% +5.29	% +5.55	% +5.53	% +5.32	% +4.61	% +2.91	% -0.24	% -2.26	% -5.55	% -7.34	% -7.13	% -6.78	% -5.83	% -5.30	% -5.71	% -4.32	% -2.11	% +0.96	% +2.29	% +3.04	% +3.47	% +3.96
Sept.	% 81.8	% +1.72	% +2.52	% +1.99	% +2.77	% +3.27	% +3.25	% +3.76	% +2.92	% +0.57	% -0.92	% -1.42	% -1.98	% -2.84	% -3.54	% -3.86	% -4.62	% -4.12	% -3.27	% -0.80	% +1.17	% +0.38	% +0.76	% +1.46	% +0.77
Oct.	% 87.1	% +1.53	% +2.21	% +2.35	% +2.54	% +1.96	% +2.52	% +2.07	% +2.24	% +2.69	% -0.15	% -1.59	% -3.37	% -3.88	% -4.68	% -3.97	% -2.90	% -2.15	% -1.35	% -0.24	% +0.05	% +0.31	% +0.38	% +1.64	% +1.72
Nov.	% 81.6	% +0.63	% +1.05	% +0.74	% +1.63	% +2.80	% +2.32	% +2.34	% +1.83	% +2.28	% +0.63	% +0.05	% -2.43	% -3.71	% -4.43	% -3.45	% -1.40	% -1.34	% -0.36	% +0.06	% -0.33	% -0.47	% +0.28	% 0.00	% +1.21
Dec.	% 82.5	% +0.38	% +0.82	% +1.36	% +1.29	% +1.34	% +0.98	% +1.31	% +0.98	% +1.07	% +0.28	% +0.50	% -0.51	% -1.36	% -1.21	% -2.06	% -1.68	% -0.92	% -1.07	% -0.24	% +0.17	% -0.52	% -0.17	% -0.54	% -0.09
Year	% 82.4	% +2.38	% +2.75	% +3.05	% +3.32	% +3.33	% +3.23	% +2.53	% +1.77	% +0.40	% -1.25	% -2.29	% -3.32	% -3.89	% -4.17	% -3.74	% -3.51	% -3.19	% -2.50	% -1.09	% +0.19	% +0.87	% +1.34	% +1.79	% +1.92

RAINFALL : ANNUAL TOTALS OF HOURLY VALUES.

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

334. 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 metres.

1925.

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. 45.8	mm. 48.6	mm. 48.0	mm. 49.3	mm. 61.9	mm. 65.2	mm. 56.1	mm. 83.7	mm. 63.2	mm. 47.5	mm. 55.6	mm. 61.9	mm. 50.9	mm. 58.8	mm. 55.4	mm. 53.6	mm. 52.2	mm. 45.9	mm. 66.8	mm. 66.4	mm. 72.4	mm. 39.3	mm. 34.3	mm. 49.4	mm. 1332.2
Duration ...	hr. 26.3	hr. 28.2	hr. 29.4	hr. 31.2	hr. 36.6	hr. 33.9	hr. 31.9	hr. 32.3	hr. 30.0	hr. 27.5	hr. 30.4	hr. 28.4	hr. 28.2	hr. 31.1	hr. 31.0	hr. 31.0	hr. 34.0	hr. 32.4	hr. 32.7	hr. 34.6	hr. 34.0	hr. 26.5	hr. 22.5	hr. 23.7	hr. 727.8

335. Cahirciveen (Valentia Observatory).

NOTES ON RAINFALL.

1925.

**Notable Falls of the Year.**—The heaviest hourly rainfall shown in the tables is 18.5 mm., experienced between 7 h. and 8 h. on the 22nd January. This was part of a fall of 35 mm. which fell between 3 h. and 15 h.; and of this amount 24 mm. fell in two hours, from 7 h. to 9 h. On the 22nd February 35 mm. fell in the 12 hours between 11 h. and 23 h.; of this total 21 mm. fell in the four hours from 15 h. to 19 h.

**Dry Periods.**—No rain fell from the 6th to the 25th June, inclusive, a period of 20 days; except for a slight fall of 0.3 mm. about midnight of the 26th-27th, this dry period extended for a further three days, to the 28th. From the 1st to the 13th October, inclusive, the only precipitation was 0.1 mm. of dew on the 1st and 0.1 mm. of rain on the 4th.

**Wet Periods.**—From the 27th January to the 28th February, a period of 33 days, rain was measured on every day. On only three days was the amount measured less than 1 mm. From the 14th October to the 10th November, a period of 28 days, rain was measured every day, five days only having less than 1 mm. From the 20th to the 31st December is part of a wet period extending to the 11th January, 1926, 23 days in all; on only two days of the 23 was the rain measured less than 1 mm.

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

336. 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. January, 1925.

Day.	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	
	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	1.2	1.0	...	...	...	...	6	3	1	9	5	4.5	1.5	...	...	...	...	...	...	...	...	10.9	4.9	
2	...	1	1.4	1.9	9	...	2	3	3.8	...	1	1	1.0	...	3	...	2	...	...	...	...	...	...	...	11.2	4.9	
3	...	...	2.1	5	...	...	3	...	3	...	...	...	...	...	...	...	...	5	4.0	4.8	5.2	...	1.7	3.1	22.5	5.8	
4	...	3	1	1.7	3	7	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2	7	5.2	3.3	
5	...	...	2	...	5	...	3	...	4	...	3	2	3	2	...	...	...	...	...	...	8	9	...	2	...	4.3	2.4
6	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2	
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	0.3	0.2	
8	...	6	9	1.9	4	3	...	2	...	1.5	1.6	5	1.1	4	2	...	1	1	6	...	4	...	...	...	10.8	6.1	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	0.3	0.4	
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	9.2	...	1	...	11.0	1.6	
13	...	...	...	...	...	...	...	...	...	1.2	8	8	2.6	3.0	1.9	3.1	2.4	6	4	2	4	3	...	...	17.7	9.6	
14	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	...	...	...	9	3	1.8	1.5	
15	...	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.3	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	6	3	...	3	4	...	1.8	2.1	
17	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.6	
18	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	2	1.9	6.2	3.1	6	...	...	12.1	4.1	
19	...	...	...	1.0	3.3	1.3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.7	2.7	
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	45.1	11.5	
22	...	...	...	3	9	2.3	2.2	18.5	5.8	3.8	3.0	4.0	1.8	1.0	5	7	3	...	...	...	...	...	...	0.3	0.2		
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	14.8	9.3	
24	...	...	...	...	...	...	...	5	5	6	1.7	2.6	2.5	3.0	7	6	8	3	3	2	5	...	...	...	0.4	0.3	
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	6	6	1.1	2	...	4	9	1	9	1.6	1.2	...	...	...	...	...	...	...	...	...	...	...	7.6	5.4	
28	...	1.2	9	...	...	1.0	4	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4.7	3.0	...	...
29	1.3	2.7	1.9	3	...	...	...	...	...	...	...	...	5	2.3	...	...	1	1	...	...	...	...	2	3	9.7	5.8	
30	...	4	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	5	3	1.4	1.3	
31	...	2	5	...	1	7	4	1.1	1.0	2	4	...	...	...	1.1	2	3	2	6	1	1	1	1	...	7.4	5.6	
Sum.	3.1	7.4	11.9	6.5	6.5	6.0	5.0	25.9	8.1	10.3	10.6	9.8	11.1	8.0	9.2	6.3	4.1	2.6	8.5	16.0	19.5	1.7	4.5	5.3	207.9	93.1	
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.	
	2.9	50.	6.0	4.0	3.4	3.8	3.9	4.1	3.6	5.5	5.5	4.4	4.9	4.3	3.8	2.8	2.6	2.4	3.7	4.3	4.1	2.2	2.8	3.1	93.1		

337. Cahirciveen (Valentia Observatory) :  $H_r$  = 9.1 metres + 0.5 metre.

February, 1925.

	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2	
2	...	...	...	...	...	...	...	...	...	...	4	...	...	2	5	5	3	...	3	...	1	...	6	2	3.3	4.1	
3	...	1	9	4	6	2	1	...	...	...	...	2	2	1.1	...	...	...	...	...	...	...	...	...	...	4.0	3.0	
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	2	...	...	...	0.5	0.7	
5	...	4	...	...	4	3	2	9	7	1.1	8	3	...	1.2	6	6	3	...	...	...	...	...	...	...	7.8	7.0	
6	...	2	1	...	3	...	2	...	4	...	2	2	...	...	1	5	2	...	8	...	1.0	3	...	...	4.5	2.7	
7	...	...	2	...	...	...	...	...	...	...	...	1	2	...	8	1.0	6	2.9	3.0	3.2	1.7	3	...	...	14.0	7.8	
8	...	...	2	1	1	1	5	...	...	...	...	...	...	...	9	7	4	2	3	3	3	3	...	...	4.1	3.1	
9	...	...	...	...	...	1	2	...	...	1.1	1.0	2.4	2	2	1	...	...	...	...	...	...	1	...	5	5.9	3.7	
10	...	...	...	...	...	1.2	...	...	...	...	1.6	...	9	1.0	2	4	1.4	8	1.6	9	6	...	3	10.9	8.1		
11	...	7	1	4	1.2	2	2	...	...	...	...	...	4	...	6	...	...	...	1.0	2	...	...	...	...	5.0	4.0	
12	...	...	...	...	...	...	...	5	2.3	4	4	...	...	4	2	...	1	5	1	5.5	6.5	2.0	...	18.9	5.3		
13	...	...	1	...	1	2	3	...	1	...	3	...	...	1.3	...	...	...	2	2	2	2	...	1	...	3.3	3.0	
14	...	...	8	2	1.7	2	2	5	...	...	...	...	...	2	...	1	2	...	...	...	...	...	...	...	4.1	2.2	
15	...	...	...	...	...	...	...	4	...	2	5	...	3	2	2	3	...	...	...	1	...	6	...	...	2.8	1.9	
16	...	1	2	...	8	1	...	...	...	...	1.7	3	2	...	4	...	...	...	...	...	...	...	...	...	3.8	2.1	
17	...	...	...	4	...	1	7	...	3	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	1.7	0.9	
18	...	...	...	...	...	...	...	...	...	...	...	4	...	...	5	...	...	1.1	1	3	3	1	...	3	3.1	1.7	
19	...	...	...	...	...	1	1	2	1	...	3	...	...	...	1	...	...	...	...	...	...	...	...	...	0.9	1.1	
20	...	...	...	...	...	...	...	...	...	...	...	1	1.3	1.6	2.1	1.2	1.2	5	2	4	...	...	...	...	8.6	5.8	
21	...	...	...	...	...	2	...	5	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	1.6	0.6	
22	...	...	...	...	...	...	...	...	...	...	6	1.2	2.0	3.3	5.1	3.1	3.5	8.8	1.8	3.8	9	8	...	...	34.9	10.2	
23	...	...	6	2	7	...	...	...	...	...	4	...	...	...	...	...	1	9	...	...	...	...	...	...	3.3	1.5	
24	...	1	1.4	3.9	4.7	1.1	5	1.5	3	...	2	...	4	1	2	...	1	...	1.6	3	3	...	...	...	16.7	6.0	
25	...	3.2	5	2	3	1.0	...	...	6	8	1.2	2	2	...	5	...	...	1.2	1.3	3.5	2	...	...	...	14.9	6.9	
26	...	2	1.8	1.5	1.5	7	5	1	...	2.1	3	9	1	2	...	4	...	2	...	3	...	...	...	...	10.8	4.7	
27	...	4	9	...	3	...	...	...	2	...	...	...	...	9	2	...	...	2	...	...	...	...	...	...	3.7	1.9	
28	...	...	5	2	...	...	...	...	...	...	...	1.8	5	3	...	...	...	...	...	...	...	...	...	...	3.5	1.9	
Sum.	2.1	7.5	7.0	9.6	9.7	4.1	4.3	4.5	7.1	4.0	7.5	6.5	6.2	10.0	10.6	13.1	7.6	11.8	15.7	14.0	17.4	11.3	3.7	1.4	196.7	102.1	
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.	
	1.6	3.5	3.9	4.3	4.2	2.9	2.8	1.9	3.7	2.7	4.6	3.1	3.9	5.9	7.1	7.0	5.3	5.0	5.7	7.6	7.4	4.9	1.9	1.2	102.1		
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.

338. Cahirciveen (Valentia Observatory) : 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) = 9.1 metres + 0.5 metre.

March, 1925.

Table with 25 columns for hourly rainfall (0-1 to 23-24) and 2 columns for total rainfall and duration. Rows include daily data from 1 to 31 and a summary row.

339. Cahirciveen (Valentia Observatory) : H<sub>r</sub> = 9.1 metres + 0.5 metre.

April, 1925.

Table with 25 columns for hourly rainfall (0-1 to 23-24) and 2 columns for total rainfall and duration. Rows include daily data from 1 to 30 and a summary row.

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

340. 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, 1925.

Day.	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	
	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	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.4	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	.2	.9	.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	.7	2.5	3.2	1.3	1.9	...	.3	...	...	1.5	1.6	2.4	1.4	.2	.4	...	...	...	...	...	...	...	...	...
6	...	.3	.1	...	...	...	...	...	...	...	...	...	...	...	...	.7	.6	...	...	...	...	...	...	...	...	...	...
7	...	...	.1	1.8	.5	.3	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	.9	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	.8	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	.5	...	...	.3	.6	.3	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	.2	.7	.8	1.3	1.2	.3	.8	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	.3	.1	...	...	...	...	...	...	...	...	.3	1.0	.1	...	...	...	.8	.9	.1	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	1.2	4.4	5.7	1.6	1.0	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	.3	...	...	...	...	...	...	.9	.3	1.5	.7	1.1	.9	1.0	2.1	.3	.1	...	...	...	...	...	...	...	...
22	...	.3	.6	1.1	.5	.2	.3	.2	.1	...	...	.7	.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	1.5	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	.7	...	.9	...	.3	.8	...	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	.4	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum	3.3	2.4	3.3	5.0	6.5	6.1	4.6	8.3	7.9	4.0	3.8	3.6	3.3	5.9	5.1	8.5	6.3	4.8	1.9	1.8	3.5	3.5	2.9	3.6	109.9	74.1	
Total Duration.	hr. 2.2	hr. 1.9	hr. 2.4	hr. 3.1	hr. 4.7	hr. 3.7	hr. 3.5	hr. 3.0	hr. 3.2	hr. 2.9	hr. 3.3	hr. 2.8	hr. 2.8	hr. 4.2	hr. 3.0	hr. 5.5	hr. 4.4	hr. 3.2	hr. 1.5	hr. 2.0	hr. 3.3	hr. 3.3	hr. 2.7	hr. 1.5	hr. 74.1		

341. Cahirciveen (Valentia Observatory) :  $H_r$  = 9.1 metres + 0.5 metre.

June, 1925.

	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.	mm.
1	.1	.2	...	...	.4	...	1.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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	0.1	0.2	...	...	0.6	0.3	1.2	...	...	0.1	0.4	0.4	...	0.1	...	...	...	...	0.9	1.4	1.4	0.4	...	0.3	7.8	6.9	
Total Duration.	hr. 0.1	hr. 0.1	hr. ...	hr. ...	hr. 0.7	hr. 0.2	hr. 0.4	hr. ...	hr. ...	hr. 0.2	hr. 0.6	hr. 0.2	hr. ...	hr. 0.2	hr. ...	hr. ...	hr. ...	hr. ...	hr. 1.1	hr. 1.2	hr. 1.0	hr. 0.5	hr. ...	hr. 0.4	hr. 6.9		
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.

344. 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. September, 1925.

Day.	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	
	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	.8	.6	.7	.9	.2	.2	.1	.7	1.0		.5												6.0	6.0	
2																											
3																											
4																											
5													.8								.5					1.3	0.8
6																											
7																					.1				.2	0.3	0.4
8	.2				.1	.3															.2					0.8	0.7
9	.2	.1			.3	.2	1.1	.1																		2.0	1.5
10					.1	.1																				0.2	0.4
11																											
12																											
13																				0.2	0.7	0.4	0.3	0.3	0.7	2.6	5.3
14	1.0	0.2																								1.2	1.2
15											.1	1.3	1.6	2.6	2.3	.5		.1	.1			.2	.1	.3		9.2	3.9
16																						2.2	.6	.8	.9	4.5	4.0
17	2.7	4.0	0.9	0.4	.9	.7	.5	.2	.1																10.4	6.2	
18									.1	.1	1.3	1.1	.8	2.7	.3										.5	7.1	2.6
19	.6		.8					.6	1.2	1.1		1.4			1.1		.1				.5					7.4	2.2
20			.5					.1								.7	.5				.6	1.7	1.2		2.4	7.7	2.0
21	.9	1.7			.3																		.1	1.6	2.0	6.6	2.7
22	3.8	1.3					1.2	1.9																		8.2	2.7
23			.5		.2		1.4			.1			.2			.6			.1	.1						3.2	1.5
24	1.1				.8		.3																		.5	2.7	1.6
25	.3	.2	.3	.3	.2	.1	.1	1.7	1.7	.4													.6			5.9	7.4
26																											
27															1.3	1.4	.3	.2	.3	.1						3.6	3.1
28			.1	.3	.4	.2	.6	.7	.3																.3	2.9	5.0
29								.3	.6	.3	.2					.3	.1	.5	.7	.9	.6	.2	.1			4.8	6.2
30	.2	1.5	1.4	.4																						3.5	2.8
Sum	11.1	9.2	5.3	2.0	4.0	2.5	5.4	5.8	4.1	2.7	2.6	3.8	3.9	5.3	5.0	3.5	1.0	0.8	1.4	3.5	5.4	3.1	3.2	7.5	102.1	70.2	
Total Duration.	5.2	4.1	4.3	3.1	4.5	3.3	3.5	4.4	2.9	2.1	1.3	1.4	2.0	0.8	1.5	1.7	1.1	1.6	2.2	3.3	4.0	3.5	3.7	4.7	70.2		

345. Cahirciveen (Valentia Observatory) :  $H_r$  = 9.1 metres + 0.5 metre.

October, 1925.

	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																		0.1		
2																												
3																												
4											.1															0.1	0.3	
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14				.1	.2	.2	.1																			0.6	0.9	
15								.7									.1	.2	.1				.1			1.2	1.1	
16	.2																	.1	1.5	.1						1.9	1.6	
17														.1	.6				.1		.1				.1	1.0	1.3	
18						.2																				0.2	0.3	
19		.1						.6	.9	3.3	1.2	1.6	3.0	1.2	2.0	1.6	.3	.5	.1							16.4	10.2	
20				.3	.6	1.0	.4	.2	.7	.3	.1						.1									3.7	4.3	
21								.9				3.9	.1				.2	.1		.2	.2				3.2	8.8	2.6	
22	.3	.7	.2	.6	.9		.2					.8														6.4	2.9	
23	.6	.1	.1	.2	1.7		.1	.5	1.4	.7	.4						.1		.1							6.0	3.9	
24								.2	3.6	.4		.2	.4						.1		.1	1.0				6.0	1.9	
25	.1	.2				.1									.2	.7	.6	1.3	.9							4.1	3.8	
26						4.7	3.8	1.2	.5												1.7	.8	1.4	.6	.1	14.8	3.5	
27	1.6				.6	.1	3.7	.2	1.8																	8.4	2.4	
28			.4				.1	1.0	.8	.9	2.2	2.8	2.7	.8	.3	.5	.2	.5	.1	.7						14.0	9.9	
29						.2	2.1	4.9	2.5	.5	2.0	4.6	2.3	1.3	.6											21.0	7.3	
30										.5																	0.5	0.3
31					.1	.8																				.5	1.4	0.8
Sum	2.8	1.1	0.7	1.2	4.1	7.3	10.5	9.6	12.3	6.6	4.6	18.8	8.6	5.3	4.2	2.6	1.9	2.4	3.4	2.2	2.8	4.6	0.6	3.9	116.6	59.3		
Total Duration.	1.1	1.0	0.7	1.2	1.9	2.9	4.3	4.3	3.5	3.9	3.2	4.1	3.4	2.8	3.0	2.5	3.6	3.4	2.9	1.4	1.5	1.3	0.2	1.2	59.3			
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.

346. 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. **November, 1925.**

Day.	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			
	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	3.5	2.0	2.4	1.4	1.2	4.2	1.8	1.5	...	...	4.0	2.2	1.1	1.1	.6	...	2.2	...	1.9	1.5	.3	.2	.2	...	32.3	12.4			
2	...	...	.3	...	1	...	...	...	...	...	...	...	...	...	...	...	1.1	...	...	...	...	...	...	...	1.9	0.9			
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	0.9		
4	...	.6	2.4	...	2.8	3.1	.2	.7	...	.9	1.3	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	2.7		
5	...	...	...	...	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.4	3.3		
6	...	...	...	...	...	...	...	...	...	...	...	...	...	.2	1.9	1.5	4.2	3.5	1.8	2.2	2.6	.3	...	...	...	18.2	6.9		
7	...	...	...	...	...	.6	.2	1.4	...	...	...	...	.4	.4	...	...	...	...	.2	...	...	...	...	...	...	3.2	0.9		
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.2	
9	.5	.6	.6	...	...	...	...	...	...	...	...	...	...	...	...	...	.2	.6	1	.7	...	...	...	...	...	...	4.4	1.8	
10	.3	...	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.6	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	.3	.4	.3	.2	1	...	...	...	...	...	...	...	2.8	4.1	
14	.2	...	...	...	...	...	...	...	1.6	3.0	1.3	.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	2.8	
15	.3	1.3	...	.5	1.3	...	...	1	...	...	...	5.9	1.7	4.1	.8	.4	...	1	...	...	...	...	...	...	...	...	16.5	4.4	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	.1	.1	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	.5	...	.1	...	.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	.1	...	...	...	.1	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	5.5	4.7	5.8	2.3	5.7	8.8	3.2	5.6	5.1	4.8	5.6	8.8	3.6	5.9	3.6	4.5	9.5	4.1	5.1	7.1	3.4	1.0	1.7	1.0	116.4	49.5			
Total Duration.	hr. 2.6	hr. 2.2	hr. 1.7	hr. 1.6	hr. 2.5	hr. 2.9	hr. 1.6	hr. 2.6	hr. 2.9	hr. 2.1	hr. 1.6	hr. 2.3	hr. 1.8	hr. 2.0	hr. 2.2	hr. 2.3	hr. 3.7	hr. 2.5	hr. 2.6	hr. 2.6	hr. 1.4	hr. 0.6	hr. 0.6	hr. 0.6	hr. 49.5				

347. Cahirciveen (Valentia Observatory) :  $H_r$  = 9.1 metres + 0.5 metre.

**December, 1925.**

	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	...	.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	.1	1.0	.4	...	...	...	...	...	...	1.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	.1	.3	2.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	.4	2.1	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	.3	...	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	1.0	.4	...	.1	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	.3	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	.2	.1	...	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	.1	...	.3	.4	...	.6	...	.5	1.0	...	.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	.3	...	...	...	.8	1.6	1.6	2.5	.6	.3	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	1.9	.8	.5	3.4	.8	...	...	...	.4	.5	.8	1.0	1.9	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	.1	...	2.4	.2	...	1.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	.7	.5	.4	.2	...	.2	...	.2	.5	...	.7	.2	.4	3.4	2.4	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	4.0	2.8	4.2	6.5	3.8	7.4	5.6	4.5	3.6	2.4	7.9	7.1	6.5	4.3	4.5	3.5	2.3	2.5	6.4	3.9	2.8	2.7	3.0	5.2	107.4	58.3		
Total Duration.	hr. 2.4	hr. 1.7	hr. 1.6	hr. 2.4	hr. 2.5	hr. 3.7	hr. 2.6	hr. 2.9	hr. 3.3	hr. 2.2	hr. 4.4	hr. 3.3	hr. 3.2	hr. 3.0	hr. 1.5	hr. 1.5	hr. 2.1	hr. 2.0	hr. 2.4	hr. 2.7	hr. 1.7	hr. 1.6	hr. 1.9	hr. 1.7	hr. 58.3			
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 OF BRIGHT SUNSHINE.

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

348. Cahirciveen (Valentia Observatory) :  $h_s$  (height of recorder above ground) = 12·8 metres.

January, 1925.

Day.	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.	
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	·5	·3	·8	·9	·9	·6	·1	—	—	—	—	—	—	4·1	52
6	—	—	—	—	—	—	·8	1·0	·8	·8	·8	·9	·2	—	—	—	—	—	—	5·3	67
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	·8	1·0	1·0	·2	·2	·2	—	—	—	—	—	3·4	43
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	·2	—	—	—	—	—	—	—	—	—	—	—	0·2	2
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	—	—	—	—	—	—	·8	1·0	·5	·2	·7	—	—	—	—	—	—	—	—	3·2	39
15	—	—	—	—	—	—	·4	·7	·9	1·0	1·0	1·0	·5	—	—	—	—	—	—	5·5	67
16	—	—	—	—	—	—	—	·4	·1	·1	·1	—	—	—	—	—	—	—	—	0·7	9
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	—	—	—	—	—	—	·6	1·0	·7	—	—	—	—	—	—	—	—	—	—	2·3	27
20	—	—	—	—	—	—	—	—	—	—	—	·1	—	—	—	—	—	—	—	0·1	1
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	—	—	—	—	—	—	·1	·2	·7	1·0	1·0	1·0	·4	—	—	—	—	—	—	5·4	63
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	·2	1·0	1·0	·1	·4	·5	·1	—	—	—	—	—	—	3·3	38
26	—	—	—	—	—	—	·1	·2	·8	·2	·3	—	—	—	—	—	—	—	—	1·6	18
27	—	—	—	—	—	—	—	—	—	—	·1	—	—	—	—	—	—	—	—	0·1	1
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	—	—	—	—	—	—	·2	·9	·9	·9	·9	1·0	·4	—	—	—	—	—	—	5·2	59
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
31	—	—	—	—	—	—	—	·2	·2	·7	·2	·5	·2	—	—	—	—	—	—	2·0	22
Sum.	—	—	—	—	—	0·4	4·7	9·0	7·3	7·9	6·7	6·1	2·1	—	—	—	—	—	—	44·2	—
Mean.	—	—	—	—	—	0·01	0·15	0·29	0·24	0·25	0·22	0·20	0·07	—	—	—	—	—	—	1·43	17

349. Cahirciveen (Valentia Observatory) :  $h_s$  = 12·8 metres.

February, 1925.

	ht.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	—	—	—	—	—	·6	1·0	·3	—	—	—	—	—	—	—	—	—	—	—	1·9	21
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	·3	·3	—	·5	·6	—	—	—	—	—	—	—	—	—	1·8	20
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	·2	·7	·4	·2	·2	·5	—	·3	—	—	—	—	—	—	2·5	27
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	·1	·4	·3	·5	·1	—	—	—	—	—	—	1·4	15
11	—	—	—	—	—	—	·3	·7	·8	·5	·6	·4	·2	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	·2	·2	·7	1·0	·5	·3	·2	·1	—	—	—	—	—	—	3·5	36
13	—	—	—	—	—	—	·2	·8	·9	·2	—	·2	·8	·3	·1	—	—	—	—	—	3·2	33
14	—	—	—	—	—	—	·4	·7	·6	·9	—	·4	·6	·2	·1	—	—	—	—	—	3·5	36
15	—	—	—	—	—	—	—	·2	·7	·2	—	·1	—	—	—	—	—	—	—	—	3·9	40
16	—	—	—	—	—	—	—	·4	·4	·6	·1	·6	·6	·8	—	—	—	—	—	—	1·3	13
17	—	—	—	—	—	—	·7	1·0	·8	·8	·9	·4	·7	—	—	—	—	—	—	—	3·6	36
18	—	—	—	—	—	—	·9	·8	·8	·8	·8	·9	·9	·4	·3	—	—	—	—	—	5·3	53
19	—	—	—	—	—	—	·2	·2	·7	1·0	1·0	·9	1·0	1·0	—	—	—	—	—	—	6·6	65
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6·0	59
21	—	—	—	—	—	—	·4	·7	·8	·7	·6	1·0	·9	1·0	·2	—	—	—	—	—	—	—
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6·3	61
23	—	—	—	—	—	—	·2	·6	·8	·7	·9	·8	·6	·4	·1	—	—	—	—	—	—	—
24	—	—	—	—	—	—	—	—	—	·1	·5	·2	—	—	—	—	—	—	—	—	5·1	49
25	—	—	—	—	—	—	—	—	·5	·8	1·0	·5	·2	—	—	—	—	—	—	—	0·9	9
26	—	—	—	—	—	—	·1	—	·8	·7	·6	·4	·2	·3	·1	—	—	—	—	—	—	—
27	—	—	—	—	—	—	·7	·8	·9	·8	·7	·7	1·0	·9	·2	—	—	—	—	—	3·2	30
28	—	—	—	—	—	—	·2	·9	1·0	·7	—	—	—	—	·8	—	—	—	—	—	6·7	63
Sum.	—	—	—	—	0·3	5·4	9·3	12·3	11·6	9·0	8·6	8·7	6·2	1·9	—	—	—	—	—	—	73·3	—
Mean.	—	—	—	—	0·01	0·19	0·33	0·44	0·41	0·32	0·31	0·31	0·22	0·07	—	—	—	—	—	—	2·62	27
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.

**350. Cahirciveen (Valentia Observatory) :  $h_s$  (height of the recorder above ground) = 12.8 metres. March, 1925.**

Day.	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.	
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.7	34
2	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.4	40
3	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.4	59
4	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.7	70
5	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	14
7	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	7
8	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.3	73
9	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	12
10	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.7	76
11	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.4	30
12	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.6	23
13	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
14	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.6	22
15	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.3	62
16	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	3
19	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	9
20	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.4	45
21	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.9	74
22	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.8	89
23	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	2
24	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.3	43
25	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.1	57
26	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.5	52
27	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.1	80
28	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.0	40
29	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	9
30	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	32
31	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.6	36
Sum.	—	—	...	0.7	5.9	10.2	13.5	12.3	12.9	14.1	13.9	15.0	14.6	11.4	5.1	...	...	...	129.6	—	
Mean.	—	—	...	0.02	0.19	0.33	0.44	0.40	0.42	0.45	0.45	0.48	0.47	0.37	0.16	...	...	...	4.18	35	

**351. Cahirciveen (Valentia Observatory) :  $h_s$  = 12.8 metres.**

**April, 1925.**

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	62
2	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.2	48
3	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.2	71
4	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	31
5	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.4	49
6	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.6	20
7	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.5	86
8	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.7	28
9	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.2	39
10	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.4	77
11	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1
12	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	32
13	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.5	40
14	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.5	40
16	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.5	54
17	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.8	49
19	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	9
20	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.1	93
21	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1	36
22	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.5	52
24	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.4	31
25	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	19
26	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.6	52
27	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.9	27
28	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.6	79
29	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.9	74
30	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	40
Sum.	—	...	1.9	6.7	11.3	11.3	15.0	15.7	16.4	15.5	17.1	15.4	14.9	14.8	11.8	3.3	...	...	...	171.1	—	
Mean.	—	...	0.06	0.22	0.38	0.38	0.50	0.52	0.55	0.52	0.57	0.51	0.50	0.49	0.39	0.11	...	...	...	5.70	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.

352. Cahirciveen (Valentia Observatory) :  $h_s$  (height of recorder above ground) = 12.8 metres.

May, 1925.

Day.	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.	
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	...	.5	.4	.8	.8	1.0	1.0	.8	.9	.8	.2	.3	...	.4	...	—	—	8.4	57	
2	—	...	.5	.3	.3	.7	1.0	...	.3	.4	...	.2	...	...	...	...	...	...	4.3	29	
3	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	—	...	.5	.9	.8	.8	.7	.9	.2	.9	.7	.6	.9	.9	.3	.1	...	...	9.2	61	
5	—	...	...	...	...	...	...	...	...	...	...	...	...	...	.1	...	...	...	0.1	1	
6	—	...	.5	.5	.7	1.0	1.0	.9	.7	.9	...	...	...	.2	...	...	...	...	6.4	42	
7	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	
8	—	...	...	.3	...	.3	.3	.6	1.0	1.0	.7	.9	.9	.3	.1	...	...	...	6.4	42	
9	—	...	.1	.9	.7	.7	.7	.7	.7	.1	...	...	...	...	...	...	...	...	4.6	30	
10	—	...	...	...	...	...	.7	.6	...	.8	1.0	1.0	.9	.9	.5	...	...	...	6.4	42	
11	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	...	...	...	...	...	...	...	...	...	...	...	...	.6	.7	.3	...	...	1.6	10	
13	—	...	...	...	...	...	...	...	...	...	...	...	...	...	.6	.1	...	...	0.7	5	
14	—	...	.5	.3	.9	.9	.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.1	...	...	10.5	68		
15	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	
16	—	...	...	...	...	...	...	...	...	...	.1	.7	.7	.8	1.0	.7	.1	...	4.1	26	
17	—	...	.5	.5	1.0	1.0	.8	.9	1.0	1.0	.9	.7	.9	.9	.4	.5	.2	...	11.2	71	
18	—	...	1.0	1.0	1.0	1.0	.8	1.0	1.0	1.0	1.0	.9	1.0	1.0	.8	1.0	.2	...	13.7	87	
19	—	...	.1	.1	...	...	...	.7	1.0	1.0	1.0	.5	.2	.4	.8	...	...	...	6.5	41	
20	—	...	.2	.2	.1	.5	...	...	.4	.9	1.0	.4	.6	1.0	1.0	.9	.1	...	7.4	47	
21	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	2	
23	—	...	...	...	.4	.2	.1	...	...	...	.1	.1	...	...	.5	.1	...	...	1.5	9	
24	—	...	...	...	...	...	...	...	...	.4	.5	.3	.2	...	.1	...	...	...	1.5	9	
25	—	...	.4	1.0	.7	...	...	.1	.2	.3	...	.4	.5	.5	1.0	.4	...	...	5.5	34	
26	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	.5	.8	1.0	.7	.9	.4	...	.2	...	.2	.4	.2	.5	.3	...	...	6.1	38	
28	...	...	.1	.1	.2	.8	.7	.5	.5	.2	...	...	...	...	...	...	...	...	3.1	19	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	.5	.7	.4	...	...	1.6	10	
30	...	...	...	.2	.3	.8	.8	1.0	.9	.8	.7	.8	...	.8	1.0	.7	...	...	8.8	54	
31	...	...	.8	.7	.6	1.0	.9	.9	1.0	1.0	.9	.6	1.0	.3	.6	.3	...	...	10.6	65	
Sum.	...	...	6.2	8.2	9.5	12.0	12.0	11.5	11.9	12.8	10.2	9.4	10.0	9.9	10.7	5.8	0.6	...	140.7	—	
Mean.	...	...	0.20	0.26	0.31	0.39	0.39	0.37	0.38	0.41	0.33	0.30	0.32	0.32	0.35	0.19	0.02	...	4.54	29	

353. Cahirciveen (Valentia Observatory) :  $h_s$  = 12.8 metres.

June, 1925.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	...	...	.3	.7	1.0	1.0	.9	.7	.9	.8	.9	.9	1.0	1.0	.8	.2	...	...	11.8	72	
2	...	...	...	...	...	...	...	...	.3	.5	.8	.1	.2	.1	...	...	...	...	2.5	15	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	.2	.2	.9	.7	.9	1.0	1.0	1.0	.8	.8	.1	...	...	...	...	8.6	52	
5	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	0.1	1	
6	...	.1	.4	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	...	...	...	13.3	81	
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	.9	...	...	15.6	95	
8	...	.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	1.0	.3	...	...	14.6	88	
9	...	.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.7	.4	.5	.5	...	...	...	12.2	74	
10	...	...	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	...	...	14.3	87	
11	...	.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	1.0	.1	...	...	14.4	87	
12	...	...	.6	.2	1.0	.8	1.0	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.5	...	...	13.0	78	
13	...	.3	1.0	.4	.3	.3	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.5	...	...	12.7	76	
14	...	...	...	...	...	...	...	.1	.6	1.0	1.0	1.0	1.0	1.0	1.0	.5	...	...	9.2	55	
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.6	.1	...	0.7	4	
16	...	...	...	...	...	...	.5	...	.1	...	.2	.2	.1	...	...	.1	...	...	1.2	7	
17	...	...	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	.8	...	1.0	6	
18	...	...	.1	...	.8	.4	.5	.6	.9	.1	...	...	...	.1	...	...	...	...	3.5	21	
19	...	...	...	.6	.7	.9	.9	1.0	1.0	1.0	1.0	1.0	.5	.6	...	...	...	...	10.2	61	
20	...	...	...	...	...	...	...	.2	.1	.1	...	...	...	.5	.3	...	...	...	1.2	7	
21	...	...	...	.4	.4	...	...	.1	...	...	.1	.6	.4	.3	1.0	1.0	.6	...	4.9	29	
22	...	.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	.8	...	...	15.6	93	
23	...	.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.7	.4	.3	...	...	...	13.0	78	
24	...	...	.5	1.0	1.0	1.0	.9	1.0	.9	.9	.6	.4	.6	.3	.8	...	...	...	10.8	65	
25	...	.2	.2	.5	.3	.9	1.0	1.0	1.0	1.0	1.0	.8	.8	.9	.8	...	...	...	11.4	69	
26	...	...	...	.3	.3	...	.6	.3	.6	...	...	.8	1.0	.7	...	...	...	...	4.6	28	
27	...	...	...	...	...	.1	.1	...	...	...	...	.2	.3	.6	.7	.7	.3	...	3.0	18	
28	...	...	.3	.4	...	...	...	.1	.3	...	.6	.5	.5	...	...	.5	...	...	3.2	19	
29	...	...	...	...	...	...	...	...	...	.6	.5	.9	.2	...	...	...	...	...	2.2	13	
30	...	...	...	...	.1	...	.1	.3	.8	.6	...	.3	.2	.8	1.0	1.0	.8	...	6.0	36	
Sum.	...	3.4	10.5	12.7	14.1	14.3	16.2	16.5	19.0	17.6	17.7	19.8	17.4	17.0	15.9	16.0	6.7	...	234.8	—	
Mean.	...	0.11	0.35	0.42	0.47	0.48	0.54	0.55	0.63	0.59	0.59	0.66	0.58	0.57	0.53	0.53	0.22	...	7.83	47	
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.

354. Cahirciveen (Valentia Observatory) :  $h_s$  (height of recorder above ground) = 12.8 metres.

July, 1925.

Day.	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.	
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	4	...	1	...	...	...	9	1.0	3	...	...	...	...	2.7	16
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	3	2	...	...	...	...	11.0	67	
6	...	...	...	...	...	...	...	...	1	4	5	1	...	...	...	...	...	...	1.1	7	
7	...	...	8	2	5	1.0	1.0	1.0	9	1.0	1.0	1.0	6	9	8	...	...	...	10.7	65	
8	...	...	2	...	9	1.0	2	...	...	2	2	7	...	3	7	2	...	...	4.6	28	
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	0.2	1	
11	...	...	...	...	1	1	5	1	...	...	8	1.0	9	7	...	...	...	...	4.2	26	
12	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	0.4	2	
13	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	0.3	2	
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	2	7	4	8	1.0	9	9	1.0	3	...	...	6.2	38	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	1	...	...	4	2	...	...	1	2	2	1	...	...	1.3	8	
20	...	1	...	3	2	2	3	8	5	8	8	2	...	1	6	1.0	5	...	6.4	40	
21	...	...	3	5	7	1	7	8	7	5	4	2	4	...	...	...	...	...	5.3	37	
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	1	1.0	8	9	9	1.0	1.0	9	9	6	...	...	...	...	8.1	51	
25	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	
26	...	...	4	8	7	4	7	2	...	...	...	...	...	...	1	...	...	...	3.3	21	
27	...	...	...	...	...	...	...	2	3	1	1	7	5	2	4	...	...	...	2.5	16	
28	...	...	...	...	...	...	1	...	1	3	...	...	...	...	...	...	...	...	0.5	3	
29	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	0.1	1	
30	...	...	...	...	2	2	3	6	8	7	2	...	...	...	...	...	...	...	3.0	19	
31	...	...	...	...	1.0	9	7	6	1.0	4	...	...	...	...	1	...	...	...	4.7	30	
Sum.	...	0.9	2.7	2.8	5.4	6.5	6.3	6.7	7.4	7.0	7.1	7.9	5.6	4.4	3.8	1.7	0.5	...	76.7	—	
Mean.	...	0.03	0.09	0.09	0.17	0.21	0.20	0.22	0.24	0.23	0.23	0.25	0.18	0.14	0.12	0.05	0.02	...	2.47	15.3	

355. Cahirciveen (Valentia Observatory) :  $h_s$  = 12.8 metres.

August, 1925.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	...	...	4	4	6	5	8	5	6	5	1.0	9	9	1.0	9	1.0	...	...	10.0	65	
2	...	...	...	4	4	2	2	...	3	9	1.0	8	2	1	...	...	...	...	4.7	31	
3	...	...	...	...	...	...	...	...	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2	...	8.9	58	
4	...	...	...	1	8	5	...	...	2	...	2	8	5	9	4	...	...	...	4.4	29	
5	...	...	...	...	...	...	...	...	...	...	9	1.0	1.0	1.0	1.0	9	...	...	5.8	38	
6	...	...	2	5	6	1	7	1.0	7	6	2	...	...	...	...	...	...	...	4.6	30	
7	...	...	1	1	...	2	4	7	5	6	1.0	1.0	1.0	1.0	2	...	...	...	7.8	52	
8	...	...	...	2	4	5	7	6	1	...	...	...	...	...	...	...	...	...	2.5	17	
9	...	...	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	...	...	...	...	...	9.2	61	
10	...	...	6	1.0	7	4	4	4	8	1.0	1.0	1.0	1.0	1.0	1.0	1	...	...	11.4	77	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	3	1.0	8	...	...	...	...	...	...	...	...	2.1	14	
13	...	...	...	...	...	...	...	3	...	1	1.0	1.0	1.0	1.0	1.0	1.0	3	...	6.7	45	
14	...	...	8	1.0	6	3	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	9	...	...	12.0	82	
15	...	...	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3	1.0	1.0	1.0	2	...	...	12.3	84	
16	...	...	2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	...	...	12.6	86	
17	...	...	...	...	5	5	1	...	...	...	...	...	...	...	...	...	...	...	1.1	8	
18	...	...	2	2	9	1.0	1.0	1.0	1.0	1.0	1.0	9	1.0	7	1	2	...	...	10.2	70	
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	9	6	3	...	...	1	...	...	...	...	...	...	...	...	...	1.9	13	
21	...	...	...	1	2	3	1.0	1.0	9	1.0	1.0	1.0	1.0	9	1.0	1	...	...	9.5	66	
22	...	...	...	...	...	...	1	7	5	...	...	2	...	...	...	...	...	...	1.5	11	
23	...	...	...	...	...	5	9	1.0	1.0	9	9	1.0	1.0	1.0	1.0	...	...	...	9.2	65	
24	...	...	...	...	...	...	...	...	...	3	...	1	1	...	6	3	...	...	1.4	10	
25	...	...	4	4	...	...	...	...	...	...	...	1	...	...	...	...	...	...	0.9	6	
26	...	...	...	...	...	...	...	4	1.0	1.0	9	8	8	7	6	...	...	...	6.2	44	
27	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	0.3	22	
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	1	9	2	3	7	2	7	1	1	8	8	...	...	...	4.9	36	
30	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	0.2	1	
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	...	...	4.4	8.3	9.5	9.4	10.0	13.2	15.0	14.0	15.6	13.9	13.7	14.2	13.3	7.2	0.6	...	162.3	—	
Mean.	...	...	0.14	0.27	0.31	0.30	0.32	0.43	0.48	0.45	0.50	0.45	0.44	0.46	0.43	0.23	0.02	...	5.24	36	
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.

**356. Cahirciveen (Valentia Observatory) :  $h_s$  (height of recorder above ground) = 12.8 metres. September, 1925.**

Day.	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.
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	...	...	...	...	...	...	...	·3	1·0	·9	·6	·8	·1	...	...	...	3·7	27
2	—	—	...	...	...	...	...	...	·1	·3	·2	·5	·5	·2	·2	...	...	...	2·0	15
3	—	—	...	...	...	...	...	...	...	...	·1	·7	1·0	·9	·9	·2	...	...	3·8	28
4	—	—	...	...	...	·1	...	...	·9	·9	·2	...	·3	...	...	...	...	...	2·4	18
5	—	—	...	...	...	...	...	...	...	...	·1	1·0	·9	·6	...	...	...	...	2·6	20
6	—	—	...	...	·7	1·0	·8	·1	·1	...	...	...	...	...	...	...	...	...	2·7	20
7	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	—	—	...	·1	...	...	·5	·4	·2	·9	·9	·6	·8	·8	·4	...	...	...	5·6	43
9	—	—	...	...	...	...	...	...	·2	·3	·8	·3	·7	1·0	·7	...	...	...	4·0	31
10	—	—	...	...	...	...	·8	·4	·5	·1	·2	·5	·1	...	...	...	...	...	2·6	20
11	—	—	...	·4	·4	·8	·2	·1	·8	·4	·9	1·0	1·0	1·0	·9	...	...	...	7·9	61
12	—	—	...	...	·1	...	·6	·2	·2	·1	·2	1·0	1·0	1·0	1·0	...	...	...	5·4	42
13	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	—	—	...	...	...	...	·3	·7	·6	·2	...	...	...	·1	...	...	...	...	2·1	17
15	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	—	—	...	·3	1·0	1·0	1·0	1·0	1·0	1·0	·7	·1	·2	...	...	...	...	...	7·3	58
17	—	—	...	...	...	·3	·1	...	·7	·3	·6	1·0	1·0	1·0	·5	...	...	...	5·5	44
18	—	—	...	...	...	...	...	...	·1	...	...	·1	...	...	...	...	...	...	0·3	2
19	—	—	...	...	...	...	·7	·8	...	...	...	...	...	·5	...	...	...	...	2·0	16
20	—	—	...	...	·3	·6	·5	·9	·8	·9	·9	...	...	·1	...	...	...	...	5·0	41
21	—	—	...	...	·9	·9	·8	1·0	1·0	·8	·5	·2	·1	...	...	...	...	...	6·2	50
22	—	—	...	...	...	1·0	·8	·3	...	...	...	·4	·1	·2	·1	...	...	...	2·9	24
23	—	—	...	...	·1	·8	·6	·8	·9	·8	·5	·3	·6	·7	...	...	...	...	6·1	50
24	—	—	...	·1	1·0	·9	·8	1·0	1·0	·4	...	...	...	...	...	...	...	...	5·2	43
25	—	—	...	...	...	...	...	...	...	·3	·5	·6	·7	...	...	...	...	...	2·1	17
26	—	—	...	...	·9	1·0	·8	·8	·9	·8	·9	·6	...	...	...	...	...	...	6·7	56
27	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	—	—	...	...	...	...	...	...	...	·1	·3	...	...	·7	·3	...	...	...	1·4	12
Sum.	—	—	...	0·9	5·5	9·4	9·4	9·4	9·2	8·3	9·6	9·4	9·5	9·6	5·1	0·2	—	—	95·5	—
Mean.	—	—	...	0·03	0·18	0·31	0·31	0·31	0·31	0·28	0·32	0·31	0·32	0·32	0·17	0·01	—	—	3·18	25

**357. Cahirciveen (Valentia Observatory) :  $h_s$  = 12.8 metres.**

**October, 1925.**

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	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	·4	...	...	...	10·1	87	
2	—	—	...	...	...	...	...	...	...	·1	·1	·1	...	...	...	...	...	...	0·3	3	
3	—	—	...	...	...	...	...	·1	...	...	...	...	·1	...	...	...	...	...	0·2	2	
4	—	—	...	...	...	...	...	·2	·3	·7	1·0	·3	·2	...	...	...	...	...	2·7	24	
5	—	—	...	...	·2	·9	·1	...	...	...	...	...	...	...	...	...	...	...	1·2	11	
6	—	—	...	...	...	...	...	...	...	·4	·4	·2	...	...	...	...	...	...	1·0	9	
7	—	—	...	...	...	...	...	·2	·1	·4	...	...	...	...	...	...	...	...	0·7	6	
8	—	—	...	...	...	·6	·9	1·0	1·0	·5	·7	1·0	·9	...	...	...	...	...	6·6	59	
9	—	—	...	...	·2	1·0	1·0	1·0	1·0	1·0	·6	·8	·8	1·0	...	...	...	...	8·4	76	
10	—	—	...	...	·4	1·0	1·0	1·0	·9	·8	1·0	·6	·3	·7	...	...	...	...	7·7	70	
11	—	—	...	...	·4	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·7	...	...	...	...	9·1	83	
12	—	—	...	...	...	...	·8	1·0	1·0	1·0	1·0	1·0	·6	·7	...	...	...	...	7·1	65	
13	—	—	...	...	...	...	...	...	...	...	·2	...	...	...	...	...	...	...	0·2	2	
14	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	—	—	...	...	...	·1	·2	·3	·2	...	...	...	...	...	...	...	...	...	0·8	8	
17	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	—	—	...	...	...	...	...	...	...	...	...	·1	·2	...	...	...	...	...	0·3	3	
19	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
21	—	—	...	...	...	...	·6	·5	·1	·4	·1	·2	...	...	...	...	...	...	1·9	18	
22	—	—	...	...	...	...	...	...	...	...	·4	·6	...	·1	...	...	...	...	1·1	11	
23	—	—	...	...	...	...	...	...	...	·5	·8	·9	·1	...	...	...	...	...	2·3	23	
24	—	—	...	...	...	·1	·2	·1	·6	·3	·4	·6	·3	...	...	...	...	...	2·6	26	
25	—	—	...	...	...	·4	·3	·5	...	...	...	...	...	...	...	...	...	...	1·2	12	
26	—	—	...	...	...	·1	1·0	·9	1·0	1·0	1·0	·6	·1	...	...	...	...	...	5·7	58	
27	—	—	...	...	...	...	·2	·9	·8	1·0	·4	·4	·7	...	...	...	...	...	4·4	44	
28	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30	—	—	...	...	...	...	·1	·5	1·0	·9	1·0	·8	·6	...	...	...	...	...	4·9	51	
31	—	—	...	...	...	...	...	·7	·3	1·0	1·0	·9	·6	...	...	...	...	...	4·5	46	
Sum.	—	—	...	1·9	6·2	9·3	10·6	11·4	12·3	11·3	10·7	6·7	4·2	0·4	—	—	—	—	85·0	—	
Mean.	—	—	...	0·06	0·20	0·30	0·34	0·37	0·40	0·36	0·35	0·22	0·14	0·01	—	—	—	—	2·74	26	
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.

358. Cahirciveen (Valentia Observatory):  $h_s$  (height of recorder above ground) = 12.8 metres. November, 1925.

Day.	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.
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	—	—	—	—	—	—	—	·1	·3	·1	—	—	—	—	—	0.5	5
2	—	—	—	—	—	·4	·4	·6	·0	·0	·8	·2	·1	—	—	—	—	—	4.5	47
3	—	—	—	—	—	—	—	—	·7	·9	·0	·9	·5	·2	—	—	—	—	4.2	44
4	—	—	—	—	—	—	·3	·4	·4	·5	—	—	—	—	—	—	—	—	1.6	17
5	—	—	—	—	—	·7	·8	·0	·9	·0	·0	·0	·9	—	—	—	—	—	7.3	78
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	·1	·7	·9	·7	·0	·5	—	—	—	—	—	3.9	42
8	—	—	—	—	—	·7	·0	·8	·0	·0	·0	·0	·8	—	—	—	—	—	7.3	79
9	—	—	—	—	—	·4	·6	·8	·6	·6	·9	·6	·1	—	—	—	—	—	4.6	51
10	—	—	—	—	—	·6	·0	·0	·0	·0	·0	·0	·6	—	—	—	—	—	7.2	79
11	—	—	—	—	—	·5	·0	·0	·0	·0	·0	·0	·0	·3	—	—	—	—	7.8	87
12	—	—	—	—	—	·2	·0	·0	·7	·8	·3	·1	·7	—	—	—	—	—	4.8	54
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	—	—	—	—	—	—	—	—	—	·2	·1	·2	—	—	—	—	—	—	0.5	6
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	—	—	—	—	—	·4	·0	·0	·0	·0	·0	·0	·8	—	—	—	—	—	7.2	83
17	—	—	—	—	—	—	·1	·7	·0	·8	·0	·6	·2	—	—	—	—	—	4.4	51
18	—	—	—	—	—	·2	·0	·0	·0	·0	·0	·0	·8	—	—	—	—	—	7.0	81
19	—	—	—	—	—	·1	·0	·0	·0	·0	·0	·0	·0	—	—	—	—	—	7.1	83
20	—	—	—	—	—	·1	·0	·0	·0	·0	·0	·0	·5	—	—	—	—	—	6.6	78
21	—	—	—	—	—	·2	·0	·0	·0	·0	·0	·6	—	—	—	—	—	—	5.8	68
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	—	—	—	—	—	·1	·0	·0	·0	·0	·0	·9	·8	—	—	—	—	—	6.8	81
24	—	—	—	—	—	—	·0	·6	·8	·2	·1	·2	—	—	—	—	—	—	2.9	35
25	—	—	—	—	—	—	—	—	·5	·2	—	—	—	—	—	—	—	—	0.7	8
26	—	—	—	—	—	—	·1	·3	·1	—	·2	—	—	—	—	—	—	—	0.9	11
27	—	—	—	—	—	—	—	·1	—	—	—	·8	·4	—	—	—	—	—	1.3	16
28	—	—	—	—	—	—	—	·6	·2	·1	—	·1	—	—	—	—	—	—	1.0	12
29	—	—	—	—	—	—	—	—	·5	·8	·6	·2	—	—	—	—	—	—	2.1	26
30	—	—	—	—	—	—	·2	·3	·6	·6	·8	·2	—	—	—	—	—	—	2.7	33
Sum.	—	—	—	—	—	4.6	13.6	15.9	17.9	17.4	16.9	14.6	9.3	0.5	—	—	—	—	110.7	—
Mean.	—	—	—	—	—	0.15	0.45	0.53	0.60	0.58	0.56	0.49	0.31	0.02	—	—	—	—	3.69	42

359. Cahirciveen (Valentia Observatory):  $h_s$  = 12.8 metres.

December, 1925.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	
1	—	—	—	—	—	—	·9	·0	·0	·0	·0	·0	·7	—	—	—	—	—	—	—	6.6	81
2	—	—	—	—	—	—	·9	·0	·0	·0	·0	·0	·7	—	—	—	—	—	—	—	6.6	83
3	—	—	—	—	—	—	—	—	·8	·8	·0	·0	·5	—	—	—	—	—	—	—	4.1	51
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	·2	·1	·3	·7	·1	·2	—	—	—	—	—	—	—	—	1.6	21
9	—	—	—	—	—	—	—	·4	·2	·2	·2	·1	—	—	—	—	—	—	—	—	1.1	14
10	—	—	—	—	—	—	·2	·3	·7	·4	·9	·5	—	—	—	—	—	—	—	—	3.0	38
11	—	—	—	—	—	—	·3	·5	·6	·8	·2	—	—	—	—	—	—	—	—	—	2.4	31
12	—	—	—	—	—	—	·7	·3	·6	·7	·6	·5	·3	—	—	—	—	—	—	—	3.7	47
13	—	—	—	—	—	—	·1	·2	·2	·4	·4	—	—	—	—	—	—	—	—	—	1.3	17
14	—	—	—	—	—	—	·7	·7	·0	·0	·0	·4	·5	—	—	—	—	—	—	—	5.3	69
15	—	—	—	—	—	—	—	—	—	—	·2	·1	—	—	—	—	—	—	—	—	0.3	4
16	—	—	—	—	—	—	—	—	·1	—	·1	—	—	—	—	—	—	—	—	—	0.2	3
17	—	—	—	—	—	—	—	—	—	—	—	·2	—	—	—	—	—	—	—	—	0.2	3
18	—	—	—	—	—	—	—	·7	·1	—	—	—	—	—	—	—	—	—	—	—	0.8	10
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	—	—	—	—	—	—	—	—	·1	—	·4	—	—	—	—	—	—	—	—	—	0.5	6
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	—	—	—	—	—	—	·3	·2	·4	·2	·3	·5	—	—	—	—	—	—	—	—	1.9	25
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—	—	—	·1	—	—	—	—	—	—	—	—	—	0.1	1
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	—	—	—	—	—	—	—	—	·3	·6	—	—	—	—	—	—	—	—	—	—	0.9	12
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	·1	·2	·1	—	—	—	—	—	—	—	—	—	—	0.4	5
31	—	—	—	—	—	—	—	—	·3	·1	—	—	—	—	—	—	—	—	—	—	0.4	5
Sum.	—	—	—	—	—	—	4.3	5.5	7.9	8.0	7.5	5.5	2.7	—	—	—	—	—	—	—	41.4	—
Mean.	—	—	—	—	—	—	0.14	0.18	0.25	0.26	0.24	0.18	0.09	—	—	—	—	—	—	—	1.34	17
Annual Total.	—	4.3	25.7	40.3	63.4	89.7	123.6	138.6	147.9	143.9	142.2	136.4	112.7	87.9	66.1	34.2	8.4	—	—	—	1365.3	—
Annual Mean.	—	0.01	0.07	0.11	0.17	0.25	0.34	0.38	0.41	0.39	0.39	0.37	0.31	0.24	0.18	0.09	0.02	—	—	—	3.74	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.

360. Cahirciveen (Valentia Observatory) :

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

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	235	9.2	220	7.5	200	6.6	190	8.9	200	13.1	200	13.1	200	13.4	200	13.8	200	14.4	195	13.8	195	13.8	195	13.8	195	14.4
2	185	4.3	180	5.6	165	6.6	175	10.5	175	9.2	180	10.2	190	12.8	225	15.1	230	16.1	230	17.7	230	16.4	230	16.4	230	16.7
3	225	9.2	220	10.5	235	12.8	220	9.8	225	13.8	230	15.4	240	17.0	260	13.4	260	10.8	250	5.9	240	4.9	245	3.0	245	3.0
4	285	11.5	270	5.9	245	10.5	230	9.8	225	12.1	225	14.4	235	11.8	235	13.1	240	13.1	260	13.1	260	12.8	260	14.1	260	14.1
5	255	7.9	260	5.9	270	6.6	260	6.2	270	7.5	275	5.6	280	3.9	255	5.6	270	7.2	255	3.9	275	5.6	300	5.6	300	5.6
6	295	4.9	295	3.0	300	2.3	300	3.3	335	3.0	—	0.7	—	1.0	—	0.7	—	0.7	—	1.0	—	1.3	—	—	—	0.3
7	215	2.6	210	3.3	210	3.0	210	3.3	210	3.3	210	2.6	210	3.6	205	3.6	200	3.3	190	3.3	185	3.3	180	4.6	180	4.6
8	160	8.2	160	9.5	160	9.8	165	11.1	170	9.8	170	8.9	170	8.5	175	8.2	175	8.5	170	10.2	170	9.8	175	175	175	8.2
9	315	7.2	310	5.2	310	2.0	—	1.0	—	1.3	—	1.0	355	2.0	30	2.0	—	1.3	—	0.0	130	2.0	150	3.6	150	3.6
10	175	6.2	175	6.2	175	6.9	175	5.9	170	6.9	170	6.9	170	6.9	175	6.6	175	6.2	175	5.9	175	6.6	175	6.6	175	6.6
11	160	4.6	165	4.6	170	4.9	165	5.6	175	4.9	175	5.2	170	6.2	165	5.2	175	5.6	170	6.6	170	6.6	165	6.2	165	6.2
12	170	7.9	170	7.2	170	7.5	170	8.2	170	8.5	170	8.5	170	8.9	170	8.9	170	9.8	165	10.5	165	10.5	165	10.5	165	11.1
13	180	8.9	180	8.5	180	8.2	180	6.9	175	6.6	170	7.2	165	9.8	160	11.5	165	13.8	165	14.4	160	17.7	160	16.7	160	16.7
14	185	15.4	260	15.7	250	14.1	240	12.5	235	8.5	235	7.5	230	6.2	230	5.2	210	3.0	195	2.3	195	2.6	205	3.3	205	3.3
15	105	2.3	160	1.6	240	2.0	—	0.3	280	2.3	—	1.3	—	0.7	—	0.7	—	0.7	—	1.3	—	1.0	—	—	—	0.3
16	175	3.3	170	3.9	170	3.6	170	3.3	165	3.9	160	3.3	165	3.0	160	4.3	160	2.3	160	4.6	155	4.9	160	3.9	160	3.9
17	175	6.9	175	6.6	175	7.9	175	7.2	175	7.9	180	7.2	180	6.9	175	7.2	175	7.5	175	6.9	175	6.9	175	7.5	175	7.5
18	180	3.6	170	4.3	175	5.6	175	5.9	170	5.6	165	7.2	170	5.2	175	5.2	180	4.3	180	4.3	180	3.6	180	2.6	180	2.6
19	110	3.9	115	3.6	135	3.3	145	3.3	160	4.3	165	5.2	160	5.9	160	4.6	125	2.6	140	4.3	140	3.0	150	4.9	150	4.9
20	170	5.2	170	4.6	175	4.9	170	5.2	170	6.2	170	5.9	165	6.2	160	6.9	160	7.9	160	7.2	160	7.2	160	6.2	160	6.2
21	155	11.8	155	10.5	155	11.5	155	10.2	150	10.5	150	11.1	150	10.8	150	11.5	155	11.8	160	11.5	155	11.5	160	10.8	160	10.8
22	150	15.1	150	15.1	150	16.1	150	15.4	150	15.4	155	13.1	165	11.5	180	4.3	255	3.0	320	5.2	305	5.2	350	3.0	350	3.0
23	240	9.5	235	9.2	240	11.1	240	12.5	240	13.1	245	13.1	255	11.8	265	10.2	280	6.9	270	6.6	270	6.6	255	6.9	255	6.9
24	145	7.9	155	6.9	155	7.5	150	7.5	150	8.9	150	8.2	155	7.9	160	7.2	160	8.2	150	8.2	145	9.5	150	7.9	150	7.9
25	155	3.3	145	3.0	140	3.3	130	3.3	120	3.3	120	2.0	115	3.6	110	4.3	100	3.3	80	3.3	75	2.3	—	—	—	1.3
26	85	6.9	90	6.9	100	6.9	105	8.2	110	6.2	110	5.9	105	6.2	115	6.6	115	7.2	110	7.9	115	7.2	105	8.9	105	8.9
27	110	6.6	110	5.9	105	5.9	100	6.6	95	4.9	90	4.3	95	3.6	85	5.2	70	6.2	55	3.0	15	4.9	10	2.3	10	2.3
28	165	6.2	175	4.6	185	4.3	195	4.3	225	4.9	225	5.6	225	6.2	240	8.2	255	10.8	255	12.8	250	12.5	255	11.1	255	11.1
29	190	9.2	200	10.2	220	12.1	220	12.5	220	13.1	220	12.8	215	12.5	220	13.4	225	13.8	225	13.8	220	12.1	220	11.8	220	11.8
30	230	12.1	230	12.5	230	12.5	230	12.8	230	12.8	225	10.8	225	9.2	225	10.8	225	9.8	220	10.8	220	11.5	220	11.1	220	11.1
31	235	9.2	230	6.2	240	6.6	240	5.9	240	6.6	240	7.5	250	8.5	250	8.5	250	10.2	245	10.2	250	11.5	255	9.5	255	9.5
Mean ...	—	7.5	—	6.9	—	7.3	—	7.3	—	7.7	—	7.5	—	7.5	—	7.5	—	7.5	—	7.4	—	7.6	—	7.2	—	7.2

361. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 12 metres + 14 metres.

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	325	9.8	335	5.9	305	7.2	305	5.9	305	5.6	290	6.2	280	6.2	290	5.2	285	4.6	265	3.6	265	5.2	255	5.2	255	5.2
2	200	5.2	200	5.2	190	4.3	185	4.3	185	4.9	185	5.2	180	5.2	185	5.9	180	6.2	190	5.9	210	7.2	220	8.2	220	8.2
3	220	4.9	220	6.2	230	5.6	235	6.2	225	6.2	225	7.5	220	8.5	220	8.2	215	9.5	225	7.5	210	8.9	225	9.5	225	9.5
4	250	4.9	220	5.2	225	4.3	225	4.9	220	2.6	220	3.3	250	2.0	220	2.3	215	3.0	210	3.0	205	3.0	185	3.9	185	3.9
5	200	9.2	215	10.2	220	10.8	220	11.5	220	11.8	225	10.8	225	10.2	225	10.8	245	8.2	280	4.6	260	6.6	270	6.2	270	6.2
6	255	7.5	260	8.9	255	8.9	275	9.8	270	8.9	270	10.2	285	9.5	260	10.2	270	9.8	260	10.8	270	8.9	270	11.5	270	11.5
7	295	8.9	300	8.2	290	6.9	290	7.5	285	6.6	300	4.9	260	2.0	—	1.0	195	3.0	180	3.9	180	4.3	175	6.2	175	6.2
8	240	13.8	240	13.1	240	15.1	240	13.8	240	13.8	235	12.5	235	11.5	230	10.2	230	11.5	225	10.8	225	10.8	225	12.1	225	12.1
9	250	12.5	250	12.1	250	10.8	245	12.1	245	11.1	240	10.8	240	9.8	235	6.2	225	5.9	200	5.2	180	6.6	190	11.8	190	11.8
10	210	8.2	205	7.9	195	9.5	195	9.2	190	10.5	200	9.8	210	10.5	220	10.8	215	12.8	210	12.1	210	12.1	225	10.8	225	10.8
11	255	2.3	275	2.3	300	2.0	290	4.3	285	4.6	—	1.3	245	3.6	260	3.6	240	6.9	250	5.6	240	3.6	235	8.9	235	8.9
12	240	7.5	245	9.5	240	9.2	245	7.5	235	11.8	230	9.2	215	6.6	210	4.3	255	5.6	260	5.6	240	7.5	245	6.6	245	6.6
13	255	9.5	265	8.9	275	7.5	285	8.2	285	3.6	240	3.0	215	4.6	210	3.9	230	6.9	220	4.6	230	5.9	220	5.2	220	5.2
14	—	0.7	350	3.9	295	5.6	330	2.0	320	8.5	320	11.5	350	12.1	350	12.5	350	12.1	355	10.2	350	9.8	350	9.2	350	9.2
15	—	1.3	35	3.6	15	6.2	10	9.5	10	8.5	5	10.5	360	10.2	360	10.8	355	11.1	345	12.8	350	12.1	350	10.8	350	10.8
16	325	9.5	320	6.2	320	6.9	335	4.3	315	6.6	335	3.6	315	7.2	335	4.9	315	8.9	310	6.6	325	6.6	310	6.9	310	6.9
17	10	3.3	10	3.0	10	3.0	—	1.0	—	0.7	10	1.6	360	2.6	5	2.3	5	5	360	2.3	355	3.0	330	4.3	330	4.3
18	350	4.6	360	3.9	335	5.2	345	3.6	325	3.9	345	5.6	345	3.9	335	2.6	345	3.3	330	4.6	330	5.2	330	5.2	330	5.2
19	360	3.9	5	3.9	355	4.3	330	6.2	335	5.2	340	4.9	350	3.6	350	4.3	340	7.5	340	7.9	335	8.5	345	8.9	345	8.9
20	—	1.0	—	1.3	90	2.3	80	2.3	—	1.																

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

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 12 metres + 14 metres.

January, 1925.

13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Day.												
195	16.4	200	16.7	230	13.1	230	12.8	235	14.1	240	19.7	240	19.7	245	19.7	240	13.4	235	9.2	230	5.2	195	3.9	12.9	1
230	16.7	230	17.0	230	15.4	230	15.4	230	17.0	230	13.4	235	14.8	230	13.4	235	11.8	240	11.8	225	9.2	225	10.5	12.7	2
235	2.0	200	2.0	175	2.0	155	4.6	130	4.9	130	5.2	100	5.2	90	6.2	80	6.9	80	6.6	75	3.0	245	11.5	7.8	3
260	13.8	255	12.8	250	11.5	255	12.5	245	9.2	245	10.5	250	6.9	245	7.5	240	4.9	260	3.9	295	4.9	270	7.9	10.4	4
285	6.6	280	8.5	280	7.9	285	7.5	290	5.9	280	7.5	280	6.9	295	5.2	300	6.6	300	6.6	300	5.9	315	6.6	6.4	5
—	0.0	—	0.7	300	3.0	285	2.6	255	2.0	240	2.6	230	2.6	220	3.0	215	2.3	215	3.0	215	2.3	215	3.3	2.1	6
180	5.6	180	5.6	180	4.9	175	4.9	180	4.3	175	4.6	170	5.9	165	5.6	165	5.2	165	6.2	165	7.9	165	8.5	4.4	7
185	7.2	225	8.2	235	9.2	265	9.8	280	11.8	290	10.8	300	11.1	305	12.8	310	11.5	310	10.5	310	10.2	310	8.2	9.7	8
160	3.6	165	4.3	170	4.6	170	4.3	175	3.6	175	3.9	175	4.9	175	4.6	175	5.6	175	5.6	170	5.2	175	5.6	3.6	9
170	5.6	170	7.2	170	6.9	170	6.6	175	5.2	175	5.2	165	5.2	165	4.3	165	2.3	165	3.9	165	3.6	170	3.9	5.8	10
170	5.9	165	7.9	165	8.2	165	8.5	170	7.9	170	6.9	170	6.6	160	7.5	160	7.5	165	8.9	170	8.2	170	7.2	6.5	11
165	11.5	165	9.8	165	11.1	165	11.8	155	12.1	155	12.5	150	14.1	155	14.8	165	10.2	175	10.5	175	10.2	180	10.5	10.2	12
160	18.4	165	18.4	165	18.7	165	17.0	165	18.7	165	17.0	170	17.4	170	17.0	170	17.4	170	16.4	175	14.8	180	15.7	13.9	13
215	3.3	215	3.3	215	3.0	—	1.3	210	2.0	200	2.0	—	1.3	—	1.3	—	1.0	—	1.0	75	1.6	—	1.0	5.2	14
—	1.0	—	1.0	170	2.3	230	2.3	230	2.3	200	2.0	195	2.0	195	1.6	—	0.7	195	2.6	190	3.3	180	3.0	1.6	15
170	3.6	170	3.6	170	4.9	165	5.6	160	6.2	165	4.9	170	4.3	175	5.2	180	4.9	180	5.9	185	7.9	180	7.5	4.4	16
175	7.5	175	7.2	175	6.6	170	6.2	170	7.2	170	6.6	175	6.2	175	5.6	175	4.6	175	4.3	175	4.6	180	3.9	6.6	17
—	1.0	—	0.3	175	2.3	—	1.3	—	1.3	—	1.3	105	2.3	25	2.3	85	6.2	75	5.6	75	4.9	85	3.3	3.8	18
150	6.2	135	5.6	135	4.9	145	4.9	150	5.6	140	6.9	150	7.2	150	7.5	155	7.9	150	6.9	155	6.6	165	5.9	5.2	19
165	7.9	165	7.2	165	8.2	165	6.9	165	6.9	165	7.9	165	8.9	165	9.5	160	9.8	160	9.8	160	10.5	160	11.5	7.3	20
160	12.8	160	12.1	160	11.8	160	11.5	150	13.1	155	13.1	150	14.1	150	15.1	150	15.1	150	15.1	150	15.4	150	15.1	12.3	21
25	2.6	20	3.0	5	1.6	—	1.0	—	0.3	250	2.0	260	7.2	250	6.6	240	5.6	240	6.9	245	6.2	245	10.5	7.4	22
260	6.2	255	4.9	255	3.6	255	2.0	230	1.6	185	3.0	120	2.0	120	3.3	135	4.6	140	6.6	145	6.6	145	7.2	7.1	23
150	9.5	160	7.2	160	7.2	160	6.6	160	6.6	155	5.9	155	5.6	170	4.3	170	2.6	170	2.3	170	2.6	165	3.3	6.7	24
110	3.0	105	2.0	105	3.3	110	6.9	100	8.9	105	8.9	100	6.2	95	4.6	95	5.6	90	7.2	90	8.9	90	9.8	4.5	25
100	7.9	105	6.6	110	6.9	105	7.2	110	6.9	115	7.9	115	7.9	110	7.9	105	8.2	110	8.9	110	7.9	110	6.9	7.4	26
330	5.9	330	8.2	325	5.6	330	5.2	335	2.6	—	1.0	—	0.3	335	1.6	20	2.3	20	2.3	—	1.3	155	5.6	4.2	27
275	11.1	275	11.5	280	11.1	280	8.9	260	7.9	265	10.2	245	9.5	235	6.9	225	6.9	205	7.5	190	7.9	190	8.9	8.3	28
230	13.1	250	9.5	235	10.5	240	12.8	235	12.1	240	10.5	255	9.8	260	8.2	260	8.2	260	7.5	255	5.2	225	3.0	11.0	29
220	12.5	215	11.8	220	12.5	215	12.5	205	11.5	210	11.5	210	11.5	215	12.8	215	12.8	200	12.1	225	10.5	235	12.5	11.5	30
255	11.5	255	12.5	260	13.1	275	11.8	275	13.4	285	12.8	290	13.1	290	10.8	290	11.5	310	9.2	305	10.2	300	9.2	10.0	31
—	7.7	—	7.6	—	7.6	—	7.5	—	7.5	—	7.7	—	7.8	—	7.7	—	7.2	—	7.3	—	6.9	—	7.5	7.4	

February, 1925.

13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Day.												
250	5.2	240	6.2	235	6.2	230	4.6	230	4.9	215	3.9	210	4.3	215	4.3	200	4.6	200	4.9	205	5.2	200	5.2	5.5	1
220	7.5	220	7.5	220	7.5	225	6.6	225	6.6	225	5.6	265	5.6	280	2.6	—	1.3	—	0.7	205	2.0	200	4.6	5.3	2
225	9.5	230	9.5	240	9.8	240	9.5	240	7.9	245	7.2	250	5.6	250	5.6	250	5.2	250	5.6	245	4.6	240	4.9	7.2	3
175	5.2	175	5.9	180	6.2	190	5.6	190	5.2	185	6.2	200	7.2	195	7.2	195	6.9	200	8.5	205	8.5	220	9.5	5.1	4
265	5.9	280	5.6	265	5.9	260	5.6	265	4.9	260	5.2	255	3.3	255	4.3	265	6.6	255	6.6	250	9.5	250	7.9	7.6	5
285	13.1	280	13.1	280	12.8	280	12.8	300	9.5	300	10.8	310	8.9	305	7.5	310	7.9	300	7.2	310	6.9	295	8.9	9.7	6
170	7.5	165	8.9	165	9.8	165	9.8	165	8.5	200	5.2	235	8.9	235	12.1	235	13.4	240	14.8	240	15.1	240	15.1	7.9	7
225	13.1	225	15.4	225	14.4	240	15.4	240	15.7	245	13.1	250	10.5	260	9.5	245	9.5	245	10.2	255	11.8	250	12.5	12.5	8
220	18.0	280	11.8	265	11.1	250	10.5	240	10.8	235	8.2	230	8.5	225	8.2	225	9.5	220	6.9	215	8.5	225	7.5	9.9	9
235	9.8	240	8.9	245	10.5	240	6.6	240	4.3	260	3.3	260	1.6	260	4.6	250	3.0	250	3.3	210	2.0	235	3.3	7.8	10
235	11.1	225	9.2	230	6.9	245	9.8	250	9.5	270	8.2	260	8.2	270	5.6	215	2.0	215	5.2	235	5.6	235	6.6	5.6	11
250	6.9	245	6.6	225	2.6	215	4.6	—	1.0	70	2.0	130	3.9	140	5.2	110	6.9	90	7.2	180	4.6	230	7.2	6.2	12
230	4.6	240	2.6	255	4.6	270	6.2	270	6.2	250	3.9	260	4.6	255	6.9	250	8.2	240	4.3	220	2.6	205	2.3	5.5	13
345	9.5	330	6.9	335	6.9	345	6.6	15	5.9	15	3.3	15	3.6	20	3.9	15	3.3	25	2.6	—	1.0	—	0.7	6.4	14
345	10.2	345	11.5	340	10.8	330	9.5	330	9.8	135	10.2	335	10.5	335	10.2	330	10.2	335	8.9	325	9.8	320	9.8	9.3	15
320	6.9	335	7.5	350	6.9	10	8.2	10	8.2	10	4.9	10	2.6	10	3.6	10	3.9	10	5.2	10	5.6	5	3.3	6.2	16
320	6.2	310	6.6	325	5.2	330	4.9	330	4.6	350	4.3	355	2.0	360	3.3	350	2.3	355	3.0	350	3.6	360	4.9	3.8	17
340	6.9	335	6.2	330	7.9	330	7.2	315	8.2	340	5.6	350	6.2	335	5.6	350	6.6	355	6.2	350	4.6	360	4.3	5.3	18
340	9.8	350	7.5	350	7.9	350	7.5	350	7.2	350	5.9	5	3.6	20	2.3	30	2.0	30	2.3	—	1.0	—	1.0	5.4	19
170	7.5	170	7.2	170	7.2	170	6.9	170	7.5	280	8.9	345	8.9	325	8.5	330	9.2	315	9.8	330	8.9	330	9.2	5.9	20
320	7.2	320	8.9	310	9.2	310	8.2	315	7.5	335	6.2	305	3.0	305	3.0	320	3.0	310	3.9	—	1.3	—	1.0	7.0	21
170	12.1	170	12.1	165	13.1	165	14.1	165	13.4	175	9.8	195	6.6	210	8.5	270	11.8	280	15.4	280	15.4	270	14.1	8.4	22
250	7.2	255	10.8	255	11.1	250	9.2	260	8.5	270	4.6	195	2.3	210	2.6	170	4.6	145	6.9	155	7.9	165	7.9	9.3	23
230	16.1	230	15.7	230	15.7	235	16.4	235	14.8	235	13.1	230	12.8	2											

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

362. Cahirciveen (Valentia Observatory) :

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

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.	°	m/s.
1	30	5.9	40	4.9	40	5.2	45	4.9	50	4.3	30	3.6	25	7.2	40	4.3	30	5.9	40	7.2	40	7.2	30	4.6		
2	30	8.2	30	7.9	30	9.2	25	10.5	25	8.2	20	9.8	35	8.5	40	6.9	45	5.2	60	5.9	60	8.2	55	8.2		
3	95	3.6	60	2.3	70	4.3	65	4.9	70	5.2	70	3.3	55	2.6	55	3.3	60	6.2	60	7.2	50	7.2	60	5.9		
4	65	3.3	70	4.3	20	2.3	345	2.0	5	3.3	10	6.6	40	4.6	70	2.3	70	3.3	55	5.9	60	7.9	50	11.5		
5	20	3.3	20	3.3	20	4.6	20	2.6	10	2.0	10	3.3	10	3.6	20	4.9	20	2.3	10	2.6	25	1.6	355	4.3		
6	335	3.9	330	4.9	340	5.2	340	4.6	330	4.3	325	4.6	320	4.9	330	4.6	330	5.2	315	4.3	315	3.6	300	5.6		
7	280	6.6	270	5.9	270	6.2	270	8.2	270	7.2	265	7.2	265	6.9	270	7.2	295	6.2	305	5.2	315	6.6	300	5.9		
8	310	11.5	320	11.5	320	10.2	325	11.8	320	11.1	330	11.8	330	9.8	335	9.5	340	8.9	335	8.2	350	5.2	335	6.2		
9	5	6.2	5	7.2	10	4.9	345	3.3	5	5.2	20	5.2	25	5.2	10	3.9	35	3.6	15	3.9	15	5.9	15	4.6		
10	355	3.9	—	0.7	—	0.3	—	0.3	—	0.3	—	0.3	—	1.0	—	1.3	—	0.7	—	0.0	350	2.6	330	2.3		
11	310	6.6	320	5.9	340	4.6	350	4.6	340	3.9	350	3.3	355	3.0	360	3.3	350	2.6	345	4.3	345	5.9	355	6.2		
12	—	0.3	—	1.3	—	1.3	—	0.3	—	0.7	20	1.6	70	2.0	70	1.6	—	0.3	—	0.7	—	1.3	—	0.7		
13	—	1.3	180	2.0	185	2.6	195	2.6	190	4.3	190	3.0	190	2.6	215	3.3	200	3.9	220	6.2	225	6.6	225	7.2		
14	255	4.6	255	2.6	255	2.3	255	3.3	255	5.9	280	7.2	285	3.9	295	4.6	295	4.6	315	4.6	320	3.9	315	5.2		
15	—	0.7	350	2.0	350	2.3	350	1.6	—	1.3	355	2.0	35	2.0	—	0.7	—	0.0	50	2.0	—	1.3	—	1.0		
16	—	0.7	—	1.3	—	1.0	—	1.3	170	3.9	170	2.6	170	2.6	170	3.0	170	3.3	170	3.0	170	3.0	195	2.6		
17	—	0.7	—	0.7	—	1.0	—	0.7	—	1.3	—	1.0	—	0.0	—	0.0	—	1.0	—	1.0	—	0.3	—	0.0		
18	—	0.3	—	0.0	—	0.0	—	0.3	—	0.7	—	0.3	—	0.3	—	0.3	—	1.0	—	0.3	—	0.0	—	0.3		
19	—	0.0	—	0.0	—	0.7	—	0.7	—	1.0	—	0.7	345	1.6	—	1.0	—	0.3	—	0.0	—	0.3	—	1.3		
20	—	1.0	—	1.3	—	1.3	—	1.0	—	0.3	—	1.3	300	3.3	275	4.3	300	6.9	350	9.2	350	9.2	355	8.5		
21	345	5.9	325	5.6	320	7.2	340	5.9	345	7.2	10	6.2	20	6.2	5	4.9	350	6.2	10	8.2	20	9.5	15	8.5		
22	55	3.0	—	1.0	—	1.3	85	2.0	90	3.3	—	1.3	—	1.3	—	1.0	—	1.0	20	3.3	10	3.3	15	4.6		
23	—	0.7	—	1.3	—	0.7	—	1.3	—	1.0	—	1.0	—	1.0	300	2.6	295	3.0	330	3.0	310	5.6	305	5.2		
24	315	3.9	310	5.9	290	8.9	290	10.5	295	9.5	295	7.2	350	8.9	330	8.5	340	8.5	335	9.8	340	10.5	335	9.2		
25	10	6.9	5	6.9	5	8.5	355	8.5	355	7.9	5	8.2	10	8.9	10	9.5	10	10.2	15	9.8	15	10.8	5	11.5		
26	30	5.9	45	3.6	35	3.3	40	3.3	35	5.2	25	5.6	30	4.9	40	4.9	35	4.6	45	6.9	20	6.6	20	6.6		
27	—	1.0	65	2.6	—	1.3	—	0.7	—	0.0	—	0.3	—	0.3	—	0.7	—	1.3	50	3.6	30	4.6	25	4.3		
28	5	5.9	10	5.6	40	3.6	40	2.3	35	2.6	10	5.9	15	3.0	20	3.6	40	3.9	25	3.9	25	5.9	25	6.6		
29	—	0.3	—	0.3	—	1.0	—	1.0	—	1.3	—	1.0	—	1.0	—	1.0	—	0.0	—	0.0	320	2.6	270	3.3		
30	215	4.3	215	4.6	235	4.9	235	5.6	230	3.9	220	6.2	210	5.9	215	5.6	210	6.9	215	6.9	215	7.9	215	8.5		
31	185	7.2	180	7.9	180	7.5	180	8.5	195	7.9	230	5.9	225	5.2	230	5.6	245	8.9	245	9.2	265	9.2	285	8.2		
Mean ...	—	3.8	—	3.7	—	3.8	—	3.8	—	4.0	—	4.1	—	3.9	—	3.8	—	4.1	—	4.7	—	5.3	—	5.4		

363. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 12 metres + 14 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.	°	m/s.
1	—	1.3	—	0.3	—	0.3	—	1.0	—	0.7	—	0.7	—	1.3	—	1.0	—	0.0	—	0.3	260	1.6	230	2.6		
2	225	4.6	235	5.9	235	5.2	230	5.2	235	5.2	235	3.9	230	3.9	230	5.6	240	6.6	260	5.2	280	6.6	305	7.2		
3	—	0.0	—	0.0	—	0.3	—	1.0	—	1.3	—	1.3	35	1.6	—	0.3	—	0.0	135	2.0	165	3.3	170	4.6		
4	170	9.5	170	9.5	170	11.1	170	11.1	170	11.8	175	11.1	170	10.5	170	11.8	170	12.5	175	9.5	220	3.0	195	3.3		
5	180	8.2	190	5.2	180	5.2	185	4.3	180	4.9	175	4.9	160	5.2	170	5.6	170	5.6	160	5.6	165	6.2	170	7.9		
6	85	3.9	80	3.9	90	4.6	90	2.3	—	1.0	90	3.6	85	3.9	80	3.6	175	3.3	55	2.3	65	4.3	35	4.3		
7	—	1.3	345	1.6	—	1.0	—	0.7	—	1.3	—	1.0	—	0.3	—	0.0	—	0.0	—	1.3	305	2.0	270	3.0		
8	—	0.7	30	1.6	—	0.3	—	1.0	—	1.0	115	3.3	140	5.6	130	3.9	150	7.9	160	8.9	165	9.5	160	10.2		
9	180	1.6	200	2.3	—	0.0	—	1.0	205	2.0	100	1.3	90	2.3	—	0.7	—	0.7	—	0.7	90	2.0	260	3.9		
10	290	4.9	290	4.6	315	1.6	310	2.3	—	1.3	300	2.0	300	2.0	300	2.3	295	4.9	310	4.6	300	5.2	310	5.6		
11	115	1.6	145	3.6	150	4.9	155	4.9	155	5.9	150	6.9	150	7.9	150	9.5	150	10.2	150	10.8	150	11.8	150	10.5		
12	340	3.6	310	7.5	320	7.9	330	7.5	340	6.2	330	4.9	330	3.0	330	2.3	305	2.3	275	3.9	255	3.6	220	3.9		
13	225	9.2	225	8.5	240	11.8	250	8.2	255	10.5	275	11.1	270	11.1	270	10.5	270	12.8	270	11.1	270	11.5	275	12.5		
14	225	2.3	205	3.3	190	3.0	175	4.6	160	6.2	160	8.5	170	6.2	210	5.9	230	8.9	230	10.5	230	11.1	225	8.5		
15	250	14.1	255	14.8	250	13.8	255	12.8	260	12.8	260	13.1	255	14.1	245	15.4	245	14.1	240	14.4	240	14.8	255	14.1		
16	270	15.7	275	14.1	270	13.8	280	14.8	280	12.8	285	12.1	285	12.1	280	12.1	285	11.8	280	10.8	290	11.1	290	10.8		
17	—	1.0	—	1.3	235	1.6	—	1.0	—	1.0	190	3.0	190	2.3	175	4.9	170	6.9	165	8.2	165	6.6	165	6.9		
18	185	5.2	185	4.6	195	5.9	210	7.2	325	9.2	350	9.8	355	7.2	350	9.2	355	7.5	350	9.5	350	9.5	350	9.8		
19	5	13.4	10	12.5	20	9.8	25	11.8	20	13.1	20	13.4	25	10.2	35	8.5	35	7.2	30	8.2	35	9.2	45	10.8		
20	60	3.0	60	2.6	55	4.3	55	2.3	55	3.9	55	3.3	50	2.3	15	2.6	30	2.0	50	3.6	30	5.9	15	5.9		
21	—	1.3	—	1.3	75	1.6	—	0.3	—	0.3	120	3.3	145	4.6	175	3.0	180	4.3	170	4.3	170	5.2	175	4.6		
22	210	3.6	215	3.0	215	3.0	215	3.3	200	3.3	190	3.9	185	4.6	180	5.9	170	6.9	190	6.9	190	9.2	200	9.5		
23	280	10.8	280	8.2	290	10.5	275	9.5	265	8.2	265	9.8	250	10.5	250	9.8	260	11.5	250	11.1	260	10.8	255	9.5		
24	285	9.8	290	10.5	285	11.1	300	10.5	300	8.9	310	8.2	290	8.2	290	8.5	295	8.9	280	8.2	290	10.5	300	9.5		
25	255	2.0	—	1.0	—	0.3	—	0.0	—	1.0	245	1.6	—	0.0	—	0.0	—	0.0	—	0.3	290	3.9	315	5.2		
26	350	5.9	360	3.9	350	4.6	350	5.2	350	6.2	350	7.2	350	5.6	335	6.9	335	6.9	340	6.6	330	7.9	325	7.2		
27	—	0.0	325	3.0	190	3.3	180	2.6																		



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) = 12 metres + 14 metres.

March, 1925.

Table of wind data for March 1925. Columns represent hours from 13 to 24, plus Mean and Day. Rows list wind speed in m/s for various heights (10, 20, 30, 350) and include a final summary row.

April, 1925.

Table of wind data for April 1925. Columns represent hours from 13 to 24, plus Mean and Day. Rows list wind speed in m/s for various heights (10, 20, 30, 350) and include a final summary row.

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

364. Cahirciveen (Valentia Observatory) :

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

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	355	3·9	355	3·9	355	3·3	350	3·3	335	4·3	335	3·0	340	4·3	360	3·6	330	3·3	310	3·9	275	4·6	255	5·6
2	185	2·3	185	2·3	185	2·3	185	2·6	185	2·6	185	2·6	185	2·6	185	3·3	195	4·6	170	4·9	170	5·9	170	7·2
3	100	5·9	120	4·9	125	8·9	130	7·9	135	8·2	140	7·5	155	5·6	175	4·9	175	5·9	170	5·9	170	6·6	175	4·9
4	210	3·0	230	4·6	245	3·9	255	4·9	255	5·6	245	2·3	205	3·6	225	5·9	225	6·9	225	6·9	200	4·9	220	5·9
5	—	1·0	—	1·3	120	2·3	165	3·3	160	4·9	130	5·9	140	5·6	210	6·6	210	5·2	210	3·3	—	1·3	305	4·3
6	5	3·9	20	2·3	—	0·3	—	1·0	20	2·0	40	1·6	55	2·6	25	6·6	25	6·9	20	6·9	10	6·2	350	6·6
7	10	6·9	25	6·2	25	5·9	360	4·6	10	4·9	15	5·2	15	5·6	15	4·6	20	5·2	20	5·2	15	5·6	360	5·6
8	10	3·9	10	3·3	360	2·6	360	3·3	345	3·6	350	5·6	360	4·3	350	6·9	345	8·2	330	9·2	335	8·5	330	10·2
9	340	10·2	350	9·8	360	7·5	350	7·9	355	7·9	340	7·2	335	8·2	330	8·2	325	7·9	330	9·2	315	9·2	315	8·5
10	330	6·9	320	7·2	325	7·5	340	6·6	335	6·6	340	5·9	350	5·9	325	6·6	330	5·6	325	6·2	295	5·2	290	4·3
11	190	5·6	195	6·6	195	6·6	200	6·9	200	7·2	220	8·2	275	6·9	290	7·2	280	8·2	260	6·9	255	8·5	245	7·2
12	180	3·9	175	5·2	165	5·9	155	8·2	160	9·5	170	8·2	175	7·9	180	8·5	180	7·9	190	7·9	190	7·5	190	6·2
13	40	2·0	65	1·6	—	1·0	—	0·7	—	0·7	—	0·0	—	0·0	—	0·0	—	0·0	—	0·7	—	1·0	170	2·0
14	—	0·7	—	0·7	—	1·3	—	0·7	—	0·3	—	0·0	—	0·0	—	0·0	—	0·7	150	2·3	160	3·0	165	3·0
15	170	4·6	170	5·6	165	6·6	165	5·9	165	7·2	160	7·9	165	7·9	165	8·2	165	8·9	165	9·2	165	8·9	165	7·9
16	220	3·3	215	3·3	200	2·6	195	3·0	175	2·6	175	3·0	210	2·3	230	2·3	195	2·6	175	3·6	160	2·3	140	2·6
17	205	2·3	195	3·3	185	4·3	185	4·3	175	3·3	170	3·0	170	2·6	170	3·0	180	4·6	185	4·3	175	4·9	170	5·9
18	145	3·0	125	2·3	70	2·0	70	2·3	70	3·0	70	2·6	70	1·6	70	2·0	—	0·7	—	1·3	315	2·3	270	4·6
19	—	0·7	—	1·0	—	0·3	—	0·7	—	1·3	10	3·0	5	3·0	340	5·2	340	6·6	330	5·9	325	6·2	325	5·6
20	—	1·3	—	0·7	—	1·0	—	0·7	—	0·3	—	0·7	—	—	0·3	—	1·3	270	2·0	260	2·0	250	2·3	
21	185	2·6	—	1·3	185	4·6	140	3·9	155	4·3	120	5·9	100	5·9	110	4·3	130	3·9	150	4·6	145	4·6	160	3·6
22	150	3·0	—	0·7	—	0·7	160	4·3	170	4·6	165	4·9	150	4·3	140	4·9	125	4·6	105	4·9	100	4·6	125	5·6
23	75	4·3	80	4·9	85	4·3	90	3·0	—	1·3	60	2·3	75	2·6	80	3·3	95	3·0	70	3·9	80	3·6	80	3·6
24	60	3·0	85	3·9	80	4·3	80	4·3	55	3·6	45	3·9	65	3·9	70	4·6	80	3·9	80	4·9	95	4·3	85	5·6
25	—	1·0	—	0·7	—	0·3	—	0·3	360	2·3	—	0·3	335	2·0	330	4·3	320	4·3	320	5·9	325	5·9	335	6·9
26	305	2·6	280	3·3	295	3·6	295	1·6	—	1·3	205	2·3	200	3·3	195	3·6	180	4·6	170	7·9	170	7·9	165	8·5
27	190	6·6	200	7·2	220	8·5	230	7·5	230	9·5	245	9·8	240	9·5	235	10·2	235	9·2	220	6·9	210	6·6	210	6·9
28	250	11·1	245	11·8	240	10·8	240	12·1	235	12·5	240	11·5	250	11·5	250	9·8	250	8·9	240	10·2	235	10·5	235	11·1
29	250	12·5	260	10·5	250	10·2	240	10·2	245	9·5	240	7·2	230	5·9	225	5·2	190	4·3	170	6·6	170	7·9	180	7·5
30	235	10·2	225	9·2	220	8·5	230	10·2	220	7·5	230	9·2	225	10·2	225	10·5	230	10·5	230	12·1	235	14·1	230	12·8
31	235	8·2	235	8·9	235	8·5	235	8·5	230	6·9	235	8·2	230	7·5	230	7·2	235	8·2	230	9·2	230	9·5	230	10·5
Mean ...	—	4·5	—	4·5	—	4·5	—	4·7	—	4·8	—	4·8	—	4·8	—	5·2	—	5·4	—	5·9	—	5·9	—	6·2

365. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 12 metres + 14 metres.

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	235	3·9	235	4·9	230	3·9	235	5·9	245	5·6	245	6·9	250	5·2	240	7·9	245	7·9	240	7·9	245	7·9	240	8·5	
2	295	3·9	300	3·9	290	3·9	280	4·9	270	3·9	295	4·3	275	4·6	305	2·6	290	4·9	270	3·9	265	4·9	250	4·9	
3	195	3·3	185	4·6	195	4·3	185	4·6	170	6·2	170	5·2	170	6·6	170	6·9	170	7·2	170	8·5	175	6·6	175	6·9	
4	180	4·9	170	6·2	170	6·9	170	7·2	170	6·6	170	6·9	165	6·6	170	6·9	165	9·2	170	8·9	170	9·5	170	8·9	
5	180	4·6	170	4·6	170	4·3	170	6·6	165	5·2	170	5·6	170	5·6	175	4·6	175	5·9	170	5·9	170	3·9	170	2·0	
6	—	0·0	—	0·3	—	0·3	—	0·0	—	0·3	—	0·7	—	0·0	—	0·7	—	0·0	—	1·3	—	1·3	275	2·6	
7	130	2·3	—	1·0	—	1·0	—	0·3	—	0·7	—	0·0	135	2·3	160	3·0	170	3·0	180	3·3	180	3·3	170	5·2	
8	—	0·7	—	0·7	—	1·0	—	1·0	—	0·3	—	0·7	—	0·0	—	0·0	—	0·0	—	1·0	—	1·3	80	2·3	
9	—	0·0	—	1·0	—	1·3	—	0·0	110	1·6	105	3·6	175	2·0	175	2·0	180	4·6	175	5·2	170	5·9	175	6·6	
10	—	0·7	—	1·0	—	1·3	—	1·0	—	1·3	—	1·0	—	—	0·7	—	1·3	280	2·0	280	1·6	280	1·6		
11	—	0·7	—	0·7	—	0·7	—	0·3	—	0·3	—	0·0	—	0·0	—	0·3	—	0·3	—	1·0	280	2·0	—	1·3	
12	—	0·3	—	1·0	—	1·0	—	1·3	—	0·7	—	0·3	—	1·0	—	0·3	280	1·6	285	3·0	290	3·3	285	3·3	
13	—	1·3	355	1·6	—	1·3	—	0·7	—	0·3	—	0·3	350	3·3	350	3·3	350	3·6	330	5·2	325	5·9	325	7·5	
14	335	4·6	340	3·3	340	4·3	340	4·6	345	4·3	345	3·6	345	4·3	345	4·3	345	4·6	345	3·9	325	5·9	325	6·2	
15	315	2·6	315	3·0	315	2·0	315	3·3	315	2·0	315	4·6	320	3·9	320	2·6	320	3·6	335	3·3	320	3·3	310	3·3	
16	315	3·9	315	2·6	315	3·0	320	4·6	325	4·6	320	4·3	315	5·2	315	5·2	310	4·3	305	6·2	310	5·6	310	5·9	
17	325	3·3	325	3·6	325	4·6	325	4·6	325	5·2	325	5·2	330	5·6	335	5·6	335	6·2	335	6·2	335	5·2	335	5·6	
18	360	5·6	360	4·9	360	4·6	360	5·6	5	5·6	5	6·6	15	4·9	20	5·6	10	5·9	10	6·6	5	4·6	360	5·2	
19	15	3·6	15	3·0	20	2·6	15	3·0	—	0·3	—	1·3	—	—	0·7	—	1·3	350	3·0	345	3·6	345	5·2	315	7·5
20	360	3·0	360	2·3	360	4·6	5	3·3	5	3·9	360	3·3	330	4·6	330	5·9	330	5·2	330	6·2	320	6·6	315	5·9	
21	320	4·9	320	3·6	320	4·9	320	4·3	320	5·2	325	5·9	335	7·5	335	7·5	340	6·2	345	5·6	340	6·9	335	8·2	
22	40	3·6	55	3·6	60	4·9	65	3·0	20	2·6	—	0·3	20	2·3	10	3·9	20	3·6	5	2·3	5	4·6	20	3·9	
23	60	1·6	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	60	5·2	40	3·3	360	6·6	360	5·6	360	7·9	
24	—	1·3	30	3·9	60	2·6	—	1·0	—	1·0	—	0·7	—	—	1·0	350	5·9	360	5·6	360	6·2	360	6·2		
25	5	3·0	10	3·3	10	5·6	360	4·6	360	5·9	360	3·3	340	5·2	10	5·9	10	5·9	10	6·2	355	5·9	355	6·6	
26	15	6·6	15	5·9	10	4·3	35	4·9	20	3·9	10</														

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

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 12 metres + 14 metres.

May, 1925.

Table for May 1925 showing wind direction and speed data for days 1 through 31. Columns include day numbers (13-24), wind speed in m/s, and a 'Mean Day' column.

June, 1925.

Table for June 1925 showing wind direction and speed data for days 1 through 30. Columns include day numbers (13-24), wind speed in m/s, and a 'Mean Day' column.

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

366. Cahirciveen (Valentia Observatory) :

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

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	95	1.6	85	1.6	—	1.0	—	0.3	—	0.7	—	1.3	140	3.0	140	3.3	150	3.9	160	3.9	165	5.6	170	4.3	
2	—	0.3	—	0.3	—	0.7	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	0.7	330	3.3	325	3.3	325	4.3	
3	345	6.9	345	6.6	335	7.2	340	7.5	345	8.9	345	6.9	345	8.9	345	6.9	340	8.5	345	8.2	340	9.2	340	8.2	
4	335	4.9	335	4.6	335	5.6	335	4.9	335	5.9	335	5.6	335	5.6	325	5.2	325	4.3	325	5.6	310	5.6	315	5.2	
5	—	0.3	—	0.7	—	1.3	—	1.0	—	1.0	—	0.0	—	0.3	355	2.0	330	3.3	320	3.3	310	3.0	280	3.9	
6	165	4.3	195	3.6	330	5.2	245	5.9	245	6.6	245	7.5	255	6.9	255	5.6	280	6.2	280	6.2	280	5.6	275	5.2	
7	350	4.3	345	3.9	325	6.2	325	4.3	325	4.9	325	4.3	320	3.9	310	5.2	320	5.2	315	5.6	305	5.9	300	5.9	
8	—	0.7	25	1.6	—	0.3	—	0.7	20	2.3	20	1.6	10	2.6	350	3.6	340	4.6	330	5.9	325	5.9	310	3.6	
9	290	4.6	280	4.3	290	3.6	290	3.0	290	3.3	285	3.9	280	3.0	275	4.9	265	3.6	250	5.2	225	5.2	215	5.2	
10	275	7.5	285	9.5	285	7.2	305	5.6	320	4.6	320	5.6	315	7.2	290	8.5	325	5.9	335	4.6	335	5.6	325	3.9	
11	310	1.6	—	0.3	—	0.3	—	0.3	—	0.3	—	0.0	—	0.3	—	0.3	—	0.3	300	1.6	290	2.0	280	2.0	
12	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	0.3	—	0.3	—	0.3	—	0.7	270	2.0	
13	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	1.3	—	1.0	235	2.3	
14	165	2.6	175	3.3	180	3.9	175	4.9	175	5.2	175	5.9	170	6.6	175	6.6	175	7.2	175	7.2	170	6.9	170	7.9	
15	325	3.0	325	4.6	335	3.9	5	3.0	5	3.0	5	3.0	5	2.0	360	3.0	350	5.2	340	5.2	320	4.3	320	4.3	
16	—	1.3	195	2.0	185	3.6	185	3.3	185	3.0	185	2.3	180	4.3	170	6.9	165	9.2	165	9.5	165	9.5	165	9.5	
17	265	3.6	265	4.3	265	3.3	265	2.6	265	3.0	245	2.3	225	2.3	200	3.3	180	5.9	165	8.2	170	9.2	170	7.5	
18	260	15.4	260	14.4	260	16.1	265	14.8	260	16.1	265	16.1	270	14.4	270	14.8	275	15.7	270	16.4	270	15.7	265	15.4	
19	275	8.2	270	8.2	260	9.2	270	8.5	270	8.2	265	7.5	260	6.9	260	5.6	260	3.3	—	0.7	—	0.0	—	0.0	
20	95	4.9	95	5.6	85	4.9	80	4.3	75	4.3	55	4.3	85	5.9	70	3.9	100	8.2	100	5.2	90	5.6	110	5.6	
21	—	1.0	—	1.0	—	0.7	75	2.0	25	2.0	65	2.6	—	1.3	75	3.6	—	1.3	70	1.6	—	1.3	—	1.3	
22	—	0.3	—	0.3	—	0.0	—	0.3	—	0.0	—	0.0	—	0.7	25	1.6	35	6.9	35	6.9	20	3.6	30	4.6	
23	10	6.9	5	9.5	10	11.1	20	6.6	45	6.6	360	6.6	5	9.8	20	6.2	15	3.0	320	3.9	360	7.5	10	6.6	
24	35	5.9	30	2.3	—	0.7	—	1.0	40	2.3	—	1.0	—	1.0	55	2.6	65	3.0	45	3.3	40	2.3	35	2.6	
25	—	1.3	300	2.0	—	0.0	300	2.6	300	1.6	300	2.3	—	1.0	300	2.3	290	2.3	285	2.0	270	3.6	265	3.3	
26	285	10.5	280	11.1	280	10.2	285	9.8	290	9.2	280	8.5	280	8.9	280	9.8	285	10.8	285	10.8	285	10.8	290	10.5	
27	300	12.5	310	12.1	310	12.5	305	11.8	300	11.1	305	9.8	300	11.1	305	9.8	310	10.8	295	10.5	290	10.5	305	11.1	
28	290	3.3	285	2.3	285	3.3	285	2.0	285	1.6	285	2.3	285	2.6	285	2.3	285	2.3	285	2.0	280	2.3	275	3.3	
29	195	2.3	—	1.0	—	1.0	—	0.7	205	1.6	—	1.0	205	1.6	200	2.0	220	2.3	230	4.3	230	3.9	230	2.0	
30	275	4.9	265	4.6	250	5.9	250	3.6	250	2.6	250	3.9	240	2.0	235	2.6	235	5.2	240	4.9	220	4.6	220	3.6	
31	75	2.6	30	2.0	65	2.6	45	4.3	30	5.2	25	5.2	20	4.9	5	3.3	355	5.2	330	6.2	330	6.2	330	4.9	
Mean ...	—	4.1	—	4.1	—	4.2	—	3.9	—	4.0	—	3.9	—	4.0	—	4.4	—	5.0	—	5.3	—	5.4	—	5.2	

367. Cahirciveen (Valentia Observatory) : H<sub>a</sub> = 12 metres + 14 metres.

	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	270	3.0	285	4.3	285	2.3	270	4.3	270	3.6	255	4.6	290	3.0	285	6.2	290	7.2	280	6.9	280	7.5	280	8.9	
2	330	4.9	320	4.6	325	3.9	320	5.2	320	4.3	325	2.6	325	4.3	325	5.6	325	4.3	330	3.3	310	3.3	290	4.3	
3	170	5.9	160	6.9	160	7.9	170	4.9	195	4.6	220	4.6	230	4.3	255	3.0	280	3.3	295	3.9	305	3.0	305	3.0	
4	—	0.7	—	1.3	—	0.0	—	0.3	—	0.3	—	0.0	—	0.0	—	0.0	—	0.7	335	2.0	315	1.6	280	2.6	
5	170	5.6	170	6.6	170	6.2	170	6.6	170	7.5	165	7.5	155	8.9	165	6.9	165	7.2	165	6.9	170	5.6	270	4.3	
6	215	2.0	210	1.6	210	2.0	210	2.3	200	3.3	195	3.0	190	2.6	200	3.0	200	3.3	190	3.6	205	5.2	200	4.3	
7	170	9.5	175	7.2	175	9.8	175	6.6	180	4.9	190	4.3	215	3.9	230	5.2	230	3.3	255	3.3	255	3.3	255	3.6	
8	135	2.0	155	3.3	155	3.9	155	4.3	155	4.9	160	4.3	165	5.6	165	6.9	170	6.9	155	6.6	155	7.9	150	7.9	
9	175	6.2	185	5.9	185	4.9	190	5.9	210	5.2	235	5.2	235	4.9	235	5.9	240	6.2	220	3.9	215	4.6	215	4.6	
10	—	0.3	—	0.3	—	0.7	—	0.0	—	0.3	—	0.0	—	0.0	—	0.3	340	2.0	330	3.0	330	6.2	330	5.9	
11	—	0.7	—	0.7	—	0.3	—	0.7	—	1.3	190	3.0	185	3.3	190	2.6	200	3.3	190	4.3	195	4.3	200	4.6	
12	180	5.6	190	3.9	200	3.6	195	3.3	180	3.0	180	2.6	180	3.9	180	4.6	175	3.3	190	2.6	210	3.0	200	4.3	
13	225	3.6	225	3.3	235	4.9	240	5.6	240	5.6	240	4.6	240	3.3	285	2.0	315	3.3	320	5.6	325	5.9	330	5.6	
14	60	3.0	35	3.6	55	2.3	345	2.3	55	5.2	60	6.2	60	5.9	80	6.9	70	7.5	65	6.6	60	3.9	60	4.9	
15	—	0.3	—	1.3	65	3.0	—	1.0	65	2.0	65	3.6	65	3.0	—	0.7	—	0.3	—	1.3	110	2.3	85	2.3	
16	—	0.7	—	1.3	—	1.3	—	1.0	15	2.3	—	1.0	—	1.3	—	0.3	—	1.0	—	1.3	—	1.3	40	2.0	
17	—	1.0	40	2.3	40	2.0	—	0.0	—	1.3	50	2.6	—	1.0	—	0.0	—	1.0	90	2.6	—	0.7	—	0.3	
18	—	0.3	—	0.7	—	0.0	—	0.7	—	0.0	—	0.3	—	0.3	—	0.7	—	0.0	—	1.3	—	1.3	295	3.0	
19	—	1.0	105	1.6	—	0.7	—	0.7	10	2.6	—	1.0	—	1.0	—	3.6	330	3.6	325	3.3	320	3.3	300	3.0	
20	—	0.0	—	0.3	—	0.7	—	0.3	—	0.3	—	1.3	—	1.0	—	0.3	—	0.3	170	1.6	185	3.6	180	3.0	
21	175	3.3	175	3.0	145	1.6	—	1.3	—	1.3	60	2.3	—	1.0	60	2.3	65	2.3	15	4.3	355	3.6	305	5.9	
22	325	3.9	325	5.9	330	5.9	325	6.6	305	7.2	300	5.2	300	3.6	310	4.6	310	5.9	300	5.2	305	3.6	260	5.2	
23	—	0.0	—	0.3	—	0.3	—	0.3	—	0.0	—	0.0	315	1.6	30	3.0	25	3.3	40	4.6	35	5.2	20	6.9	
24	345	6.6	345	6.2	345	6.6	345	6.6	345	7.5	340	6.2	340	6.2	330	5.6	320	6.2	325	5.9	320	5.6	325	7.5	
25	—	1.3	—	0.3	—	1.0	—	0.0	—	0.7	—	1.0	—	1.0	—	0.7	—	1.0	155	3.0	155	3.3	165	3.6	
26	175	5.2	170	6.2	175	5.6	180	5.6	185	5.6	195	4.9	200	4.3	200	3.9	2								



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

368. Cahirciveen (Valentia Observatory) :

$H_a$  (height of anemograph above M.S.L.) = Height of ground above

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	240	7.9	245	6.9	245	5.9	245	5.6	245	5.9	285	2.3	295	2.3	300	3.3	320	3.6	325	3.3	315	2.0	300	3.9
2	315	6.2	300	6.2	305	4.9	320	4.9	320	4.3	305	4.6	290	5.6	305	4.6	280	5.2	285	6.9	280	6.6	270	5.9
3	275	5.9	275	6.2	280	5.6	285	6.9	290	6.9	290	7.9	305	6.2	320	6.9	315	5.9	315	7.2	320	6.9	325	5.6
4	10	4.3	30	1.6	360	3.3	360	2.3	335	6.2	340	6.6	340	5.9	335	7.5	335	7.5	340	8.9	335	7.5	340	7.5
5	300	3.3	295	4.9	290	4.6	285	5.9	285	7.2	285	6.9	275	6.6	275	8.9	275	8.5	280	9.5	280	9.2	275	9.5
6	10	4.9	10	3.3	10	3.6	10	3.3	10	2.0	45	5.9	20	4.3	30	4.6	25	5.2	20	3.9	340	4.9	340	5.2
7	355	2.0	—	0.7	—	0.3	—	0.0	355	3.3	355	2.3	—	0.0	—	0.7	290	2.6	295	2.6	305	6.3	305	2.6
8	315	3.6	335	2.3	335	1.6	335	3.3	345	2.3	315	3.3	315	2.6	320	3.6	320	4.6	295	3.6	305	4.3	310	5.2
9	300	5.2	315	4.9	305	3.9	285	3.6	300	6.2	305	4.6	295	6.2	285	7.2	300	7.5	300	7.2	310	7.5	310	8.9
10	350	4.9	350	5.9	345	6.2	335	7.5	340	4.9	345	5.9	350	3.9	360	3.9	360	4.9	345	5.9	350	4.6	345	6.9
11	5	4.6	5	3.3	5	3.3	20	3.9	20	2.0	—	1.3	—	1.0	20	2.0	30	3.6	10	3.9	15	3.0	5	3.6
12	—	1.3	—	0.3	—	0.7	—	0.3	—	1.0	—	0.7	120	2.0	—	0.7	—	0.0	—	0.0	—	1.0	55	2.3
13	130	3.3	140	3.9	135	4.9	140	6.2	145	5.6	150	5.9	150	6.6	160	6.9	165	5.2	165	6.2	165	6.6	170	6.9
14	170	6.2	165	5.9	165	3.3	165	4.6	165	5.6	160	4.6	160	3.6	155	4.6	155	5.6	160	6.2	160	6.6	155	7.2
15	145	10.8	145	10.5	150	11.8	145	12.1	145	13.1	145	11.8	145	13.1	145	13.8	140	12.8	140	13.1	145	12.8	145	15.1
16	250	3.9	205	2.3	205	2.3	235	2.3	230	2.0	220	2.0	—	1.3	—	1.3	215	2.0	215	3.0	220	3.9	220	4.6
17	105	3.6	95	4.6	80	4.3	90	4.3	90	5.6	65	6.6	75	4.6	80	2.0	350	4.9	350	6.6	325	6.2	295	4.9
18	210	2.3	205	2.6	205	3.0	200	3.3	190	2.3	195	3.3	200	3.6	215	5.9	210	5.2	200	5.6	200	4.6	200	3.6
19	180	3.3	180	3.9	180	3.9	180	3.6	180	4.9	175	4.3	175	4.9	175	4.6	215	5.9	175	2.0	175	4.3	185	4.3
20	240	5.6	225	4.3	210	3.6	225	5.2	210	4.3	210	4.3	230	4.9	225	5.2	235	7.2	225	6.2	235	8.9	235	8.5
21	260	6.2	270	8.2	270	9.2	275	7.5	280	7.5	285	7.9	290	5.6	295	3.6	300	3.0	290	1.6	275	2.0	265	2.0
22	140	8.9	175	7.2	225	4.6	210	3.9	190	3.9	170	4.3	165	3.6	—	1.0	—	1.0	155	3.6	165	3.3	165	2.6
23	310	10.2	305	10.5	310	10.5	315	10.2	330	8.2	335	9.5	350	7.5	345	7.9	340	8.9	335	8.5	335	7.9	320	9.2
24	325	3.6	320	3.6	320	3.9	350	3.6	345	4.3	335	2.3	10	2.6	15	2.0	345	2.3	315	4.6	300	4.9	295	3.3
25	150	5.6	155	5.9	155	6.2	150	5.9	150	6.6	155	5.9	160	3.9	190	2.3	255	4.6	275	6.9	285	6.9	310	7.5
26	320	8.2	325	8.5	315	8.2	290	7.5	305	6.9	305	5.9	315	7.2	315	8.2	320	8.9	310	8.5	310	8.2	305	10.2
27	—	0.3	—	1.3	25	1.6	25	1.6	—	0.7	—	1.3	—	1.0	85	2.0	160	4.3	165	3.6	170	4.3	175	4.9
28	160	2.0	160	2.0	—	1.0	—	0.3	—	1.0	160	1.6	160	1.6	—	1.0	—	1.3	—	0.7	190	2.6	215	2.6
29	180	4.9	180	5.2	180	4.9	180	4.3	180	3.9	190	3.6	195	3.3	195	3.0	195	2.3	195	3.0	200	4.3	205	3.9
30	185	2.0	—	1.3	175	2.6	170	2.3	—	0.3	—	0.7	—	0.3	—	0.3	—	1.0	230	3.0	300	2.3	305	3.9
Mean ...	—	4.8	—	4.6	—	4.5	—	4.5	—	4.6	—	4.6	—	4.2	—	4.3	—	4.9	—	5.2	—	5.4	—	5.7

369. Cahirciveen (Valentia Observatory) :  $H_a = 12$  metres + 14 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	—	0.7	—	1.0	55	1.6	—	1.0	—	1.0	—	1.0	—	0.3	—	0.7	—	0.0	—	0.3	—	0.3	—	0.3
2	—	0.7	—	0.3	50	1.6	—	1.0	50	1.6	—	1.0	—	0.3	—	1.0	—	0.3	—	0.7	—	0.3	—	0.3
3	—	1.3	—	1.3	40	2.0	40	2.0	40	1.6	40	1.6	—	1.3	—	1.0	—	0.3	—	0.3	—	0.7	—	0.7
4	—	1.0	—	0.7	—	0.3	—	0.3	—	0.0	—	0.7	—	1.3	—	0.0	—	1.0	—	1.0	—	1.0	—	0.0
5	—	0.0	—	0.3	—	1.3	—	1.3	—	0.0	—	0.7	—	0.0	—	0.0	—	0.3	—	1.0	—	1.0	—	1.0
6	—	0.3	—	0.0	—	0.7	200	2.0	—	0.0	—	0.3	—	1.0	—	0.3	—	0.0	—	0.7	—	0.3	220	1.6
7	290	1.6	—	0.3	295	1.6	300	2.6	310	2.6	—	1.3	315	2.0	—	1.3	—	1.0	—	0.3	315	2.6	30	2.6
8	90	5.2	—	1.0	55	1.6	65	2.8	75	3.6	75	4.6	75	3.6	80	3.3	40	5.2	35	3.0	50	3.0	55	2.0
9	—	0.7	—	1.3	—	1.0	—	1.0	—	0.3	30	1.6	—	1.0	30	1.6	—	0.7	—	0.3	—	0.3	115	3.6
10	—	1.3	70	1.6	70	2.6	70	2.3	70	3.3	70	3.6	70	3.6	60	3.6	65	2.3	75	2.0	190	2.0	215	2.3
11	—	0.7	35	2.0	35	2.0	—	0.7	—	1.3	—	1.3	—	0.7	—	1.3	—	0.7	—	0.0	—	0.0	—	0.7
12	—	0.7	—	0.7	—	0.3	—	0.0	—	0.0	—	1.0	—	1.0	—	0.3	—	0.3	—	0.0	—	0.7	15	1.6
13	—	0.0	—	0.0	—	0.0	—	1.0	320	3.0	300	3.3	310	5.2	300	4.3	300	4.6	310	3.9	310	4.6	300	4.9
14	75	6.2	85	4.9	85	4.6	85	3.3	—	1.3	120	1.6	115	3.0	85	3.3	100	3.3	95	2.6	105	2.3	—	1.3
15	80	2.3	—	1.0	90	1.6	—	0.7	130	2.0	140	2.6	—	1.0	105	2.0	—	0.7	150	2.6	160	3.6	170	4.6
16	230	4.6	230	3.0	230	2.3	230	1.6	235	3.0	—	0.7	—	0.3	—	0.3	—	0.0	—	0.7	—	0.3	—	0.7
17	190	4.6	200	5.2	205	7.2	200	8.2	215	7.9	220	6.6	220	6.9	220	7.2	220	7.2	225	6.9	225	8.2	225	8.5
18	—	0.0	—	0.0	—	0.0	—	0.3	—	0.0	—	0.0	—	0.3	350	2.0	—	1.0	—	0.3	—	1.3	—	1.3
19	95	3.3	95	4.3	90	4.3	90	5.6	90	6.6	115	4.9	125	3.6	140	4.6	125	4.9	120	5.6	125	7.5	140	9.2
20	180	3.3	170	5.2	170	5.6	170	6.2	170	5.2	170	5.9	170	6.2	170	6.2	170	6.9	170	6.6	175	5.9	175	5.6
21	175	7.9	175	6.9	175	7.2	180	5.6	180	3.9	180	3.9	175	3.9	170	6.9	170	6.9	170	6.6	170	6.6	175	6.2
22	175	8.5	175	8.5	175	8.5	185	8.5	185	8.2	195	8.5	190	7.2	195	7.2	195	7.2	195	5.9	190	5.9	185	5.9
23	245	10.2	250	7.5	245	11.1	250	10.2	245	9.2	240	10.2	245	9.2	245	8.9	250	7.9	270	7.9	290	5.9	310	5.2
24	250	8.5	260	9.8	265	9.8	265	6.6	280	6.2	250	9.2	260	6.6	250	4.3	250	7.2	225	2.6	265	6.6	240	7.9
25	330	9.5	325	9.2	325	8.5	320	4.6	295	5.2	295	4.9	285	6.2	295	4.9	270	5.2	250	3.3	230	4.6	220	5.6
26	190	3.0	185	4.6	170	4.3	160	7.2	160	9.5	165	9.5	180	9.2	210	10.2	230	13.4	235	13.4	230	11.8	225	11.5
27	230	8.9	230	9.8	230	9.5	235	10.8	240	12.8	240	13.1	270	11.5	280	9.8	295	9.2	290	10.2	285	9.8	280	10.5
28	235	4.9	220	3.6	215																			

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

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 12 metres + 14 metres.

September, 1925.

Table for September 1925 showing wind speed and direction data for days 1 through 30. Columns include day numbers, wind speed in m/s, and other meteorological indicators.

October, 1925.

Table for October 1925 showing wind speed and direction data for days 1 through 31. Columns include day numbers, wind speed in m/s, and other meteorological indicators.

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

## 370. Cahirciveen (Valentia Observatory):

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

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	160	12.5	165	12.5	170	9.2	170	5.9	160	7.5	140	10.8	140	10.2	150	11.1	155	9.5	160	10.2	170	10.8	190	6.9
2	185	3.9	180	4.3	175	5.2	180	5.2	235	5.2	235	3.6	220	3.6	215	2.6	195	3.9	200	4.9	220	5.6	200	4.6
3	—	0.7	—	0.7	—	0.7	—	0.7	—	0.3	—	1.3	—	0.3	140	2.3	165	3.3	235	2.3	230	2.3	235	4.6
4	190	3.6	190	3.3	230	3.0	215	2.0	175	3.0	170	3.0	155	4.3	165	5.9	160	4.6	170	3.3	195	4.3	220	5.6
5	220	2.3	220	2.3	220	1.6	220	2.0	220	2.3	220	1.6	220	2.6	—	0.7	—	1.0	—	0.7	—	0.0	—	0.3
6	—	0.3	—	1.0	—	0.7	80	2.0	—	0.7	—	1.0	—	0.3	125	2.6	130	4.9	135	7.2	135	6.2	140	6.9
7	230	7.9	235	10.8	235	7.9	235	6.2	235	5.2	220	4.6	210	4.3	215	3.9	210	3.3	—	1.3	—	1.0	—	1.3
8	40	11.5	30	9.5	25	11.1	25	10.2	25	11.8	25	11.8	25	12.1	30	12.1	30	11.8	25	10.8	25	11.1	25	11.8
9	20	2.0	15	2.3	15	4.3	5	4.9	360	6.9	15	5.6	10	3.9	355	5.2	330	4.6	320	3.6	355	3.9	305	7.2
10	5	2.6	10	1.6	20	2.0	50	1.6	50	2.0	50	2.0	55	3.0	60	3.0	65	2.0	55	2.3	45	3.9	25	5.6
11	—	0.3	—	0.3	—	0.0	—	0.3	—	1.0	85	2.0	—	1.0	—	1.3	—	0.7	—	0.0	—	0.0	—	0.0
12	90	3.6	90	3.3	90	3.3	90	4.3	90	4.9	105	4.9	115	3.9	125	4.6	130	5.2	135	4.9	145	5.6	155	4.9
13	135	5.6	135	4.9	130	5.2	125	4.9	135	5.9	140	5.2	130	5.6	130	5.9	130	6.6	135	6.2	140	5.6	145	5.9
14	160	6.2	160	4.9	165	5.9	165	6.2	170	4.9	165	5.9	160	6.2	160	6.6	155	6.2	160	6.2	170	5.6	175	5.2
15	155	4.9	150	5.9	145	5.2	155	4.9	170	4.3	175	4.9	175	3.0	175	2.3	175	2.3	—	1.3	—	1.0	—	1.3
16	95	4.6	95	3.0	95	2.3	95	2.0	—	0.7	95	2.6	95	2.0	95	2.0	95	2.0	90	3.9	90	3.9	70	3.3
17	65	4.6	80	4.9	65	3.3	100	4.3	340	3.9	90	6.6	80	2.0	35	2.3	55	3.3	55	1.6	30	3.3	40	3.6
18	80	3.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.7	—	0.7	—	0.3	—	1.0	—	0.3	—	0.0	—	0.0
19	—	1.3	—	0.3	—	1.0	—	1.0	—	1.0	—	1.0	—	1.0	—	0.3	—	0.3	—	1.0	—	0.0	—	0.0
20	—	0.3	90	2.3	—	1.3	—	1.3	—	1.3	90	2.6	—	1.0	—	0.7	90	1.6	—	1.0	—	1.3	—	0.0
21	—	1.3	—	1.0	—	1.0	—	1.0	90	2.0	90	3.0	—	0.7	—	1.0	—	1.3	90	2.6	90	1.6	—	0.0
22	—	0.0	—	0.0	—	0.7	—	0.3	—	0.0	—	1.3	60	2.0	—	0.7	—	0.3	—	0.3	—	0.3	60	2.0
23	—	0.0	—	0.0	—	0.3	—	0.3	—	0.0	—	1.0	35	2.0	50	2.0	60	2.6	50	2.0	25	4.3	25	5.6
24	—	1.3	80	2.0	65	1.6	—	1.3	—	0.7	—	1.3	—	1.3	—	1.0	—	1.0	—	1.0	—	0.7	—	0.0
25	335	6.2	330	6.9	330	6.6	335	9.2	335	9.8	340	10.2	345	8.5	5	7.2	10	6.9	5	9.2	15	6.6	30	5.9
26	130	2.3	150	3.9	135	5.9	120	5.2	105	4.6	105	4.3	100	5.2	90	4.6	90	4.6	80	4.6	75	3.6	75	4.6
27	—	1.0	65	1.6	35	3.3	—	0.0	—	0.3	—	0.3	—	0.3	—	1.3	40	1.6	40	10.2	40	9.5	30	7.9
28	10	7.9	350	9.2	350	8.9	345	10.2	345	8.5	340	8.5	335	8.9	340	10.2	345	10.8	340	10.8	350	9.8	5	9.5
29	5	3.3	350	4.3	360	4.6	350	3.6	360	3.9	350	4.3	5	3.0	340	2.3	305	5.6	310	6.6	310	6.6	300	7.9
30	320	10.2	315	11.5	320	11.5	305	12.5	315	12.8	325	9.8	330	7.5	335	8.2	330	7.9	335	8.9	355	9.8	345	10.8
Mean ..	—	3.9	—	4.0	—	3.9	—	3.8	—	3.8	—	4.2	—	3.7	—	3.8	—	4.0	—	4.3	—	4.3	—	4.4

371. Cahirciveen (Valentia Observatory): H<sub>a</sub> = 12 metres + 14 metres.

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	20	3.3	40	4.6	25	3.0	30	2.6	35	1.6	—	1.3	—	1.3	70	3.0	70	3.6	70	3.3	70	3.0	60	3.6
2	70	2.6	70	1.6	65	2.3	65	2.0	65	2.6	65	2.3	—	1.3	—	1.3	65	2.6	—	1.0	65	2.0	—	1.0
3	—	0.7	—	1.3	—	0.3	—	0.0	60	2.0	90	3.6	85	3.3	95	3.6	90	4.9	90	3.9	100	4.9	105	6.2
4	105	7.9	120	10.8	135	10.8	130	9.8	130	10.2	135	12.1	130	11.5	125	11.5	130	11.1	125	11.1	125	11.8	125	10.8
5	130	10.2	125	9.8	125	9.5	130	10.2	120	9.2	115	10.2	120	10.2	110	12.1	110	13.4	115	14.1	120	13.4	110	12.8
6	115	12.1	125	11.5	115	10.2	125	10.2	125	10.5	125	10.2	130	10.2	135	9.8	130	11.1	135	10.2	135	11.5	140	10.8
7	155	10.2	155	10.2	150	11.8	155	10.2	155	10.8	165	11.1	170	10.8	170	10.2	170	11.1	165	9.8	165	11.1	170	10.5
8	195	8.2	200	8.2	210	9.2	220	9.2	215	8.2	210	8.2	235	11.5	230	7.9	230	8.5	225	9.5	225	8.9	240	12.5
9	250	9.5	245	12.1	240	12.5	250	13.8	245	13.8	255	13.1	260	11.1	260	12.5	255	12.8	260	10.8	255	13.1	265	12.5
10	295	8.9	290	10.5	295	9.5	300	7.5	305	6.6	290	6.2	290	4.6	290	4.9	310	5.6	290	5.2	285	5.6	290	6.6
11	5	2.3	355	3.6	350	3.3	345	1.6	340	4.3	360	1.6	—	0.7	360	1.6	360	2.3	—	1.3	—	0.7	—	1.3
12	—	0.3	—	0.0	—	0.3	—	0.3	—	0.0	—	0.7	—	0.7	—	0.0	—	0.7	—	0.0	—	0.0	—	0.7
13	—	1.0	—	1.6	—	0.7	—	1.3	—	1.3	—	1.0	—	0.7	—	1.3	—	1.0	10	1.6	360	3.6	350	2.6
14	45	1.6	45	2.3	45	2.6	50	2.3	55	1.6	55	2.6	55	2.0	55	2.3	55	3.0	55	2.0	55	2.0	50	2.3
15	—	0.7	—	0.7	—	0.3	—	0.3	70	2.3	—	1.0	—	1.0	345	2.6	315	3.9	295	2.0	275	5.2	280	6.9
16	—	1.0	—	0.7	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0
17	—	0.0	—	0.0	—	0.0	—	0.0	—	0.7	—	0.0	—	0.0	—	0.0	—	0.7	—	0.0	—	0.0	—	0.0
18	—	0.3	—	0.7	135	2.0	125	2.0	—	1.0	130	3.9	130	3.6	120	3.3	125	2.6	125	5.9	125	3.6	120	3.6
19	100	3.6	100	3.9	100	3.6	100	4.3	100	4.6	85	4.9	85	3.6	85	3.0	85	3.6	90	4.6	95	3.6	90	3.6
20	60	9.8	60	10.2	65	9.8	70	11.5	70	11.8	65	10.8	65	11.1	60	10.2	60	8.5	55	8.5	55	9.2	55	8.2
21	—	0.3	—	0.3	—	0.3	85	1.6	—	0.7	25	3.6	20	2.3	290	4.3	265	3.9	265	5.6	245	6.9	245	8.9
22	—	1.3	—	0.7	—	0.3	—	0.3	—	0.3	—	0.3	—	0.0	—	0.3	45	2.6	35	5.6	40	4.6	35	4.9
23	—	1.0	—	1.0	—	0.3	—	0.3	130	3.0	—	1.0	135	1.6	155	2.0	120	2.3	175	4.3	175	3.9	215	5.9
24	315	7.9	295	5.2	295	4.3	290	5.2	295	3.9	—	1.0	—	1.3	—	1.0	30	2.3	—	0.3	—	1.0	65	2.0
25	80	6.9	75	5.6	75	5.2	85	3.9	95	6.6	100	7.2	95	5.6	95	7.5	95	7.5	105	8.9	130	4.3	150	7.2
26	235	12.8	240	9.8	240	8.9	240	7.9	245	6.2	230	3.6	220	3.3	205	4.3	180	3.9	170	4.6	165	5.9	165	7.9
27	220	8.2	220	9.2	230	9.8	220	6.2	220	7.5	225	6.2	220	7.5	220	8.2	225	7.9	225	8.2	230	8.5	230	9.2
28	245	9.2	235	7.5	230	6.9																		





372. Cahirciveen (Valentia Observatory) :  $H_a = 17$  metres + 13 metres.

1925.

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.
	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	31	12 30	17	1 0	16	20 0	11	21 45	9	6 10	13	6 35	9	10 55	13	17 25	12	18 25	4	13 50	22	1 25	12	0 15
2	31	12 5	15	14 10	17	6 10	14	16 15	13	3 5	9	3 55	10	16 30	10	0 30	9	2 50	4	15 0	13	2 30	6	1 25
3	29	5 45	17	11 55	12	0 10	15	23 40	13	3 5	13	12 35	13	4 45	15	1 50	11	15 20	4	0 15	10	20 0	17	19 50
4	24	6 10	18	22 30	17	11 55	20	9 30	14	10 30	16	12 35	9	4 50	11	17 10	12	9 15	3	14 25	14	2 30	24	22 15
5	16	5 15	22	3 50	10	21 30	16	1 10	16	13 35	10	9 10	10	23 0	15	7 10	12	12 30	5	18 40	5	15 20	22	19 15
6	12	0 35	21	18 15	12	22 45	9	12 35	16	20 5	7	14 55	11	0 20	19	24 0	9	6 5	5	12 25	22	19 10	23	13 30
7	14	23 45	19	23 5	15	19 45	6	15 25	13	17 25	9	12 10	9	2 35	21	1 15	8	19 50	11	23 55	15	24 0	23	22 15
8	20	19 35	23	14 50	18	3 50	18	21 0	15	22 10	4	14 25	9	12 20	18	15 0	10	23 55	10	0 15	19	8 40	24	12 35
9	12	0 45	35	13 5	11	2 0	*	*	15	2 10	11	12 15	11	15 20	13	2 0	14	12 15	8	12 50	14	2 30	21	4 0
10	15	5 30	25	*	11	21 5	8	14 30	13	22 25	5	9 35	12	1 15	10	15 55	12	14 35	6	7 50	9	12 25	15	2 40
11	15	21 55	17	19 50	11	15 10	19	14 45	14	5 30	4	14 40	7	18 0	18	19 55	9	15 45	9	18 10	8	21 15	9	4 45
12	23	18 0	17	14 20	7	20 40	14	24 0	17	8 5	9	16 10	6	12 50	14	0 30	6	23 55	7	16 25	10	10 35	5	15 5
13	33	14 15	15	4 25	14	19 15	15	2 40	6	15 30	12	13 25	8	23 40	9	18 5	13	15 50	9	6 15	11	22 25	12	18 45
14	30	0 30	22	6 40	11	5 45	22	21 30	10	16 30	9	14 50	14	12 15	12	7 20	21	20 20	10	0 55	13	9 45	7	0 0
15	6	1 0	22	10 45	6	14 5	24	14 5	15	11 10	8	23 15	8	8 35	7	16 10	30	12 40	11	21 35	11	2 0	21	19 15
16	17	22 50	20	9 15	6	11 0	24	4 15	10	20 30	9	9 35	17	9 30	9	12 15	9	23 50	10	21 55	11	24 0	5	1 15
17	17	6 20	11	15 45	3	13 30	12	11 45	11	11 55	10	18 40	21	22 0	7	6 5	14	15 5	15	3 25	13	4 10	6	20 45
18	11	6 15	15	12 45	4	16 0	18	23 40	8	18 45	10	8 40	22	9 25	8	15 45	12	9 55	8	22 5	8	0 30	10	10 0
19	13	20 35	16	11 25	6	15 10	19	0 55	9	14 0	11	13 55	12	2 50	7	20 5	14	18 10	17	13 5	4	3 15	19	22 0
20	18	23 10	15	14 10	14	20 40	10	2 30	6	15 20	12	17 50	13	8 20	12	20 15	17	15 40	13	12 55	4	2 20	18	2 25
21	24	22 5	20	5 50	18	22 40	12	18 15	12	18 5	11	11 40	9	18 0	12	21 20	15	24 0	16	23 40	5	5 45	21	15 20
22	27	2 15	24	15 30	7	12 10	22	13 15	11	17 15	11	2 30	13	8 40	10	4 20	19	20 25	19	6 35	11	21 10	13	17 35
23	18	4 55	24	4 30	12	16 50	21	14 20	11	22 25	11	12 5	18	2 45	14	17 5	16	4 0	16	3 20	14	13 40	20	18 10
24	14	10 55	28	12 10	20	18 40	17	2 10	11	10 0	11	18 30	9	1 0	12	15 30	15	0 25	16	3 5	11	23 0	16	0 0
25	16	23 0	23	10 30	19	3 0	13	18 5	10	16 20	12	22 20	13	22 5	13	17 5	17	20 15	16	1 0	15	3 20	14	15 5
26	15	12 5	22	19 35	10	0 40	11	10 30	17	21 25	13	15 0	20	20 5	13	5 0	14	5 10	22	21 20	12	16 50	18	14 10
27	11	13 30	23	0 5	9	11 35	13	7 40	19	22 20	10	15 5	19	5 0	11	1 5	10	18 10	18	4 15	16	20 20	19	15 10
28	19	16 40	16	2 20	10	12 10	15	7 30	21	19 5	7	17 5	7	17 50	10	16 45	9	21 35	21	14 0	18	9 5	21	10 30
29	24	4 35	—	—	9	23 10	11	15 10	17	22 55	14	12 55	8	19 5	8	1 5	9	11 35	22	12 55	17	22 40	28	14 20
30	23	21 30	—	—	17	20 45	13	13 35	22	10 50	10	13 0	9	3 30	9	8 30	7	17 0	17	13 40	20	3 30	37	16 25
31	22	14 40	—	—	17	4 30	—	—	15	14 15	—	—	10	3 25	11	22 0	—	—	21	23 45	—	—	23	9 40

\* Defective record.

DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES TUBE ANEMOGRAPH.

373. Cahirciveen (Valentia Observatory) :  $H_a = 17$  metres + 13 metres.

1925.

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.	1st, 13th, 14th	hr. 25	16	hr. 143	hr. 366	hr. 175	hr. 35	hr. 0	°	m/s. 21	day. 1 hour. 13	m/s. 33	day. 13 h. 14 m. 15	
Feb.	9th	1	14	90	391	174	16	0	255	17	13 9	35	9 13 5	
Mar.	—	—	5	10	328	271	135	0	5	12	25 16	20	24 18 40	
April	—	—	9	67	362	226	65	0	200	15	22 14	24	15 14 5	
May	—	—	6	27	357	307	53	0	235	13	30 12	22	30 10 50	
June	—	—	1	3	247	348	122	0	170	12	4 13	16	4 12 35	
July	—	—	4	25	216	402	101	0	265	13	18 16	22	18 9 25	
Aug.	—	—	3	8	249	353	134	0	180	12	23 6	21	7 1 15	
Sept.	—	—	2	18	323	330	49	0	160	15	15 13	30	15 12 40	
Oct.	—	—	7	47	259	251	187	0	180	13	29 14	22	29 12 55	
Nov.	—	—	6	23	247	344	106	0	115	13	6 19	22	6 19 10	
Dec.	29th, 30th	7	17	139	266	233	99	0	220	22	30 16	37	30 16 25	
Year	6 days	33	90	100	3,611	3,414	1,102	0	220	22	Dec. 30 16	37	Dec. 30 16 25	

## MINIMUM TEMPERATURE "ON THE GRASS" DURING THE INTERVAL 18H. TO 7H. G.M.T.

Readings in degrees absolute.

## 374. Cahirciveen (Valentia Observatory).

1925.

Day.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>	<i>a.</i>
1	74·1	73·4	76·9	<b>70·7</b>	76·7	78·7	78·7	84·1	86·8	75·7	81·5	69·1
2	*	79·1	76·9	77·0	76·9	79·7	83·3	82·7	84·1	76·9	80·0	<b>68·0</b>
3	75·5	81·2	73·5	71·3	80·5	81·9	85·8	84·5	83·1	80·1	80·2	68·1
4	74·9	78·9	71·9	78·1	77·5	82·5	83·6	83·0	80·2	85·8	80·1	76·9
5	75·5	82·5	75·9	77·1	<b>75·1</b>	82·9	<b>78·4</b>	86·7	83·9	86·5	75·9	78·5
6	<b>73·0</b>	76·8	80·0	75·4	75·9	76·8	85·9	83·1	81·1	86·4	74·6	80·4
7	78·1	73·7	81·1	74·1	78·8	<b>76·3</b>	81·5	87·3	82·1	82·1	80·2	83·5
8	79·1	82·1	75·1	73·5	79·7	77·1	80·9	81·0	81·1	82·1	77·9	80·8
9	74·0	79·7	73·7	75·6	79·8	83·1	82·5	84·7	84·3	76·8	75·1	76·7
10	78·1	79·1	73·7	76·7	78·7	80·1	86·0	79·7	81·2	74·1	74·1	77·6
11	77·8	75·7	78·5	75·4	81·7	82·6	86·0	79·3	77·2	<b>73·3</b>	69·9	76·3
12	80·3	72·5	75·3	78·7	80·4	83·3	86·3	87·3	<b>74·7</b>	75·0	70·3	70·2
13	80·5	73·6	76·7	79·7	77·3	82·1	86·8	86·7	77·5	75·9	78·6	71·9
14	79·1	73·7	80·3	77·9	76·5	84·7	85·4	85·3	83·7	79·9	79·1	72·8
15	75·2	<b>70·2</b>	80·7	78·9	81·5	84·1	84·3	79·1	85·9	77·5	79·8	71·7
16	74·1	76·9	75·9	76·5	80·3	82·7	82·7	81·4	79·7	82·8	74·7	77·5
17	81·8	75·3	79·7	76·8	77·0	83·1	84·9	81·3	82·6	85·8	75·2	77·5
18	81·3	75·7	79·7	79·8	76·4	81·4	83·1	84·0	80·2	83·6	73·0	73·5
19	81·5	75·3	73·9	76·7	77·2	82·1	84·1	85·1	82·8	83·1	69·8	77·5
20	80·8	71·1	77·5	74·9	78·7	82·3	83·5	81·5	79·5	86·5	<b>69·1</b>	75·3
21	82·1	74·7	74·1	73·5	75·7	85·1	80·1	81·3	80·9	84·0	69·1	69·9
22	82·6	70·9	70·1	79·2	80·9	80·1	83·1	84·8	82·3	83·9	73·7	72·9
23	78·5	74·5	72·1	76·3	82·7	77·5	86·5	84·1	81·9	82·8	74·6	70·5
24	74·6	73·9	78·3	77·4	82·7	79·7	86·9	85·7	79·1	80·5	70·9	73·1
25	79·1	76·1	75·7	80·1	77·1	81·9	85·9	<b>78·3</b>	81·9	79·1	77·1	75·9
26	76·5	76·1	76·7	76·7	80·5	83·7	81·4	85·9	80·9	80·9	73·7	80·1
27	77·5	77·0	<b>69·7</b>	79·5	81·3	84·7	83·9	85·2	78·8	80·6	69·7	80·1
28	74·2	76·7	78·1	77·1	79·0	82·1	82·3	86·7	85·2	79·8	76·7	76·9
29	77·5	—	71·9	74·7	80·8	84·0	85·3	86·3	86·9	81·9	75·6	81·7
30	80·9	—	79·1	74·3	79·7	84·2	82·5	80·2	85·5	82·5	76·7	76·2
31	79·1	—	78·7	—	79·5	—	84·9	86·9	—	82·5	—	78·4
Mean ...	77·9	75·9	76·2	76·5	78·9	81·7	83·8	83·7	81·8	81·0	75·2	75·5

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 279·1.

\* No record.

375. Cahirciveen (Valentia Observatory).

Table for 375. Cahirciveen (Valentia Observatory) showing cloud forms, amounts, weather, and remarks for January 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks.

376. Cahirciveen (Valentia Observatory).

Table for 376. Cahirciveen (Valentia Observatory) showing cloud forms, amounts, weather, and remarks for February 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks.

377. Cahirciveen (Valentia Observatory).

Table for March 1925 at Valentia Observatory. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-31 and a Mean Cloud Am't row.

378. Cahirciveen (Valentia Observatory).

Table for April 1925 at Valentia Observatory. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 17h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Data rows 1-30 and a Mean Cloud Am't row.

Summary table for April 1925. Columns: Day, Cloud Forms, Cloud Amount (7h, 9h, 13h, 15h, 17h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), Remarks.

379. Cahirciveen (Valentia Observatory).

Day.	Cloud Forms.			Cloud Amount (All Forms).						Weather.						Remarks.
	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>	
1	St-Cu : Cu.	St-Cu : Cu.	St-Cu : Cu : A-Cu.	5	3	7	7	7	9	...	...	...	...	...	...	b early to o p : bc a : c p : o n :
2	St-Cu : Ci-Cu : Ci-St	St-Cu : Ci-St.	St-Cu : A-St.	8	8	10	9	9	10	p <sup>0</sup>	...	...	...	...	...	p early : c a : o p and n :
3	St.	St.	St : St-Cu.	10	10	10	10	10	9	≡ <sup>0</sup>	≡ <sup>0</sup>	...	...	...	...	≡ <sup>0</sup> a : o p : o n :
4	St-Cu.	St-Cu : Cu.	St-Cu : A-Cu.	4	6	7	10	7	7	...	...	...	...	...	...	p early to bc a : c p : o p and n :
5	St.	St : A-St.	St : A-St.	10	10	10	10	10	8	p <sup>0</sup>	p <sup>0</sup>	...	...	...	...	p early : a and p : c p : o n :
6	St : Sr-Cu : A-Cu.	St-Cu : A-Cu.	St : St-Cu : A-St.	7	7	4	10	8	8	...	...	...	p <sup>0</sup>	...	...	p early : bc a : c p : o p and n :
7	St : A-St.	St : St-Cu : A-St.	St : A-St.	10	9	10	9	10	10	...	...	p <sup>0</sup>	p <sup>0</sup>	p <sup>0</sup>	...	o p : a : o p : T p : o p : o n :
8	St : St-Cu : A-Cu.	St : St-Cu : A-Cu.	St-Cu : St.	8	9	7	8	9	10	...	...	...	...	...	...	o a : c p : o n :
9	Fr-Cu : St-Cu.	St-Cu : A-St.	St : St-Cu : A-St.	7	8	8	9	10	9	...	...	...	...	...	...	bc early : c p : a and p : o n :
10	Fr-St : St-Cu.	Cu : A-St.	Cu : A-St.	8	5	8	8	10	10	...	...	...	...	...	...	p early : bc a : c p : o n :
11	St : A-St.	St-Cu	St : St-Cu.	10	9	9	10	9	9	...	...	...	...	...	...	≡ <sup>0</sup> early : o all day :
12	St.	St.	St : St-Cu : A-Cu.	10	10	10	10	6	7	...	...	...	...	...	...	o : a and p : c n :
13	St-Cu.	St : A-St.	St : St-Cu.	10	10	10	10	7	10	...	...	...	...	...	...	bc early : o a : o p : o n :
14	St-Cu : Ci-St.	St-Cu : Cu.	St : St-Cu.	8	7	4	3	8	10	p <sup>0</sup>	...	...	...	...	...	bc early : c a : b p : o : o n :
15	St : St-Cu.	St.	St	9	9	10	10	10	10	...	...	≡ <sup>0</sup>	≡ <sup>0</sup>	...	...	≡ <sup>0</sup> early : o : a and p : o n :
16	St.	St : St-Cu : A-St.	St-Cu.	10	10	10	8	3	7	p <sup>0</sup>	...	...	...	...	...	o : a : bc p and n :
17	St-Cu.	Cu : A-Cu.	Cu : Ci.	8	5	8	6	7	7	...	...	...	...	...	...	bc a and p : c n :
18	Ci-St.	St-Cu : Ci-Cu.	St-Cu.	1	3	4	5	7	4	p <sup>0</sup>	...	...	...	...	...	p early : bc a and p : c n :
19	St : A-Cu.	St-Cu : A-Cu.	St-Cu.	7	9	7	7	6	10	...	...	...	...	...	...	bc early : o a : c p : o p : o n :
20	St-Cu : A-Cu.	St-Cu : A-Cu.	St-Cu : A-Cu.	7	7	7	7	5	8	...	...	...	...	...	...	bc early : c a and p : bc n :
21	St : St-Cu.	St.	St.	8	10	10	10	10	10	...	...	...	...	...	...	o : a : o : p : o : o n :
22	St : Nb : A-St.	St : A-St.	St-Cu : A-St.	10	10	10	10	10	10	...	...	...	...	...	...	o with at times all day.
23	Fr-St : St-Cu.	St-Cu : A-St.	St-Cu.	9	8	10	8	6	9	...	...	...	...	...	...	o early : c a : o : bc p : o n :
24	St : St-Cu : A-St.	St-Cu.	St : St-Cu.	9	8	9	9	9	2	...	( )	...	...	...	...	c ( ) a : o p : o p : bc n :
25	St : St-Cu : Ci-Cu.	St : St-Cu.	St : St-Cu.	5	8	8	7	6	3	p <sup>0</sup>	...	...	...	...	...	b early : bc a : c p : bc n :
26	St : A-St.	St.	St.	10	10	10	10	10	10	...	...	...	...	...	...	b early : o with all day.
27	St : St-Cu.	St : St-Cu : A-Cu.	St : St-Cu.	8	8	8	9	8	8	...	...	...	...	p <sup>0</sup>	p <sup>0</sup>	o early : c a : c p : o p and n :
28	St : St-Cu : A-Cu.	St : A-St.	St : St-Cu.	7	7	10	10	8	10	...	...	...	...	p <sup>0</sup>	p <sup>0</sup>	p early : bc a : o p : o p and n :
29	St : A-St.	St : A-St.	St.	10	10	10	10	9	9	p <sup>0</sup>	...	...	...	...	...	o with at times all day.
30	St : St-Cu.	St-Cu.	St-Cu.	8	7	5	6	5	4	...	...	...	...	...	...	o p early : c a : c p : o to b p :
31	St-Cu.	Cu.	St-Cu.	7	6	8	7	5	8	...	...	...	...	...	...	o p early : bc a : bc p : c p : o n :
Mean Cloud Am't				8.0	7.9	8.3	8.5	7.9	8.2							

380. Cahirciveen (Valentia Observatory).

Day.	Cloud Forms.			Cloud Amount (All Forms).						Weather.						Remarks.
	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>	
1	Cu-Nb : A-Cu.	Cu.	St-Cu.	4	4	3	6	3	10	...	( )	...	...	...	...	c p early to b a : bc p and n :
2	St : St-Cu.	St-Cu.	St-Cu : A-Cu.	10	9	9	3	7	9	p <sup>0</sup>	...	...	...	...	...	p early : c a : bc p : o n :
3	St : St-Cu : A-St.	St.	St.	10	10	10	10	10	10	...	...	...	...	...	...	o to o a : o p : o : o n :
4	Fr-St : A-Cu.	St-Cu : A-Cu.	St-Cu : A-Cu.	7	7	6	6	6	9	...	...	...	...	...	...	≡ <sup>0</sup> early : c a : bc p : o n :
5	St : St-Cu.	St : A-St.	St : A-St.	10	10	10	10	10	9	...	...	...	...	...	...	o a : o to o : o p : o p : o n :
6	St-Cu : Ci-Cu.	Cu : Ci.	Ci-Cu.	6	7	2	2	3	6	...	...	...	...	...	...	bc a : b p : bc n :
7	Ci-Cu.	Ci.	Ci-St.	1	1	4	3	1	2	...	...	...	...	( )	...	b ( ) a : bc p : b : n :
8	—	A-Cu.	—	—	—	1	—	—	—	...	...	...	...	...	...	early : a fine day.
9	Ci-St.	Ci-St.	A-St.	6	7	5	6	8	3	...	...	...	...	...	...	ppp early : fair or fine all day.
10	A-Cu.	—	—	3	2	—	—	—	1	8	8	...	...	...	...	ppp early : fine with ∞ all day.
11	—	—	A-Cu.	—	—	—	—	2	5	p	p <sup>0</sup>	8	8	8	8	p early : fine with ∞ all day.
12	A-Cu : A-St.	Cu : A-Cu.	—	7	7	3	1	—	1	8	8	8	8	8	8	p early : c ∞ a : b ∞ p and n :
13	St-Cu : A-Cu.	St-Cu.	St-Cu.	4	8	3	2	2	9	...	...	...	( )	( )	...	ppp early : bc ∞ a : b ( ) p : c n :
14	St.	Cu.	Fr-St.	10	9	3	2	1	3	...	...	...	...	...	...	bc early : c a : b p : bc n :
15	St.	St.	St : A-St.	10	10	10	10	9	8	...	...	...	...	...	...	bc early : o a and p : c o r o n :
16	St : St-Cu : A-Cu.	St : St-Cu : A-Cu.	St.	8	10	8	8	10	8	...	...	...	...	...	...	c a : o to o : o p : c n :
17	St : St-Cu.	St : St-Cu : A-St.	St : St-Cu.	8	10	10	9	8	3	...	...	...	...	...	...	bc early : o a and p : bc n :
18	St : St-Cu.	St : St-Cu.	St-Cu.	8	8	8	8	9	10	...	...	...	...	...	...	b early : c a and p : o n :
19	St-Cu : Ci-Cu.	Cu : Fr-Cu : Ci-St.	St-Cu : Ci-St.	7	7	2	5	8	8	...	...	...	( )	...	...	c o r o a : bc p : c n :
20	St.	St.	St : St-Cu : A-Cu.	10	10	9	8	8	10	...	...	...	...	...	...	≡ <sup>0</sup> and o early : o o r c all day.
21	St : A-Cu.	Cu : St : A-St.	St-Cu.	4	7	8	7	7	6	...	...	...	...	...	...	≡ <sup>0</sup> early : bc a : c p : bc n :
22	Ci-Cu.	Ci-Cu : Ci-St.	Cu : Ci-St.	6	4	3	2	2	1	...	...	...	( )	( )	...	bc a : b ( ) p : b n :
23	St-Cu : Ci.	St-Cu : Cu.	St-Cu.	5	5	3	2	7	7	...	...	...	...	...	...	( ) early : bc a : b ( ) p : bc n :
24	Ci-Cu : Ci-St.	St-Cu : Ci-Cu : Ci-St	St-Cu : A-Cu : Ci-St	6	6	6	6	7	7	...	...	...	...	...	...	bc a and p : c n :
25	St-Cu : Ci-Cu.	St-Cu : Ci-Cu : Ci-St	St-Cu : Ci-St.	8	5	3	4	3	8	...	...	( )	( )	...	...	b early : bc a : bc ( ) p : c n :
26	St-Cu.	St-Cu : A-Cu : A-St.	St-Cu : A-Cu : A-St.	10	8	8	8	8	10	...	...	( )	...	...	...	o to c ( ) a : c p : o : o n :
27	St.	St-Cu.	St : St-Cu : A-Cu.	10	9	9	9	7	4	...	...	...	...	...	...	o early : c o r o a and p : bc n :
28	Fr-Cu : A-Cu.	St-Cu : A-St.	St-Cu.	6	9	9	8	9	9	...	...	...	...	...	...	bc to o a : c p : o n :
29	St : St-Cu.	St : St-Cu : A-Cu.	St : St-Cu : A-Cu.	10	10	8	7	10	10	...	...	...	...	...	...	o : a : c p : o : o n :
30	St : St-Cu.	St-Cu : A-Cu.	St-Cu : A-Cu.	10	9	7	8	6	3	...	...	...	...	( )	( )	o early : c a : c ( ) p : bc ( ) n :
Mean Cloud Am't				6.8	6.9	5.7	5.3	5.7	6.3							

381. Cahirciveen (Valentia Observatory).

Table for July 1925 at Cahirciveen (Valentia Observatory). Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes a Mean Cloud Am't row at the bottom.

August, 1925.

382. Cahirciveen (Valentia Observatory).

Table for August 1925 at Cahirciveen (Valentia Observatory). Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes a Mean Cloud Am't row at the bottom.

383. Cahirciveen (Valentia Observatory).

Day.	Cloud Forms.			Cloud Amount (All Forms).						Weather.						Remarks.
	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>	
1	St.	St: St-Cu.	St-Cu.	10	10	9	6	7	10	0	...	...	...	...	...	o 0 a: bc p: on:
2	St: St-Cu.	St: St-Cu.	Cu: A-Cu.	8	9	8	8	6	7	...	...	...	...	...	...	ca: c to bc p: cn:
3	St-Cu.	St: A-St.	St-Cu: Cu.	10	10	10	6	3	1	...	...	...	...	...	...	oa: bc p: bn:
4	St-Cu: A-Cu.	St-Cu.	St-Cu.	7	8	8	10	8	9	...	...	...	...	...	...	b early: ca and p: on:
5	St-Cu.	St.	St: St-Cu.	10	10	10	6	8	8	...	...	...	...	...	...	oa: op 0 to bc p: cp 0 n:
6	St: St-Cu.	St-Cu.	St-Cu.	9	3	9	9	10	10	...	...	...	...	...	...	o early: bc a: op and n:
7	Fr-St: St-Cu.	St-Cu: A-St.	St: St-Cu.	10	10	10	10	10	10	...	(	(	...	...	p 0	o ( ) a: op: op 0 n:
8	St: St-Cu.	St: St-Cu: A-Cu.	St: St-Cu.	8	10	6	7	5	10	p 0	...	...	...	...	...	op 0 early: ca: bc p: on:
9	St.	St: A-St.	St-Cu.	10	10	8	9	2	2	p 0	...	p 0	...	...	...	op 0 a: cp 0 to bp: bc n:
10	St: St-Cu.	St: St-Cu.	St: St-Cu: A-St.	7	7	8	8	10	7	...	...	...	...	...	...	cp 0 early: ca: op: bc n:
11	St-Cu.	Cu: Fr-Cu.	Cu: Fr-Cu.	2	5	6	4	3	1	(	(	(	(	(	(	bc 0 early: bc ( ) a and p to bn:
12	St-Cu: Ci-St.	Cu: St-Cu: Ci.	St-Cu.	9	8	8	7	1	1	(	(	(	(	(	(	b 0 early: ca: bc p: bn:
13	A-St.	St-Cu: A-St.	St.	10	10	10	10	10	10	(	(	(	(	(	(	bc 0 early: oa: o to o 0 p and n:
14	St: A-St.	St-Cu: A-St: A-Cu.	Fr-St: A-St: A-Cu.	10	9	8	10	9	7	...	...	...	...	...	...	o 0 early: ca: op: bc n:
15	St-Cu: A-St.	St: A-St.	St: St-Cu.	10	10	10	10	9	9	...	...	0	...	...	...	o to o 0 a: o 0 p: op 0 n:
16	St-Cu: Ci-Cu.	St-Cu.	St-Cu: A-St.	6	4	6	8	10	10	...	...	...	...	...	...	bc a: c to op: o 0 n:
17	St: A-St.	St-Cu.	St-Cu: Ci-Cu: Ci.	10	8	8	3	7	2	...	...	...	...	...	...	o 0 early: ca: bc p and n:
18	St: St-Cu.	St: A-St.	St-Cu: A-St: A-Cu.	8	9	10	9	9	10	...	p 0	0	...	...	...	b early: op 0 a: op: op 0 n:
19	St: A-St.	St: St-Cu: A-St.	Fr-St: St: Cu-Nb.	10	10	8	10	6	7	...	0	...	...	...	...	oa and p with p 0 2 T: bc p 0 n:
20	St: Cu-Nb.	Cu: Ci.	Nb: St-Cu.	8	7	7	9	9	10	p 0	...	...	...	p 0	...	cp 0 early: ca: op 0 T < p:
21	St-Cu.	Cu: Ci-Cu.	St-Cu: A-St.	5	2	4	8	9	10	...	...	...	...	...	...	op 0 early: bc a: cp: op 0 n:
22	St: A-St.	St-Cu: A-St.	St: St-Cu.	10	5	9	9	9	9	0	...	...	...	...	...	o 0 early: bc a: op 0 p and n:
23	St: St-Cu.	St: A-St.	St-Cu.	8	7	8	9	7	5	p 0	...	p 0	...	...	...	ca and p with p 0: bc n:
24	Fr-St: St-Cu.	St-Cu: Ci-Cu.	St-Cu: A-St.	3	6	7	10	10	10	...	...	...	...	...	0	b early: bc a: op: o 0 n:
25	St.	St: A-St.	Fr-St: St-Cu.	10	10	10	8	9	3	0	0	...	...	...	...	o 0 a: c or op: b to op 0 n:
26	St-Cu.	St-Cu: Ci-Cu.	St-Cu: A-St: A-Cu.	8	4	8	8	8	9	...	...	...	...	...	...	cp 0 early: bc a: cp: on:
27	St: St-Cu: A-St.	St-Cu: Cu.	St.	10	10	10	10	10	10	...	...	...	0	0	0	0 early: oa: o 0 p: o 0 n:
28	St.	St: St-Cu.	St: St-Cu.	10	10	10	10	10	10	0	...	...	...	...	...	o 0 a: op: o 0 n:
29	St.	St.	St.	10	10	10	10	10	10	0	...	...	0	0	0	0 early: op 0 a: o 0 p and n:
30	St.	St: Ci-Cu.	St-Cu: Ci.	10	10	9	8	3	—	...	...	...	...	...	...	o 0 early: oa: cp: bn:
Mean Cloud Am't				8.5	8.0	8.4	8.3	7.6	7.2							

384. Cahirciveen (Valentia Observatory).

Day.	Cloud Forms.			Cloud Amount (All Forms).						Weather.						Remarks.
	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>	
1	Ci-Cu.	Ci-Cu.	Ci-Cu.	2	2	4	1	1	—	pp	...	...	...	...	0	p early: ba and p: b 0 n:
2	St.	St.	St-Cu.	10	10	10	9	8	9	...	...	...	...	...	0	b 0 early: o 0 a: op: o 0 n:
3	St.	St: St-Cu.	St: St-Cu.	10	9	10	10	10	9	...	...	...	...	...	...	0 early: o all day.
4	St: St-Cu.	St-Cu: A-Cu.	St.	9	9	5	8	10	9	...	...	...	...	...	...	p early: oa: bc p: o 0 n:
5	St: St-Cu.	St-Cu.	St-Cu.	9	7	10	10	10	10	...	...	...	...	...	...	0 early: ca: op and n:
6	St: St-Cu.	St: St-Cu.	St: St-Cu.	9	10	8	8	8	10	...	...	...	...	...	...	oa: cp: o 0 n:
7	St.	St: St-Cu.	St: St-Cu.	10	9	7	10	7	9	...	...	...	...	...	...	0 early: ca and p: on:
8	St-Cu.	St-Cu.	St: St-Cu.	9	8	6	3	7	4	...	(	...	...	...	...	bc a: bp: bc n:
9	—	Cu: St-Cu.	St-Cu.	—	—	4	3	2	—	...	...	...	...	...	...	p early: ba: bc p: bn:
10	—	St-Cu.	St-Cu.	—	—	6	7	2	—	pp	...	...	...	...	...	p early: ba: bc p and n:
11	—	—	St-Cu.	—	—	—	—	1	—	pp	...	...	...	...	...	p early: fine all day.
12	St: St-Cu: A-St.	St-Cu.	St-Cu.	8	8	3	4	4	—	pp	...	...	...	...	...	p early: bc a and p: bn:
13	St-Cu.	St-Cu: A-St.	St-Cu: A-St.	10	10	8	10	10	10	...	...	...	...	...	...	bc early: oa, p and n:
14	St.	St: St-Cu: A-St.	St-Cu.	10	10	8	10	10	7	...	...	...	...	...	...	0 early: oa and p: cn:
15	St-Cu: A-St.	St: St-Cu: A-St.	St: St-Cu: A-St.	10	10	10	10	10	10	...	...	...	...	...	...	p 0 early: oa and p: o 0 n:
16	St-Cu: A-Cu: Ci-St.	St: St-Cu: A-Cu.	St.	8	8	7	10	10	10	...	...	...	...	0	0	0 early: ca: op: o 0 to 0 n:
17	St-Cu.	St.	St.	10	10	10	10	10	10	...	...	0	0	0	0	0 early: oa: o 0 p: on:
18	St.	St-Cu.	St-Cu: Cu: A-St.	10	10	9	8	7	10	...	...	...	...	...	...	0 early: oa: cp: on:
19	St: St-Cu: A-St.	St: A-St.	St.	9	10	10	10	10	10	...	0	0	...	...	0	p 0 early: o 0 all day 0 n:
20	St.	St.	St.	10	10	10	10	10	10	...	0	...	...	...	...	o 0 a: op and n:
21	Cu.	St: St-Cu.	St: St-Cu.	9	7	7	8	10	8	...	...	...	...	...	p 0	o to bc p 0 a: cp 0 p: cn:
22	St-Cu.	St: St-Cu.	St-Cu: Ci-Cu: Ci-St.	10	8	8	8	6	9	p 0	p 0	p 0	...	...	...	op 0 2 early: op 0 a: cp 0 p:
23	St-Cu: A-St.	St: St-Cu: A-Cu.	St: St-Cu.	9	10	7	7	7	9	...	p 0	...	...	...	...	op 0 a: cp: on: [op 0 n:
24	St-Cu: A-St.	St: St-Cu.	St: St-Cu.	9	9	8	8	7	9	...	p 0	...	...	...	...	0 early: op 0 a: cp 0 p: om:
25	St-Cu: A-St.	St-Cu: Ci-Cu.	St: A-St.	3	7	9	10	10	3	...	...	...	...	...	...	cp 0 early: bc a: op 0 p: bn:
26	St.	St-Cu.	St: St-Cu.	10	8	3	7	3	9	...	...	...	...	...	...	0 2 early: bc p 0 a: bc p: p 0 n:
27	St-Cu.	St-Cu: A-Cu.	St: St-Cu: A-St.	10	9	6	8	6	10	p 0	...	...	...	...	p 0	p 0 2 early: cp 0 a: bc p: op 0 n:
28	St.	St.	St.	10	10	10	10	10	10	p 0	p 0	...	...	...	0	p to o 0 a: 0 p: 0 n:
29	St.	St.	St: A-St.	10	10	10	10	10	10	...	0	...	...	...	...	o 0 a: o 0 p: o to bc n:
30	Cu: A-St.	St-Cu: A-Cu.	St: St-Cu: A-St.	9	9	7	6	7	8	...	p 0	...	...	...	...	op 0 a: bc p: cn:
31	St-Cu: A-St.	St-Cu.	St: A-St: A-Cu.	8	8	7	7	10	10	...	...	...	...	...	...	p 0 early: bc a: cp: on:
Mean Cloud Am't				8.1	7.9	7.3	7.7	7.5	7.5							



385. Cahirciveen (Valentia Observatory).

November, 1925.

Table for November 1925 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes mean cloud amount at the bottom.

386. Cahirciveen (Valentia Observatory).

December, 1925.

Table for December 1925 with columns for Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes mean cloud amount and mean annual cloud amount at the bottom.



M.O. 299  
(Richmond)

Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1925

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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RICHMOND (KEW OBSERVATORY)

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LONDON:

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

1927

## 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 .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	5·5
Robinson Cup Anemograph .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	25
Dines Tube Anemograph .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	25

### *Heights in Metres above Ground.*

Thermometer Bulbs .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	3·0
Sunshine Recorder .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	13·3
Robinson Cup Anemograph .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	20
Dines Tube Anemograph .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	20

## 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  $1\frac{1}{2}$  metres higher than that of the surrounding park. 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. The Old Deer Park is mainly open pasture. Round the Observatory a golf course has been laid out. Another open area partly wooded, Syon Park, lies to the north-north-east across the river. Richmond Park is about  $1\frac{1}{2}$  miles ( $2\frac{1}{2}$  km.) to the south-east. General views of the Observatory building and the exposure lawn are to be found in the 1923 volume. For the early history of the Observatory reference may be made to papers by R. H. Scott (Royal Society's Proceedings, Vol. 39 (1885), pp. 37-86), and C. Chree (The Record of the Royal Society, 1897).

Two important events in the history of the Observatory occurred in 1925, and must be mentioned briefly here, the retirement of Dr. Charles Chree, F.R.S., and the installation of the Galitzin seismographs in place of the old magnetographs.

Dr. Chree had been Superintendent of the Observatory since 1893. His valuable researches cover a large field, and in his hands the Observatory records have been used to the best advantage.

The operation of the magnetographs having been seriously affected by the growth of electric traction in the neighbourhood, the records were discontinued at the end of 1924. The instruments were transferred to Eskdalemuir in 1925. In the same month the Galitzin seismographs, which were provided in 1910 by the generosity of Professor (now Sir Arthur) Schuster, were brought from Eskdalemuir. In preparation for them a large concrete pillar standing on the gravel 1·35 m. below the level of the floor, was erected in the old magnetograph room. Accommodation for the photographic recording apparatus was provided in an adjacent room. The seismographs were in continuous operation by the end of the year.

## 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 (pp. 9-16). 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). 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. A comparison, made in 1925, confirmed the correction + 0.2 mb. (+ .006 mercury inch) which has been applied for many years. Comparisons are made on the assumption that the value of the acceleration due to gravity is  $g = 981.199 \text{ cm/sec}^2$ . This is the value given by pendulum observations.† The departure from the value given for the latitude by Helmert's formula is insignificant. On a few occasions when a loss of trace occurred, the missing hourly values were derived from the Dines Float Barograph.\* There were 7 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 raingauge 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.

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\* For a description of this instrument see *Observatories' Year Book*, 1923, p. 94.

† A comparison between the values of "g" at Cambridge and Kew Observatory was made during the year 1925 by Sir G. 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 Kuhnen and Furtwangler is adopted as this standard of reference.

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 1915 give corrections to the nearest  $0.05^{\circ}$  C., the largest being  $0.10^{\circ}$ . The thermometers are tested each January in ice. According to tests made in January, 1925, there was no indication of any change of zero.

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  $0.3a$  from these observations. The larger departures refer to occasions when temperature is oscillating or changing rapidly.

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  $273a$ . 284 hours had thus to be dealt with during the year. Humidity is determined from the dry and wet bulb readings by the table, based on Glaisher's factors, published in the *Computer's Handbook*. The photographic thermograph was out of action from October 28th to November 30th, whilst the screen was being repaired and painted. During this period use was made of the records from a thermograph mounted in a large screen of the Stevenson pattern on the north wall to the east of the entrance. This thermograph by Negretti & Zambra is provided with forced ventilation by electric fan. The differences between temperatures recorded in the two screens are generally small.

It may be noted that during 1925, 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  $1\frac{1}{2}$ 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.

*Solar Radiation.*—Observations are made with an Ångström pyrliometer, 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 445-456 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,  $1mw. \text{ per sq. cm.} = 0.01435 \text{ gramme-calorie per sq. cm. per minute.}$  The vertical component, i.e. the direct radiation received per square centimetre of a horizontal surface, is also given.

The Ångström instruments in use are by Rose, Stockholm. No. 100 was in use throughout the year. The older instrument No. 24 was kept in reserve. 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. is required.\*

*Wind Speed and Direction.*—The Robinson cup anemograph from which the results in the present volume are mainly derived is exposed on the roof of the Observatory. This instrument has 9 inch cups; the radius of the circle described by their centres is 24 inches. The horizontal arms are 17.8 mm. wide; their vertical thickness is 4.6 mm. in the middle and 2.5 mm. at the edges. The oblique stays are rectangular in section, the dimensions being 6.3 mm. (facing the wind) and 3.8 mm. (facing upwards). The height of the cups above the lawn is 20 m. There are trees in the neighbourhood reaching greater heights. Those along the river to the West of the Observatory and about 280 m. away average 25 m.

Direction is not tabulated when the speed of the wind averages less than 1.6 metres per second. Data missing owing to imperfections of the trace or other causes are replaced by results from the Dines tube anemograph, the head of which is approximately at the same height as the Robinson anemograph cups. 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. In June, 1925, it was noticed that the wind speed given by the pressure tube anemograph was rather less than that given by the Robinson cups. Calibration with a pressure gauge shewed that the adjustment of the pressure-tube instrument was not in accordance with the prescribed formula. From September 20th, 1925, a correction of + 0.5 m/s was applied to all readings of the charts from 0.5 m/s upwards (readings 0.1 to 0.4 m/s being doubled). With this correction the differences between the two anemographs were almost eliminated.

*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. As will be seen from Table 473 the surface of the underground water surpassed this level at the beginning of the year when the park was flooded.

*Minimum Temperature on the Grass.*—The grass minimum thermometer is set at 18h and read at 9h on the succeeding day, the reading being assigned to the day of reading.

This thermometer has a spherical bulb, diameter 17 mm. 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.

**Identification Numbers of Instruments in use in 1925.**

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. 1425
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. 23005
Photo-thermograph	..	..	..	..	..	No number
Photo-barograph	..	..	..	..	..	"
Robinson Cup Anemograph	..	..	..	..	..	"

\* R. E. Watson. *Geophysical Memoir*, No. 21, 1923.

### Notes on the Meteorological Tables.

*The Weather of 1925.*—The most memorable feature of the weather of the year was the exceptionally dry June. Less rain fell during the month than in any other calendar month since the continuous record was commenced at this observatory in 1856. Four days of continuous frost at the end of November provided an opportunity for skating, the first enjoyed in the neighbourhood of London for some years.

*Pressure.*—During the year pressure at station level ranged between 966.0 mb. and 1040.6 mb. These values occurred on December 20th and January 19th respectively. The extreme values of the mean pressure for the calendar day were 972.8 mb. and 1039.2 mb. on the same dates. Another low mean value occurred on February 26th, 972.9 mb. The low pressure of December 20th was spread over a large area on either side of the English Channel. There was a striking difference of temperature between the polar and equatorial sides of the trough. At Kew there was prolonged light rain, 12 hours of rain yielding only 7 mm. On February 26th conditions were different, there was squally weather at Kew whilst a "dying" cyclone passed slowly across the north of England. The high pressure of January 19th was associated with an anticyclone which covered most of continental Europe as well as the British Isles. There was fog all day at Kew.

*Pressure (Diurnal Variation).*—In accordance with the precedent of the last three years the first four harmonic components have been computed for each month. The results are tabulated in Table A.

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.

As is well known for a single month the first harmonic component departs erratically from the normal value\* computed from averages covering many years. The passage of a depression across the country is recorded in the pressure tabulations as a rise and fall of perhaps 30 millibars and affects the average hourly values for the month to the extent of a millibar. The normal values of the amplitude of the first component are comparatively large in summer, about .3 millibar, and very small in winter. The highest value found in 1925, .520 millibar in June is 75 per cent. above the normal for the month. This is in accordance with the large range of temperature in this month, which, as has been mentioned above, was exceptionally fine. For the summer months the phases of the first component are fairly consistent; Kew being an inland station pressure tends to be high in the early morning about sunrise and lowest in the early afternoon. The phases for the winter half year are promiscuous. On the other hand, the amplitudes and phases of the higher components are all comparatively close to their normal values. Thus the maximum amplitude of the second component occurs as it should in an equinoctial month, September. The amplitude is .456 mb as compared with a normal .399 mb; the phase is  $153^\circ$  as compared with  $151^\circ$ . The maximum of the third component is in December .212 mb, the normal being .146 mb, the phase  $357^\circ$  instead of  $353^\circ$ . For the fourth component the maximum is also in December .089 mb, the normal for that month being .073 mb. The phase is  $181^\circ$  instead of  $205^\circ$ , the difference being equivalent to 24 minutes of time.

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\* The normals quoted refer to the period 1871-1915.



TABLE A.

Diurnal Variation of Barometric Pressure. Fourier Coefficients.  $\Sigma c \sin (nt + \alpha)$ .  
 Richmond (Kew Observatory), Longitude  $0^{\circ} 19' W$ . 1925. Local Mean Time.

Month or Season.	$c_1$	$\alpha_1$	$c_2$	$\alpha_2$	$c_3$	$\alpha_3$	$c_4$	$\alpha_4$
	mb.	°	mb.	°	mb.	°	mb.	°
January .. .. .	.218	294	.343	147	.161	329	.077	178
February .. .. .	.078	280	.454	126	.156	7	.033	61
March .. .. .	.028	31	.421	147	.062	334	.053	42
April .. .. .	.140	35	.378	155	.036	149	.028	335
May .. .. .	.036	124	.352	159	.106	161	.036	316
June .. .. .	.520	17	.290	138	.114	155	.017	181
July .. .. .	.365	59	.322	139	.112	153	.023	302
August .. .. .	.060	22	.326	141	.066	161	.056	282
September .. .. .	.242	12	.456	153	.023	266	.055	334
October .. .. .	.029	129	.428	153	.099	350	.025	128
November .. .. .	.434	145	.322	138	.158	354	.059	205
December .. .. .	.222	299	.207	121	.212	357	.089	181
Arithmetic Mean .. .. .	.198	..	.358	..	.109	..	.046	..
Year .. .. .	.087	28	.354	144	.035	3	.007	215
Winter .. .. .	.066	236	.326	134	.167	352	.051	178
Equinox .. .. .	.099	25	.420	152	.033	337	.025	11
Summer .. .. .	.222	36	.319	145	.099	157	.026	288

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

*Temperature.*—The year opened with mild weather. March was actually colder on the average than either January or February. June, though fine, was not exceptionally hot, the excess of the average temperature above normal was only  $1^{\circ}C$ . The highest temperatures were recorded in July. There was a long spell of cold weather from November 8th to December 25th. On only one day during this spell was the mean temperature for the 24 hours above  $280a$  ( $45^{\circ}F$ ).

The coldest weather occurred early in December under the influence of a continental anticyclone, the cold air coming from E. and S.E. The lowest temperature recorded in the North-wall screen was  $267.8a$ . ( $22.6^{\circ}F$ .) early on the 6th. The lowest maximum in the screen was  $273.1a$ . ( $32.2^{\circ}F$ .) on the 4th. That day had the lowest mean for the year  $271.1a$ . ( $28.6^{\circ}F$ ).

The highest temperature was reached on July 22nd  $303.3a$ . ( $86.5^{\circ}F$ .), and was the prelude to a great thunderstorm. During the preceding night temperature did not fall below  $291.2a$ . ( $64.8^{\circ}F$ .); the minimum  $290.1a$ . for the calendar day was recorded at 23 h. A noteworthy high temperature was reached on June 11th,  $301.7a$ . ( $83.7^{\circ}F$ .). On this occasion the rise in temperature, under the influence of continuous sunshine and little wind, was  $17.4^{\circ}C$ . between sunrise and the middle of the afternoon.

*Temperature (Diurnal Variation).*—The Table of diurnal inequalities of temperature exhibits the normal characteristics, the minimum for the day occurring at sunrise, the maximum in the late afternoon. The case of February is somewhat anomalous, the minimum being as early as 3 h. This is to be attributed to the rise of temperature during the later part of the night which occurred on two or three occasions.\*

\* The explanation of this phenomenon appears to be that under a clear sky the surface air cools and fog is formed and that, as the fog extends to greater heights, the radiation from the ground becomes less effective and temperature rises.

Harmonic analysis of the diurnal variation of temperature shows the first component as the dominant one in all months of the year; the second component is very small in the summer months when the interval between the daily maxima and minima approximates to 12 hours. In the year under review the most striking departure from the normal was in the case of June. This was a very sunny month and the daily range of temperature was high. The amplitude of the first harmonic component was 4.61a or 25 per cent. above normal. On the other hand, the lack of sunshine in August and September was responsible for considerable reductions in the amplitudes of the leading components.

TABLE B.  
Diurnal Variation of Temperature. Fourier Coefficients.  $\Sigma c \sin (nt + \alpha)$ .  
Richmond (Kew Observatory), Longitude  $0^\circ 19' W$ . 1925. Local Mean Time.

Month or Season.	$c_1$	$\alpha_1$	$c_2$	$\alpha_2$	$c_3$	$\alpha_3$	$c_4$	$\alpha_4$
	a.	°	a.	°	a.	°	a.	°
January .. .. .	1.223	218	0.542	35	0.148	199	0.067	314
February .. .. .	1.522	225	0.452	35	0.083	201	0.054	156
March .. .. .	2.220	221	0.568	41	0.053	305	0.067	215
April .. .. .	3.030	228	0.437	63	0.211	23	0.051	244
May .. .. .	3.688	228	0.264	60	0.272	28	0.098	70
June .. .. .	4.613	220	0.025	65	0.313	29	0.111	19
July .. .. .	3.979	222	0.157	6	0.218	12	0.090	82
August .. .. .	3.059	228	0.215	40	0.350	21	0.048	269
September .. .. .	3.037	231	0.576	58	0.245	10	0.178	184
October .. .. .	2.384	224	0.809	47	0.153	234	0.047	199
November .. .. .	1.444	229	0.541	44	0.136	216	0.033	96
December .. .. .	0.938	225	0.413	34	0.235	227	0.035	113
Arithmetic Mean .. .. .	2.595	..	0.417	..	0.201	..	0.073	..
Year .. .. .	2.5.8	225	0.408	44	0.078	3	0.017	149
Winter .. .. .	1.278	224	0.486	37	0.147	214	0.011	116
Equinox .. .. .	2.663	227	0.592	51	0.095	354	0.079	200
Summer .. .. .	3.829	224	0.155	41	0.286	23	0.057	48

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

*Humidity*.—The month with the lowest relative humidity was June. On June 9th the relative humidity in the middle of the day was estimated to be as low as 33 per cent. On June 10th the average relative humidity for the whole day was 53 per cent. and for the complete month of June the average was only 67 per cent. The highest mean vapour pressure, 20.8 mb., occurred on July 22nd. The relative humidity fell to 45 per cent. in the middle of the afternoon, but after the thunderstorm in the evening the air was saturated. The lowest vapour pressure, 4.3 mb., occurred in frosty weather on November 28th, the mean relative humidity for the day being only 75 per cent. In January the lowest vapour pressure of the month, 5.6 mb., occurred paradoxically with the highest relative humidity, nearly 100 per cent., fog and frost occurring together.

The diurnal variation of relative humidity has always the same general characteristics, but it is of some interest to notice that the monthly means of hourly values do not run "smoothly." It has been found that this is mostly due to the irregularity of occurrence of rain; a shower causes a sudden rise in humidity and the effect is not averaged out in a single month.

The diurnal variation of vapour pressure at Kew is in all months of the simple type with the minimum at sunrise, and very slight changes after the dew has disappeared in the morning.

The figures for the year under review provide instances of a small drop of vapour pressure in the middle of the afternoon and a subsequent rise. These instances are in the monthly means for March and July. In June, the exceptionally fine month, the rise of vapour pressure continued though very slowly from the early morning up to 21h.

*Rainfall.*—The rainfall for the year as a whole was in no way abnormal. Interest centres in the exceptionally low rainfall of June. The total rainfall for that month was only 1.1 mm. Of this amount, 1.0 mm. fell on one day, June 24th, the other 0.1 mm. represents drizzle on the evening of the 26th. The record of rainfall at the Observatory is continuous from 1856 and such a small total has never been measured previously in one calendar month. The smallest totals hitherto were 1.3 mm. in April, 1912, 2.3 mm. in February, 1891, and again in February, 1895, 2.5 mm. in April, 1893. There were dry Junes in 1921 and 1923, as well as in 1895; in each of the three cases the total was about 6 mm.

The heaviest fall credited to a single day in 1925 was 47 mm., which occurred on July 22nd, most of it in a prolonged thunderstorm.\*

In reckoning the duration of rainfall it is the rule to ignore the time in which the rate of fall is less than 0.1 mm. per hour. By this criterion the day with the longest duration was February 13th with 14.7 hours. There were two other days with more than 12 hours. With regard to Tables 433, 444 it should be mentioned that in cases of slight precipitation spread out over several hours, amounts of 0.1 mm. have been credited to certain hours at equal intervals whilst the appropriate symbol for dew, hoarfrost, or wet fog is shown for the other hours.†

Snow or sleet fell on fifteen days, two being in February, four in March, the others in the last two months of the year. "Snow lying" at 7h was registered on two occasions, but the depth was never considerable. Snow which fell on November 27th accumulated to about 2 cm. and persisted for two days. No deeper deposit was recorded during the year.

*Sunshine.*—The average daily duration of bright sunshine (as recorded by the Campbell-Stokes instrument) was 3.98 hours or 0.06 hours below the normal. June was exceptionally bright. The total duration of sunshine, 271 hours (just over 9 hours per day), is the highest on record for June, though higher totals have been reached in May (315 hours in 1909 and 291 hours in 1922), and in July (334 hours in 1911, 291 hours in 1900, and 281 hours in 1887). The longest duration, 14.7 hours, occurred on June 4th, the percentage of the time the sun was above the horizon being 90 on that day. There were 65 sunless days in the year (including 18 in January and 14 in December), 47 days with more than 9 hours (including 19 in June), and 16 days with more than 12 hours.

*Solar Radiation.*—The most powerful sunshine measured was on June 1st, 89.5 milliwatts per square centimetre. The "Solar constant" being 135 mw/cm<sup>2</sup> the proportion of sunshine passing completely through the atmosphere on this occasion was 66 per cent.

*Wind.*—February 11th with an average speed of 10.6 metres per second was the most windy day of the year, but January 1st had the "highest hourly wind," 15.1 m/s. and the highest gust 26 m/s. At the other end of the scale were two days, January 10th and 11th, each credited with an average of 0.1 m/s. From 18h. on the 10th to 22h. on the 11th the total "run" of the anemometer cups was only one-third of a mile. The persistence of calms or exceedingly slight air currents during this long period is confirmed by the P.T. anemograms. Fog and frost prevailed at the time.

\* This storm covered a very large area stretching from Kent to Cheshire (see *British Rainfall*, 1925)

† For explanation See General Introduction, p. 14.

The average winds for the individual months of 1925 varied considerably from 4.6 m/s. in February to 2.6 m/s. in August.

The hourly means for the whole year will be found at the foot of the December Table (instead of being reproduced, as in the 1922 and 1923 year books in the text). The lowest and highest hourly means, 2.6 m/s at 2h and 4.6 m/s at 13h, are both in good agreement with the normal values, computed for 1881-1915, 2.58 m/s and 4.52 m/s.

*Earth Temperatures.*—With regard to the table of earth temperatures it may be noted that at the beginning of the year the tubes containing the thermometers must have been reached by the underground water. The level of the underground water (Table 473) was above the bottom of the 122 cm. tube for a week. During this week the temperature recorded in this tube remained quite steady.

The annual means of the readings at the two depths were (30 cm.) 283.1a and (122 cm.) 283.6a. These means refer to 9h, a time at which the temperature at 30 cm is below the mean for the day. In fact it is known from thermograph records\* that the correction required to get the mean for the day at this depth is on the average + 0.2a. With this correction applied the difference between the annual means at 30 cm. and 122 cm. is reduced to 0.3a.

*Grass Minimum Temperatures.*—The mean of the monthly means of "grass minimum" temperature for the year 1925 was 276.3a. The "grass minimum" readings were lower in March than in January and February. The lowest reading of the year, 262.7a. (13.5°F.) occurred on March 13th.

*Level of Underground Water.*—In Table 473 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.

At the beginning of the year the water level was high as the result of the flooding of the park by water which had overflowed the embankment along the Thames on December 28th, 1924. The water in the park subsided gradually, and there was a steady fall in the level of the underground water. The water was at its lowest very late in the year, on October 20th. The insignificant effect of the thunderstorm of July 22nd may be noticed.

*Diary of Cloud and Weather.*—As explained in the footnotes, observations are lacking at 15h on Sundays and a few other days. The last line in each monthly table gives the mean amount of cloud for each of the six hours of observation. The following mean data are derived from these:—

*Mean Amount of Cloud from Six Observation Hours.*

Month	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Cloud ...	7.8	7.3	7.1	7.1	6.4	5.0	6.8	7.4	6.8	7.2	5.9	6.6	6.8

*Mean Amount of Cloud for the Year at the Six Observation Hours.*

Hour ...	7h	9h	13h	15h	18h	21h
Cloud ...	6.9	6.8	7.6	7.4	6.7	5.6

\* A thermograph with two bulbs was installed in 1923, the depth of one bulb being 10 cm., that of the other 30 cm.

The use of the symbols  $\equiv$  and  $\infty$  in the weather columns of Tables 469-480 is governed as far as daylight observations are concerned by the following conventions, which are in accordance with the general practice adopted by the Meteorological Office.\* If the Orange Tree Inn, 1,000 metres S.E. of the Observatory cannot be seen, there is fog  $\equiv$ . If trees 200 metres away cannot be seen, there is thick fog  $\equiv^2$ . If the Orange Tree Inn can be seen but the chimney of the brewery at Mortlake, 4 kilometres away, if visible at all is not very clear, there is either mist  $\equiv^0$  or haze $\alpha$ , the distinction being made according to the relative humidity at the Observatory. On occasions when the humidity is 80 per cent. or above, the obscurity is attributed to mist; when the humidity is below that limit, to haze.

The symbols are used at night to indicate as nearly as may be the same degrees of atmospheric obscurity.

### 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 487.

In the spring of 1924 there was a change in the surroundings of the site on the lawn where observations are taken; previously there had been fruit bushes and vegetables on either side of the grass plot. The ground was dug up in the spring and grass was sown in May, 1924. There is no indication in the run of the exposure factors that this had any effect.

There was, however, a notable change in the ratio between August and October, 1924. This change persisted, the average value of the ratio, which had been 2.15 in 1923, rose to 2.77 in 1925. It was shown eventually that the change could be accounted for by the erection in September, 1924, of an aerial for the reception of time-signals by wireless telegraphy. This affected the exposure of the electrograph but not that of the apparatus for absolute observations. There is therefore no reason to suspect the computed potential gradient values.

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 Cambridge and Paul potentiometer, a high tension dry battery being used as a source of potential difference. The battery in use shewed signs of marked deterioration towards the end of the year. It was replaced early in 1926.

\* The Meteorological Office convention as to mist and haze was altered in April, 1925 (see *The Observers' Handbook*, 1926), but for the present tables the earlier rules have been followed up to the end of the year.

† 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.

The data appearing in Table 486 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 exceeding 3 hours. 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 mean character figure for 1925 was 0.63, the same as that for 1924, and therefore appreciably above the average for the previous 14 years, 0.607.

Table 487 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. Blanks indicate that the trace was in some way defective. 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 487 are + 1160 v/m at 3h on December 4th and — 905 v/m at 21h on April 5th. The former value is representative of foggy conditions; on this particular occasion the fog developed in the afternoon of the 3rd and persisted throughout the 4th with a high potential gradient all day. The extreme negative potential gradient of April 5th was associated with light rain following drizzle. The potential gradient was persistently negative and free from large oscillations from 15h. until after midnight, during which time light rain or drizzle was falling continuously.

Of the two sets of mean monthly values at 3h, 9h, 15h and 21h given in Table 487 at the foot of each month's data, the first set (*a*) represents the arithmetic means of all the positive potentials 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 believed that the values (*a*) may be expected to give approximately the true monthly mean from all days when negative potentials are excluded, while the values (*b*) may be expected to give approximately the true monthly mean when negative potentials are included. But a reservation is necessary in both cases, for the highly oscillatory occasions such as are met with during thunderstorms have been omitted, and this omission may have a sensible effect.

If the monthly means in Tables 487 and 488 be compared, it will be found that the quiet day mean is the highest in nine months out of the twelve. In some of the nine months its excess over the mean (*a*)—which generally exceeds the mean (*b*)—is considerable. For the year as a whole, allowing equal weight to the 12 months, the quiet day mean, the mean (*a*), and the mean (*b*) are respectively 326 v/m, 301 v/m, and 283 v/m. In each case the values are very similar to those for 1924, which were 329 v/m, 300 v/m and 283 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.\*

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\* Estimates for the years 1898–1909 are given by Chree, *Phil. Trans.* A (1915) p. 141. The change of site of the electrogram in 1915 is discussed in *Hourly Values*, 1916.

1910	310 v/m	1916	367 v/m	1922	318 v/m
11	301 v/m	17	354 v/m	23	318 v/m
12	300 v/m	18	346 v/m	24	329 v/m
13	335 v/m	19	331 v/m	25	326 v/m
14	345 v/m	20	315 v/m		
15	354 v/m	21	281 v/m		

The average for the 16 years is 327 volts per metre.

The low minimum of 1921 was probably to be attributed in part to the exceptional atmospheric conditions prevailing during the coal strike of that year. Apart from this abnormality a smooth change of potential gradient is to be noticed. In fact, the figures have been quoted\* by Dr. Bauer as evidence for a connection between atmospheric electricity and solar activity.

The diurnal inequalities and the mean monthly and annual values in Table 488 are based on the curves of quiet days selected from those entirely free from negative potential. 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 February, April and December it was necessary to include several 24-hour periods which did not commence at midnight.

Except in these cases the non-cyclic change is given explicitly in Table 488, 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 19h, 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	1916	20	4	151	1922	20	4	144
1911	9	4	154	1917	20	4	154	1923	9	4	160
1912	9	4	149	1918	20	2	139	1924	20	4	133
1913	19	3, 4	160	1919	8	4	124	1925	19	3	129
1914	20	3	169	1920	9	3	122				
1915	19	5	173	1921	20	3, 4	132				

It will be seen that the range has been considerably lower in most recent years than it was in the years 1911 to 1917.

If the inequalities for the year and the seasons are compared with the corresponding inequalities for atmospheric pollution given in Table 490, a remarkably close similarity will be noticed in the hours of occurrence of the principal maxima and minima. The main outstanding difference occurs in the summer months, when the prominent principal minimum of pollution is in the afternoon whereas that of the potential gradient is in the early morning. It should be borne in mind that the same days have not been used in obtaining these inequalities.

*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 universal electrometer.† For calculating the conductivity at 15h, four observations, each giving the leakage from a charged plate in 5 minutes, are averaged. The product of the conductivity so determined and the potential gradient at 15h (as

\* Washington, Carnegie Institution. Researches of the Dept. of Terr. Mag., Vol. V., pp. 361-384.  
 † *Proceedings of the Cambridge Philosophical Society*, Vol. 13, p. 184 (1906).

given in Table 486) 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 two-fifths the days of the year 1925.

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 0.34 in December to 1.18 in May in terms of the unit  $1 \times 10^{-16}$  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 0.78. The mean derived directly from the 144 observations is 0.78. 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 about  $2 \times 10^{-16}$  amperes per square centimetre.

*Ionic Charges.*—Table 486 also gives the volume-charges carried by such positive and negative ions (including all of the more mobile type) as are caught by the Ebert apparatus.\* The observations extend over some 20 minutes near 15h, being simultaneous with the experiments with the Wilson electrometer.

Normally, two Ebert instruments are in use, one charged positively, the other negatively, the signs alternating from day to day.

During the first five months of the year only one instrument was used, No. 2965, as the other No. 3327 was being fitted with new fibres by the makers. No. 3327 was returned in May, and both were in use during June, when the clockwork of No. 2965 broke down. Both instruments were again in use during November and December. During the months when only one instrument was available, observations of positive and negative ionization were made on alternate occasions.

In interpreting the observations it is to be borne in mind that even in pure mountain air the greater part of the electric charge is carried by the sluggish "Langevin" ions. In less pure air a still higher proportion of the ions is immobilised and there is a decrease in the number of the small ions, i.e., of ions such as are caught by the Ebert apparatus and are effective in producing the conductivity of the atmosphere.

As is usual at Kew the highest values of the measured ionization occurred during the summer half of the year. Positive ionization exceeding  $1 \times 10^{-16}$  coulomb per c.c. occurred on days in June and August. The negative ionization exceeded the same limit on August 21st. In foggy weather the number of small ions is very small and uncertain. The lowest ionization tabulated occurred on February 16th and June 19th,  $-0.13 \times 10^{-16}$  coulomb per c.c. in each case. The averages for the year were +.51 and  $-0.42 \times 10^{-16}$  coulomb per c.c. According to Millikan's experiments† the ionic charge is  $15.9 \times 10^{-20}$  coulomb, so that these averages correspond respectively with 320 positive and 265 negative ions per c.c. These averages are much lower than those obtained by observers in other countries. According to Bauer and Swann‡ the means for the principal observations reported at land stations before 1917 were 737 positive and 668 negative ions per c.c.

\* *Physikalische Zeitschrift*, Vol. 8, No. 8, p. 246 (1907).

† *Phil. Mag.* (6) 34 (1917) 3.

‡ Washington, Carnegie Institution. *Researches Dept. of Terr. Mag.*, Vol. III (1917) p. 811.



## ATMOSPHERIC POLLUTION.

The Owens atmospheric pollution recorder or air filter No. 1\* is normally situated in the Clinical House, and the air it samples is about  $1\frac{1}{2}$ m. above that of the adjacent ground. From May 28th to September 28th and from October 2nd to the end of the year it was housed in the "clock room," the air being drawn into the instrument from a point outside at the same level as at the original site. 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 filter paper through which a measured volume of air has been drawn. Shade number 1 answers to 0.32 milligrams per cubic metre, according to Mr. J. G. Clark's determinations.†

Table 489 gives mean hourly values derived from all the days of the month for which complete records were obtained. There were 317 such days in the year. The highest and lowest of these hourly values are in heavy type.

Table 490 gives diurnal inequalities derived from the data in Table 489 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.

Record was never entirely lacking for a single day, but for the greater part of a good many other days it was owing to defective behaviour of the apparatus. Of the days of complete record January 11th was the dirtiest, the mean amount of pollution from the hourly values being 2.3 milligrams per cubic metre. The day was foggy throughout, being the middle day of three days of continuous fog. The fog became very dense in the late evening of the 11th, and the pollution attained a maximum value of 6.4 milligrams per cubic metre at 20h. This was the highest hourly value in the year.

The winter months of 1925 were equal in dirtiness with those of 1924, but the summer months were much cleaner.

Allowing equal weight to each month the mean value computed for the year 1925 was .263 milligrams per cubic metre, as compared with .323 in 1924, .305 in 1923, .394 in 1922 and .307 in 1921. In any discussion of these mean values it should be borne in mind that at Kew Observatory the great majority of estimates are shade 0 or shade 1. To discriminate between these two shades is difficult and the decision depends on the "personal equation" of the observer. Some change in standard from year to year is inevitable.

The nature of the diurnal variation is most easily recognised in Table 490. 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 summer the principal maximum is in the forenoon, the principal minimum in the early afternoon. In winter, on the other hand, the greatest pollution is recorded in the evening, the least in the early hours of the morning.

## SEISMOLOGY.

Table C, shown below, gives a résumé of the results obtained during the period January 1st to June 17th from the Milne seismograph (No. 9) in the basement.‡ The boom pointed north and south, so the instrument indicated movements of the ground in the east-west direction. Observations to determine the sensitiveness

\* A description of the instrument is given in the *Report of the Advisory Committee for Atmospheric Pollution*. 4th Report, 1917-1918 (p. 20).

† London, M.O. *Report of the Advisory Committee for Atmospheric Pollution*. 3rd Report, 1916-1917 (p. 20).

‡ The Milne instrument was removed in June, 1925, the room it occupied being required for the recording apparatus of the Galitzine seismographs.

made on December 5th, 1924, and May 8th, 1925, gave results in close agreement, the mean value found for the angle of tilt answering to 1 mm. ordinate on the trace being 0.55". Observations made on the oscillation period on these three occasions gave a mean of 17.2 seconds. In an instrument of this type it is difficult, if not impossible, to discriminate between the different kinds of waves, and there is often considerable uncertainty as to the time of commencement. Thus the information given in Table C is confined to the time of the largest movement and its amplitude. Numerical measurements are not given if the measured amplitude is less than 1 mm. The letters *a*, *b*, *c* denote amplitudes on an increasing scale, *a* representing an amplitude not exceeding 0.2 mm., *b* an amplitude of at least 0.2 mm., but less than 0.5 mm., and *c* an amplitude of at least 0.5 mm., but less than 1.0 mm. The amplitude is partly determined by the approach in the period of the earthquake wave to the natural period of the boom, but a large amplitude is never experienced unless the earthquake has been a really considerable one.

The greatest amplitude recorded during the period, on March 1st, was due to an earthquake near Quebec. The disturbance of April 16th originated in Formosa.

The Milne seismograph was put out of action on June 18th, when preparations for the installation of the Galitzin seismographs from Eskdalemuir were begun. Trials of the latter instruments were made from October 15th to the end of the year. They have been in regular operation since January 1st, 1926.

TABLE C.—SEISMOLOGICAL DIARY.

Richmond (Kew Observatory).

Times G.M.T.

1925.

Date.	Maximum.		Date.	Maximum.		Date.	Maximum.		Date.	Maximum.		Date.	Maximum.		
	Time.	Amp.		Time.	Amp.		Time.	Amp.		Time.	Amp.		Time.	Amp.	
	h. m.	mm.		h. m.	mm.		h. m.	mm.		h. m.	mm.		h. m.	mm.	
Jan. 9	18 4	<i>b</i>	Feb. 1	6 21	<i>c</i>	Mar. 1	2 45	3.9	April 5	3 24	<i>b</i>	May 3	18 33	1.3	
18	13 3	2.9	2	20 37	1.4	1	13 20	<i>b</i>	5	22 33	<i>a</i>	4	0 3	1.2	
26	19 53	<i>c</i>	9	15 51	<i>c</i>	16	15 29	1.5	11	11 46	1.2	5	11 14	1.4	
28	4 54	1.3	13	15 26	<i>b</i>	22	10 43*	1.5	16	20 46*	3.7	6	0 32	<i>c</i>	
28	11 47	<i>b</i>	16	18 33	<i>a</i>	29	22 1	<i>c</i>	23	0 18	<i>a</i>	7	15 35	<i>b</i>	
			20	1 53	} <i>c</i>							15	13 1	<i>a</i>	
			24	0 35		<i>c</i>							19	6 25	<i>c</i>
												20	12 6	<i>a</i>	
												22	10 42	<i>a</i>	
												23	3 00	1.4	
												24	2 23	<i>b</i>	
												25	4 46	<i>b</i>	
												25	17 12	<i>b</i>	
												26	16 35	<i>a</i>	
												27	2 54	<i>a</i>	
												28	6 59	<i>b</i>	
													Instrument dismantled from June 18.		

\* Times uncertain.

Readings in millibars at exact hours, Greenwich Mean Time.

387. Richmond (Kew Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 10.4 metres.

January, 1925.

Table for Richmond (Kew Observatory) in January 1925. Columns include Day, Station Level (1-31), and Mean (Station level/Sea level). Rows show hourly pressure readings in millibars.

388. Richmond (Kew Observatory) : H<sub>b</sub> = 10.4 metres.

February, 1925.

Table for Richmond (Kew Observatory) in February 1925. Columns include Day, 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.

389. Richmond (Kew Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 10.4 metres.

March, 1925.

Table for Richmond (Kew Observatory) in March 1925. Columns include Day (1-31), Station Level (1-31), and Mean (Station level/Sea level). Data is presented in millibar format with decimal points.

390. Richmond (Kew Observatory) : H<sub>b</sub> = 10.4 metres.

April, 1925.

Table for Richmond (Kew Observatory) in April 1925. Columns include Day (1-30), Station Level (1-30), and Mean (Station level/Sea level). Data is presented in millibar format with decimal points.

\* 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.

391. Richmond (Kew Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 10.4 metres.

May, 1925.

Table for Richmond (Kew Observatory) in May 1925. Columns include Day (1-31), Station Level (1-31), and Mean (Station level). Rows show hourly pressure readings in millibars.

392. Richmond (Kew Observatory) : H<sub>b</sub> = 10.4 metres.

June, 1925.

Table for Richmond (Kew Observatory) in June 1925. Columns include Day (1-30), Station Level (1-30), Mean (Station level), Mean (Sea level), and G.M.T. 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.

395. Richmond (Kew Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 10.4 metres.

September, 1925.

Table for Richmond (Kew Observatory) in September 1925. Columns: Day (1-30), Station Level (1-30), Mean (Station level), Mean (Sea level). Rows: Hourly pressure readings in millibars.

396. Richmond (Kew Observatory) : H<sub>b</sub> = 10.4 metres.

October, 1925.

Table for Richmond (Kew Observatory) in October 1925. Columns: Day (1-31), Station Level (1-31), Mean (Station level), Mean (Sea level), G.M.T. (1-24, Mean). Rows: 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 mean.

Readings in millibars at exact hours, Greenwich Mean Time.

397. Richmond (Kew Observatory) : H<sub>b</sub> (height of barometer cistern above M.S.L.) = 10.4 metres.

November, 1925.

Table with 25 columns (Day 1-24, Mean) and 31 rows (Station Level 1-30, Mean). Data includes hourly pressure readings in millibars for Richmond (Kew Observatory) in November 1925.

398. Richmond (Kew Observatory) : H<sub>b</sub> = 10.4 metres.

December, 1925.

Table with 25 columns (Day 1-24, Mean) and 31 rows (Station Level 1-30, Mean). Data includes hourly pressure readings in millibars for Richmond (Kew Observatory) in December 1925.

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 degrees absolute at exact hours, Greenwich Mean Time.

402. Richmond (Kew Observatory) : North Wall Screen : ht (height of thermometer bulb above the ground) = 3.0 metres.

January, 1925.

Table with 25 columns (Day 1-24, Mean) and 31 rows (Day 1-31). Each cell contains a temperature reading in degrees absolute. The 'Mean' row at the bottom shows the average for each day.

403. Richmond (Kew Observatory) : North Wall Screen : ht = 3.0 metres.

February, 1925.

Table with 25 columns (Day 1-24, Mean) and 28 rows (Day 1-28). Each cell contains a temperature reading in degrees absolute. The 'Mean' row at the bottom shows the average for each day. A 'G.M.T.' row at the very bottom indicates the corresponding Greenwich Mean Time for each day.

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.

404. Richmond (Kew Observatory) : North Wall Screen : ht (height of thermometer bulb above the ground) = 3.0 metres.

March, 1925.

Table with 25 columns (Day 1-25) and 26 rows (Mean, G.M.T. 1-25). Columns 1-25 contain temperature readings in degrees absolute. Row 1 is labeled 'Day' and 'Mean'. Row 26 is labeled 'G.M.T.'. The data shows a diurnal cycle with temperatures ranging from approximately 75.0 to 83.5 degrees absolute.

405. Richmond (Kew Observatory) : North Wall Screen : hb = 3.0 metres.

April, 1925.

Table with 25 columns (Day 1-25) and 26 rows (Mean, G.M.T. 1-25). Columns 1-25 contain temperature readings in degrees absolute. Row 1 is labeled 'Day' and 'Mean'. Row 26 is labeled 'G.M.T.'. The data shows a diurnal cycle with temperatures ranging from approximately 77.0 to 86.0 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.

406. Richmond (Kew Observatory): North Wall Screen: ht (height of thermometer bulb above the ground) = 3.0 metres.

May, 1925.

Table with 25 columns (Day, 1-24, Mean) and 31 rows of temperature readings for May 1925. Includes a 'Mean' row at the bottom.

407. Richmond (Kew Observatory): North Wall Screen: ht = 3.0 metres.

June, 1925.

Table with 25 columns (Day, 1-24, Mean) and 30 rows of temperature readings for June 1925. Includes a 'Mean' row and a 'G.M.T.' row at the bottom.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is written 75.0.







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

414. Richmond (Kew Observatory) : North Wall Screen : h\_t = 3.0 metres.

Table with 25 columns (1-24 hours and Mean) and 2 rows (a. and numerical values). Values range from 81.23 to 85.90.

TEMPERATURE : MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

415. Richmond (Kew Observatory) : North Wall Screen : h\_t = 3.0 metres.

Large table with 25 columns (Month, Mean, Hour 1-24) and 12 rows (Jan to Dec, Year). Contains monthly mean temperatures and diurnal inequalities.

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

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

416. Richmond (Kew Observatory) : North Wall Screen : h\_t = 3.0 metres.

Large table with 25 columns (Month, Day, Max, Min) and 31 rows (Days 1-31). Contains daily maximum and minimum temperatures.

NOTE.—The initial 2 or 3 of the readings is omitted, i.e., 275.0 degrees absolute is written 75.0.

Small table with 2 columns: Year ... 86.7 79.3



Percentages at exact hours Greenwich Mean Time. Determined as explained on page 14.

417. Richmond (Kew Observatory) : North Wall Screen : h<sub>1</sub> (height of thermometer bulbs above the ground)=3.0 metres.

January, 1925.

Table for Richmond (Kew Observatory) in January 1925. Columns include Day (1-31), hours (1-24), Mean, and Vapour Pressure\* (mb.).

418. Richmond (Kew Observatory) : North Wall Screen : h<sub>1</sub> = 3.0 metres.

February, 1925.

Table for Richmond (Kew Observatory) in February 1925. Columns include Day (1-28), hours (1-24), Mean, and Vapour Pressure\* (mb.).

\* Computed from the mean temperatures and the mean relative humidities.

† Mean of the column.

‡ Mean of the row.







Percentages at exact hours, Greenwich Mean Time. Determined as explained on page 14.

425. Richmond (Kew Observatory) : North Wall Screen : h<sub>t</sub> (height of thermometer bulbs above the ground) = 3.0 metres.

September, 1925.

Table for Richmond (Kew Observatory) in September 1925. Columns include Day (1-30), hours (1-24), Mean, and Vapour Pressure\* (mb.). Rows show relative humidity percentages for each hour.

426. Richmond (Kew Observatory) : North Wall Screen : h<sub>t</sub> = 3.0 metres.

October, 1925.

Table for Richmond (Kew Observatory) in October 1925. Columns include Day (1-31), hours (1-24), Mean, and Vapour Pressure\* (mb.). Rows show relative humidity percentages for each hour.

\* Computed from the mean temperature and mean relative humidity. † Mean of the column. ‡ Mean of the row.



HUMIDITY : ANNUAL MEANS OF HOURLY VALUES.  
From the monthly means, for exact hours, Greenwich Mean Time.

429. Richmond (Kew Observatory) : North Wall Screen :  $h_t = 3.0$  metres.

1925.

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 ...	% 87.7	% 88.4	% 88.8	% 89.1	% 89.2	% 88.3	% 87.0	% 84.7	% 81.0	% 77.7	% 74.4	% 71.6	% 69.6	% 68.8	% 68.4	% 69.6	% 71.6	% 74.0	% 76.5	% 79.5	% 82.0	% 84.1	% 85.8	% 86.6	% 86.2
Vapour Pressure in millibars ...	mb. 9.6	mb. 9.5	mb. 9.4	mb. 9.3	mb. 9.3	mb. 9.4	mb. 9.5	mb. 9.7	mb. 9.8	mb. 10.0	mb. 10.1	mb. 10.1	mb. 10.2	mb. 10.2	mb. 10.2	mb. 10.2	mb. 10.2	mb. 10.2	mb. 10.1	mb. 10.0	mb. 9.9	mb. 9.8	mb. 9.7	mb. 9.6	mb. 9.9

RELATIVE HUMIDITY : MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

430. Richmond (Kew Observatory) : North Wall Screen :  $h_t = 3.0$  metres.

1925.

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.	% 87.9	%	+2.4	+1.9	+2.5	+2.2	+2.1	+2.7	+2.5	+2.7	+1.7	+0.4	-0.4	-3.5	-4.6	-5.5	-5.9	-4.7	-1.8	-1.2	-0.0	+0.5	+0.9	+1.3	+1.7	+2.3
Feb.	% 82.9	%	+3.6	+3.8	+4.3	+4.9	+5.1	+4.1	+5.0	+5.5	+2.3	-0.7	-2.3	-5.7	-8.1	-8.3	-8.8	-7.3	-4.0	-2.3	-0.3	+0.2	+0.6	+2.3	+3.2	+3.1
Mar.	% 77.6	%	+6.1	+7.6	+7.3	+8.3	+8.5	+7.9	+7.9	+7.1	+2.6	-1.0	-5.1	-8.2	-10.9	-13.0	-14.3	-12.3	-8.7	-4.7	-2.8	-0.6	+1.7	+4.1	+5.9	+6.4
April	% 76.9	%	+9.7	+10.5	+11.3	+12.0	+11.5	+12.0	+8.7	+4.3	-1.3	-4.6	-8.3	-10.6	-13.4	-13.8	-14.5	-12.3	-10.5	-7.7	-3.2	-1.0	+1.5	+5.2	+6.9	+7.7
May	% 75.9	%	+12.8	+13.3	+15.2	+14.7	+15.0	+12.1	+8.9	+3.8	-2.8	-5.6	-9.7	-13.0	-14.0	-15.3	-15.0	-14.7	-13.2	-11.2	-8.5	-1.9	+2.3	+6.0	+9.3	+11.4
June	% 67.0	%	+13.8	+15.0	+15.6	+17.2	+16.2	+12.8	+9.5	+2.9	-1.8	-5.6	-8.6	-11.5	-14.2	-15.8	-16.0	-16.8	-15.5	-13.0	-9.9	-4.2	+2.3	+6.8	+9.0	+11.7
July	% 73.0	%	+13.2	+14.9	+16.0	+16.0	+16.1	+13.0	+10.5	+6.8	+1.9	-2.7	-8.0	-11.6	-14.0	-15.4	-17.4	-16.9	-16.6	-14.3	-11.0	-4.0	+0.9	+4.2	+8.1	+10.5
Aug.	% 79.5	%	+9.5	+10.2	+10.4	+10.6	+11.5	+10.1	+7.9	+3.7	-1.1	-4.9	-8.1	-8.6	-10.2	-12.5	-13.2	-13.5	-11.9	-8.9	-5.4	-0.3	+3.2	+5.0	+7.6	+8.6
Sept.	% 80.9	%	+8.8	+9.5	+9.1	+9.2	+9.2	+8.6	+7.5	+4.1	-1.1	-6.2	-10.1	-12.6	-12.1	-12.3	-11.9	-10.1	-9.2	-6.2	-1.4	+2.3	+4.3	+5.7	+7.5	+7.4
Oct.	% 86.6	%	+4.3	+4.9	+5.6	+5.9	+5.7	+6.3	+6.5	+5.9	+3.4	0.0	-4.2	-8.5	-11.3	-11.4	-10.9	-8.9	-5.0	-1.5	+0.1	+1.5	+1.9	+2.7	+3.4	+3.6
Nov.	% 86.2	%	+2.3	+3.5	+3.6	+4.4	+4.7	+4.9	+4.6	+5.1	+2.9	+0.6	-2.3	-5.1	-7.8	-7.3	-7.9	-5.2	-3.1	-1.7	-0.9	0.0	+0.6	+1.0	+1.3	+1.6
Dec.	% 87.7	%	+3.1	+3.1	+2.3	+1.1	+2.3	+2.3	+2.7	+2.7	+2.7	+0.5	-2.0	-4.2	-6.0	-5.7	-5.0	-4.2	-2.6	-1.7	-1.0	+0.2	+1.4	+2.3	+2.8	+2.9
Year	% 80.2	%	+7.5	+8.2	+8.6	+8.9	+9.0	+8.1	+6.9	+4.5	+0.8	-2.5	-5.8	-8.6	-10.5	-11.4	-11.7	-10.6	-8.5	-6.2	-3.7	-0.6	+1.8	+3.9	+5.6	+6.4

RAINFALL : ANNUAL TOTALS OF HOURLY VALUES.

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

431. 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.

1925.

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. 25.1	mm. 35.4	mm. 25.3	mm. 33.2	mm. 27.8	mm. 27.3	mm. 36.3	mm. 36.2	mm. 23.3	mm. 22.3	mm. 11.8	mm. 20.4	mm. 30.6	mm. 44.7	mm. 26.4	mm. 22.9	mm. 17.0	mm. 32.8	mm. 36.9	mm. 17.8	mm. 16.4	mm. 21.2	mm. 31.2	mm. 26.9	mm. 649.2
Duration ...	hr. 18.0	hr. 19.2	hr. 22.2	hr. 23.0	hr. 23.0	hr. 24.8	hr. 26.6	hr. 28.1	hr. 19.5	hr. 12.4	hr. 13.8	hr. 15.1	hr. 18.6	hr. 22.9	hr. 18.9	hr. 17.5	hr. 14.3	hr. 17.0	hr. 15.2	hr. 14.8	hr. 15.3	hr. 16.1	hr. 18.0	hr. 18.1	hr. 452.4

432. Richmond (Kew Observatory).

NOTES ON RAINFALL.

1925.

Dry Periods.

The outstanding dry period during the year occurred from June 1st to 23rd., 23 days with no rain at all. From June 24th to July 6th the total was only 1.9 mm. Two other periods without rain were from September 29th to October 12th (14 days) and from November 12th to 24th (13 days).

Wet Periods.

The most persistent wet weather was from February 8th to February 16th, and from October 16th to 24th, when rain fell on every day. Rain also fell on every day except the 24th from December 18th to 31st.

Rainfall Duration.

There were 66 calendar days on which the duration of rainfall was registered as 0.1 to 1.0 hour, 30 days with 1.1 to 2.0 hours, 58 days with 2.1 to 6.0 hours, 16 days with 6.1 to 12.0 hours, and 3 days with more than 12 hours. The day with the greatest duration was February 13th, when the duration was 14.7 hours, the amount falling being 28.8 millimetres.

Continuous Falls.

On August 23rd to 24th, it rained continuously for 10.5 hours, producing 20.1 millimetres, and on February 6th, a continuous fall of 7.4 hours produced 10 millimetres.

Heavy Falls in Short Periods.

On July 22nd, a severe thunderstorm yielded 5 millimetres in 6 minutes, and 10 millimetres in 20 minutes. The rain continued intermittently, 25 millimetres fell in less than 4 hours and 42 millimetres within 11 hours. Falls of 5 millimetres in less than an hour also occurred on July 27th (5 mm. in 48 minutes), August 10th (5 mm. in 6 minutes, 10 mm. in 1 hour), August 21st (5 mm. in 36 minutes), October 22nd (5 mm. in 12 minutes) and December 30th (5 mm. in 30 minutes).







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

437. Richmond (Kew Observatory) 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) = 5.5 metres + 0.53 metres. May, 1925.

Table with 24 columns for hourly periods (0-1 to 24-0) and 25 rows for days (1 to 31). Columns include rainfall in mm and duration in hr. Summary row shows total duration of 43.7 hours.

438. Richmond (Kew Observatory) : H<sub>r</sub> = 5.5 metres + 0.53 metres. June, 1925.

Table with 24 columns for hourly periods (0-1 to 24-0) and 31 rows for days (1 to 30). Columns include rainfall in mm and duration in hr. Summary row shows total duration of 2.3 hours.





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

443. Richmond (Kew Observatory) : 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) = 5.5 metres + 0.53 metres. November, 1925.

Table for Richmond (Kew Observatory) in November 1925. Columns include Day, 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, and Duration. Rows list days 1-30 and a summary row.

444. Richmond (Kew Observatory) : H<sub>r</sub> = 5.5 metres + 0.53 metres. December, 1925.

Table for Richmond (Kew Observatory) in December 1925. Columns include Day, 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, and Duration. Rows list days 1-31 and summary rows for Total Duration and G.M.T.



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

447. Richmond (Kew Observatory) :  $h_s$  (Height of recorder above ground) = 13.3 metres.

March, 1925.

Day.	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.	hr.	hr.	hr.	hr.	hr.			%	Sky.	Total.
1	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	11	...	...	...
2	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	14	...	...	...
3	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	11	...	...	...
4	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	9	...	...	...
5	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	3	...	...	...
6	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	25	...	...	...
8	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.3	65	...	...	...
9	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0	71	Clear.	66	37
10	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.5	75	Clear.	69	39
11	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	15	...	...	...
13	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1	44	...	...	...
14	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.9	25	Ast & M	7	4
15	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	13	...	...	...
16	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	17	...	...	...
17	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.3	45	Haze	48	29
18	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	17	...	...	...
19	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.3	61	Ci. haze	22	13
20	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	3	...	...	...
21	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	13	...	...	...
23	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.8	48	...	...	...
24	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.6	46	Sl. haze	46	29
25	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	16	...	...	...
26	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.2	34	Clear	69	44
27	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	3	...	...	...
28	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	8	Clear	73	49
30	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...
31	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	—	—	0.0	0.1	3.1	8.9	8.1	11.6	11.7	11.1	9.1	9.8	6.3	3.0	0.0	0.0	—	—	80.8	—	—	—	—
Mean	—	—	0.00	0.00	0.10	0.29	0.26	0.37	0.38	0.36	0.29	0.25	0.20	0.10	0.00	0.00	—	—	2.61	22	—	—	—

448. Richmond (Kew Observatory) :  $h_s$  = 13.3 metres.

April, 1925.

Day.	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.	hr.	hr.	hr.	hr.	hr.			%	Sky.	Total.
1	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	32	Clear	76	52
2	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.3	56	Clear	75	52
4	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.6	35	...	...	...
5	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	2	...	...	...
6	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	14	...	...	...
7	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	2	...	...	...
8	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.2	69	...	...	...
9	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	12	Haze	32	23
10	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	9	...	...	...
11	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.2	61	...	...	...
13	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0	22	...	...	...
14	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.3	24	...	...	...
15	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.0	44	...	...	...
16	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	14	...	...	...
17	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.9	36	...	...	...
18	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.4	60	...	...	...
19	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1	...	...	...
20	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	3	...	...	...
21	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.8	34	...	...	...
22	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.4	60	...	...	...
24	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.5	53	Haze	71	55
25	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0	14	...	...	...
26	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.2	57	...	...	...
27	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.9	48	Clear	82	64
28	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.0	34	...	...	...
30	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	16	...	...	...
Sum	—	0.0	1.3	6.1	10.9	11.5	12.7	11.0	11.0	11.1	14.5	12.8	12.8	8.4	6.0	1.0	0.0	—	131.1	—	—	—	—
Mean	—	0.00	0.04	0.20	0.36	0.38	0.42	0.37	0.37	0.37	0.48	0.43	0.43	0.28	0.20	0.03	0.00	—	4.37	32	—	—	—





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

451. Richmond (Kew Observatory) : h<sub>s</sub> (Height of recorder above ground) = 13.3 metres.

July, 1925.

Table with 24 columns for hours 3 to 21, and 3 columns for radiation (Sky, Total, Vertical). Rows include daily data from 1 to 31, a 'Sum.' row, and a 'Mean.' row.

452. Richmond (Kew Observatory) : h<sub>s</sub> = 13.3 metres.

August, 1925.

Table with 24 columns for hours 3 to 21, and 3 columns for radiation (Sky, Total, Vertical). Rows include daily data from 1 to 31, a 'Sum.' row, a 'Mean.' row, and a 'Hour L.A.T.' row.





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

457. Richmond (Kew Observatory):

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

Table with 24 columns (Day, 1-11, Noon) and 2 rows per day. Columns 1-11 have 2 sub-columns for wind speed and direction. Each cell contains two values: direction (top) and speed (bottom). Includes a 'Mean ...' row at the bottom.

458. Richmond (Kew Observatory): H<sub>a</sub> = 5 metres + 20 metres.

Table with 24 columns (G.M.T., 1-11, Noon) and 2 rows per day. Columns 1-11 have 2 sub-columns for wind speed and direction. Each cell contains two values: direction (top) and speed (bottom). Includes a 'Mean ...' row at the bottom.



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

459. Richmond (Kew Observatory) :

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

Table with columns for Day (1-31) and time periods (1-11, Noon). Each cell contains two values: a top value (likely pressure or temperature) and a bottom value in m/s (wind speed).

460. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

Table with columns for Day (1-30) and time periods (1-11, Noon) and a GMT. row. Each cell contains two values: a top value (likely pressure or temperature) and a bottom value in m/s (wind speed).

WIND : DIRECTION AND SPEED.

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

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 5 metres + 20 metres.

March, 1925.

Table with columns for days 13-24, Mean, and Day. Each day has two columns of wind speed data in m/s. The table contains detailed hourly wind speed records for March 1925.

April, 1925.

Table with columns for days 13-24, Mean, and Day. Each day has two columns of wind speed data in m/s. The table contains detailed hourly wind speed records for April 1925.









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

M.S.L.+h<sub>a</sub> (height of anemograph above ground) =5 metres +20 metres.

July, 1925.

Table with columns for days 13-24, Mean, and Day. Each day column contains two columns of wind speed data (m/s) for different heights (indicated by degrees). The data shows wind speed fluctuations throughout the month of July.

August, 1925.

Table with columns for days 13-24, Mean, and Day. Each day column contains two columns of wind speed data (m/s) for different heights (indicated by degrees). The data shows wind speed fluctuations throughout the month of August.

Note : For speeds not exceeding 1.5 m/s the direction is regarded as indeterminate.

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

465. Richmond (Kew Observatory) :

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

Table with 13 columns (Day, 1-11, Noon) and 2 rows per day (m/s, °). Contains wind speed and direction data for Richmond (Kew Observatory) from Day 1 to 30.

466. Richmond (Kew Observatory) : H<sub>a</sub>=5 metres+20 metres.

Table with 13 columns (G.M.T., 1-11, Noon) and 2 rows per day (m/s, °). Contains wind speed and direction data for Richmond (Kew Observatory) from Day 1 to 31.

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

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 5 metres + 20 metres.

September, 1925.

Table with columns for days 13 to 24 and Mean Day, containing wind speed data in m/s for each hour.

October, 1925.

Table with columns for days 20 to 31 and Mean Day, containing wind speed data in m/s for each hour.



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

M.S.L. + h<sub>a</sub> (height of anemograph above ground) = 5 metres + 20 metres.

November, 1925.

Table with 24 columns (13-24) and 2 rows (Mean, Day). Each column contains two rows of data (m/s and degrees). The table lists wind speed and direction for various hours from 185 to 270.

December, 1925.

Table with 24 columns (13-24) and 2 rows (Mean, Day). Each column contains two rows of data (m/s and degrees). The table lists wind speed and direction for various hours from 15 to 260.

469. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

1925.

Table with 24 columns (Day, Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.) and 24 rows (Day 1-31). Each cell contains wind speed (m/s) and time (h. m.) for maximum and gust.

DISTRIBUTION OF WIND SPEED: EXTREME VELOCITIES AS RECORDED BY THE DINES TUBE ANEMOGRAPH.

470. Richmond (Kew Observatory) : H<sub>a</sub> = 5 metres + 20 metres.

1925.

Table with 2 main sections: DISTRIBUTION OF WIND (columns for wind speed ranges) and EXTREME VELOCITIES (columns for highest hourly wind and highest gust). Rows list months from Jan to Dec and a Year summary.



471. Richmond (Kew Observatory).

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

Table with 24 columns for months (Jan-Dec) and 2 rows per month for depths (30cm, 122cm). Includes a 'Mean' row at the bottom. Initial 2 or 3 of readings is omitted; i.e., 275.0 degrees absolute is written 75.0.

The initial 2 or 3 of the readings is omitted ; i.e., 275.0 degrees absolute is written 75.0.

Year 83.1 83.6

MINIMUM TEMPERATURE "ON THE GRASS" DURING THE INTERVAL 18H. TO 7H. G.M.T.

Readings, in degrees absolute.

472. Richmond (Kew Observatory).

1925.

Table with 12 columns for months (Jan-Dec) and 1 row per month for minimum temperature. Includes a 'Mean' row at the bottom.

HEIGHT IN CM. ABOVE M.S.L. OF SURFACE OF UNDERGROUND WATER.

Daily Means and Extremes for Months.

473. Richmond (Kew Observatory).

1925.

Table with 12 columns for months (Jan-Dec) and 2 rows per month for height measurements (cm.). Includes a 'Mean' row at the bottom.

Annual Mean 267 cm.

Extremes for the months: -Jan., 461, 355; Feb., 387, 333; Mar., 388, 319; Apr., 319, 272; May, 272, 247; June, 247, 220; July, 220, 205; Aug., 212, 204; Sep., 212, 199; Oct., 242, 198; Nov., 263, 242; Dec., 266, 221.

Year 76.3

The initial 2 or 3 of the readings is omitted ; i.e., 275.0 degrees absolute is written 75.0. † Thermometer out of action. Note.-The minimum refers to the interval from 18h. the previous day to 7h. on the day to which it is entered.

474. Richmond (Kew Obs.).

January, 1925.

Table for Richmond (Kew Obs.) in January 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Weather (7h-21h), and Remarks. Data rows 1-31 show various cloud types like St., Fr-Cu., Nb., and weather conditions like q, q, q.

475. Richmond (Kew Obs.).

February, 1925.

Table for Richmond (Kew Obs.) in February 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Weather (7h-21h), and Remarks. Data rows 1-28 show various cloud types like Ci-St., St., Fr-Cu., and weather conditions like q, q, q.

Summary table for Richmond (Kew Obs.) with columns for Day, Cloud Forms, Cloud Amount, Weather, and Remarks. It provides mean cloud amounts and other summary statistics.

Note.—Observations are not taken at 15h. on Sundays, Good Fridays and Christmas Day. \* Mean for 27 days only. † Mean for 24 days only.

476. Richmond (Kew Obs.).

Table for Richmond (Kew Obs.) March 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes mean cloud amount at the bottom.

477. Richmond (Kew Obs.).

April, 1925.

Table for Richmond (Kew Obs.) April 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes mean cloud amount at the bottom.

\* Mean for 26 days only.

† Mean for 25 days only.

478. Richmond (Kew Obs.).

Table for Richmond (Kew Obs.) in May 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Weather (7h-21h), and Remarks. Data rows 1-31 show various cloud types like A-Cu, St-Cu, Ci, and weather symbols like sun, clouds, rain.

479. Richmond (Kew Obs.).

Table for Richmond (Kew Obs.) in June 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Weather (7h-21h), and Remarks. Data rows 1-30 show various cloud types like Fr-Cu, Cu, A-Cu, and weather symbols like sun, clouds, rain.

Summary table for Richmond (Kew Obs.) showing Mean Cloud Am't and Day. Columns include Day, Cloud Forms, Cloud Amount, Weather, and Remarks. Includes mean values for 26 days only.

\* Mean for 26 days only.

† Mean for 26 days only.

480. Richmond (Kew Obs.).

Table for Richmond (Kew Obs.) in July 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes a Mean Cloud Am't. row at the bottom.

481. Richmond (Kew Obs.).

Table for Richmond (Kew Obs.) in August 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes a Mean Cloud Am't. row at the bottom.

\* Mean for 27 days only.

† Mean for 26 days only.



484. Richmond (Kew Obs.).

November, 1925.

Table for Richmond (Kew Obs.) in November 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes a Mean Cloud Am't row at the bottom.

485. Richmond (Kew Obs.).

December, 1925.

Table for Richmond (Kew Obs.) in December 1925. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h, 9h, 13h, 15h, 18h, 21h), Weather (7h, 9h, 13h, 15h, 18h, 21h), and Remarks. Includes Mean Cloud Am't and Mean Annu'l Cloud Am't rows at the bottom.

\* Mean for 25 days only.

† Mean for 27 days only.

486. Richmond (Kew Observatory).

Table with columns for months (January to December) and rows for days (1-31). Each month's section includes columns for Day, Character, Air-Earth Current (Amp/cm²), and Ionic Charge per cc. × 10¹⁶ (Coulomb).

Annual Means:—Character (360d) 0.63; Air Earth Current (144d) 0.78; Ionic charges + (87d) 0.51; — (79d) 0.42.











Air Ministry  
METEOROLOGICAL OFFICE

THE  
OBSERVATORIES' YEAR BOOK  
1925

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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LONDON:

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1927

## AEROLOGICAL SECTION.

Station.	Latitude.	Longitude.	Height above Sea Level.
Kew .. .. .	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. 1925.**

The tables are presented in substantially the same form as those appearing in the Observatories' Year Book for 1924. The Dines pattern meteorograph was employed solely as before, the instruments being mainly constructed in the Observatory workshop supplemented by a few purchased from outside contractors.

The method of operation remained substantially the same as that described in the Computer's Handbook.\*

In the computation of pressure-height a value of gravity constant with height has been assumed, and equal to 981.2; the effect of humidity on the density of the air has been neglected.

A total of 63 soundings were made during the year, 47 from the Distributive Station of the Meteorological Office at Sealand Aerodrome, and 16 from Kew Observatory. Of these, 49 instruments were found and returned; one had only reached a negligible height and one yielded an unreliable record through damage to the instrument in transit to Sealand. Three records obtained simultaneously from Sealand were incorporated into one set of figures in the tables, thus leaving in all 45 soundings for publication. The choice of station from which an ascent was made was generally determined in view of the probable direction and length of the run of the balloon, and in consequence the percentage of returns has been high. The average height reached was appreciably greater than in the previous year.

In most cases the mean of the records on the ascent and descent was employed entirely in computing the published figures. In a few cases a weighted mean was used, and in two cases the ascending record alone was used over the lowest kilometre or two. All such occasions are mentioned in the notes. Except in the cases of soundings made near midday in summer the difference between the two records did not in general exceed 4a, with a mean of about half that value. Whenever direct evidence could be obtained it was almost always found that in the troposphere the descending record was the colder of the two. The reason is believed to lie partly in a temperature lag of the thermograph member, and in daylight ascents also to differential solar heating of the instrument, as between the ascent when the ventilation is comparatively weak, and the descent when it is much more vigorous. In the case of high ascents made during the daytime a pronounced rise of temperature was sometimes observed over about a kilometre at the extreme top, particularly so on the record of the descent immediately after the bursting of the balloon. 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 has accordingly been ignored, and greater weight has also been given to the descent than to the ascent in the upper parts of such records as show an unusually large difference between them.

The ventilation of the meteorograph is effected solely by the natural draught produced by its vertical velocity. The coned case referred to last year was employed almost entirely in 1925. The vertical velocity of the rising balloon was of the order

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\* MO. 223, Section II, Sub-section II.

200 metres per minute in about one third of the soundings, and 300 metres per minute or more in the remainder. After the balloon had burst the instrument fell at the rate of about 700 metres per minute.

The figures given in the table of lapse rates do not in every case agree with the temperatures appearing in the table of temperature-heights. The reason is that both were determined independently from the original data, which can sometimes profitably be read to .5 degree, and then rounded off to the nearest whole degree.

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 to reduce greatly the chance of a systematic difference occurring between the results of a fast and a 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 an actual sounding.

During the year the greater part of the stock of meteorographs were rebuilt with improved aneroid boxes and mountings for the same. These boxes provide a scale which does not contract much at the lower pressures and show a lag which is very much less than that of the older ones. The improvements have also made the instruments less liable to damage from shock. The lag, or difference in reading as between a falling and a rising pressure, is now 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 the 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 height of 6 or 7 kilometres, 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.

When soundings were first made from Sealand Aerodrome, meteorographs calibrated beforehand at Kew Observatory were forwarded by post to Sealand, and there is reason to suppose that the zero readings were sometimes disturbed before the sounding was made by shocks encountered in transit. Serious cases were readily discoverable and if necessary the results were rejected; minor ones, however, were not, and the general standard of accuracy attained in the soundings from Sealand was somewhat lowered in consequence. Subsequent to April 1925, the calibrated meteorographs were forwarded by passenger train in a large case in which they were carefully packed in cotton wool, and there is no reason to suppose that this source of error has occurred since that date.

In Table 491 occur the entries "Types of Tropopause" and " $H_c$  = Height of Tropopause." These are defined as follows:—Type I. The stratosphere commences with an inversion, and  $H_c$  is the height of the first point of zero temperature gradient. Type II. The stratosphere begins with an abrupt transition to a temperature gradient below  $2a$  per kilometre without inversion, and  $H_c$  is the height 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 kilometre next above is  $2a$  or less, provided that it does not exceed  $2a$  for any subsequent kilometre. In Table 492 the pressure distribution is classified according to the types defined in "Aids to Forecasting."†

† E. Gold, F.R.S., Geophysical Memoir No. 16., M.O. 220f., London, 1920.

Some statistical results of the soundings made in England during the five years 1921-1925 are set out in the table below. Means and correlation coefficients are given based on about 114 soundings, of which about 15 per cent. were made from Kew Observatory, 38 per cent. from Benson Observatory and 47 per cent. from Sealand Aerodrome.

Mean temperatures are given for each season, winter indicating the three months Dec.-Jan.-Feb., and so on. In the determinations of the correlation coefficients the seasonal variations of the quantities have been ignored and all departures taken from the annual means.

MEAN TEMPERATURE AT EACH HEIGHT, 1921—1925.																		
Degrees absolute above 200 a.																		
	Ground	1 km.	2 km.	3 km.	4 km.	5 km.	6 km.	7 km.	8 km.	9 km.	10 km.	11 km.	12 km.	13 km.	14 km.	15 km.	16 km.	17 km.
Winter	78.2	74.0	69.4	63.4	57.2	50.7	43.6	36.0	28.9	23.2	19.0	17.7	19.0	20.1	19.7	19.7	19.1	19.1
Spring	81.8	75.7	70.3	65.0	58.8	52.6	45.3	38.1	31.3	25.3	20.6	17.0	18.1	19.4	19.9	19.6	19.7	19.3
Summer	89.6	82.9	78.1	73.8	68.1	62.4	55.6	48.4	41.1	33.9	27.1	22.3	19.8	21.5	22.9	22.9	23.8	25.1
Autumn	82.5	77.7	73.1	68.8	63.0	56.4	49.5	41.9	34.7	27.4	22.8	19.4	18.7	18.6	17.6	17.3	17.6	17.8

	Suffix used in correlation coefficients.	1921—25.	
		Mean Value.	Standard Deviation.
Surface Pressure at M.S.L. . . . .	1	1015 mb.	13.1 mb.
Mean Temperature from 1 to 9 km. . . . .	2	254 a.	6.1 a.
Pressure at 9 km. . . . .	3	305 mb.	10.7 mb.
Height of Tropopause . . . . .	4	10.6 km.	13.8 km.
Temperature at Tropopause . . . . .	5	218 a.	6.5 a.

CORRELATION COEFFICIENTS.									
$r_{12}$	$r_{13}$	$r_{14}$	$r_{15}$	$r_{23}$	$r_{24}$	$r_{25}$	$r_{34}$	$r_{35}$	$r_{45}$
.36	.65	.57	-.41	.94	.69	-.07	.75	-.20	-.67

PARTIAL CORRELATION COEFFICIENTS.		
$r_{23.4} = .88$	$r_{34.2} = .41$	$r_{42.3} = -.07$

PARTIAL REGRESSION EQUATIONS.		
$\delta H_c = .87 \delta P_g - .13 \delta T_m + .67 \text{ Ca.}$	}	Standard deviations as units.
$\delta P_g = .19 \delta H_c + .81 \delta T_m + .31 \text{ Ca.}$		
$\delta T_m = .96 \delta P_g - .03 \delta H_c + .34 \text{ Ca.}$		



Sealand : Lat. 53° 14' N. ; Long. 3° 00' W.

Kew : Lat. 51° 28' N. ; Long. 0° 19' W.

491. *T* = Temperature in Degrees absolute above 200a. *P* = Pressure in millibars. *H* = Height in kilometres above M.S.L.

No. of Ascent.	526	527.	528.	529.	531.	532.	534.	536.	537.	539.	541.	542.
Date.	Jan. 15.	Jan. 16.	Jan. 17.	Jan. 24.	Feb. 2.	Feb. 11.	Feb. 13.	Mar. 17.	Mar. 19.	Mar. 21.	Apr. 14.	Apr. 15.
Station.	Sealand.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.
Start G.M.T. ...	17 h. 14 m.	12 h. 17 m.	12 h. 55 m.	8 h. 30 m.	8 h. 05 m.	13 h. 29 m.	16 h. 58 m.	17 h. 40 m.	7 h. 25 m.	8 h. 00 m.	17 h. 50 m.	7 h. 50 m.
<i>H<sub>t</sub></i> = Greatest Height ... (km.)	13.39	7.24	17.92	16.79	9.92	14.75	4.24	19.19	16.56	16.44	10.84	12.25
<i>T<sub>t</sub></i> = Corresponding Temperature (a)	218	243	* 221 ?	223	210	220	253	213	224	223	219	227
<i>P<sub>t</sub></i> = Corresponding Pressure (mb.)	154	406	77	93	250	116	572	61	96	91	228	180
Place of Fall ...	Stone, Staffs.	Welwyn, Herts.	Penistone, Yorks., W.R.	Brandon, Coventry, Warwickshire.	Farndale, Yorks., N.R.	Northaller-ton, Yorks., N.R.	Barnet, Herts.	Knighton, Radnor.	Nantwich, Cheshire.	Haughton, Staffs.	Merzig, Saar Basin (Alsace).	Norton and Dunston Station, Lincs.
Distance ... (km.)	67	46	95	141	185	160	22	99	37	72	795	171
Bearing. Degrees from N....	123	8	70	140	46	39	22	182	120	133	119	90
Geostrophic Wind— Speed ... (m/s.)	Indeter- minate.	4	13	9	Indeter- minate.	Indeter- minate.	11	Indeter- minate.	Indeter- minate.	9	12	20
Degrees from N. ...		180	235	270			225			360	175	270
Wind (Anemograph)— Speed ... (m/s.)	2	4	7	7	4	Calm.	1	7	1	2	7	12
Degrees from N. ...	200	160	190	250	300	—	200	315	210	20	160	250
Humidity at surface ... (%)	91	98	58	81	95	90	87	96	95	86	83	61
Type of Tropopause ...	I	?	I	I	?	I	?	I	I	II	?	I
<i>H<sub>c</sub></i> = Height of „ ... (km.)	11.56	—	11.49	11.28	—	10.38	—	11.41	10.93	7.29	10.55	8.91
<i>T<sub>c</sub></i> = Temp. at „ ... (a.)	214	—	214	216	—	209	—	208	216	221	219	227
<i>P<sub>c</sub></i> = Pressure at „ ... (mb.)	206	—	212	217	—	231	—	212	230	368	238	296
Mean Temp. ( <i>H<sub>c</sub></i> + 2) to ( <i>H<sub>c</sub></i> + 5) (a.)	—	—	217	223	—	—	—	214	221	226	—	—
in ( <i>H<sub>c</sub></i> + 5) to ( <i>H<sub>c</sub></i> + 8) (a.)	—	—	—	—	—	—	—	213	—	224	—	—
Stratosphere ( <i>H<sub>c</sub></i> + 8) to ( <i>H<sub>c</sub></i> + 11) (a.)	—	—	—	—	—	—	—	—	—	—	—	—
<i>T<sub>m</sub></i> (Mean Temp. 1 to 9 km.) (a.)	252	—	256	253	248	248	—	255	254	237	255	248
<i>P<sub>c</sub></i> (Pressure at M.S.L.) ... (mb.)	1031	1037	1029	1027	991	989	986	1033	1033	1019	1005	1000

492.

NOTES.

No. of Ascent.	Date.	Time.	
526.	Jan. 15th.	17.14 G.M.T.	Weather overcast. Pressure distribution; very large high over Central Europe and deep low NW of Iceland. Light variable winds over England generally, SW in Ireland. Type V. Apparent inversion, ground to 0.3 km. Isothermal layer, 1.63 km. to 2.13 km. Temp. 272 a, and a small isothermal layer 8.25 km. to 8.43 km. Temp. 229 a.
527.	Jan. 16th.	12.17 „	Weather overcast (St. 10) after fog. Central European anticyclone increased in intensity, low in Jan Mayen region, with a low approaching SW Ireland. Type V., but pressure still high over England. Inversion of 3a, from 0.50 km. to 0.80 km. Temps. 279 a. to 282 a.
528.	Jan. 18th.	12.55 „	Weather fair, Cu-St. 5/10 estimated about 1100 m. moving from WSW. Central European anticyclone still very intense with subsidiary over Spain, very deep depression on SW coast of Iceland, and a low near the Azores. Pressure still high over England, with small secondaries crossing the country. Type VI. The Balloon apparently floated for some time near the highest point and the temperature readings were too high in consequence. The most probable value has therefore been taken at the highest point. (See Introduction.)
529.	Jan. 24th.	8.30 „	Weather Cloudy, Cu-St. estimate 1 at 1200 m., moving from WNW, and some A-Cu. High pressure over Faroe, S. France, Spain and Russia; low in North Sea and West of Ireland. Ridge of high crossing British Isles. Type IV? Apparent inversion of 1 a, surface to 0.46 km., and isothermal layers from 1.01 km. to 1.27 km. Temp. 275 a, and 3.05 km. to 3.32 km. Temp. 262.5 a.
531.	Feb. 11th.	8.05 „	Weather overcast and raining. Clouds, estimated height 500 m. from NW. Pressure distribution; very large low area with centres in Norwegian Sea, between Iceland and Ireland, and S. of Ireland; secondaries crossing British Isles. Type V a.
532.	Feb. 11th.	13.29 „	Weather overcast, raining, calm. Clouds, Nb. and Fr-St. Low off S. of Ireland moved up to St. George's Channel region and V-shaped depression developing NW of Ireland. Type V.a. Small lapse of temperature noted (1 a) from 1.16 km. to 1.73 km.
534.	Feb. 13th.	16.58 „	Weather overcast, slight drizzle, after heavy rain. Clouds St. 10. Pressure distribution; low just off Ireland NW, secondary over Bristol Channel. Type XIV.
536.	Mar. 17th.	17.40 „	Weather overcast. Clouds, 9/10 Cu-St. moving from NW estimated at 1100 m. Some Ci-Cu. at 16 h, also from NW. Pilot balloon ascent at 16 h. 30 m. showed wind due north at 3500 m. Pressure distribution; anticyclone lying over the British Isles, centre near Valentia. Type XI. Inversion from 1.94 km. to 2.68 km. Temps. 269 a. to 271.5 a.
537.	Mar. 19th.	7.25 „	Weather overcast Cu-St. at estimated height of 1400 m. from NW. Wind variable. Pressure distribution; long anticyclonic tongue extending W-E across England. Type Ia. or XI. Large inversion from 1.88 km. to 2.07 km., Temps. 267.5 a. to 271.5 a.
539.	Mar. 21st.	8.00 „	Weather overcast: 9/10 Cu-St. estimated at 1200 m., from north. Cirrus also from NW by W. Pressure distribution; large North Atlantic anticyclone, lows over Denmark and NW Germany. Type X. The tropopause was low, 7.29 km. The super adiabatic lapse rate near the ground may be due to the employment of the mean of the up and down records at 0.5 kms. (70.5 a. and 68.5 a.). There is reason to suppose that the lapse rate was high.
541.	April 14th.	17.50 „	Weather overcast, with squalls of rain. Clouds, nb. estimated at 500 metres, and A-St. Pressure distribution; large depression over Iceland and secondary between Iceland and Ireland. High over Azores with easterly tongue over France. Type Va. The balloon did not burst and floated for a long time, falling in Germany. Up temperature record in the troposphere about 3 a. warmer than the down. A weighted mean was used in all cases giving a decided bias in favour of the up record.
542.	April 15th.	7.50 „	Weather overcast, with heavy squalls. Clouds, St. 4/10 estimated at 600 metres from WSW.; A-Cu. 3/10 and A-St. 2/10. Pressure distribution; deep depression NW of the Hebrides, Azores high, and steep gradient over British Isles. Type III. Isothermal layer from 2.78 km. to 3.17 km. Temp. 258 a. The lapse rate between G.L. and 0.5 km. is given as +12, but owing to damage to the instrument a zero error existed, and the lapse below 0.5 km. could not be accurately determined.

\* See Notes.

Sealand: Lat. 53° 14' N.; Long. 3° 00' W. Kew: Lat. 51° 28' N.; Long. 0° 19' W.

491. T = Temperature in Degrees absolute above 200a. P = Pressure in millibars. H = Height in kilometres above M.S.L.

No. of Ascent.	543.	544.	545.	546.	547.	548.	549.	550.	551.	552.	553.
Date.	Apr. 15.	Apr. 16.	Apr. 16.	Apr. 21.	May 13.	May 14.	May 15.	June 17.	June 18.	June 19.	June 27.
Station.	Sealand.	Sealand.	Kew.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.
Start G.M.T. ... ..	17 h. 55 m.	17 h. 59 m.	18 h. 00 m.	15 h. 34 m.	17 h. 50 m.	7 h. 43 m.	7 h. 55 m.	13 h. 16 m.	18 h. 30 m.	17 h. 45 m.	16 h. 30 m.
H <sub>c</sub> = Greatest Height ... (km.)	12·87	14·06	7·80	12·28	15·60	16·98	16·65	2·97	20·74	13·78	17·03
T <sub>c</sub> = Corresponding Temperature (a)	230	225	232	221	218	224	* 223?	277	223	225	225
P <sub>c</sub> = Corresponding Pressure (mb.)	168	137	356	184	110	91	95	710	49	150	91
Place of Fall ... ..	Mansfield, Notts.	Barr Beacon Walsall, Staffs.	Brede, Sussex.	Shackleford Godalming, Surrey.	Pannal, Harrogate, Yorks, W.R.	Kirkheaton, Huddersfield, Yorks, W.R.	Harpurley, Manchester, Lancs.	Pulford, Nr. Chester	Cleobury, Mortimer, Worcs.	Newport, Salop.	Pembridge, Herefordshire.
Distance ... .. (km.)	120	102	87	39	127	97	62	12	97	65	112
Bearing Degrees from N. ... ..	94	134	131	223	49	60	58	161	158	141	177
Geostrophic Wind— Speed ... .. (m/s.)	18	20	20	9	Indeterminate	Indeterminate.	2	3	9	9	9
Degrees from N. ... ..	265	310	310	50			185	325	335	305	350
Wind (Anemograph)— Speed ... .. (m/s.)	7	15	9	4	4	4	4	9	7	7	4
Degrees from N. ... ..	270	280	290	45	290	300	160	290	300	300	360
Humidity at surface ... .. (%)	77	86	63	50	74	81	89	64	70	71	62
Type of Tropopause ... ..	III.	I.	?	I.	I.	I.	I.	?	I.	I.	I.
H <sub>c</sub> = Height of ,, ... (km.)	5·10	10·50	—	10·96	11·76	11·45	11·15	—	11·50	11·23	11·99
T <sub>c</sub> = Temp. at ,, ... (a.)	244	222	—	213	211	215	215	—	209	219	215
P <sub>c</sub> = Pressure at ,, ... (mb.)	514	236	—	227	202	214	223	—	210	221	199
Mean Temp. { (H <sub>c</sub> + 2) to (H <sub>c</sub> + 5) (a.) in (H <sub>c</sub> + 5) to (H <sub>c</sub> + 8) (a.) Stratosphere (H <sub>c</sub> + 8) to (H <sub>c</sub> + 11) (a.)	238 — —	— — —	— — —	— — —	— — —	222 — —	222 — —	— — —	217 218 —	— — —	222 — —
T <sub>m</sub> (Mean Temp. 1 to 9 km.) (a.)	251	249	—	254	257	258	257	—	256	258	260
P <sub>s</sub> (Pressure at M.S.L.) ... (mb.)	998	1007	1007	1022	1022	1024	1019	1022	1022	1021	1020

## 492.

## NOTES.

No. of Ascent.	Date.	Time.	Notes.
543.	April 15th.	17.55 G.M.T.	Weather overcast. Squally. Clouds, St. and Cu.-St. from W, estimated at 800 metres. Pressure distribution; Deep low off N of Scotland. Type III., becoming I. in next 12 hours. The tropopause appears to have been remarkably low on this occasion.
544.	April 16th. (Sealand)	17.59 "	Weather overcast, slight rain and squally. Clouds, St. from W by N estimated at 500 metres. Pressure distribution: Series of lows over Scandinavia—Baltic region. Azores—Spain high with wedge to NW. Type I. Inversion 4·18 km. to 4·38 km. Temps. 253·5 a. to 254 a. Isothermal patch 8·38 km. to 8·79 km. Temp. 228·5 a.
545.	April 16th. (Kew)	18.00 "	Weather overcast after showers; squally. Clouds, Cu. 6/10 and Cu-Nb. 4/10. Pressure; As above. Type I. Isothermal layers at 1·88 km. to 2·09 km. Temp. 268·5 a.; and 3·57 km. to 3·79 km. Temp. 259 a.
546.	April 21st.	15.34 "	Weather fine and cloudless. Pressure distribution: Long belt of high, Azores—Scandinavia, with a subsidiary centre over the North Sea, decreasing in intensity. Type IX.b. Inversion from 1·07 km. to 1·40 km., Temps. 276·5 a. to 277·5 a. The super adiabatic lapse rate near the ground may be due to the employment of the mean of the up and down records at 0·5 kms. (Temperatures 281·5 a. and 280 a. respectively). A high lapse rate was probable on this occasion.
547.	May 13th.	17.50 "	Weather overcast. Clouds, Cu. 3/10, Ci-Cu. 1/10 and Ci. 5/10 Cirrus moving from WSW. (A pilot balloon ascent at 16 h. gave a SSW wind at 1200 metres, becoming SW by W at 1800 metres.) Pressure distribution; Large anticyclonic belt from Azores across British Isles with a centre over the North Sea. A small low over NW England. Type XI becoming XIII a. Inversions 2·45 km. to 2·78 km. Temps. 272·5 a. to 273 a. and 1·62 km. to 1·85 km. Temps. 275·5 a. to 276 a. Very good clear record.
548.	May 14th.	7.43 "	Weather overcast. Clouds, 8/10 St. at 250 metres and 1/10 Cu-St. Pressure distribution; anticyclonic belt with centres over Scotland, Danish Coast, Scilly, Baltic. Type XIII a. Small inversion on up trace 0·66 km. to 0·76 km. Temps. 280 a. to 280·5 a. Inversion on down trace 1·41 km. to 1·53 km., Temps. 274 a. to 275 a. Inversion on up trace 1·83 km. to 2·00 km., Temps. 275 a. to 276 a. Small inversion on down trace 2·00 km. to 2·20 km., Temps. 273 a. to 273·5 a. Very good record.
549.	May 15th.	7.55 "	Weather fair. Clouds, 2/10 Fr-Cu. and 4/10 A-Cu.—A-Cu. moving from WSW. Pressure distribution; Scandinavian anticyclone with narrow belt of high across England to Azores; low south of Iceland. Type IIIc., modified. (Traces of inversion (on the up trace only) near the ground, to 0·8 km., Temp. 283 a.; (lower limit unknown.)) Small inversion 2·23 km. to 2·47 km., Temps. 274 a. to 274·5 a. and an isothermal layer 6·55 km. to 6·81 km., Temp. 246·5 a. A rise of temperature of 3 a. shown at the extreme upper limit of the ascent has the appearance of an insolation effect. It has been ignored and the most probable value taken for the temperature.
550.	June 17th.	13.16 "	Weather overcast. Clouds, 8/10 Cu-St. estimated at 900 metres from NW by N, and 1/10 A-St. from NW. Pressure distribution; very large Azores—Iceland high, low over Gulf of Bothnia. Type I becoming X. This ascent only reached 2·97 km. but showed a marked inversion from 1·27 km. to 1·40 km., Temps. 274·5 a. to 279·5 a. There seems to be some evidence that the temperature zero of the instrument was disturbed and that accordingly all the temperatures other than that at G.L. are 3 a. too low. The record was clearly visible to an unusually high pressure, and the lapse rate near the surface was certainly large.
551.	June 18th.	18.30 "	Weather, fine; Clouds, 1/10 Cu. and trace Ci-Cu. Pressure distribution; very large North Atlantic high—Baltic low. Type X. Inversion 1·91 km. to 2·49 km., Temps. 271·5 a. to 273·5 a. The conditions were not such as to presuppose such an abnormal lapse rate near the ground. Being based on the screen temperature on the ground a certain element of uncertainty is introduced.
552.	June 19th.	17.45 "	Weather overcast. Clouds, 6/10 Cu-St., 3/10 A-Cu. and 1/10 Ci-St. Pressure distribution; North Atlantic high, lows over Norwegian Sea and Baltic; a secondary centred over the South of Scotland. Type I (or X). Inversion on up trace, 0·79 km. to 1·16 km., Temps. 281·5 a. to 282 a. Isothermal layers on the down trace, (i) at 1·20 km. to 1·48 km., Temp. 279 a., and (ii) a small layer 3·72 km. to 3·78 km., Temp. 264·5 a. Isothermal layer on both traces, mean 10·08 km. to 10·23 km., Temp. 223 a.
553.	June 27th.	16.30 "	Weather overcast, clouds, 6/10 Cu. and 4/10 St-Cu. from N, no upper cloud visible. Pressure distribution; large anticyclone centred SW of Ireland with a ridge running to Spitsbergen: secondaries to eastward. Low over Iceland. Type X. Isothermal layer on down trace, 1·54 km. to 1·81 km., Temp. 275 a. Marked inversion on up trace, 1·68 km. to 1·93 km., Temps. 273 a. to 276·5 a. Inversion from 2·60 km. to 2·79 km., Temps. 272·5 a. to 273·5 a., and small isothermal patches:—269 a. from 3·65 km. to 3·75 km., and 264 a. from 4·59 km. to 4·67 km.

\* See Notes.

Sealand: Lat. 53° 14' N.; Long. 3° 00' W. Kew: Lat. 51° 28' N.; Long. 0° 19' W.

491. T = Temperature in Degrees absolute above 200a. P = Pressure in millibars. H = Height in kilometres above M.S.L.

No. of Ascent.	554.	556.	557.	558.	560.	562.	563.	564.	566.	567.	569.
Date.	July 14.	July 18.	Aug. 14.	Aug. 14.	Aug. 15.	Aug. 15.	Aug. 16.	Aug. 17.	Aug. 19.	Aug. 20.	Aug. 22.
Station.	Kew.	Kew.	Sealand.	Sealand.	Sealand.	Kew.	Kew.	Sealand.	Kew.	Sealand.	Kew.
Start G.M.T. ... ..	17 h. 48 m.	11 h. 49 m.	7 h. 50 m.	13 h. 03 m.	7 h. 55 m.	18 h. 00 m.	7 h. 00 m.	8 h. 00 m.	7 h. 10 m.	8 h. 00 m.	7 h. 00 m.
H <sub>t</sub> = Greatest Height ... (km.)	19.12	16.16	22.58	18.40	19.65	21.66	18.76	18.35	14.03	20.30	15.48
T <sub>t</sub> = Corresponding Temperature (a)	223	229	* 233?	* 225?	224	225	* 223?	233	230	229	* 229?
P <sub>t</sub> = Corresponding Pressure (mb.)	66	106	41	76	62	45	71	79	147	56	115
Place of Fall ... ..	Box Hill, Surrey.	Moulton Marsh, Spalding, Lincs.	Tilstone Fearnall, Cheshire.	Chesterton, Stoke-on-Trent, Staffs.	Dolanog, Welshpool, Montgomeryshire.	Fittleworth, Sussex.	Bolney, Sussex.	Lower Peover, Knutsford, Cheshire.	St. Albans, Herts.	Helsby, Cheshire.	Hammond Bletchley, Bucks.
Distance ... .. (km.)	23	147	26	54	64	58	54	42	32	16	62
Bearing. Degrees from N....	174	5	112	113	205	197	170	84	358	70	331
Geostrophic Wind—Speed ... .. (m/s.)	4	13	Indeterminate	Indeterminate	2	4	5	Indeterminate	8	Indeterminate.	9
Degrees from N. ... ..	165	210			135	35	315		70		190
Wind (Anemograph)—Speed ... .. (m/s.)	4	4	2	4	4	2	Calm.	1	4	4	1
Degrees from N. ... ..	200	180	340	315	160	20	—	180	45	160	135
Humidity at surface ... .. (%)	47	73	84	79	75	62	97	89	92	97	96
Type of Tropopause ... ..	I	I	I	II	I	I	I	I	I	I	II
H <sub>c</sub> = Height of „ ... (km.)	11.66	11.58	10.80	10.70	12.52	12.90	12.97	12.08	10.39	10.30	8.46
T <sub>c</sub> = Temp. at „ ... (a.)	215	221	223	222	211	209	210	221	223	221	229
P <sub>c</sub> = Pressure at „ ... (mb.)	210	213	244	248	190	177	176	204	253	254	327
Mean Temp. (H <sub>c</sub> + 2) to (H <sub>c</sub> + 5) (a.)	221	226	225	222	218	217	220	227	—	227	231
in (H <sub>c</sub> + 5) to (H <sub>c</sub> + 8) (a.)	222	—	225	223	—	221	—	—	—	225	—
Stratosphere (H <sub>c</sub> + 8) to (H <sub>c</sub> + 11) (a.)	—	—	228	—	—	—	—	—	—	—	—
T <sub>m</sub> (Mean Temp. 1 to 9 km.) (a.)	261	261	262	263	265	264	265	265	260	258	255
P <sub>s</sub> (Pressure at M.S.L.) ... (mb.)	1019	1006	1026	1027	1029	1027	1027	1022	1011	1011	1001

492.

NOTES.

No. of Ascent.	Date.	Time.	Notes.
554.	July 14th.	17.48 G.M.T.	Weather fine and hot. Clouds, Cu. 1/10. Pressure distribution; Azores and Scandinavian anticyclones with a belt of high across south of England. Icelandic low. Type XIa. (?). Small inversion on up trace (scarcely notable on down trace) at 1.85 km. to 1.98 km. Temps. 282.5 a. to 283 a. This ascent was followed with a theodolite and the direction of the wind was found to be the same at all levels—very light from nearly due north—except near the surface. Mean of both traces used in working up except below 1.75 kms. where the up trace only was taken, as the falling trace differed widely from the surface conditions.
556.	July 18th.	11.49 „	Weather fair. Clouds, Cu. and Fr-Cu. 6/10 from SW. and Ci. 1/10 also from SW. Pressure distribution; low on west coast of Ireland, stationary, (moved after 36 h. south-east after filling up a little). Pressure high over Norwegian Sea and moderately high with very slight gradients over Europe and very quiet conditions. Type VII. Small inversion noted from 1.70 km. to 2.05 km., Temps. 278 a. to 278.5 a.
557.	Aug. 14th.	7.50 „	Weather overcast. Clouds, Cu-St. 2/10 from NW and St. 7/10; lowest St. estimated about 500 m. Pressure distribution; large N Atlantic anticyclone and quiet conditions over W Europe generally. Low off far north of Norway. Type I (or perhaps X). Small inversion 0.81 km. to 0.90 km., Temp. about 283.5 a., and a small isothermal layer 1.85 km. to 2.0 km., Temp. 279 a. Marked signs of insolation near the upper limit of the ascent. The most probable values of the temperature above 21 km. are given.
558.	Aug. 14th.	13.03 „	Weather overcast. Clouds, St. and Cu-St., St. from north, estimated at 550 m. Anticyclone extending more over Britain. Type X. Isothermal or very slight inversion 2.21 km. to 2.93 km., Temp. 277 a. The two traces differ by from 8 a. to 3 a. As the warmer trace seems to have been considerably affected by insolation a weighted mean of both was used with a bias towards the colder trace. A marked rise of temperature of about 8 a. on the down trace at the extreme upper limit of the ascent has the appearance of an insolation effect, and has been ignored. The most probable value of the temperature at the highest point has been given.
560.	Aug. 15th.	7.55 „	Weather cloudy (high cloud) Ci-St. 8/10 from NE. North Atlantic anticyclone extending well over Britain. Distant lows to NE. and E. Type X or IX.b. Inversion on up trace 1.86 km. to 2.32 km., Temps. 278.5 a. to 280.5 a. On the down trace, 1.50 km. to 1.89 km., Temps. 280 a. to 282 a. Isothermal layers, on the up trace 3.50 km. to 3.77 km., Temp. 275 a., and on the down trace, 3.17 km. to 3.47 km., Temp. 275 a. The systematic difference between the heights of inversion, isothermal layer (and also the tropopause) on the up and down traces is noteworthy.
562.	Aug. 15th.	18.00 „	Weather, fine; Clouds, Ci. 3, moving rather fast from NNE. Pressure distribution; North Atlantic anticyclone maintained—NW to NE wind from north to south of British Isles. Type X or IXb. Isothermal layer 1.05 km. to 1.47 km., Temp. 281.5 a., and an inversion from 2.01 km. to 2.27 km., Temps. 279.5 a. to 281 a.
563.	Aug. 16th.	7.00 „	Weather fine and cloudless, calm. The anticyclone extended a little further over Europe and developed two centres, one over NW Ireland and one a few hundred miles to the west. Feeble low towards the Azores, and lows on N Russia and Jan Mayen. Type I or VIII.b. (?) Surface inversion; Temp. 285 a. to 286.5 a. approximately; Isothermal or slight inversion 1.14 km. to 1.35 km., Temp. 283.5 a., and an inversion 1.52 km. to 1.76 km., Temps. 282.5 a. to 284 a. The up trace was nearly isothermal at 284 a., from 1.72 km. to 2.50 km. also. The height of the tropopause reached 12.97 km., the highest recorded in 1925. A rise in temperature of about 5 a. at the highest point reached suggested insolation and was ignored. The most probable temperature is given for the highest point.
564.	Aug. 17th.	8.00 „	Weather fine, Clouds, Cu. 2/10, estimated height about 500 m. from west. Anticyclone became less intense and developed centres over the sea NW of Britain and over Central Europe. Shallow low west of Bay of Biscay, and a deeper low over Finland. Type XI a. Inversion from 0.57 km. to 0.74 km., Temps. 285.5 a. to 288 a.
566.	Aug. 19th.	7.10 „	Weather overcast. Clouds, St. 10. Pressure distribution; ill-defined low region from Iceland to Mediterranean with a shallow centre over N France (Others over Finland, S of Iceland, Central Europe, and W Mediterranean); Azores and Jan Mayen highs with a tongue extending south as far as the south of England. Type doubtful; a development of XIII, with light E. to N wind over the British Isles. Isothermal on up trace; lower limit uncertain, to 0.8 km., Temp. 283 a. Inversion on down trace from 0.9 km. to 1.15 km., Temps. 279 a. to 280 a. Inversion (both traces) mean 1.33 km. to 1.46 km., Temps. 280 a. to 281 a. In the upper part of the ascent in the stratosphere the two traces differ by 7 a. or 8 a. and a sudden rise of temperature at constant pressure is shown on the down trace at the top. The latter was ignored and in the stratosphere a bias was made towards the readings of the colder (down) trace. Below 1 km. the warmer trace has been employed entirely as the record suggested somewhat different surface conditions as between the start and fall.
567.	Aug. 20th.	8.00 „	Weather overcast, some rain and mist. Clouds, 8/10 Nb. and 2/10 St.-St. estimated at 500 m. Pressure distribution; high over Jan Mayen region and Spain, low over Finland, N Italy and west of Ireland. A small high in the North Sea, and apparently small secondaries moving across S England. Very slight gradients over most of Europe. No noteworthy inversions. Type doubtful. Pointer failed to record in certain parts of the record.
569.	Aug. 22nd.	7.00 „	Weather, cloudy after slight showers. Clouds, Cu. 6/10 Cirrus noted at 8 h. 45 m. moving from South by east. Pressure distribution; rather deep low centred over the Channel Isles, decreasing in intensity. Low pressure from Iceland to Russia, distant highs over Arctic and Azores. Type XV, developing soon into XIII. A slight inversion was indicated on the down trace at 2.66 km., Temp. cir. 272 a. A marked rise in temperature occurred at the highest point on the down (colder) trace apparently due to insolation. The rise was ignored and the most probable value of the temperature given for the highest point.

\* See Notes.

## SOUNDINGS WITH REGISTERING BALLOONS, 1925.

Sealand: Lat. 53° 14' N; Long. 3° 00' W. Kew: Lat. 51° 28' N.; Long. 0° 19' W.

491. T = Temperature in Degrees absolute above 200a. P = Pressure in millibars. H = Height in kilometres above M.S.L.

No. of Ascent. Date. Station.	570. Sept. 17. Sealand.	571. Oct. 15. Sealand.	572. Oct. 23. Kew.	573. Nov. 7. Kew.	575. Nov. 12. Kew.	576, 577, 578 Dec. 14.* Sealand.	580. Dec 16. Sealand.	581. Dec. 17. Sealand.	583. Dec. 19. Sealand.	584. Dec. 22. Kew.	585. Dec. 23. Sealand.
Start G.M.T. ... ..	7 h. 55 m.	17 h. 35 m.	10 h. 55 m.	11 h. 50 m.	16 h. 50 m.	16 h. 15 m.	17 h. 05 m.	8 h. 40 m.	8 h. 20 m.	12 h. 13 m.	12 h. 55 m.
$H_c$ = Greatest Height ... (km.)	17.65	6.11	18.97	7.57	8.63	20.46	17.45	17.68	13.94	13.62	12.56
$T_c$ = Corresponding Temperature (a)	221	245	223	232	227	208	206	215	212	216	214
$P_c$ = Corresponding Pressure (mb.)	81	459	62	360	318	46	75	75	132	138	157
Place of Fall ... ..	Campsall, Doncaster, Yorks, W.R.	Flecknoe, Rugby, Warwick- shire.	Shalford, Braintree, Essex.	North Ockenham, Essex.	Wokingham Berks.	Undy, Monmouth- shire.	Down Hatherley, Glos.	Rowington, Nr. War- wick.	Ranaskill, Doncaster, Yorks, W.R.	Maplestead, Halstead, Essex.	Burbage, Buxton, Derby- shire.
Distance ... .. (km.)	128	159	80	43	40	185*	157	133	133	87	71
Bearing. Degrees from N. ...	69	132	45	78	262	176*	160	139	82	50	87
Geostrophic Wind— Speed ... .. (m/s.)	5		15	9	12	13	9	14	3	18	9
Degrees from N. ... ..	180	Indeter- minate	220	265	60	360	315	280	115	40	235
Wind (Anemograph)— Speed ... .. (m/s.)	2	4	7	4	7	4	7	9	2	4	2
Degrees from N. ... ..	135	225	200	250	45	315	270	270	135	20	160
Humidity at surface ... .. (%)	98	81	84	76	70	84	90	83	92	95	72
Type of Tropopause ... ..	1.	?	1.	?	?	1.	1.	1.	1.	1.	1.
$H_c$ = Height of ,, ... (km.)	10.94	—	9.07	7.57	—	10.59	11.41	11.21	10.83	10.65	7.93
$T_c$ = Temp. at ,, ... (a.)	217	—	221	232	—	217	205	207	209	216	213
$P_c$ = Pressure at ,, ... (mb.)	229	—	285	360	—	225	203	214	218	221	330
Mean Temp. $\left\{ \begin{array}{l} (H_c + 2) \text{ to } (H_c + 5) \text{ (a.)} \\ \text{in } \left\{ \begin{array}{l} (H_c + 5) \text{ to } (H_c + 8) \text{ (a.)} \\ (H_c + 8) \text{ to } (H_c + 11) \text{ (a.)} \end{array} \right. \end{array} \right.$	222	—	227	—	—	215	208	212	—	—	214
Stratosphere	—	—	224	—	—	210	—	—	—	—	—
$T_m$ (Mean Temp. 1 to 9 km.) (a.)	257	—	250	—	—	241	248	252	248	250	237
$P_s$ (Pressure at M.S.L.) ... (mb.)	1012	1018	976	983	1029	1018	1027	1024	1000	974	1003

## NOTES.

No. of Ascent.	Date.	Time.	Weather
492. 570.	Sept. 17th.	7.55 G.M.T.	Weather overcast, misty. Clouds, A-Cu. 10/10 moving from SW, height estimated about 3700 m. Pressure distribution; very extensive high Azores—Central Europe and a smaller one centred over northern Norway. Low over Iceland and secondaries around the British Isles—a rather vigorous low off SW Iceland, moving SE and decreasing in intensity. Transient tongue of high over Great Britain. Type Va., or IVa. becoming Va. Small inversion near surface, inversion from 2.53 km. to 2.85 km., Temps. 269.5 a. to 270.5 a. Inversion 4.49 km. to 4.72 km., Temps. 261.5 a. to 262 a. The two traces differed by about 12 a. a little below the highest point, and the balloon apparently floated for some time. A rise of about 17 a. took place when the balloon began to fall, which was ignored. In the upper part of the stratosphere a weighted mean of the two records was used, with a considerable bias towards the colder trace.
571.	Oct. 15th.	17.35 "	Weather overcast, raining. Clouds, Nb. 10, estimated height 800 metres, from W by S. Pressure distribution; high centred over France, also over Iceland—lows west of Ireland (not deep) and over Finland. Slight ridge of high over Britain, with a secondary in the Irish Sea region. Type IVa. Inversion 1.46 km. to 1.69 km., Temp. 269.5 a. to 271 a. Inversion, 249 a. to 250 a., at a mean height of 5.35 km.
572.	Oct. 23rd.	10.55 "	Weather cloudy. Clouds, Cu-St. and St. 7/10, and Ci. 1/10. Lower Cloud moving from SW; cirrus moving very slowly indeed, probably from SW. Pressure distribution; large and deep low (less than 964 mb.) centred over Scotland—a secondary having merged into it—moving during the previous night from the Bristol Channel to E Scotland. Type XV. No inversions noted. The two traces were followed to an unusually high pressure. At 0.5 km. the up and down traces give 282° a. and 280.5° a. respectively. The lapse rate of 11 a. disappears if the up trace be employed.
573.	Nov. 7th.	11.50 "	Weather fair. Clouds, Cu-St. 4/10 from West, Ci. 4/10 from W by S. Pressure distribution; elongated east and west Atlantic low with a secondary centred over the Welsh Coast. Type III (or XV). Isothermal layer from 4.27 km. to 4.47 km., Temp. 255. Also a very slight inversion on the down trace only; about 275.5 a. at 1.09 km. to 1.12 km. The lapse rate of 12 a. between G. L. and 0.5 km. was based on the mean temperature at 0.5 km. (281 a. up, 279 a. down), and the temperature in the screen. If the up trace be taken (281 a.) the lapse rate is reduced to 10 a.
575. (576, 577, 578)	Nov. 12th. Dec. 14th.	16.50 " 16.14 "	Weather fine and cloudless, hazy. Pressure distribution; long anticyclonic tongue from E Baltic over Britain, deep Icelandic low, and a smaller low approaching SW Ireland. Type VI. Isothermal layers—1.95 km. to 2.28 km., Temp. 263.5 a., 2.85 km. to 3.18 km., Temp. 261.5 a., and a smaller layer, 4.18 km. to 4.36., Temp. 254.5 a. Both traces clear and good and could be followed almost to the surface. Weather cloudy; Cloud, Cu-St. 8/10 at estimated height of 800 m. moving from NW. Pressure distribution; North Atlantic anticyclone with a subsidiary over Scandinavia; Baltic and Central European lows. Type X (becoming I). Small isothermal layer 4.5 km. to 4.8 km., Temp. 241 a. Another less well defined, about 7.8 km. to 8.3 km., Temp. 225.5 a. Three soundings were made on this occasion at 16.14, 16.15 and 16.16. Up to 16 kms. the means of the three have been employed, above 16 kms. and for place of fall and greatest height that at 16.16 only. The standard deviation between individual readings at definite heights and the corresponding means amounts to 0.6 mb. in the case of pressure and 0.7 a. in the case of temperature.
580.	Dec. 16th.	17.05 "	Weather overcast; Clouds, Cu-St. estimated at 800 m. moving from NW. Pressure distribution; anticyclone from Germany to SW Ireland. Low in Norwegian Sea and secondaries to the south. A small low in the Southern North Sea. Type II. Isothermal on one trace (probably the down) at or near the surface to 0.5 km., Temp. 273 a. Marked inversion from 1.45 km. to 1.55 km., Temps. 267 a. to 270.5 a. Two Isothermal layers, or slight inversions, shown on both traces but not quite at same level; mean heights 3.0 km., Temps. 262 a. and 4.2 km., Temp. 256 a. The lapse rate of 11 between G. L. and 0.5 km. was based on the mean temperature at 0.5 km. and the temperature in the Stevenson screen.
581.	Dec. 17th.	8.40 "	Weather overcast, Clouds, Cu-St. 10/10 at 900 metres from NW by W. Pressure distribution; anticyclonic over France and Austria with a long tongue extending NW; high over Iceland and a col between the two. Low over Scandinavia and western Atlantic. Type I. Slight inversions, on the warmer trace 2.3 km. to 2.4 km., Temps. 270 a. to 270.5 a., and on the colder trace, 3.1 km. to 3.3 km., Temps. 264 a. to 264.5 a. Bad trace.
583.	Dec. 19th.	8.20 "	Weather overcast, Clouds, low Cu-St. 3/10. High Cu-St. 7/10, latter moving from W.SW. at about 2000 metres. Pressure distribution; high over S. Italy and N. Iceland; lows over Atlantic SW. of Ireland, and over Baltic region. Col over England. Type doubtful, perhaps XIV. Trace of an inversion on the up trace from surface to 0.2 km., Temps. 275 a. to 277 a. Inversion on the down trace only, 2.9 km. to 3.1 km., Temps. 257.5 a. to 259 a. Faint trace. Up trace not visible over large parts of the record. Mean read or estimated in troposphere. Down trace only employed from the tropopause upwards.
584.	Dec. 22nd.	12.13 "	Weather overcast, raining; hazy. Clouds, low St. 10/10. Pressure distribution; vigorous low in western Channel moving east. Low north of Shetland. Type XIV. No noteworthy inversions or other features. The pointer did not record continuously and the balloon seems to have reached a greater height than is indicated on the record.
585.	Dec. 23rd.	12.55 "	Weather, fine; Clouds, Ci. 1/10, moving from NW by N. Pressure distribution; low NE of the Shetlands and over the Baltic. Small secondary to NW of Ireland, crossing England in next 18 hours. Type XIV (becoming I). Isothermal layer on up trace, 0.6 km. to 0.8 km., Temp. 272 a. (partly observable at the same level on down trace, 270 a.). Record visible almost from the start and to the fall.



T = Temperature in Degrees Absolute. P = Pressure in millibars. H = Height in kilometres above M.S.L.

Table 493: HEIGHTS AND TEMPERATURES CORRESPONDING WITH ISOBARIC SURFACES—continued. 1925. Columns include Station, Date, Start, and Pressure/Height/Temperature for various altitudes (1000m to 200m).

Table 494: PRESSURES AND TEMPERATURES AT GIVEN HEIGHTS—continued. 1925. Columns include Heights (Kilometres) and corresponding Pressure (P) and Temperature (T) values.

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 HEIGHTS—continued.

Degrees absolute per kilometre.

Table 495: LAPSE RATE OF TEMPERATURE BETWEEN GIVEN HEIGHTS—continued. 1925. Columns include Heights (Kilometres) and corresponding Lapse Rate values.

Note.—The lapse rates are derived from the original tabulations which are generally made to the nearest half-degree. \* See table 492.

SOUNDINGS WITH REGISTERING BALLOONS, 1925—continued.

T = Temperature in Degrees Absolute. P = Pressure in millibars. H = Height in kilometres above M.S.L.

Table with 12 columns for stations 554-569, listing dates, stations, and start times (G.M.T.).

493. HEIGHTS AND TEMPERATURES CORRESPONDING WITH ISOBARIC SURFACES—continued. 1925.

Table showing heights and temperatures for isobaric surfaces from 100 to 1000 millibars across 12 stations.

494. PRESSURES AND TEMPERATURES AT GIVEN HEIGHTS—continued. 1925.

Table showing pressures and temperatures at given heights from 21 km down to G.L. across 12 stations.

\* At 22 km.; P=45 mb.; T=231a. See also Table 492.

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 HEIGHTS—continued.

Degrees absolute per kilometre.

1925.

Table showing lapse rates of temperature between given heights from 20 to 0.5 km across 12 stations.

\* —2a between 21 km. to 22 km.

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. H = Height in kilometres above M.S.L.

Table with 12 columns: No., Date. Station., Start (G.M.T.), 570., 571., 572., 573., 575., 576, 577, 578., 580., 581., 583., 584., 585.

493. HEIGHTS AND TEMPERATURES CORRESPONDING WITH ISOBARIC SURFACES—continued. 1925.

Table with 22 columns: Pressure., H., T., H., T., H., T., H., T., H., T., H., T., H., T., H., T., H., T., H., T. (Millibars, km., a., km., a., km., a., km., a., km., a., km., a., km., a., km., a., km., a., km., a.)

494. PRESSURES AND TEMPERATURES AT GIVEN HEIGHTS—continued. 1925.

Table with 22 columns: Heights., P., T., P., T., P., T., P., T., P., T., P., T., P., T., P., T., P., T., P., T., P., T. (Kilometres, mb., a., mb., a., mb., a., mb., a., mb., a., mb., a., mb., a., mb., a., mb., a., mb., a.)

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 HEIGHTS—continued.

495. Degrees absolute per kilometre. 1925.

Table with 11 columns: Kilometres, and 10 columns of lapse rate values.

Note.—The lapse rates are derived from the original tabulations which are generally made to the nearest half-degree. \*See Table 492.



