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METEOROLOGICAL OFFICE

THE
OBSERVATORIES' YEAR BOOK
1929

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

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PREFACE.

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

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

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

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

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

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

The only addition to this volume is a table of daily readings of temperature in the ground as recorded at Eskdalemuir Observatory.

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

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

TABLE OF CONTENTS.

TABLE	PAGE
Preface	2
Table of Contents	3
Errata in previous volumes	7
List of Observatories, with Geographical Positions and Heights	8
Normal Values and Monthly Summaries	8
General Introduction to the Meteorological Tables	9

LERWICK OBSERVATORY.

Introduction	22
----------------------	----

ATMOSPHERIC ELECTRICITY.

Potential Gradient.

1 Daily Values at 3h, 9h, 15h and 21h ; Monthly and Annual Means	48
2 Diurnal Inequalities (0a Days only)	50
3 Diurnal Inequalities (1a and 2a Days only)	50
4 Electrical Characters of each day and approximate Duration of Negative Potential Gradient	51

TERRESTRIAL MAGNETISM.

5-52 Hourly Values of Horizontal Force, Declination and Vertical Force ; Hourly, Daily and Monthly Means	52
Daily Extremes and Range ; Monthly Means	53
Magnetic Character Figures ; Daily Values and Monthly Means	53
Temperature in Magnet House ; Daily Observations and Monthly Means	53
53-61 Diurnal Inequalities ; Horizontal Force, Declination and Vertical Force, Monthly, Annual and Seasonal Means for each hour	76
62 Monthly, Annual and Seasonal Range of Mean Diurnal Inequalities	79
63 Average Departure from Daily Mean	79
64 Monthly Values of Non-Cyclic Change of Horizontal Force, Declination and Vertical Force	79
65 Monthly Mean Values of the Squares of the Absolute Daily Ranges	79
66 Mean Monthly and Annual Values of Magnetic Elements	79

AURORA.

67 Auroral Log	80
68 General Auroral Table	81

ABERDEEN OBSERVATORY.

Introduction	84
----------------------	----

Pressure.

METEOROLOGY.

69-80 Hourly Readings ; Hourly and Daily Means	91
81 Annual Means of Hourly Values	97
82 Monthly Means and Diurnal Inequalities	97
83 Daily Extremes	97

Temperature.

84-95 Hourly Readings ; Hourly and Daily Means	98
96 Annual Means of Hourly Values	104
97 Monthly Means and Diurnal Inequalities	104
98 Daily Extremes	104

ABERDEEN OBSERVATORY—*continued.*

TABLE		PAGE
	<i>Humidity.</i>	
99-110	Hourly Values of Relative Humidity ; Hourly, Daily and Monthly Means of Relative Humidity and Vapour Pressure	105
111	Annual Means of Hourly Values of Relative Humidity and Vapour Pressure ..	111
112	Monthly Means and Diurnal Inequalities of Relative Humidity	111
	<i>Rainfall.</i>	
113	Annual Totals of Hourly Values of Amount and Duration	111
114	Notes on Rainfall for the Year	111
115-126	Hourly Amounts ; Hourly, Daily and Monthly Totals of Amount and Duration	112
	<i>Sunshine.</i>	
127-138	Hourly Readings ; Hourly, Daily and Monthly Totals	118
138	Annual Totals and Means of Hourly Readings	123
	<i>Wind, Speed and Direction.</i>	
139-150	Hourly Readings ; Hourly, Daily, Monthly and Annual Means of Wind Speed ..	124
151	Highest Instantaneous Wind Speed recorded each Day by the Dines Tube Anemograph	136
152	Distribution of Wind Speed ; Extreme Velocities	136
	<i>Ground Temperature.</i>	
153	Daily Readings, Monthly and Annual Means	137
	<i>Night Minimum Temperature on the grass.</i>	
154	Daily Readings, Monthly and Annual Means	137
	<i>Diary of Cloud, Visibility and Weather.</i>	
155-166	Daily Observations	138

ESKDALEMUIR OBSERVATORY.

Introduction	146
----------------------	-----

METEOROLOGY.

	<i>Pressure.</i>	
167-181	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes	185
	<i>Temperature.</i>	
182-196	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes	192
	<i>Humidity.</i>	
197-210	Hourly Values of Relative Humidity ; Hourly, Daily and Monthly Means of Relative Humidity and Vapour Pressure ; Annual Means of Hourly Values of Relative Humidity and Vapour Pressure ; Monthly Means and Diurnal Inequalities of Relative Humidity	199
	<i>Rainfall.</i>	
211-224	Annual Totals of Hourly Values—Amount and Duration ; Notes on Rainfall for the Year ; Hourly Amounts ; Hourly, Daily and Monthly Totals of Amount and Duration	205
	<i>Sunshine.</i>	
225-236	Hourly Readings ; Hourly, Daily and Monthly Totals ; Annual Totals and Means of Hourly Readings	212

ESKDALEMUIR OBSERVATORY—*continued.*

TABLE		PAGE
	<i>Solar Radiation.</i>	
225-236	Measurements of Radiation by Ångström Pyrheliometer	212
	<i>Wind, Speed and Direction.</i>	
237-248	Hourly Readings ; Hourly, Daily, Monthly and Annual Means of Wind Speed ..	218
249	Highest Instantaneous Wind Speed recorded each day by the Dines Tube Anemograph	230
250	Distribution of Wind Speed ; Extreme Velocities	230
	<i>Ground Temperature.</i>	
251	Daily Readings, Monthly and Annual Means	231
	<i>Night Minimum Temperature on the grass.</i>	
252	Daily Readings ; Monthly and Annual Means	231
	<i>Diary of Cloud, Visibility and Weather.</i>	
253-264	Daily Observations	232
	ATMOSPHERIC ELECTRICITY.	
	<i>Potential Gradient.</i>	
265	Daily Values at 3h, 9h, 15h and 21h ; Monthly and Annual Means	238
266	Diurnal Inequalities (0a Days only)	240
267	Diurnal Inequalities (1a and 2a Days only)	240
268	Electrical Character of each day and approximate Duration of Negative Potential Gradient	241
	TERRESTRIAL MAGNETISM.	
269-316	Hourly Values of North, West and Vertical Components ; Hourly, Daily and Monthly Means	242
	Daily Extremes and Range ; Monthly Means	243
	Magnetic Character Figures ; Daily Values and Monthly Means	243
	Temperature in Magnet House ; Daily Observations and Monthly Means	243
317-334	Diurnal Inequalities ; North, West and Vertical Components, Declination, Inclination, and Horizontal Force, Monthly, Annual and Seasonal Means for each hour	266
335	Diurnal Inequalities ; Monthly, Annual and Seasonal Range	272
336	Monthly Values of Non-Cyclic Change of North, West and Vertical Components	272
337	Monthly Mean Values of the Squares of the Absolute Daily Ranges	272
338	Mean Monthly and Annual Values of Magnetic Elements	272
339-340	Harmonic Components of the Diurnal Inequality of Magnetic Force	273
341-342	Mean Annual Values for Magnetic Observations of the Globe	274
	CAHIRCIVEEN (VALENTIA OBSERVATORY).	
	Introduction. Table of Magnetic Results	276
	METEOROLOGY.	
	<i>Pressure.</i>	
343-357	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes	287
	<i>Temperature.</i>	
358-372	Hourly Readings ; Hourly and Daily Means ; Annual Means of Hourly Values ; Monthly Means and Diurnal Inequalities ; Daily Extremes	294
	<i>Humidity.</i>	
373-386	Hourly Values of Relative Humidity ; Hourly, Daily and Monthly Means of Relative Humidity and Vapour Pressure ; Monthly Means and Diurnal Inequalities of Relative Humidity	301

TABLE	CAHIRCIVEEN (VALENTIA OBSERVATORY)— <i>continued.</i>	PAGE
	<i>Rainfall.</i>	
387-400	Annual Totals of Hourly Values—Amount and Duration; Notes on Rainfall for the Year; Hourly Amounts; Hourly, Daily and Monthly Totals of Amounts of Duration	307
	<i>Sunshine.</i>	
401-412	Hourly Readings; Hourly, Daily and Monthly Totals; Annual Totals and Means of Hourly Readings	314
	<i>Wind, Speed and Direction.</i>	
413-424	Hourly Readings; Hourly, Daily, Monthly and Annual Means of Wind Speed..	320
425	Highest Instantaneous Wind Speed recorded each day by the Dines Tube Anemograph	332
426	Distribution of Wind Speed; Extreme Velocities	332
	<i>Night Minimum Temperature on the grass.</i>	
427	Daily Readings, Monthly and Annual Means	333
	<i>Diary of Cloud, Visibility and Weather.</i>	
428-439	Daily Observations	334
	RICHMOND (KEW OBSERVATORY).	
	Introduction	342
	METEOROLOGY.	
	<i>Pressure.</i>	
440-454	Hourly Readings; Hourly and Daily Means; Annual Means of Hourly Values; Monthly Means and Diurnal Inequalities; Daily Extremes	359
	<i>Temperature.</i>	
455-469	Hourly Readings; Hourly and Daily Means; Annual Means of Hourly Values; Monthly Means and Diurnal Inequalities; Daily Extremes	366
	<i>Humidity.</i>	
470-483	Hourly Values of Relative Humidity; Hourly, Daily and Monthly Means of Relative Humidity and Vapour Pressure; Annual Means of Hourly Values of Relative Humidity and Vapour Pressure; Monthly Means and Diurnal Inequalities of Relative Humidity	373
	<i>Rainfall.</i>	
484-497	Annual Totals of Hourly Values—Amount and Duration; Notes on Rainfall for the Year; Hourly Amounts; Hourly, Daily and Monthly Totals of Amount and Duration	379
	<i>Sunshine.</i>	
498-509	Hourly Readings; Hourly, Daily and Monthly Totals; Annual Totals and Means of Hourly Readings	386
	<i>Solar Radiation.</i>	
498-509	Measurements of Radiation by Ångström Pyrheliometer	386
	<i>Wind, Speed and Direction.</i>	
510-521	Hourly Readings; Hourly, Daily, Monthly and Annual Means of Wind Speed..	392
522	Highest Instantaneous Wind Speed recorded each day by the Dines Tube Anemograph	404
523	Distribution of Wind Speed; Extreme Velocities	404
	<i>Ground Temperature.</i>	
524	Daily Readings, Monthly and Annual Means	405
	<i>Night Minimum Temperature on the grass.</i>	
525	Daily Readings, Monthly and Annual Means	405
	<i>Level of Underground Water.</i>	
526	Daily, Monthly and Annual Means; Extremes for each Month	405
	<i>Diary of Cloud, Visibility and Weather.</i>	
527-538	Daily Observations	406

RICHMOND (KEW OBSERVATORY)—*continued.*

TABLE		PAGE
ATMOSPHERIC ELECTRICITY.		
539	Absolute Observations of Conductivity, Air-Earth Current and of Ionic Charges ; Daily Values and Monthly Means	412
540	Electrical Character of each day and approximate Duration of Negative Potential Gradient	413
<i>Potential Gradient.</i>		
541	Daily Values at 3h, 9h, 15h and 21h ; Monthly and Annual Means	414
542	Diurnal Inequalities ; Selected Quiet Days	416
ATMOSPHERIC POLLUTION.		
<i>Results from Owens Atmospheric Pollution Recorder.</i>		
543	Monthly, Annual and Seasonal Means for each Hour	416
544	Diurnal Inequalities	416
SEISMOLOGY.		
545	Seismological Diary	417
546	Microseisms	427
AEROLOGICAL SECTION.		
	Introduction	430
SOUNDINGS WITH REGISTERING BALLOONS.		
547	Dates of Upper Air Soundings, Particulars of Place of Fall of the Recording Instruments, Wind Data, and Principal Results of each Ascent	434
548	Notes on the Pressure Distribution and on Peculiarities of the Individual Records ..	434
549	Heights, Temperatures and Relative Humidity corresponding with Isobaric Surfaces ..	438
550	Pressures, Temperatures and Relative Humidities at given Heights	438
551	Lapse Rate of Temperature between given Heights	438

ERRATA IN PREVIOUS VOLUMES.

LIST OF OBSERVATORIES.

	Latitude.	Longitude	G.M.T. of Local Mean Noon.	Height above M.S.L. in metres.
	° ' N.	° ' W.	h m	
Lerwick, Shetland Isles	60 8 N.	1 11 W.	12 5	81·7
Aberdeen	57 10 N.	2 6 W.	12 8	11·4†
Eskdalemuir, Dumfries-shire	55 19 N.	3 12 W.	12 13	242·0
Valentia Observatory, Cahirciveen, Co. Kerry.	51 56 N.	10 15 W.	12 41	9·1
Kew Observatory, Richmond, Surrey ..	51 28 N.	0 19 W.	12 1	5·5

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

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

NORMAL VALUES AND MONTHLY SUMMARIES.

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

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

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

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

GENERAL INTRODUCTION TO THE METEOROLOGICAL TABLES.

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

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

NOTES ON THE INSTRUMENTS AND TABULATION OF THE RECORDS.

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

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

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

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

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

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

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

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

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

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

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

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

Two alternative methods of reading the curves have been adopted.

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

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

† At Eskdalemuir the screen stands in the open.

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

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. The height of the rim of the Beckley raingauge above the surface of the surrounding ground varies from 0.4 m. to 0.6 m. at the different observatories. Details are given at the head of the tables of hourly values. A check gauge with funnel 8 inches in diameter is installed near by.

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

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

Wind - Speed and Direction.—The hourly values of wind-speed and direction which appear in this volume are derived from the records of Dines tube anemographs. These instruments record the speed of the wind and its direction directly as functions of the time. For volumes previous to that of 1926 the hourly values of wind-speed and direction were derived from the records of Robinson Cup Anemographs, except at Eskdalemuir, where the records of tube-anemographs have always been used for the purpose of hourly values. Particulars of the exposure of the tube-anemographs at the several observatories will be found in the introductions to the data for each observatory. A description of the tube anemograph will be found in the *Meteorological Observer's Handbook*.

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

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

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

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

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

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

NOTES ON THE TABLES.

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

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

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

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

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

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

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

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

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

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

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

1 inch = 25.4000 millimetres.

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

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

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

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

where z = height of the station above M.S.L.

E = earth's radius, both expressed in the same units,
and λ = latitude of station.

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

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

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

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

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

z = height of station in centimetres.

e = base of Napierian logarithms.

K = gas constant for dry air = $10^9/348.4$ C.G.S. units.*

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

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

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

$$\bar{g} = 980.617 (1 - 0.00259 \cos 2\lambda).$$

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

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

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

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

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

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

Temperature.—The scale on which temperatures are recorded is such that the freezing point of water under atmospheric pressure is 273a 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

$$5.709 \times 10^{-5} (t + 0.1)^4 \text{erg}/(\text{cm.}^2 \text{sec.}); \text{ or } 5.717 \times 10^{-5} t^4 \text{erg}/(\text{cm.}^2 \text{sec.})$$

* This value depends on a coefficient of expansion of dry air of $1/273$ and on the density of dry air at pressure 1013.23 mb. and temperature 273°A, *viz.*, 1293.052 g/m³.

† 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*."

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

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

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

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

where x = vapour pressure under the conditions of observation.

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

p = pressure of the air.

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

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

A = a "constant."

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

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

When the wet bulb reading does not exceed 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.

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

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

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

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

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

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

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

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

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

* For the years 1904 to 1920 it was the practice to tabulate rainfall for the period of 60 minutes centred at the exact hours; the reversion to the method in use before 1904 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° above the horizon, fails to make a scorch on the card of the Campbell-Stokes recorder.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Beaufort Notation and International Weather Symbols.

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

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

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

The figure 0 written after and above a symbol indicates slight, whilst the figure 2 indicates strong or heavy; thus ●⁰ slight rain, ●² 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 d₀ stands for slight drizzle.

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

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

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

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

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

M.O. 330
(Lerwick)

Air Ministry
METEOROLOGICAL OFFICE

THE
OBSERVATORIES' YEAR BOOK
1929

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.

LERWICK

Published by the authority of the
METEOROLOGICAL COMMITTEE



LONDON:
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

1931

LERWICK OBSERVATORY.

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

INTRODUCTION.

GENERAL REMARKS.

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

The Observatory was opened on the 7th June, 1921, when the first instalment of the instrumental equipment arrived. Later on in the same year the construction of a magnetograph house and of huts for absolute magnetic and auroral observations was commenced. The magnetograph house is a heavy concrete structure with walls 2 feet 6 inches (76 cm.) thick, of internal dimensions 16 feet by 10 feet (4·9 m. × 3 m.), and after construction several months had to elapse before the thick concrete walls and roof could be thoroughly dried and the recording instruments placed in position. These instruments, which are described below, consist of magnetographs recording magnetic declination and horizontal and vertical force. During 1928 subsidiary magnetographs recording declination and horizontal force were installed in one of the adjacent non-magnetic huts; the records obtained therefrom are used to cover lacunæ in the standard traces or for special investigations. In addition, in order to obtain a record of the more minute changes in the vertical component of terrestrial magnetic force, a line of twin cable was laid in an approximately horizontal plane round Loch Trebister, the terminals of the cable being connected to a suitable galvanometer on which could be measured the current induced in the cable by changes in the vertical component of terrestrial magnetic force. The arrangement is similar to one in use at Eskdalemuir Observatory, but no records from either have yet been included in official publications.

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

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

SITE.

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

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

ATMOSPHERIC ELECTRICITY.

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

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

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

The collector rod passes through a window in the north wall, and is situated 190 cm. from the corner of the building. The collector, which is 476 cm. above the ground and projects 123 cm. from the window, consists of a copper spiral about 5 cm. long, painted over, by means of a special adhesive varnish, with a salt of radium. The collector 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. in diameter. The latter tube passes through a hole, 3.8 cm. diameter, in one end of a wooden box (dimensions 38 × 25 × 10 cm.), where it is supported horizontally between the ends of two metal rods embedded in sulphur. A number of small 2-volt electric bulbs are kept burning inside the box in order to improve the insulation of the supports for the collector rod during wet weather, and a similar bulb is placed inside the case of the electrometer. The rod is connected to the base of the acid pot of the Benndorf electrometer by a fine wire. A detailed description of this instrument is to be found in *Phys. Zeit.* 7 (1906), p. 98, whilst the general principle is described in Mathias' *Traité d'Electricité Atmosphérique et Tellurique*, p. 54, and in Chauveau's *Electricité Atmosphérique*, pp. 61-64.

The record consists of a series of dots made once a minute on a long roll of paper as it is unwound from a drum by clockwork, exact hours being indicated by dots near the edge of the sheet. Timing is taken from electric clock No. 1,031, governed by the Observatory standard, Shelton No. 35. The needle of the electrometer is earthed at least twice daily, and a zero line is obtained by connecting up these earth marks; owing to the constancy of the perpendicular distance between the zero line and the line through the hour marks, further intermediate positions of the zero are easily obtained. The scale value has been about 21 volts per millimetre, which permits a range from +1700 to -1100 volts per metre in the open to be recorded.

Combined tests of the insulation of the system and scale value of the record are made daily, the procedure being to remove the collector and to charge the needle, which is connected to a Wulf electrometer. The rate of leak is obtained for a period of 4 minutes with a positive charge and for the same interval with a negative charge. Considering the climatic difficulties the behaviour of the instrument in the matter of insulation has been very satisfactory. The rate of leak has been in general small, the average during 1929 being such that the instrument would lose half its potential in 69 minutes. It has been found that the scale value remains reasonably steady and may, for all practical purposes, be taken as constant across the full width of the sheet. The factor by which the recorded potential must be multiplied for conversion into potential gradient in the open is obtained from absolute measurements above a levelled piece of ground near the old site of the electrograph (see site plan in the Observatories' Year Book, 1928). An insulated wire, stretched horizontally between two stout wooden posts 121 cm. in height and 9.48 m. apart, carries at its centre a burning fuse exactly 1 metre above the ground. Wulf electrometer, No. 5225 (Günther & Tegetmeyer, Braunschweig), is connected to one end of the wire and ten to twenty readings are obtained from the electrometer at minute intervals. The reduction factor is deduced from the mean of these values and the corresponding mean potential at the collector as recorded by the Benndorf electrograph. Smoothed monthly means of factors so obtained are employed in reduction of the records.

There was no change in any essential part of the apparatus or in the observational technique throughout the year 1929.

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

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Mean Value of													
$-\frac{d}{dt} \log_e V.$...	·010	·009	·008	·009	·008	·010	·012	·016	·011	·010	·010	·011	·010
No. of days used in mean	31	27	31	30	30	30	30	30	30	30	26	28	353
Highest $-\frac{d}{dt} \log_e V.$...	·015	·015	·017	·020	·017	·015	·029	·028	·025	·020	·021	·027	—
Lowest $-\frac{d}{dt} \log_e V.$...	·006	·003	·003	·005	·004	·005	·005	·003	·003	·005	·005	·007	—
Scale Value (v/mm) ...	21.8	21.8	21.9	22.0	$\left. \begin{matrix} 22.3^* \\ 21.2 \end{matrix} \right\}$	21.4	21.6	$\left. \begin{matrix} 21.1^* \\ 19.8 \\ 21.7 \end{matrix} \right\}$	21.1	21.4	21.3	22.3	—
Mean Exposure Factor ...	1.21	1.20	1.15	1.36	1.28	1.39	1.25	1.24	1.33	1.23	1.26	1.21	1.26
Applied Exposure Factor	1.19	1.19	1.22	1.29	1.33	1.33	1.28	1.27	1.28	1.26	1.24	1.26	—
No. of Determinations of Exposure Factor ...	10	10	12	14	12	15	11	9	5	6	12	7	132

*Changes of Scale Value occurred on 7th May, 9th and 24th August.

In its response to changes of potential gradient the Benndorf instrument is very sluggish, compared, for instance, with the Kelvin water dropper in use at Eskdalemuir Observatory. A series of tests in 1929 gave 45 seconds as the time to rise to half

value, the rise being assumed to follow an exponential law. 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. 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.,—

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

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

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

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

In 1929 the mean monthly value of K_L/K_C varied from 1/60 to 1/130, so that the electrograph generally recorded a potential gradient not less than 98 per cent. of the true gradient. The corresponding values of the fraction for 1928 were such that the registered potential gradient varied between 95 per cent. and 98 per cent. of the true gradient. This change is reflected in the mean values of the exposure factor for the two years, these falling from 1.31 in 1928 to 1.26 in 1929. Though at most only partly responsible for the month-to-month changes of the factor it is not unlikely that the 1929 seasonal variation in the rate of leak of the electrograph contributed to the variation in exposure factor during that year. The vegetation in the vicinity of the site for the absolute observations changes very slightly throughout the year and the grass on the site itself is kept short. A larger contribution to the variations of the factor is probably made by the combination of effects due to peculiarities of the electrograph site and wind direction. In this connection the following table shows the mean values of the exposure factor for 1927 and 1928 summarized according to wind direction :—

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

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

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

IDENTIFICATION NUMBERS OF INSTRUMENTS USED IN 1929.

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

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

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

The character figures so assigned are given in Table 4.

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

Over the year 1929 there were 25.3 hours less negative potential gradient than in 1928, but only 2 days less on which negative gradients did occur. Against the mean daily duration of 1.63 hours for 1928, that for 1929 was 1.55 hours. In both years there is a close parallelism between the month-to-month variations of mean duration of negative potential and the monthly mean electric character figure, and again between either of these quantities and the monthly totals of rainfall.

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

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

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

The hourly values for 3h, 9h, 15h, and 21h are given in Table I; estimated values, enclosed within brackets, are given in cases where the record was in some manner defective, a dash is entered against hours for which no value can be given with any degree of assurance. Two sets of mean monthly values at the four selected hours are given below each month's data; the first set (*a*) represents the arithmetic mean of all the hours of positive potential gradient in the corresponding column, and the second set (*b*) represents the algebraic mean derived from all days for which values for all four selected hours are available. The means from the four values (*a*) and (*b*) for each month may be expected to approximate closely to the true monthly mean, the (*a*) values representing all days when negative gradients are excluded and the (*b*) values representing all days inclusive of those with negative gradients. The indeterminate values $z \pm$ can naturally not enter into either set of mean values.

In all months except July the general (*a*) mean from the four selected hours exceeds the (*b*) mean, the difference over the year as a whole amounting to 28 v/m. The monthly mean daily values derived from the *oa* days are in seven months greater than the (*a*) means but over the year the *oa* day mean is only 1 v/m greater than the (*a*) mean. The annual mean daily values derived in these three ways for the three years 1927–1929 during which the electrograph has been in the same position are :—

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

It is a defect of the Benndorf recorder that even with such a high scale value as 22 v/mm the width of the sheet is frequently exceeded during oscillatory movements. In 1929 there were 53 days on which the electrometer needle went beyond the limits of registration on the positive side and 118 on the negative side; the occasions being mainly when precipitation was falling on the collector. The greatest number of extreme positive excursions were associated with snow or sleet showers and were almost invariably only momentary.

The following table summarises the occasions of highest potential gradients of both signs persistent over periods of at least one hour, a specified hour defining the 60 minute interval centred at the exact hour G.M.T.

Occasions of highest potential gradients.

Positive.

<i>Day.</i>	<i>Hour.</i>	<i>Mean Value.</i>	<i>Conditions.</i>
March 9 . .	19h	774 v/m	Mist or fog
„ 9 . .	16h–20h	622 v/m	Mist or fog
„ 10 . .	17h	806 v/m	Mist or fog
„ 10 . .	16h–19h	691 v/m	Mist or fog
April 20 . .	6h	>1079 v/m	Snow, very oscillatory
July 18 . .	14h–16h	651 v/m	Fog

Aug.	3	.	.	22h-23h	830 v/m	Mist after rain
Sept.	11	.	.	19h	799 v/m	Mist or fog
"	24	.	.	18h-22h	560 v/m	Fog
"	26	.	.	15h-20h	570 v/m	Fog
Negative.						
Jan.	21	.	.	5h	<-1140 v/m	Rain
Feb.	6	.	.	20h	<-1119 v/m	Rain
March	5	.	.	9h	-1028 v/m	Rain
Sept.	18	.	.	2h	<-1080 v/m	Rain
"	19	.	.	12h	<-1080 v/m	Rain
Oct.	4	.	.	7h-10h	<-1096 v/m	Rain
Dec.	28	.	.	8h	<-1127 v/m	Rain

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

January, 20d 22h 7m to 21d 5h 54m. Mean potential gradient <-536 v/m during continuous rain.

March, 2d 0h 15m to 2d 7h 58m. Continuously negative except for three short excursions to positive side, mean gradient -89 v/m during continuous rain.

April, 4d 0h 0m to 4d 10h 45m. Became just positive for three isolated minutes, mean -191 v/m during continuous rain.

June, 22d 22h 15m to 23d 2h 47m. Continuously negative, mean -519 v/m during rain.

October, 4d 7h 4m to 4d 10h 0m. Continuously <-1100 v/m during rain.

October, 6d 4h 0m to 6d 9h 20m. Negative except for two limited excursions to positive, mean <-421 v/m during rain.

November, 11d 12h 15m to 11d 17h 48m. The total duration of negative potential for November 11 was 10.7 hours, being continuously negative, except for one minute, with a mean potential gradient of <-515 v/m from 12h 15m to 17h 48m and with a further period of continuous negative gradient of average <-1060 v/m from 4h 33m to 6h 12m; the occasion was one of continuous rain.

December 21d. The total duration of negative potential was 16.1 hours, associated with continuous rain. From 1h to 19h it was wholly negative except for short excursions of limited duration to positive side; the mean potential gradient over the period for which complete trace is available was <-323 v/m.

December, 29d 1h 15m to 29d 8h 50m. Except for three short intervals of low positive potential gradient, continuously negative with a mean of -76 v/m associated with continuous rain.

October, 2d 15h to 24h was a period of highly variable gradient during intermittent rain showers. Ten times during these nine hours the potential gradient exceeded +810 v/m and eleven times was less than -810 v/m. It exceeded +1600 v/m from 15h 0m to 15h 15m, at 19h 0m, at 19h 30m, and at 23h 25m; from 17h 10m to 17h 20m, at 17h 50m, and at 20h 45m the gradient was negative and <-1085 v/m

There were 45 days on which there occurred apparent changes of potential gradient from the limit of the sheet on the positive side to the limit on the negative side, at least once within an interval of 60 minutes. If these changes were real and not due to charges given to the collector boom by precipitation, they connote a range of at least 2600 v/m within an hour. In some of the hours the extreme reversal occurred at least twice within the period.

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

As compared with the annual mean diurnal variations for oa days for 1927 and 1928, the variation for 1929 has almost lost the secondary forenoon oscillation, retaining only a pronounced single oscillation with minimum about 2h and maximum at 20h. In the separate mean variations for the equinoctial and summer months, however, the secondary oscillation is present, being most marked and with an earlier maximum at 6h in the summer months. The principal evening maximum at 20h persistent throughout these two seasons is advanced to early afternoon in winter. Inequalities for all the remaining days of 1929 which contained no hour of range exceeding 1000 v/m, but in which negative potential gradients occurred, i.e. $1a+2a$ days, are naturally more irregular and show less tendency to a secondary variation in the early forenoon. The evening maximum in the period 18h to 20h is the principal feature of the variation; the mean variation for the equinoctial months has its minimum at 10h instead of 2h or 4h as for the other two seasons. This feature of a retarded minimum in the equinoctial months is to a less extent apparent in the oa days.

In both classes of days, oa and $1a+2a$, the seasonal mean daily values derived from the inequalities increase from winter to summer; this is also true of the two sets of daily means (a) and (b) of Table I deduced from the values at the four hours each day. But whereas the equinoctial mean values for the former classes are intermediate between those of the other solstitial seasons, those for the (a) and (b) means from the four hours per day are less than the mean for winter, though only by 1 v/m in the case of the (b) means for all complete days.

TERRESTRIAL MAGNETISM.

Notes on the Instruments.

The standard records of declination and horizontal and vertical force are obtained from the Munro magnetographs which were in use at Falmouth until 1912. The instruments had been stored for several years, but were afterwards reconditioned; the declination and horizontal force instruments 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 vertical force 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 the Observatories' Year Book, 1928.

The vertical force constituent of the Munro magnetograph set was removed to the auxiliary recording house at the latter end of November and continued as the standard instrument until 31st December, 1929. A new instrument of the Watson quartz fibre type and supplied by the Cambridge Instrument Company was installed in the standard recording house at the end of November and became the standard vertical force instrument from 1st January, 1930.

With the Munro V variometer freed a complete auxiliary magnetograph can be maintained, the other constituents being a Krogness H magnetograph and a locally adapted declination instrument. The hut intended for eye-reading variometers during auroral displays has been lined with thermally low conducting Celotex and fitted with a light-tight porch so as to form a more satisfactory subsidiary recording house. The auxiliary records arranged to function at a low sensitivity have already proved their usefulness in supplying record during highly disturbed hours.

The chief instrumental defects encountered during the year were :—

- (a) A slight irregular drift in the case of the horizontal force instrument ; corrosion of the tungsten wire used for the suspension of the magnet caused a breakage to occur on 1st September.
- (b) Unsteadiness of the vertical force system. The instrument was adjusted on the following dates :—8th February, 20th March, 24th April, 6th and 29th May, 20th June, 3rd July, 28th September and 25th November, on which last date it was dismantled and removed to the subsidiary magnetograph house.
- (c) Irregular changes in declination base line values. These seem to be of two kinds, some appearing as abrupt discontinuities explainable by slight internal friction in the 16-strand silk suspension, others being slow changes like positive and negative bays with a period up to three weeks within which the base line values slowly diverge from and subsequently re-attain their theoretically expected straight run. These latter changes are frequently synchronous with corresponding warm and cold spells (after allowance is made for the temperature lag through the magnetograph house walls) and are probably bound up with a differential distortion of the magnetograph, the case upholding the suspension tube being of wood whereas the base line mirror rests on the slate slab forming the top of the pillar.

Monthly scale values have been assigned to the records by taking overlapping means, except when discontinuities occurred and special measures were required. The determinations are made by Broun's method, the deflecting magnet being placed in the "broadside on" position and at a distance of 55.9 cm. from the recording magnets. A larger deflection distance would render the error due to inequality of the distribution coefficients for the H, D and V magnets less appreciable, but cannot be used owing to the restricted size of the magnetograph house. The scale value of H was maintained at approximately $6 \gamma/\text{mm.}$; for the V magnetograph the scale value increased from $12 \gamma/\text{mm.}$ in January to $30 \gamma/\text{mm.}$ in September and during the last three months of the year it was kept at about $19 \gamma/\text{mm.}$

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

Base values for the records are obtained from the results of absolute observations, the determinations of declination and horizontal force being taken at least twice weekly, those of dip five or six times in each week. Horizontal force and declination are determined with 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 $8^{\circ} 43' 2''$ east of south. Inclination is measured with Dover Circle No. 238 placed on the East pillar (No. 3), using $3\frac{1}{2}$ inch needles. In the deflection experiment three distances 25, 30 and 35 cm. are used for obtaining the distribution coefficients, the horizontal force being computed from the deflection at 25 cm. only.

Mean annual values of the P and Q correction have been derived from observations during the period March 1923 to the end of 1929. An accident caused some change to the magnet in March 1923, and values for earlier months have been discarded.

The values during these years are as follows:—

Year.	P.	Q.	$\log_{10}(1 + P/25^2 + Q/25^4)$.
1923 (March–December) ...	-2.398	-14.36	$\bar{1}.99831$
1924	-1.236	-464.6	$\bar{1}.99862$
1925	-1.165	-875.9	$\bar{1}.99821$
1926	+1.225	-1711.2	$\bar{1}.99895$
1927	+2.229	-2183.8	$\bar{1}.99912$
1928	+0.223	-1395.6	$\bar{1}.99860$
1929	-0.539	-968.5	$\bar{1}.99855$

The mean value of $\log_{10}(1 + P/25^2 + Q/25^4)$ employed in the reduction of all observations for 1929 was the mean of the values derived up to the end of 1928, namely, $\bar{1}.99864$. If the 1929 value is added, the mean for the total available period becomes $\bar{1}.99862$. The adoption of this latter value would raise all the hourly values, monthly means, etc., as given in the tables by 0.37 in the case of H and 17 in the case of V.

As stated in the general remarks the walls of the magnetograph chamber are of concrete, 2 feet 6 inches in thickness. The diurnal variation of temperature within the chamber is, for most days of the year, negligibly small and no corrections for this diurnal variation have been applied to the diurnal inequalities or other data published in this volume. From the magnetograph house temperatures for each day given in the Tables, however, it will be noted that the day to day change of temperature is sometimes considerable. The average change day-to-day in degrees absolute over each of the twelve months of 1929 and for the year as a whole was as follows:—

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
0.40	0.45	0.33	0.37	0.31	0.33	0.37	0.23	0.31	0.30	0.45	0.35	0.35

There were 15 occasions on which the change reached or exceeded 1°A. These rapid fluctuations of temperature obviously add considerably to the problem of satisfactorily determining base line values in the cases of the horizontal and vertical force magnetographs. The temperature coefficient of the former is known with fair accuracy, being taken to be 6.17 per 1°A.; consideration of the trend of base values indicates that the error introduced by omitting to apply a correction for temperature of the magnetograph is usually less than the error of observation and that it would be desirable to have absolute observations made more frequently than twice weekly. For another reason, namely that magnetic disturbance at Lerwick is so much more frequent and so much more considerable than at more southerly observatories, it would similarly be desirable to have very frequent absolute observations, with a view to the retention only of those made at times when the autographic records indicate a reasonably constant magnetic field. With the existing staff and instruments it has not, however, been possible to contemplate any increase in the observations of horizontal force.

In the case of the vertical force, the magnetograph appears to be subject to a thermal hysteresis sufficiently large to render ineffectual any method so far tried of making allowance for the fluctuations of temperature in the chamber. It has not therefore been possible to bring into close accord with one another the base line values deduced from individual absolute observations. So long as these conditions exist the hourly values of vertical force must be regarded as of a somewhat lower order of accuracy than might be desirable. The diurnal inequalities are not of course subject to any appreciable uncertainty on this account; the uncertainty only arises where for instance the mean value for a given day or series of days comes to be compared with that for another day or series of days.

Again, owing to the smallness of the chamber, the presence of an observer for a short time, as, for instance, during a scale test, causes an appreciable rise in temperature and this seems to be reflected in the record of vertical force in the form of a fairly rapid rise and afterwards a slow recovery to normal. The effect on the record is so characteristic that an approximation to the undisturbed curve can in general be drawn in with considerable confidence, and this has been done where the duration of the visit of an observer was sufficient to make the magnitude of the effect noticeable.

AURORA.

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

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

Notes on the Tables.

The hourly values of H, D and V, obtained as described above, appear in three of the four monthly tables. The variations in D, being expressed in minutes, may be readily converted to units of force (γ) of the component perpendicular to the magnetic meridian by multiplying by a factor which for 1929 is approximately 4.25. A rough comparison of the H, D and V registrations with component registrations (geographical N and W, and V) as for instance at Eskdalemuir, can then be easily made. The mean value for the day is computed according to the expression:—

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

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

In the fourth table for each month are given:—

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

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

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

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

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

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

Review of Results.

Mean and Extreme Values of the Magnetic Elements, 1929.—The mean values of the magnetic elements for the years 1928 and 1929 are given in Table I. The values of H, D and V have been computed from the hourly values derived from the autographic records of "all" days, standardized by means of the absolute observations; those of N, W, I and T have been deduced from the values of H, D and V.

TABLE I.

Year.	H.	D. (West)	I.	N.	W.	V.	T.
	γ	$^{\circ}$ $'$	$^{\circ}$ $'$	γ	γ	γ	γ
1928	14585	14 37.1	72 39.4	14113	3681	46702	48926
1929	14556	14 23.6	72 40.3	14099	3619	46651	48870

The decrease in westerly declination from 1928 to 1929 ($13'.7$) was greater than in the previous year ($12'.8$). The rates for the four years earlier were $13'.8$ for 1923-24, $13'.0$ for 1924-25, $14'.9$ for 1925-26 and $12'.9$ for 1926-27.

Mean values derived from (a) international quiet days and (b) international disturbed days, as follow:—(a) H, 14561γ ; D, $14^{\circ}23'.8$; V, 46658γ ; (b) H, 14549γ ; D, $14^{\circ}23'.7$; V, 46646γ .

The extreme values of H, D and V recorded during 1929 are given in Table II., but these values may have been exceeded at times when the light passed beyond the edges of the photographic paper.

TABLE II.

Element.	Maximum.		Minimum.		Absolute Annual Range.
	Value.	Date, 1929.	Value.	Date, 1929.	
Horizontal Force ...	15242γ	d. h. m. Mar. 12 ... 15 25	$<13265\gamma$	d. h. m. Feb. 28 ... 1 3 and 1 8	} $>1977\gamma$
Declination	$16^{\circ} 15'.5$	Feb. 27 ... 21 51	$12^{\circ} 18'.2$	Feb. 28 ... 1 5 1 8		$3^{\circ} 57'.3$
Vertical Force ...	47095γ	Feb. 28 ... 0 50	46173γ	Feb. 27 ... 20 33	922γ

The range of $3^{\circ} 57'.3$ in declination is equivalent to a range of 1008γ in the component of force perpendicular to the magnetic meridian. In the year 1928 smaller ranges were recorded in H and D, but a larger range in V. In the year 1926 greater ranges were recorded in D and V, the extremes in these, respectively, having been $> 4^{\circ} 44'.9$ and $> 2086\gamma$.

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

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

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

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Provisional sunspot number ...	65.4	61.9	52.8	52.8	57.6	72.2	70.1	62.1	34.7	54.7	81.2	105.1
Mean absolute daily range of D ...	17.3	38.4	30.2	19.0	18.1	19.3	23.0	22.2	23.3	30.5	24.3	26.5
Mean $\Sigma R^2/(100\gamma^2)$...	296	4215	1954	277	248	254	1025	929	532	1163	993	1001

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

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

Another important change is in the seasonal behaviour of the ranges; at Lerwick during 1929 winter is the season of largest mean absolute daily range, whilst at Eskdalemuir equinox occupies that position.

TABLE III.

Month.	Magnetic Character Figures.			Mean Character Figures.		Mean Value of $\Sigma R^2/100\gamma^2$.					
	"0" days.	"1" days.	"2" days.	Lerwick.	International.	"All" days.	Q days.	"0" days.	"1" days.	"2" days.	D days.
1929.											
January	21	9	1	0.35	0.47	296	18	33	405	4831	1575
February	10	13	5	0.82	0.82	4215	29	47	512	22176	21549
March	5	21	5	1.00	0.85	1954	82	92	358	10518	4176
April	9	19	2	0.77	0.54	277	81	92	168	2161	1054
May	8	22	1	0.80	0.61	248	96	96	233	1824	724
June	11	17	2	0.70	0.56	254	85	101	264	1000	661
July	8	20	3	0.84	0.66	1025	93	101	357	7936	5005
August	11	17	3	0.74	0.55	929	73	77	313	7535	4693
September	6	22	2	0.87	0.75	532	63	60	494	2345	1709
October	7	19	5	0.94	0.85	1163	60	66	482	5306	4919
November	9	17	4	0.83	0.71	993	29	45	470	4823	4147
December	8	18	5	0.90	0.71	1001	38	49	562	4110	4110
Year, 1929	113	214	38	0.80	0.67	1074	62	72	385	6214	4527
Year, 1928	126	211	29	0.74	0.63	581	62	71	305	4996	2068
Year, 1927	137	206	22	0.68	0.63	586	58	66	409	5491	2427
Year, 1926	208	134	23	0.50	0.65	1436	58	93	1014	15614	7226
Year, 1925	207	130	28	0.51	0.56						
Year, 1924	229	114	23	0.44	0.55						

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

Month.	Mean Absolute Daily Range. 1929.			Mean Daily Range expressed as Percentage of Yearly Mean. 1929.		
	H.	D.	V.	H.	D.	V.
January	70	73	32	49	71	36
February	272	162	136	191	157	153
March	211	128	104	148	124	117
April	98	80	48	69	78	54
May	105	77	48	73	75	54
June	110	82	45	77	80	51
July	168	97	100	118	94	112
August	157	94	64	110	91	72
September	123	99	95	86	96	107
October	148	129	145	104	125	163
November	129	101	117	90	98	131
December	119	112	155	83	109	174
Winter	147	112	110	103	109	124
Equinox	145	109	98	101	106	110
Summer	135	87	60	94	85	67
Year	143	103	89	—	—	—

The frequency distribution of absolute daily ranges recorded in 1929 is shown in Table V. A comparison with the corresponding figures for Eskdalemuir (Table V. on page 176) indicates that ranges in excess of 200 γ are again much more frequent at Lerwick than at Eskdalemuir, even in the case of D or W ranges, of which the frequency distributions at the two places usually show less divergence. Apart from this it is notable that the ranges of maximum frequency at Lerwick again fall in the intervals 70-79 γ for H, and 50-59 γ for D, but 20-29 γ for V, that is, at a lower point in the case of D than at Eskdalemuir, but at the same points in the cases of H and V.

TABLE V.—FREQUENCY DISTRIBUTION OF ABSOLUTE DAILY RANGE.

Range. γ	Number of Cases, 1929.			Percentage Distribution.		
	H.	D.	V.	H.	D.	V.
0— 9 ...	0	0	16	0·0	0·0	4·4
10— 19 ...	3	0	52	0·8	0·0	14·5
20— 29 ...	14	8	54	3·8	2·2	15·0
30— 39 ...	30	18	29	8·2	4·9	8·0
40— 49 ...	24	19	31	6·6	5·2	8·6
50— 59 ...	36	60	30	9·9	16·4	8·3
60— 69 ...	38	53	21	10·4	14·5	5·8
70— 79 ...	44	38	9	12·1	10·4	2·5
80— 89 ...	39	35	15	10·7	9·6	4·2
90— 99 ...	14	28	9	3·8	7·7	2·5
100—109 ...	13	13	6	3·6	3·6	1·7
110—119 ...	9	13	8	2·5	3·6	2·2
120—129 ...	10	9	8	2·7	2·5	2·2
130—139 ...	7	7	4	1·9	1·9	1·1
140—149 ...	7	7	6	1·9	1·9	1·7
150—159 ...	5	2	5	1·4	0·5	1·4
160—169 ...	9	10	3	2·5	2·7	0·8
170—179 ...	3	1	1	0·8	0·3	0·3
180—189 ...	1	5	4	0·3	1·4	1·1
190—199 ...	1	2	3	0·3	0·5	0·8
200+ ...	58	37	47	10·1	15·9	13·0
Days omitted ...	—	—	4	—	—	—

TABLE VI.—PRINCIPAL MAGNETIC DISTURBANCES RECORDED AT LERWICK, 1929.

Where the beginning of a disturbance has been marked by a "sudden commencement," the serial number is followed by an asterisk (*), and the time entered in the second column is that of the sudden commencement, estimated to the nearest minute. In other cases, the exact hour nearest the time at which disturbance may be regarded as having begun is entered in the second column. To the tabulated values of maximum and minimum, the following have to be added: —H, 14000γ; D, 14°, V, 46000γ.

No.	From	To	Horizontal Force.					Declination.					Vertical Force.				
			Max.	Time.	Min.	Time.	Range.	Max.	Time.	Min.	Time.	Range.	Max.	Time.	Min.	Time.	Range.
	d. h. m.	d. h.	γ	d. h. m.	γ	d. h. m.	γ	'	d. h. m.	'	d. h. m.	'	γ	d. h. m.	γ	d. h. m.	γ
1*	Jan. 5 3 7	Jan. 6 20	757	5 20 8	478	5 21 10	279	54.5	5 18 46	-1.3	5 19 33	55.8	796	5 19 26	678	5 5 20	118
2	Jan. 8 21	Jan. 11 10	673	9 17 55	70	9 0 51	603	39.3	9 17 47	-26.7	9 0 48	66.0	742	9 17 55	538	9 0 48	204
3	Feb. 6 13	Feb. 10 22	704	8 20 17	508	10 11 49	196	45.9	6 16 11	-8.7	6 23 1	54.6	824	8 20 35	586	10 1 59	238
4*	Feb. 16 15 7	Feb. 20 4	1062	17 15 51	-305	17 22 32	1367	66.9	17 20 29	-34.3	17 22 36	101.2	810	17 16 14	350	18 3 30	460
5	Feb. 21 14	Feb. 23 8	627	22 16 33	452	22 23 2	175	40.8	21 14 49	2.0	22 21 12	38.8	668	22 16 42	491	23 0 15	177
6*	Feb. 26 19 22	Feb. 28 19	1150	27 19 2	<-735	{ between 28 1 3 and 1 8	>1885	135.5	27 21 51	-101.8	28 1 5	237.3	1095	28 0 50	173	27 20 33	922
7*	Mar. 11 13 53	Mar. 13 24	1242	12 15 25	-404	12 3 8	1646	108.9	12 5 43	-30.2	12 3 12	139.1	719	11 17 7	304	12 4 49	415
8	Mar. 15 8	Mar. 18 22	1114	15 16 55	-137	16 2 24	1251	47.1	15 16 29	-30.4	16 2 24	77.5	719	15 17 23	326	16 2 22	393
9	Mar. 20 14	Mar. 22 23	676	21 17 30	169	21 3 22	507	43.3	21 6 6	-6.1	21 2 43	49.4	700	22 17 25	377	21 3 21	323
10	Apr. 15 16	Apr. 17 24	703	16 17 9	207	16 3 42	496	43.0	16 3 51	2.7	16 1 48	40.3	683	16 17 59	404	16 4 15	219
11*	May 11 23 10	May 13 22	759	13 14 42	478	13 4 19	281	38.3	13 16 55	3.5	13 4 59	34.8	766	13 17 37	480	13 4 39	286
12	May 14 12	May 17 20	658	16 16 39	418	16 3 25	240	38.4	14 15 8	0.2	14 21 12	38.2	700	14 18 28	621	17 4 30	79
13	June 8 2	June 12 4	722	10 17 21	446	10 6 21	276	38.5	11 20 7	9.3	11 1 39	29.2	692	10 17 16	538	11 1 2	154
14	June 21 12	June 24 20	665	22 19 59	492	24 4 11	173	37.0	23 13 40	7.4	23 22 4	29.6	701	23 16 11	604	22 9 0	97
15*	July 5 9 5	July 7 22	748	5 16 30	470	6 6 7	278	43.0	5 16 30	13.6	7 6 39	29.4	711	5 17 11	536	6 6 59	175
16	July 10 5	July 12 2	967	10 16 49	103	{ 10 23 0 Between 15 23 4 and 23 26	864	55.7	10 2 33	8.1	{ 10 23 48 and 11 7 36	47.6	851	10 18 20	421	10 21 32	430
17*	July 14 16 31	July 17 16	968	16 15 8	<31	{ 15 23 4 and 23 26 Between 1 22 50 and 23 0	>937	78.9	15 23 26	-18.7	15 2 29	97.6	877	16 15 11	310	15 3 12	567
18*	July 31 21 6	Aug. 2 24	692	1 14 50	<130	{ 1 22 50 and 23 0	>562	47.4	1 18 35	-7.4	1 23 41	54.8	750	1 16 0	466	1 23 16	284
19	Aug. 4 10	Aug. 5 24	617	4 17 29	362	5 1 18	255	31.8	4 12 19	3.4	5 1 11	28.4	665	4 21 48	481	5 2 34	184
20*	Aug. 14 12 27	Aug. 16 24	1064	14 17 29	23	14 21 38	1041	51.5	14 18 10	-28.6	14 21 44	80.1	862	14 17 49	513	15 1 29	349
21	Aug. 17 20	Aug. 19 20	659	19 15 5	445	18 10 32	214	33.2	18 4 54	11.0	18 19 26	22.2	697	19 16 15	582	18 0 50	115
22*	Sep. 6 23 30	Sep. 7 24	642	7 17 31	476	7 10 5	166	35.2	7 10 52	-13.7	7 3 9	48.9	799	7 17 11	503	7 3 18	296
23*	Sep. 9 21 30	Sep. 15 4	706	10 17 29	359	11 1 27	347	43.4	10 6 15	-11.3	10 19 59	54.7	845	14 16 19	550	10 17 33	295
24	Sep. 21 14	Sept. 22 22	643	22 16 39	225	22 1 1	418	42.9	22 0 49	-5.4	21 21 21	48.3	782	22 17 43	489	22 4 24	293
25	Oct. 7 12	Oct. 9 24	638	8 17 40	372	7 22 16	266	66.5	7 22 13	-11.9	9 19 6	78.4	795	7 16 12	434	8 20 52	361
26*	Oct. 16 11 13	Oct. 18 2	821	16 18 6	-10	16 20 54	831	72.9	16 18 11	-32.9	16 21 2	105.8	1019	16 20 56	368	17 22 36	651
27	Oct. 30 12	Oct. 31 11	624	30 19 48	371	31 1 12	253	49.4	30 19 34	-1.3	30 19 45	50.7	757	30 18 55	534	31 1 22	223
28	Nov. 2 13	Nov. 4 5	826	3 19 17	174	3 0 10	652	42.6	3 6 50	-31.4	3 17 8	74.0	847	3 16 59	422	3 3 8	425
29	Nov. 16 4	Nov. 16 24	772	16 18 38	-2	16 20 18	774	50.7	16 19 57	-14.4	16 20 18	65.1	925	16 15 22	531	16 20 31	394
30	Dec. 3 11	Dec. 7 3	681	6 15 4	158	4 1 4	523	45.8	6 20 36	-26.0	3 22 46	71.8	924	4 15 21	419	4 1 0	505
31	Dec. 9 18	Dec. 12 14	606	11 18 10	409	12 1 4	197	26.0	11 16 49	-12.1	11 21 38	38.1	779	11 19 20	489	12 1 4	290
32*	Dec. 16 11 34	Dec. 18 5	998	16 16 36	317	17 21 42	681	68.1	16 18 8	-27.9	17 2 59	96.0	889	16 15 39	360	16 18 12	529
33	Dec. 21 22	Dec. 23 24	775	22 17 40	437	22 23 14	338	37.4	22 14 14	-12.6	22 21 19	50.0	837	22 18 37	535	22 23 8	302

Diurnal Inequalities.—The ranges of the mean diurnal inequalities of all days are about the same as those of 1928 in H and D, but much larger in V in equinox and winter.

The quiet day ranges are about the same as in recent years; the mean inequality of H for the winter season, however, has a greater range than in the two previous years.

The ranges of the mean disturbed day inequalities for the year and winter season are greater in all elements than those of 1928 and 1927, but generally less than those of 1926. In the last four months of 1929 the ranges of the disturbed day inequalities are greater in V than in H, whereas in the first eight months, and also in nearly every month of 1928, they were less.

A comparison of the records of Eskdalemuir and Lerwick shows that the declination inequalities at the two places for all, quiet and disturbed days are very similar in general appearance, although minor irregularities on the one set of values are not always reproduced on the other, or, if so, only with diminished amplitude. Differences are more obvious on the horizontal force curves even on quiet days; and the disturbed day inequalities in H in some months bear little resemblance to one another. In the case of vertical force the present year is the fourth year of observations to be published. In some months the quiet day inequalities are very different from those at Eskdalemuir, and it will be seen from the table below that the range of the inequality varies from about one-fifth of the Eskdalemuir range in August to 1.9 times the Eskdalemuir range in November. The seasonal variation of this ratio is thus higher than in any of the three previous years. At Lerwick the V oscillation on quiet days is more definitely semi-diurnal than at Eskdalemuir, having fairly well marked maxima at about 7h and 18h. In all seasons of 1929, as in 1928 and 1926, the afternoon hump is definitely the larger, though in 1927 the morning hump was rather the larger in the mean for the year and very definitely the larger in the summer season.

Ratio of the Range of the Inequality at Lerwick to that at Eskdalemuir. (1929).

Type of Day.	Element.		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
q	D	...	1.01	.88	.99	0.97	1.04	1.00	.98	1.02	.94	.90	.89	.98
d	D	...	1.25	1.61	1.30	1.10	1.21	1.01	1.14	1.18	1.14	1.07	1.15	1.20
q	H	...	.84	.84	1.00	1.17	1.10	1.12	1.05	1.04	1.00	1.00	.80	.93
d	H	...	3.99	2.94	5.43	1.41	1.32	1.27	2.79	2.06	1.66	3.12	1.98	3.04
q	V	...	.38	.71	1.08	.45	.28	.30	.50	.19	.64	.68	1.89	1.50
d	V	...	1.31	1.11	.96	1.07	1.69	1.35	1.88	1.34	1.81	1.93	2.10	1.85

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

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

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

Remarks on the Autographic Records, 1929.

January.—(Average Character Figure 0.35). After a quiet period at the beginning of the month a small disturbance began with a "sudden commencement" at 5d 3h 7m. The fluctuations increased during the evening hours, but were never large; a rise of 260 γ took place in H between 19h 57m and 20h 8m, and was followed by an irregular fall to a minimum at 21h 10m, after which the disturbance died away. The ranges were:—H, 279 γ ; D, 55'.8; V, 118 γ .

DIURNAL VARIATION OF THE MAGNETIC ELEMENTS LERWICK 1929

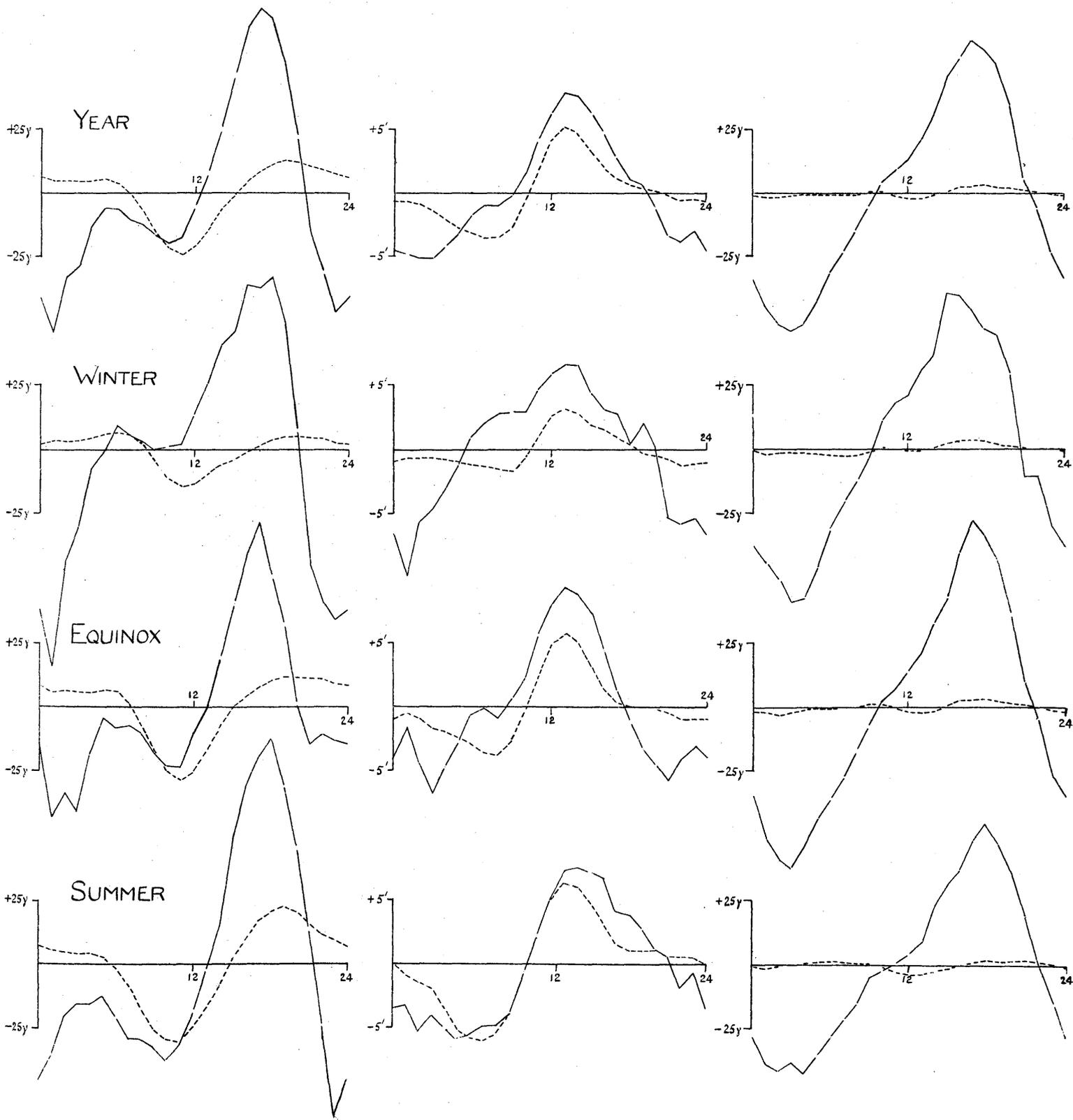
Quiet Days -----

Disturbed Days ———

Horizontal Force

Declination

Vertical Force

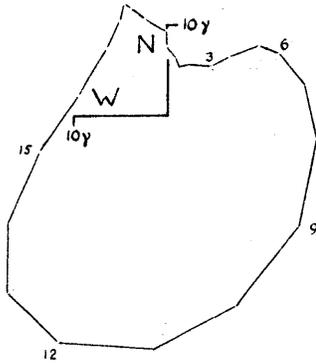


VECTOR DIAGRAMS ILLUSTRATING DIURNAL VARIATION OF MAGNETIC FORCE LERWICK 1929

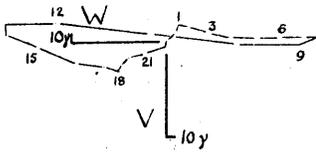
Quiet Days

Disturbed Days

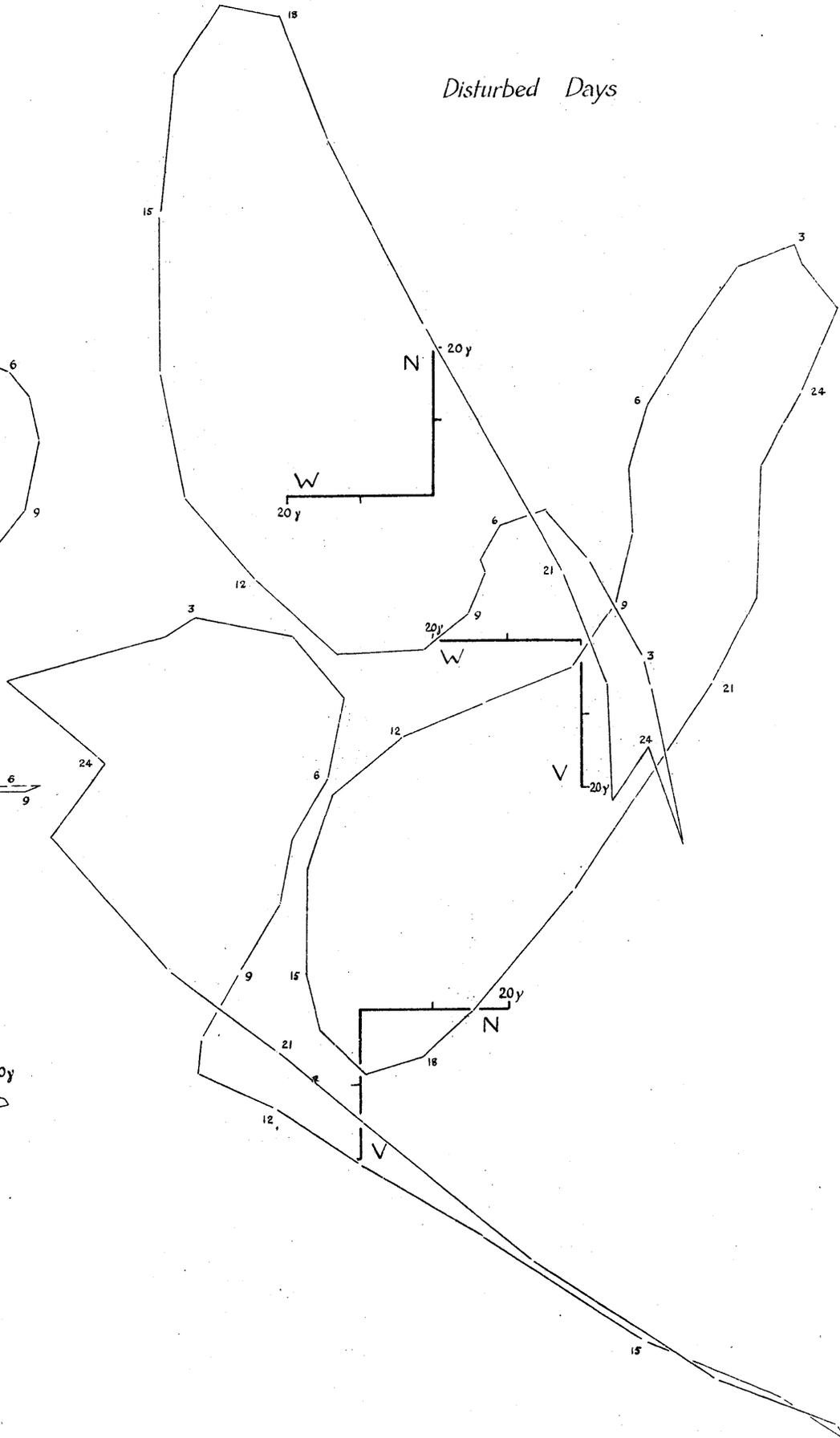
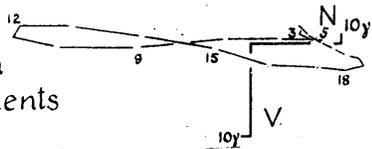
Horizontal
Components



Prime
Vertical
Components



Meridian
Components



At 8d 21h another disturbance began, during the course of which all three elements were almost continuously below their undisturbed values; after considerable fluctuations the minima occurred at practically the same time in all, viz., shortly before 9d 1h, and were followed by a rapid recovery in the case of H and D and a gradual rise in V. The disturbance died away at 4h, but was renewed to some extent at about 18h. The ranges during the 24 hours following the onset of the disturbance were: H, 603 γ ; D, 66'·0; V, 204 γ , the first mentioned being three and a half times the corresponding N range at Eskdalemuir. There was considerable agitation during the 10th and the early hours of the 11th, after which conditions were very quiet for some 48 hours.

No other disturbance worthy of note occurred during the month; the period 17d 0h to 20d 8h was very quiet. A movement of the "sudden commencement" type at 20d 20h·48m was followed by agitation of a very slight nature, lasting some days.

Aurora was observed from one or more places in Scotland on January 2, 3, 4, 5, 9, 12, 15, 16, 28 and 30, but in no case was the display more than a glow, or widely seen.

February.—(Average Character Figure 0·82). The first half of the month was free from large disturbance, though few days were entirely quiet; the quietest period was from about 3d 14h to 5d 2h. Considerable agitation took place on the afternoon of the 6th, and it was a week before conditions became calm again. Small dips occurred in D at about 6d 19h and 23h, the latter accompanied by a small hump in H; a peak of 120 γ occurred in H around 8d 20h, accompanied by a hump of some 200 γ in V; apart from these movements there was nothing worthy of description. A "sudden commencement" at 12d 19h 36m was followed by disturbance too slight for remark.

After a comparatively quiet interval from the 13th onwards, a disturbance, which eventually became very large, began at 16d 15h 7m. The oscillations were at first small and rapid, but larger fluctuations set in soon after 23h, with a rapid rise and fall of 90 γ in H, a drop of 9' in D and a dip of 75 γ in V. Shortly before 17d 4h H fell rapidly by 60 γ , while D rose by 25' to a sharp peak; thereafter the fluctuations became more violent, until the storm attained its greatest intensity on the afternoon of the 17th and the succeeding night. H mounted rapidly but irregularly during the afternoon, reaching its maximum in an abrupt peak shortly before 16h; after large fluctuations lasting an hour, H began at 17h 0m a rapid fall of 275 γ in 10 minutes. Between 17h 30m and 18h there was a rapid rise and fall of some 330 γ , and this was succeeded by a temporary decrease of activity in all three elements lasting about 2½ hours.

The movements in D and V corresponding to those of H described above were irregular and not of very large extent. Both D and V were most active from 15h to 18h; mention may be made of a sharp dip of 45' in D with minimum at 17h 3m, and a drop of 33' at 18h, followed by a smaller rise.

Disturbance was renewed suddenly at 20h 24m, when H, D and V fell abruptly by 400 γ , 43' and 280 γ respectively. The fluctuations were very violent until about 23h and rather less so after that; all elements were below their undisturbed values until 18d 5h, apart from a few sharp peaks in D. Soon after 17d 23h a rapid rise took place in H; D and V continued to fall, but with smaller fluctuations. D reached a minimum at 18d 1h 12m, and rose rapidly to a rounded hump at 2h, followed by another at 3h 20m; the minimum of V occurred at 3h 30m and was followed by a gradual rise till 6h.

The ranges in the period discussed were:—H, 1367 γ ; D, 101'; V, 460 γ . The disturbance was practically at an end at 18d 5h, but was renewed at 23h. H rose to a small hump soon after midnight and began to fall at 3h 15m on the 19th; the fall reached a depth of 160 γ at 4h 10m and was followed by an irregular rise for 3 hours. Two dips of some 13' occurred in D with minima at about 0h 30m and 1h 45m. V fell slowly till 3h, afterwards rising again.

There was considerable agitation during the succeeding days, and another small disturbance began on the afternoon of 21st, and became more conspicuous on the 22nd. There was a small outburst of activity around 22d 16h 30m, but the largest fluctuations began at 20h 21m, with a sharp rise of 50γ in H; this was followed at 20h 40m by a fall of 110γ in 16 minutes. Concurrently with these movements several oscillations of moderate amplitude took place in D. There was further activity around 23h, when the minimum of H occurred. V was below its undisturbed value from 22d 21h to 23d 4h.

After 23rd conditions became quiet for a space, but a minor disturbance took place during the night of the 25th. After small and rapid oscillations beginning at 25d 18h, H began to fall shortly before 22h, reaching a depth of 185γ below the undisturbed value at 22h 39m; a rapid recovery followed, the whole movement forming a symmetrical V-shaped depression, ending at 23h 30m. D rose to a maximum at 22h 35m and fell by $28'$ to a minimum at 23h 20m. V rose to a rounded maximum at 19h; at 22h the fall became more rapid and a minimum was reached at 22h 35m, the range being 186γ . Disturbance was considerably greater on the next night, following a "sudden commencement" at 26d 19h 22m, and very much greater on the night of the 27th-28th. After a small peak at 26d 20h, H was below its undisturbed value from 21h to 6h of the 27th. The greatest activity in all elements began at 26d 23h with a large and rapid fall in H, and ended at 2h with a rapid rise in H; thereafter the fluctuations, though large in D, were not of such extreme rapidity, but were rather of the character of humps and dips superposed on oscillations of very small period and amplitude. In a qualitative sense this description would apply to most magnetic storms at Lerwick.

There was a rather sudden cessation of activity at 27d 7h 45m, and conditions were comparatively quiet till 14h, when a very large disturbance began. H mounted irregularly to a series of sharp peaks around 19h; there was also a large peak at 15h 47m. D oscillated without any great change till about 18h 20m, when it rose to a very sharp peak at 18h 42m. V increased gradually till 18h. Between 18h 38m and 52m a remarkable movement took place in H, consisting of an abrupt fall of 540γ , followed by a complete recovery; the minimum occurred at 18h 44m. A large oscillation took place in V, which fell to a minimum at 18h 40m and rose by 270γ to a sharp peak at 18h 47m.

Between about 19h and 20h 30m H fell by some 900γ or 1000γ in three abrupt stages. Between 20h 22m and 30m D fell by $130'$ rising by $165'$ in the next 7 minutes. V fell by 475γ between 20h 22m and 33m. From this time until 28d $3\frac{1}{2}$ h the disturbance in all elements was at its height. Innumerable fluctuations of the order of 1° took place in D. V fluctuated rapidly and irregularly; a sudden maximum was reached at 28d 0h 50m, shortly before pronounced minima in H and D, after which H rose very rapidly, and the amplitude of the oscillations began to decrease. At about 3h 30m D began to rise, reaching an approximately normal value at about 4h 20m; the rise in H ended at 4h, after which the oscillations were of small period and amplitude. The ranges during the night of the 27th-28th were:—H, $> 1885\gamma$; D, $237'$ (nearly 4°); V, 922γ .

On the afternoon of the 28th there was a temporary renewal of disturbance. Between 12h and 14h 7m H rose by some 270γ to a sharp peak, falling again during the next hour; at about 14h there was an abrupt dip of some $12'$ in D and minor activity in V.

Aurora was observed from one or more places in Scotland on February 8, 9, 10, 17, 18, 26, 27 and 28. The display of 27th-28th was striking and was widely observed even as far south as the south coast of Devonshire. Unusual night visibility was re-

ported by S.S. Marella* on February 26th on a voyage between Australia and Java. Between 2 a.m. and 3 a.m. on that date Mt. Cheremai (10,099 ft.) was visible to the naked eye when the ship was at distances ranging from 55 to 61 miles.

March.—(Average Character Figure 1.00). The first disturbance to be noted was a minor one lasting from the afternoon of the 7th till the end of the 8th. The movements were not large and consisted mainly of small and rapid oscillations throughout nearly the whole period. The disturbance began at about 7d 17h 25m with a dip of 20' in D and a small rise in V. H was below its undisturbed value from 7d 21h to 8d 3h; both H and V rose during the afternoon to a maximum at 16h, after which the disturbance died away. There was a temporary renewal of activity from 20h to 21h, D making a dip of 30'.

A "sudden commencement" at 11d 13h 53m marked the beginning of a large disturbance. In its general outline this followed the usual course, but the range of V was unusually small compared with that of H; moreover, the period of greatest activity, with very low values of H, was later than usual on the first night of the storm, viz., between 2h and 8h on the 12th. After this H rose rapidly and from 13h to 19h underwent many large fluctuations. A notable feature consisted of a series of peaks in D at 12d 10h 40m, 13h 6m, 15h 26m, 17h 57m, 20h 22m, 22h 44m and about 13d 1h 10m; of these the middle three are very sharp and narrow peaks some 60 or 70' high, the others being less well defined; the intervals are very nearly 2h 25m. (It will be observed that the maximum of D for the 12th, at 5h 43m, fits this series fairly closely. There was also a small peak at 12d 0h 57m). From 12d 19h to 13d 6h there was a large dip in H accompanied by rapid oscillations, and the minimum of H for this night occurred in a sudden drop at about 22h 30m.

The movements of V consisted of a gradual rise on the afternoon of the 11th until 17h, followed by a gradual fall. Between 3h and 7h on the 12th there was considerable activity, though the movements were not large. V rose somewhat during the morning, but there were no well-defined movements during this day, the fluctuations being comparatively small and irregular. Slight increases of activity in V were associated with most of the above-mentioned peaks in D. The ranges between the onset of the storm and the morning of the 13th were:—H, 1646 γ ; D, 139'; V, 415 γ . The H range is some five and a half times as great as that recorded at Abinger.† The disturbance died away after 13d 6h.

Another large disturbance began on the morning of the 15th. Conditions were fairly quiet until 13h, after which H rose rapidly, reaching a maximum at 16h 55m; the fall after the maximum was very large and rapid and was followed by a quiet interval from 17h 40m till 19h 50m. In V there was a hump from 15h to 20h, with a small dip at the time of the maximum of H; in D the oscillations were small and irregular. At 20h the disturbance was renewed. H fell by some 200 γ at about this time, and soon after midnight another larger fall marked the beginning of the most disturbed period, which ended at about 16d 3h 30m with a rapid rise of H. The disturbance then died away, but there was minor disturbance during the next 24 hours and some activity for several days afterwards.

A small disturbance occurred during the night of the 20th-21st. The most noteworthy feature was a sharp dip of 360 γ in H between 21d 3h and 4h, followed by an irregular dip between 5h and 8h.

During the rest of the month conditions were moderately quiet, though no day was free from minor activity.

*Marine Observer, VII., p. 42.

†Nature, 123 (1929), p. 504.

Aurora was observed from one or more places in Scotland on March 2, 3, 4, 6, 7, 8, 11-17, 22, 25, 27, 29 and 31. The display of March 12th was bright and widely observed. Ships in various seas reported bright aurora at about this time, viz., : on March 11 at 9 p.m. in lat. $51^{\circ} 41' N$, long. $144^{\circ} 12' W$, on March 12 off New Zealand coast in $40^{\circ} S$ lat., on March 12 at 11.30 p.m. in lat. $37^{\circ} 48' S$, long. $129^{\circ} 55' E$, on March 11 at 10 p.m. in lat. $49^{\circ} 10' N$, long. $134^{\circ} 40' W$.*

April.—(Average Character Figure 0.77). There were very few disturbances this month, and none of large magnitude.

A "sudden commencement" at 4d 9h 27m was followed by small and rapid oscillations for about 9 hours, but no magnetic storm developed. Conditions were then quiet for eleven days, especially during the hours from 9d 20h to 10d 11h.

At 15d 16h considerable agitation began; there were, however, no large movements until 16d 3h 5m, when H began to fall rapidly. The fall reached a depth of 340γ at 3h 42m and a rapid rise followed. There was a peak of about 25' in D at 3h 51m. Superposed on these movements in H and D there were very rapid oscillations of small amplitude from about 3h 30m to 4h 30m. There was a dip of 130γ in V from 1h till 8h, with a small peak at 3h 45m.

During the morning and afternoon of the 16th small rapid oscillations continued in H and D. The afternoon rise in H was broken by a small hump between 14h and 15h, and continued until the maximum was reached shortly after 17h. At 22h 34m greater disturbance set in with a fall in H and V, and a rise in D; the dip in V and large fluctuations in H and D continued from then until 17d 2h, when a rapid rise in H marked the end of the major disturbance. H and V continued to rise for another three hours. There was agitation, though of diminishing degree, during the next 48 hours.

Nothing worthy of note occurred from this time until the last three days of the month. The 20th was a very quiet day.

On the 28th day there was renewed activity, which continued for a further five days. The fluctuations were for the most part rapid and irregular, but not of large extent; on the afternoon of the 29th, however, the normal diurnal variation of H was somewhat accentuated, and between 21h and 22h there were one or two well-marked smooth oscillations in both H and D.

Aurora was observed from one or more places in Scotland on April 1, 2, 4-11, 16, 20, 21 and 30, but in no case widely. It is reported as having been seen from S.S. Wellington in lat. $38^{\circ} 12' S$, long. $138^{\circ} 58' E$ on April 16, 13.20 to 13.40 G.M.T.†

May.—(Average Character Figure 0.67).—There was continuous minor activity during the first three days; conditions were then quieter until after the occurrence of a "sudden commencement" at 11d 23h 10m. From the 12th till the 17th inclusive there was considerable agitation, which reached the extent of a small disturbance on the 13th. On this day V began to fall at 3h, reaching a minimum, 180γ below its undisturbed value, at about 4h 40m. H and D fluctuated irregularly, H being slightly below its undisturbed value from 2h till 6h. In the three hours from noon H rose irregularly by some 240γ to a maximum at 14h 42m; between 15h 10m and 15h 40m a drop of 120γ occurred, and was followed by an irregular hump till 19h. Small dips of the order of 15' took place in D at about 14h 30m, 17h 40m and 20h 20m. V rose rather rapidly between 13h and 13h 40m, continued at about the same value till 17h 37m, when the maximum occurred in a small peak, and then fell gradually for about 5 hours. The ranges during the period discussed were:—H, 281γ ; D, $34'.8$; V, 286γ .

*Marine Observer, VII, p. 65.

†Marine Observer, VII, p. 82.

A second spell of disturbance is regarded as commencing about 14d 12h. At 14d 20h 40m a rapid drop began in D; a minimum 26' below the undisturbed value was reached at 21h 12m, and was followed by a rapid recovery and a few small oscillations. Slight activity occurred simultaneously in H and V. On the following night (15th-16th) there was some activity from 20h to 22h, and a sharp dip of 150 γ in H between 2h 30m and 4h 30m.

From the 18th to 24th inclusive conditions were fairly quiet, with the exception of the hours from 4 to 16 on the 23rd. Between 23rd 5h 30m and 6h 30m, H fell by 95 γ , and there was a hump of 12' in D from 6h 30m till 7h 50m and a small rise and fall of V between 6 and 7h. During the next eight or nine hours the movements were small and rapid.

Towards the end of the 24th conditions became more disturbed again, and considerable movements took place in the early hours of the 25th. On the afternoon of the 28th there was a small disturbance, preceded for several hours by small and rapid oscillations. A drop of 120 γ in H soon after noon was followed by an irregular rise to a maximum in a peak at 16h 45m; H fluctuated near this value for three hours, and the disturbance ended rather suddenly with a fall of 38 γ shortly before 20h. D rose to a maximum at 15h, afterwards falling gradually till 20h. Small rapid oscillations were present all the time, but there were no large movements; between 19h and 20h an oscillation with a range of 7'·5 marked the end of the disturbance. The only noticeable movement of V was a small hump around 16h. There was some activity from 9h till 21h on the 30th.

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

June.—(Average Character Figure 0·70).—There was a considerable amount of minor disturbance in this month, but none of large dimensions. After slight activity during the first three days conditions were moderately quiet until the morning of the 8th; from then till the end of the 12th disturbance was practically continuous, being greatest on the 10th and 11th. On the afternoon of the 8th there were two small humps in H around 14h and 17h, followed at 22h by a rapid rise of 30 γ and a fall of 85 γ in the next 50 minutes. There were small dips in D and V between 8d 22h and 9d 2h. The 9th was more disturbed, and after 20h there were considerable irregular fluctuations in D, which continued during the 10th and until the early hours of the 11th. A sharp dip of 100 γ occurred in H between 10d 5h 30m and 7h; H rose during the afternoon until soon after 17h and then fell irregularly until midnight. In V there was a rounded maximum between 17h and 18h followed by a gradual fall to a minimum at 11d 1h. After a hump of some 70 γ in H around 11d 1h fluctuations in all elements were small but rapid until the afternoon, when H rose to its maximum at 16h 30m. From then the movements were very small until 19h 44m, when there was a fresh outburst of activity which lasted until nearly 22h; V dipped slightly, while H and D made several irregular oscillations.

Disturbance was considerably less on the 12th, and the period 13d 22h to 15h 6h was very quiet. Normal conditions prevailed for the next few days. Some fresh disturbance was manifest from 21d 12h and much agitation on the 22nd-24th. Between 23d 8h and 24d 8h the oscillations were very rapid in H and D, though the ranges were not large. The activity was greatest between 13h and 19h, during the afternoon rise in H, and again around 22h.

The remainder of the month was normal, apart from the afternoon of the 28th. On this date the diurnal oscillation of H was magnified into a large hump, roughly 150 γ higher than the undisturbed value, between 12h and 20h. Between 14h and 17h there was activity of a small order in all elements.

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

July.—(Average Character Figure 0.84). A small disturbance began on the morning of the 5th. The usual afternoon activity in H in a storm was represented by a small hump between 15h and 17h; the maximum occurred at 16h 30m and was followed by a rapid drop of 150 γ . The maximum of D occurred simultaneously with that of H, in a small peak 8' high; at about 16h 38m, when the fall in H and D became most rapid, V began to rise, and at the time of maximum, some half-an-hour later, had risen by 90 γ . No other noteworthy movements took place until the following morning, when there was a dip of 95 γ in H between 5h and 7h, and a hump of 15' in D; between 6h and 9h V dipped by 70 γ .

The next disturbance began on the morning of the 10th. H fell gradually from 6h till 7h 30m, but there were no large movements until 11h 34m, when H rose abruptly by 195 γ ; there were also small movements in D and V. After this the activity was much greater, and there were several large peaks in H during the afternoon and evening; the maximum of H occurred in a very sharp peak at 16h 49m, and there was a small peak in D at about the same time. 16h 45m was the beginning of a rounded hump in V, which reached a maximum after a small temporary dip at 18h, and then fell irregularly until midnight. At 21h 19m there was a sudden outburst of activity, which resulted in a large oscillation in all elements. H rose by 260 γ to a very sharp peak at 21h 24m, fell by 530 γ in the next 12 minutes, and rapidly recovered to nearly its original value. The movement in D consisted of an irregular rise of 27' to a maximum at 21h 34m, followed by a rapid fall. V, after a small rise, fell by 270 γ to a minimum at 21h 30m. A large dip of some 380 γ occurred in H, beginning at 22h 23m and ending at 23h 40m after a rapid rise; there was a small peak of 20' between 22h 23m and about 23h, followed by several irregular oscillations until 23h 40m, when the disturbance came to an end, except for minor fluctuations. The ranges were: H, 864 γ ; D, 47'·6; V, 430 γ .

Another disturbance began with a rapid rise of 35 γ in H at 14d 16h 31m, but no large movements took place until shortly before midnight. After its initial movement, H continued to rise gradually, reaching a maximum at about 18h. Shortly before 20h there was a hump of 38 γ in H, a dip of 18' in D and a hump of 45 γ in V; during the next three hours, which were quiet, H fell gradually. About $\frac{1}{2}$ hour before midnight H began to fall rapidly, and there was increased activity in D and V. H reached its minimum at 15d 0h 37m in a very sharp dip, and immediately rose rapidly; between midnight and 3h there was great activity of a small order in H and D superposed on the larger fluctuations. D fell to a minimum at 2h 30m, and there was a small dip in H at the same time; H and D then rose rapidly and made many large fluctuations before 5h. V began to fall at about 1h and there was a dip of some 200 γ until 7h. The ranges during this period were: H, 298 γ ; D, 64'; V, 383 γ .

During the morning and afternoon of the 15th there were continued small and rapid oscillations and at 17h the disturbance broke out again. Some of the features of the previous night were reproduced. There was no great activity at first; H rose to a maximum at 18h, and then fell gradually but with increasing velocity; there was a small peak in D shortly before, and a small rounded maximum in V shortly after, 18h, and conditions were then quiet until after 22h. At about 22 $\frac{1}{2}$ h the fall of H became very rapid and the trace passes beyond the limit of registration at 23h, re-appearing some half-hour later, when H was rising at a great speed. Between 23h 0m and 10m there was a sharp dip of 23' in D, followed by a peak at 23h 26m and a drop of 85' to a minimum at 23h 59m. Small and rapid oscillations were continuous throughout this period. V began to fall rapidly at 22h 57m, reached a minimum at 23h 13m, and oscillated irregularly until midnight; V was below its undisturbed value from 15d 22h till 16d 2h.

H continued its rapid rise until 16d 1h, when it reached its normal value, and the disturbance was temporarily at an end.

The ranges between the afternoon of the 15th and the morning of the 16th were : H, $< 672\gamma$; D, $85'$; V, 390γ .

Disturbance was renewed on the afternoon of the 16th, and in this case was over before 22h. The maximum of H occurred in a very tall peak at 15h 8m, and was followed by an irregular fall broken by large fluctuations. There was considerable activity in D between 14h and 20h ; the maximum was reached at 16h 31m, and there was a rounded hump at 18h, and another preceded the drop to a minimum at 20h 0m. V reached its maximum soon after 15h and fell gradually until 2h the next morning. On the following afternoon there was a small outburst of activity between 11h and 14h.

During the rest of the month the degree of activity was fairly constant. On the afternoon of the 24th there was a slight disturbance ; from the 27th onward conditions were quieter until the end of the month. A disturbance began in the last hours of the 31st and will be described under August.

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

August.—(Average Character Figure 0.74).—At 21h 6m on July 31st there was a sudden rise of 58γ in H, a small rise in D and a small drop in V. Considerable agitation followed, and developed into a large disturbance during the night of August 1st–2nd. During the morning and afternoon of the 1st there were many small and irregular fluctuations, superposed on the normal diurnal variations, which were somewhat enhanced. Soon after 22h H began to fall very rapidly and this was, as usual, the beginning of the most disturbed period of the storm, H and D oscillating very rapidly during the next hour. H reached its minimum a few minutes before 23h ; after a sharp peak at 23h 7m it rose rapidly and attained a normal value before midnight. D rose to a double peak with maxima at 23h 5m and 23h 16m, and then fell to a minimum at 23h 41m. There was an irregular peak in V, some 160γ high, between 22h 30m and 23h 16m. In the two hours after midnight there was a temporary cessation of disturbance, but it was renewed soon after 2d 2h with a fall of 260γ in H and further rapid oscillations about the time of minimum (3h 20m). H rose again immediately, and the disturbance was practically at an end by 5h ; there was a dip of about 90γ in V between 2 and 5h. The ranges were : H, $> 562\gamma$; D, $54' \cdot 8$; V, 284γ .

A small disturbance took place on the night of the 4th–5th. D made several fairly regular oscillations of roughly $6'$ amplitude between 4d 23h and 5d 3h, but the greatest activity occurred between 1h and 3h during a dip of 150γ in H ; there was a shallow dip in V from midnight to 4h.

From the 6th to 13th inclusive conditions were quiet, apart from an outburst of activity of a small order from 0h to 23h on the 11th.

A disturbance, which became very large during the afternoon and night, began at 14d 12h 27m with small movements in all elements. The disturbance followed a normal course in its main features. All three elements were at their highest values about 18h. H then fell rapidly, and there was very great activity during two deep dips in H, the first shortly before 22h and the second from 23h to 15d 2h. The ranges were : H, 1041γ ; D, $80' \cdot 1$; V, 349γ .

During the 15th–20th inclusive there was slight disturbance and the rest of the month was comparatively quiet.

Aurora was seen from one or more places in Scotland on August 2 and during the night of 14th–15th.

September.—(Average Character Figure 0·87).—There was no large disturbance this month, but disturbance of moderate degree occurred on about ten days.

Quiet conditions continued until the end of the 6th, when a small movement in all three elements marked the beginning of a disturbance which lasted for 24 hours, with ranges of 166 γ in H, 49' in D, and 296 γ in V. After a small peak shortly before 7d 1h, D made a dip of 36' between 2h and 7h; several small dips occurred in H, while V was below its undisturbed value from about 1h to 7h. H fell to a minimum at 10h, rose gradually to a maximum at about 17h, and fell again slowly: small oscillations were present continuously. Between about 15h and 16h D fell by 15' and V rose by 105 γ ; the return to the former values took place in each shortly before 21h.

Slight disturbance set in again rather suddenly about 8d 21h 14m; about 24 hours later, viz., at 9d 21h 27m, more marked disturbance set in and this continued until the 15th. At 10d 17h 29m a value of 14706 γ was attained in H and a few minutes later D fell to 13° 56'·5. The lowest value of H, 14359 γ , was attained at 11d 1h 27m in a "pit" between midnight and 2h of 11th. The successive daily traces over the period 8th to 15th show frequent apparent repetitions of movements.

Quiet conditions ensued until the afternoon of 21st, when moderate disturbances again became evident. The most outstanding movements in this storm were two "pits" in H, one around 1h and the other around 4h of 22nd. The minimum value (14225 γ) was attained in the former at 22d 1h 1m. This disturbance died down about 22d 22h, the remainder of the month being marked by no noteworthy movements, though 27th was slightly disturbed.

Aurora was seen from one or more places in Scotland on September 3, 5, 9, 10, 12, 13, 14, 22, 27, and 30.

October.—(Average Character Figure 0·94). The quietness characterizing the latter part of September was maintained until the early hours of 7th October, when a moderate disturbance was ushered in by a period of small vibratory movements. The only notable movement in this disturbance was a sharp rise in D to 15° 6'·5 at 7d 22h 13m. Conditions were not entirely quiet again until the evening of 13th. After two very quiet days the largest disturbance of the month was ushered in by a "sudden commencement" at 16d 11h 14m. In a sharp rise commencing at 16d 17h 45m, H increased by some 170 γ to a maximum of 14821 γ at 18h 6m, falling again by 360 γ in a further five minutes; again in a sharp movement setting in about 20h 32m it fell by nearly 500 γ to a minimum of 13990 γ at 20h 54m, and had recovered by 580 γ at 23h 18m. The movements in declination were somewhat similar but (interpreted in units of force) of about half the magnitude. The abrupt movements in V were in the opposite sense to those in H and D, and of a total range of 557 γ , as against 831 γ in H. The evening of 17th showed a roughly approximate repetition, about 1½ hours later in time, reduced in the case of H to about three-fourths of the range and considerably more flattened in the case of D; whilst in V the movements were now in the same direction as in H. Yet again, in the more rapid movements, the night of 18th–19th shows a suggestion of a repetition, modified and delayed by a further 2½ or 3 hours, of the sharp movements of the two previous evenings.

From the 21st inclusive conditions were fairly quiet until 30th, when a period of slight disturbance commenced.

Aurora was seen from one or more places in Scotland on October 3, 7–10, 12, 14, 17, 23–27, 29–31. On 7th, 8th and 30th the display was observed fairly widely.

November.—(Average Character Figure 0·83).—The slight disturbance noted at the end of last month continued into November; following a small movement, rather like a “sudden commencement,” at 2d 12h 57m, greater disturbance supervened, more particularly within the period 2d 20h to 4d 4h. A notable feature of the H trace on the afternoon of 3rd is a succession of sharp peaks at 15h 3m, 17h 0m and 19h 17m, at which times maxima of 14735 γ , 14773 γ and 14826 γ , respectively, were attained. Corresponding depressions occurred in D at 15h 15m, 17h 8m and 19h 20m, with minima of 13° 32'·5, 13° 28'·6 and 13° 33'·5 respectively.

A “sudden commencement” at 8d 21h 43m was followed by no disturbance worth mention, conditions remaining very quiet from the 8th until the evening of the 15th. Thereafter slight disturbance ensued at first, but between 14h and 22h of 16th, and more particularly between 18h and 21h, extremely rapid movements of considerable range were in progress. The ranges reached within the three hours amounted to 774 γ in H, 65'·1 in D and 285 γ in V. The disturbance subsided with remarkable rapidity about 22h and was followed by three days of very small variation in force. Shortly before 20d 12h some indication appeared of another disturbance. The chief feature was a very considerable afternoon hump in which H and V rose 200 γ above their undisturbed levels; the quick return to fairly quiet conditions and the absence of any corresponding dip around or after midnight made the afternoon rise the more remarkable. Conditions were afterwards fairly quiet for the rest of the month and particularly quiet about 23rd to 25th.

Aurora was seen from one or more places in Scotland on November 1-3, 5, 6, 8-10, 12, 14-16, 20, 24, 26, 27 and 30.

December.—(Average Character Figure 0·90). The month opened with quiet conditions, the first considerable disturbance developing gradually from about midday of 3rd. This disturbance possessed no very notable features, but lasted a considerable time, diminishing gradually after the 6th. The most abrupt excursion in H was a dip of some 250 γ between 4d 0h 40m and 1h 25m.

Conditions had not become entirely quiet when some further disturbance of a minor nature set in on 11th, lasting for about a day. The 13th, 14th and 15th were rather quieter, but on 16th there commenced the chief disturbance of the month. On the afternoon of that day H rose some 450 γ and V some 250 γ above their undisturbed levels. In the case of H, as in the storm of 20th November (26 days earlier), there was the peculiarity of no corresponding subsequent dip; in V there was a dip just after 18h, but no important movements later in the night. In both the D and the H traces of this day there are other points of resemblance to those of 20th November. There was some repetition of disturbance on a lesser degree on the following afternoon.

The 19th to 21st was the quietest period of the month. Shortly after 21d 22h small oscillations set in suggestive of fresh disturbance, which indeed developed on the following day. The chief movement was a rise in H of about 200 γ in the half hour ending 22d 17h 40m, when a value of 14775 γ was attained.

The 26th and 27th were quiet, and the remainder of the month had no disturbance worthy of mention.

Aurora was seen from one or more places in Scotland on December 1, 3-6, 8-10, 16, 22-24, 26, 27, 29-31.

POTENTIAL GRADIENT (reduced to level surface) : VOLTS PER METRE.
 Mean values for periods of sixty minutes, centred at exact hours, Greenwich Mean Time.

1. Lerwick.

Day.	January. Factor 1·19.				February. Factor 1·19.				March. Factor 1·22			
	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	101	119	189	111	75	135	199	104	227	401	392	48
2	70	158	104	163	163	220	306	179	- 174	19	101	168
3	122	91	122	155	73	155	132	122	112	109	128	155
4	129	186	153	220	111	407	370	300	136	85	99	96
5	132	174	114	98	135	- 251	111	166	88	88	115	128
6	60	122	85	62	132	218	98	< -837	101	104	91	184
7	39	98	137	- 62	334	306	101	122	69	128	99	125
8	52	96	83	- 194	150	324	192	210	200	235	184	398
9	106	80	78	62	106	205	137	166	184	422	497	427
10	106	91	129	132	153	153	- 231	< -453	139	288	470	411
11	78	98	127	67	47	49	60	344	275	454	387	158
12	62	78	85	96	153	132	137	262	107	99	144	192
13	62	85	127	166	> 174	394	> 337	119	195	174	99	115
14	57	70	104	124	88	163	135	127	64	72	115	147
15	168	< -386	181	114	205	60	91	- 85	112	144	136	184
16	111	3	192	344	319	228	119	129	104	99	187	243
17	> 627	91	104	z+	311	142	194	101	123	133	187	206
18	91	88	132	93	163	233	91	85	168	96	125	168
19	75	13	220	124	122	119	137	137	246	190	179	133
20	106	101	176	104	109	148	155	228	104	203	382	374
21	- 311	47	251	445	215	179	347	233	374	395	211	270
22	49	148	218	176	192	236	104	114	93	128	158	125
23	114	106	192	119	18	< -303	129	- 18	101	88	- 163	77
24	98	111	140	127	91	85	117	137	83	99	88	109
25	73	137	137	- 67	111	137	142	155	117	40	64	139
26	83	80	148	140	140	145	161	163	67	35	107	77
27	145	101	> 427	165	80	117	135	85	91	83	139	117
28	36	163	264	> 860	88	78	91	215	67	88	80	112
29	80	83	127	49	-	-	-	-	109	150	131	85
30	238	- 21	352	233	-	-	-	-	64	93	136	120
31	451	- 67	378	140	-	-	-	-	91	147	128	77
(a)	124	101	170	174	145	183	160	167	134	158	179	173
(b)	93	75	172	146	145	151	146	93	124	158	168	173
Mean ...	(a) 142. (b) 121.				(a) 164. (b) 134.				(a) 161. (b) 156.			

Day.	April. Factor 1·29.				May. Factor 1·33.				June. Factor 1·33.			
	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	z±	125	105	142	83	125	157	128	128	97	157	160
2	91	80	20	- 57	140	160	154	146	88	120	123	154
3	68	85	111	133	104	113	160	140	111	71	148	134
4	40	- 321	116	224	113	83	101	116	105	74	77	123
5	105	119	131	168	- 689	- 1028	205	80	80	108	105	< -259
6	133	142	82	321	83	101	211	- 6	131	120	140	111
7	435	210	187	324	200	73	- 65	124	148	117	14	151
8	497	361	145	145	96	- 130	z+	110	91	97	134	168
9	71	77	99	139	412	85	135	- 54	z±	128	128	-
10	88	128	119	142	56	217	87	37	91	143	(111)	123
11	91	116	108	139	102	110	110	121	-	-	- 510	103
12	97	116	122	165	99	118	93	138	123	71	439	436
13	85	114	159	162	76	138	223	361	296	211	- 37	239
14	82	114	145	179	186	- 536	350	197	214	353	348	157
15	131	145	196	230	180	85	135	189	202	143	336	556
16	151	136	230	261	279	158	158	206	396	450	439	197
17	159	176	469	148	87	71	102	127	- 114	100	128	174
18	122	122	74	< -460	99	127	90	175	257	- 157	168	182
19	20	65	54	> 378	138	172	133	152	- 128	202	427	168
20	429	45	116	< -295	138	192	59	127	137	51	148	180
21	99	105	133	136	135	82	87	116	114	71	80	88
22	- 9	68	68	187	133	245	389	491	- 228	171	85	40
23	97	142	60	131	265	234	372	409	- 23	140	117	40
24	145	159	108	3	192	262	206	121	- 271	97	100	54
25	310	88	< - 85	170	65	310	(451)	285	91	131	197	208
26	114	122	> 491	173	268	572	353	426	162	177	162	205
27	88	105	142	281	415	217	214	183	114	151	111	108
28	77	122	108	119	121	144	180	203	91	68	100	188
29	48	77	139	116	155	149	175	248	140	60	140	162
30	94	97	116	94	121	206	152	147	248	111	171	191
31	-	-	-	-	85	110	133	164	-	-	-	-
(a)	142	123	143	178	154	166	185	189	155	137	173	171
(b)	136	107	137	133	128	103	177	177	100	127	167	159
Mean ...	(a) 147. (b) 128.				(a) 173. (b) 146.				(a) 159. (b) 138.			

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

POTENTIAL GRADIENT (reduced to level surface): VOLTS PER METRE.
 Mean Values for periods of sixty minutes, centred at the exact hours, Greenwich Mean Time.

1. Lerwick.

Day.	July. Factor 1.28.				August. Factor 1.27.				September. Factor 1.28.			
	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	124	210	298	381	54	102	99	121	278	499	273	100
2	141	127	215	166	83	75	118	105	73	375	65	111
3	69	14	80	66	147	78	115	461	67	97	119	143
4	141	132	243	243	394	163	83	126	97	121	103	121
5	88	99	127	144	99	115	126	150	67	(135)	105	108
6	88	152	124	177	102	121	153	137	111	116	138	265
7	105	102	130	166	107	105	—	—	103	84	516	410
8	138	119	138	240	—	(100)	(100)	166	178	184	43	224
9	135	248	497	560	(173)	251	231	178	111	151	(127)	135
10	320	284	370	262	95	103	146	334	84	108	111	143
11	113	221	232	138	156	382	171	151	149	105	127	327
12	182	94	138	138	156	118	100	148	370	254	— 135	151
13	—	66	174	144	118	191	108	228	81	116	213	278
14	121	110	177	282	193	532	141	211	257	175	132	219
15	188	130	138	201	128	63	138	100	213	219	124	192
16	127	179	163	190	68	133	208	(251)	86	121	138	159
17	155	177	193	185	—	233	38	100	167	124	205	359
18	97	110	726	411	(63)	98	113	(163)	< -429	143	108	154
19	356	199	444	497	100	248	256	100	108	41	32	140
20	508	232	320	334	153	161	454	402	97	81	111	170
21	102	91	97	155	316	173	161	520	89	— 213	124	178
22	—	110	108	44	143	118	100	284	103	108	127	211
23	149	130	102	188	< - 891	141	103	158	62	254	254	124
24	108	135	108	127	132	168	185	141	113	130	135	632
25	110	80	83	110	69	119	94	127	108	— 216	200	378
26	108	166	121	108	110	119	— 317	124	211	19	529	470
27	190	138	108	138	243	386	373	312	305	5	105	162
28	119	124	124	144	599	331	671	179	19	283	(135)	—
29	135	124	124	0	105	< - 44	155	99	—	(108)	(135)	186
30	— 88	160	342	171	86	91	94	155	81	221	> 491	(0)
31	69	248	237	237	121	75	— 295	— 524	—	—	—	—
(a)	153	146	209	205	154	171	175	198	135	156	173	210
(b)	145	149	214	212	118	159	138	176	119	127	165	191
Mean ...	(a) 178. (b) 180.				(a) 175. (b) 148.				(a) 169. (b) 151.			
Day.	October. Factor 1.26.				November. Factor 1.24.				December. Factor 1.26.			
	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	251	151	181	(216)	304	— 246	198	211	87	— 197	169	101
2	105	378	135	3	129	— 446	135	132	135	132	— 141	253
3	116	132	132	173	71	219	143	140	155	141	253	244
4	86	< - 1096	119	81	92	— 53	127	— 79	169	197	— 115	261
5	— 30	124	194	138	172	190	195	158	191	197	< - 953	208
6	186	— 251	257	57	108	135	156	66	118	56	146	273
7	116	189	70	65	362	145	143	(211)	141	146	— 205	98
8	127	108	135	89	37	222	290	267	84	135	— 318	98
9	70	65	105	108	327	293	478	— 158	76	65	110	208
10	(54)	78	< - 818	70	> 634	158	> 671	298	365	256	205	194
11	(0)	— 3	95	92	> 924	407	— 174	50	84	157	— 81	70
12	67	46	89	127	63	26	45	238	11	155	115	309
13	95	97	132	— 494	—	—	—	293	— 70	20	166	121
14	67	65	108	132	317	119	301	169	(56)	141	< - 542	554
15	81	205	135	— 635	79	114	219	169	379	318	121	233
16	16	— 13	265	— 356	95	169	135	135	107	110	259	112
17	189	216	— 424	119	92	106	129	137	73	— 17	70	96
18	62	95	70	89	92	87	198	135	160	149	155	174
19	78	51	103	105	79	— 148	103	330	171	225	306	211
20	— 143	67	130	127	201	174	224	264	155	— 17	225	— 8
21	111	113	113	54	319	272	169	264	— 247	— 298	— 458	573
22	8	84	124	— 257	156	211	462	230	188	— 576	157	143
23	— 121	67	— 351	89	206	135	148	156	96	90	110	34
24	— 513	181	127	111	150	251	224	— 539	96	76	56	98
25	— 313	97	159	278	222	— 737	198	121	67	87	214	(225)
26	116	108	170	178	79	98	185	140	3	101	160	306
27	89	108	170	189	53	79	108	129	14	126	152	152
28	100	119	243	121	106	172	— 238	11	93	0	115	155
29	111	— 351	189	178	8	124	150	— 82	— 45	112	194	169
30	92	124	143	175	121	127	119	114	—	—	—	256
31	92	170	246	348	—	—	—	—	90	110	138	132
(a)	96	125	148	130	193	168	209	176	125	132	163	206
(b)	44	49	82	57	193	83	181	118	100	73	26	187
Mean ...	(a) 125. (b) 58.				(a) 187. (b) 144.				(a) 157. (b) 97.			
Annual Means ...								(a)	143	147	174	181
								(b)	120	113	148	152
								(a) 161.		(b) 133.		

The Potential Gradient is reckoned as positive if the potential increases upwards. For indeterminate potential gradient the following notation is used :

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.

* oa DAYS ONLY.

2. Lerwick.

1929.

Month and Season.	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.	Non-cyclic change 24-0.	No. of Days used.	Mean Values
	1.	2.																									
Jan.	v/m. -17	v/m. -16	v/m. -15	v/m. -17	v/m. -17	v/m. -11	v/m. -9	v/m. -11	v/m. +12	v/m. +14	v/m. +3	v/m. -13	v/m. -10	v/m. +9	v/m. +8	v/m. +11	v/m. +19	v/m. +5	v/m. +9	v/m. +24	v/m. +19	v/m. +6	v/m. 0	v/m. -3	v/m. -19	4	v/m. 123
Feb.	-5	-15	-5	-14	-16	-11	-5	-10	+5	-3	-10	+13	+23	+1	-20	-7	-8	+15	+20	+23	+9	+12	+3	+5	+5	6	150
Mar.	-39	-41	-46	-51	-40	-35	-17	-7	-6	-15	-19	-18	-9	+1	+15	+52	+70	+68	+82	+71	+24	+7	-14	-33	+5	17	190
April	-7	-16	-13	-18	-16	-12	-11	-24	-15	-23	-13	-11	-4	-10	-5	0	+9	+29	+52	+49	+44	+15	+2	-2	+5	12	146
May	-16	-20	-24	-19	-15	+1	+5	+2	0	-9	-17	-16	-11	-5	-10	+10	+30	+27	+24	+37	+24	+12	+6	-15	+3	18	178
June	-66	-73	-31	-4	+8	+4	-19	-38	-39	-23	+28	-14	-20	+50	+47	+30	+6	+18	+56	+59	+18	+18	+3	-16	+86	9	163
July	-11	-10	-20	-6	0	-14	-27	-19	-31	-40	-39	-1	+2	+27	+1	+4	+7	+25	+32	+36	+34	+38	+9	+3	+2	17	182
Aug.	-40	-46	-23	-33	-37	-12	+8	-26	-20	-13	-38	-9	+4	+22	+11	+15	-10	+16	+23	+64	+47	+41	+44	+12	-5	6	179
Sept.	-20	-37	-7	-22	-28	-9	+15	-1	-5	-19	-29	-27	-37	-23	-18	-24	-22	+12	+42	+54	+96	+103	+19	-13	+72	6	151
Oct.	-4	+3	-13	-39	-51	-31	-15	-25	-20	-15	-20	-15	+1	+7	+22	+9	+15	+27	+30	+37	+38	+40	+10	+10	+86	3	140
Nov.	-36	-34	-47	-48	-40	-37	-35	-35	-21	-19	+17	+11	+25	+29	+41	+60	+54	+43	+65	+35	+21	+3	-27	-25	+20	2	120
Dec.	-135	-113	-94	-78	-67	-25	-18	-36	-11	-7	+16	+28	+76	+108	+100	+63	+39	+41	+38	+39	+34	+47	+79	-123	-118	1	221
Year	-33	-35	-28	-29	-27	-16	-11	-19	-13	-14	-10	-6	+3	+18	+16	+19	+17	+27	+39	+44	+34	+28	+11	-17	+12	101	162
Winter	-48	-45	-40	-39	-35	-21	-17	-23	-4	-4	+7	+10	+28	+37	+32	+32	+26	+26	+33	+30	+21	+17	+14	-37	-28	13	153
Eqnx.	-17	-23	-20	-33	-34	-22	-7	-14	-11	-18	-20	-18	-12	-6	+3	+9	+18	+34	+51	+53	+51	+41	+4	-9	+42	38	157
Sumr.	-33	-37	-25	-15	-11	-6	-8	-20	-23	-21	-17	-10	-6	+23	+12	+15	+8	+21	+34	+49	+31	+27	+15	-4	+21	50	175

3. Lerwick.

1929.

* 1a AND 2a DAYS ONLY.

Month and Season.	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.	Non-cyclic change 24-0.	No. of Days used.	Mean Values
	1.	2.																									
Jan.	v/m. -15	v/m. -17	v/m. -24	v/m. -31	v/m. -32	v/m. -27	v/m. -40	v/m. -3	v/m. +10	v/m. +14	v/m. +9	v/m. +2	v/m. +18	v/m. +1	v/m. +23	v/m. +15	v/m. +51	v/m. +35	v/m. +24	v/m. +19	v/m. +20	v/m. -18	v/m. -11	v/m. -23	v/m. +23	5	v/m. 110
Feb.	-29	-67	-51	-46	-40	-25	-34	-19	-2	+1	-9	+2	+55	+43	+43	+27	-38	+24	+26	+52	+57	+49	+48	-67	-131	5	141
Mar.	-66	-69	-69	-55	-58	-36	-28	-11	+6	+4	+47	+44	+23	+36	+9	+26	+42	+54	+82	+83	-6	+14	-20	-53	-65	6	167
April	-51	-72	-63	-82	-111	-147	-138	-152	-224	-263	+5	+71	+77	+113	+154	+217	+225	+154	+152	+69	+60	+1	+40	-35	-50	2	145
May	+26	+24	+8	-31	-53	-34	-55	-96	-78	-2	-73	-50	-40	+24	-18	+7	+74	+23	+93	+106	+45	+29	+43	+19	-37	1	158
June	-8	-18	-23	-18	-3	+14	+10	+9	-6	-17	-33	-17	-3	+14	+7	+8	-19	+55	+58	+51	-7	-37	-19	+2	+45	6	169
July	-26	+51	-61	-101	-32	-35	-26	-14	-18	+10	+24	+4	+20	+75	+117	+59	+5	+7	-7	+29	+26	-5	+2	-2	+52	8	198
Aug.	+17	+19	+6	-26	-19	-10	-8	-6	-17	-18	-18	-20	-36	-18	-19	-15	+4	+7	+35	+65	+64	+24	-13	+1	+18	7	139
Sept.	-16	-34	-32	-40	-37	-35	-34	-35	-50	-52	-41	-27	-18	+9	+23	+12	+20	+66	+113	+97	+56	+43	+11	+1	-81	14	157
Oct.	+9	-24	-28	-22	-22	-48	-45	-12	0	-39	-5	+5	-67	+5	+35	+45	+44	+18	+36	+19	+32	+27	+19	+18	+25	6	81
Nov.	-47	-64	-50	-68	-49	-54	-56	-49	-54	-41	-85	-46	+6	+24	+54	+86	+105	+124	+117	+71	+53	+40	+23	-40	-37	6	141
Dec.	-32	-66	-51	-33	-41	-27	-25	-21	-49	-15	-27	+10	+8	+18	+5	-8	+42	+55	+73	+59	+72	+31	+12	+8	-14	3	125
Year	-20	-37	-37	-46	-41	-39	-40	-34	-40	-35	-17	-2	+4	+29	+36	+40	+46	+52	+67	+60	+39	+17	+11	-14	-21	69	144
Winter	-31	-53	-44	-45	-41	-33	-39	-23	-24	-10	-28	-8	+22	+21	+31	+30	+40	+59	+60	+50	+51	+25	+18	-31	-40	19	129
Eqnx.	-31	-50	-48	-50	-57	-67	-61	-53	-67	-87	+1	+23	+4	+41	+55	+75	+83	+73	+96	+67	+35	+21	+13	-17	-43	28	137
Sumr.	+2	-7	-17	-44	-27	-16	-20	-27	-30	-7	-25	-21	-15	+24	+22	+15	+16	+23	+45	+63	+32	+3	+3	+5	+19	22	166

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

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

4. Lerwick.

1929.

Day.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	Character. Duration of negative pot. grad.											
1	1b 1.1	1b 0.8	1a 1.1	1b 1.7	1b 0.8	oa ...	oa ...	1b 2.3	1b 0.3	1c 2.0	1b 1.9	2b 5.3
2	1a 0.9	1b 0.3	2a 6.9	1b 1.6	1b 0.3	oa ...	1b 1.7	1a 0.7	1a 0.1	2c 7.1	1b 2.7	2b 4.5
3	oa ...	1a 0.7	oa ...	1b 1.9	oa ...	1b 2.7	1b 0.9	2b 4.1	1a 0.1	1b 0.5	1b 1.1	1b 0.5
4	oa ...	1b 1.7	1a 0.2	2a 7.3	1b 2.7	1b —	oa ...	oa ...	oa ...	2c 11.3	1b 2.4	2b 3.7
5	oa ...	1b 1.8	1a 0.1	oa ...	2b 7.8	1b 1.4	oa ...	1a 0.2	1a —	2b 3.4	1b 1.3	2b 5.1
6	2b 4.1	2b 4.7	oa ...	oa ...	1b —	1a 0.5	oa ...	1a 0.5	oa ...	2b 7.7	1b 0.9	1b 0.9
7	2c 4.8	oa ...	oa ...	oa ...	1b 2.9	1b 1.2	oa ...	1a —	1a 0.1	2b 5.6	1b 1.2	2b 5.5
8	2c 4.5	1b 2.3	oa ...	1b 0.5	2b 3.3	1a 0.1	oa ...	—	1a 0.6	1b 1.3	2c 3.3	1b 1.9
9	1b 0.8	1b 0.1	oa ...	1b 0.9	1b 2.7	2b —	1a 0.1	1a —	oa ...	1a 0.1	2c 3.2	1b 1.9
10	1a 0.7	2c 3.3	oa ...	oa ...	2b 7.3	1 —	1a 0.1	oa ...	1a 0.4	2b —	2c 3.1	1b 2.2
11	oa ...	1b 2.0	oa ...	oa ...	oa ...	2 —	1a 0.6	1b 1.9	1b 1.6	2a 3.2	2c 10.7	1b 2.3
12	1a 2.5	2c 3.8	oa ...	oa ...	oa ...	1a 0.3	oa ...	1a 0.1	1a 2.2	2a 3.3	1c 2.1	2c 4.0
13	1b 0.1	2c 3.2	oa ...	oa ...	oa ...	2b 4.0	1a —	oa ...	oa ...	1b 2.6	—	1b 2.2
14	1b 1.3	1c 2.5	1b 1.3	oa ...	2b 3.1	oa ...	1a 0.1	1b 1.3	1a 0.2	1a 0.3	2c 3.7	1c 2.6
15	1c 2.3	2b 5.6	oa ...	oa ...	1a 0.1	1a 0.2	oa ...	1b 2.3	oa ...	1b 1.5	oa ...	1c 2.6
16	1c 0.9	1b 0.8	oa ...	oa ...	oa ...	1b 1.7	oa ...	1a —	oa ...	2b 7.6	1a 0.9	1b 1.2
17	1c 0.9	1b 1.3	oa ...	1a 0.1	oa ...	1b 1.8	oa ...	2a —	1a 2.5	2b 4.1	1a 0.3	1a 1.0
18	1b 0.5	1b 0.2	oa ...	1b 1.9	oa ...	1b 0.8	1a 0.7	1b —	2b 3.1	1b 2.1	1a 0.4	1a 0.4
19	2b 3.8	1a 0.1	oa ...	1c 2.0	oa ...	1a 1.8	oa ...	oa ...	2b 5.7	oa ...	2a 5.3	oa ...
20	2b 3.1	oa ...	oa ...	1c 2.9	oa ...	1a 0.6	oa ...	oa ...	1a 1.1	2a 5.5	1b 2.3	2b 4.4
21	2b 6.8	1a 1.8	1a 0.1	1b 0.8	oa ...	1a 0.3	oa ...	1a 1.4	2b 6.5	1a 1.9	2b 3.3	2c 16.1
22	1a 0.3	1a 0.4	1b 0.7	1b 2.2	oa ...	2b 6.1	1a —	1a 0.2	1a 0.2	2b 5.2	1a 0.1	2b 4.5
23	1b 0.5	2b 4.5	1b 1.9	1b 0.7	1b 0.5	2a 4.1	oa ...	2b —	1a 0.1	2b 5.7	1b 1.5	1b 2.5
24	1a 0.4	1a 0.1	1a 0.1	1c 2.4	oa ...	2b 3.3	1a 0.3	2b 3.5	oa ...	2c 3.1	1b 0.9	1b 1.6
25	1b 1.0	oa ...	1a 1.9	1c 1.8	1b —	oa ...	oa ...	1a 0.6	2a 3.5	1b 1.3	2b 3.6	1b —
26	1b 0.4	oa ...	oa ...	1b 0.9	oa ...	oa ...	oa ...	1b 0.7	1a 0.3	oa ...	1b 2.5	1a 0.3
27	1b 0.4	oa ...	oa ...	1b 1.9	oa ...	oa ...	oa ...	1b 0.1	1a 0.9	1a 0.1	oa ...	1b 1.1
28	1b 2.0	oa ...	oa ...	oa ...	oa ...	oa ...	oa ...	1b —	1 —	2b 4.1	2b 7.1	1c 2.7
29	1b 2.1	oa ...	oa ...	1b 0.8	oa ...	1a 0.2	1a 1.5	1b —	1 —	2b 3.2	2a 5.6	2b 8.1
30	2b 3.7	oa ...	1b 0.5	oa ...	oa ...	1a 0.2	2a 3.7	oa ...	2c 3.5	1b 0.1	1a 0.3	—
31	1b 0.6	oa ...	1c 1.8	oa ...	oa ...	oa ...	oa ...	2b 6.4	oa ...	oa ...	oa ...	1b 0.4
Total	50.5	42.0	16.6	32.3	31.5	31.3	9.7	26.3	33.0	93.9	71.7	89.5
No. of days used.	31 31	28 28	31 31	30 30	31 29	30 26	31 29	30 22	30 27	31 30	29 29	30 29
Mean	1.10 1.6	1.00 1.5	0.42 0.5	0.63 1.1	0.55 1.1	0.97 1.2	0.42 0.3	0.97 1.2	0.93 1.2	1.42 3.1	1.28 2.5	1.30 3.1

Annual Values :—Character Frequency $\begin{matrix} 0 & 1 & 2 \\ 104 & 186 & 72 \end{matrix}$
 Mean character figure 0.91 (362 days)
 Duration of negative pot. grad. : Total 528.3 hrs.
 No. of days 341
 Mean 1.55 hrs.

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

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

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

5. Lerwick. (H.)

14,000 γ (·14 C.G.S. unit) +

January, 1929.

Table with 25 columns (0-24) and 26 rows (Day 1-31, Mean). Columns represent hours of the day, and rows represent days of the month. Values are magnetic force readings in γ. Includes a 'Mean' row at the bottom.

MAGNETIC DECLINATION (WEST).

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

6. Lerwick. (D.)

14° +

January, 1929.

Table with 25 columns (0-24) and 26 rows (Day 1-31, Mean). Columns represent hours of the day, and rows represent days of the month. Values are magnetic declination in degrees. Includes a 'Mean' row at the bottom.

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

7. Lerwick (V.)

46,000 γ (.46 C.G.S. unit) +

January, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1 Q	684	684	684	685	684	684	684	685	685	687	688	688	687	687	685	685	686	686	686	686	684	684	687	686	686	686
2	686	685	685	682	682	683	683	685	686	685	685	685	685	686	686	685	685	685	685	686	686	686	686	686	685	685
3	685	683	682	682	682	680	680	680	680	682	682	683	684	684	684	686	683	681	683	685	691	696	706	703	697	686
4	697	695	689	671	674	679	681	680	681	683	684	684	685	684	685	684	683	683	684	683	683	684	684	683	683	683
5 D	683	682	682	682	681	680	681	681	681	682	684	682	681	681	681	681	685	688	718	765	751	739	735	726	717	697
6	717	702	705	702	702	703	704	707	707	708	708	708	708	708	708	708	708	709	712	716	710	707	706	705	706	707
7	706	705	704	704	703	703	702	700	702	702	702	703	702	703	703	704	706	706	703	702	702	702	703	703	701	703
8 D	701	699	697	695	692	694	695	695	695	696	695	696	696	698	699	702	703	703	702	699	699	699	701	686	610	695
9 D	610	568	592	612	617	638	649	655	656	659	665	666	668	673	674	683	689	705	720	714	712	716	716	708	698	667
10 D	698	695	694	695	695	695	694	692	691	693	693	693	694	687	686	690	709	713	703	705	702	697	682	675	694	694
11	675	642	632	637	635	609	619	630	641	645	650	653	655	657	658	659	660	659	661	661	659	659	659	658	658	649
12	658	658	659	660	660	658	658	658	658	658	662	661	660	668	660	660	661	662	662	662	661	662	662	661	662	660
13	662	662	664	662	664	663	661	661	661	663	665	665	665	666	668	668	667	667	665	665	664	668	668	668	667	665
14 D	667	658	659	659	659	659	661	661	661	663	665	665	665	662	664	687	701	693	687	686	686	683	681	678	676	671
15	676	674	669	669	671	671	671	671	672	671	675	675	676	676	676	677	678	682	680	679	679	677	675	674	672	675
16	672	671	670	670	670	670	671	669	670	670	671	673	673	671	673	675	678	681	681	678	678	679	680	675	669	674
17 Q	669	670	672	672	672	673	674	674	671	671	674	673	673	673	674	676	677	677	677	677	677	677	676	677	676	674
18 Q	676	675	675	676	676	676	675	676	677	677	679	679	677	676	675	677	679	680	680	680	680	679	679	678	678	677
19 Q	678	676	676	676	676	676	676	676	676	677	677	677	677	677	677	677	677	677	677	677	678	678	677	677	677	677
20	677	674	674	673	673	672	672	672	672	673	673	673	673	672	670	668	667	667	667	667	667	672	676	679	679	672
21	679	677	676	676	674	674	672	670	671	670	666	665	666	666	670	671	671	673	675	679	676	675	675	677	678	673
22	678	674	668	665	665	667	668	669	669	669	672	672	671	672	672	673	677	674	672	671	672	676	678	677	678	672
23 Q	678	680	678	677	676	675	674	674	674	674	674	674	671	671	671	673	671	670	670	669	667	665	667	667	668	672
24	668	667	665	664	663	662	662	661	662	662	664	666	666	676	687	686	686	685	682	681	680	680	680	680	680	673
25	680	680	680	680	679	678	676	675	674	674	676	674	674	674	675	677	678	679	681	682	681	681	681	679	681	678
26	681	680	680	680	680	680	680	676	676	675	676	676	677	676	678	680	681	681	683	684	683	684	685	687	687	680
27	687	684	683	684	683	684	683	682	681	681	681	680	680	680	680	681	681	683	684	684	683	680	680	679	680	682
28	680	679	678	679	681	681	680	678	678	678	680	679	680	680	680	680	681	681	689	690	690	689	689	686	684	683
29	684	682	682	681	681	681	681	679	679	679	676	676	678	679	679	680	680	682	682	687	703	703	699	698	697	684
30	697	693	686	687	687	686	686	686	686	686	685	686	685	684	684	684	684	686	686	685	685	683	682	681	680	685
31	680	676	679	679	677	679	680	681	682	683	685	685	682	682	683	684	685	685	686	688	687	688	690	690	690	683
Mean	680	675	675	675	675	675	675	676	676	677	678	678	678	678	679	681	683	684	685	686	686	685	685	684	680	679

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

January, 1929.

Day.	Terrestrial Magnetic Elements.												Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House 200 + °A.			
	Horizontal Force.					Declination.					Vertical Force.							
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.	Maximum 14° +		Minimum 14° +		Range.	Maximum 46,000 γ +					Minimum 46,000 γ +		Range.
1 Q	h. m.	γ	γ	h. m.	γ	h. m.	35° 0'	28° 1'	21° 21'	6-9	h. m.	γ	γ	h. m.	γ	14	0	75.7
2	22 44	591	572	12 4	19	16 38	36.2	31.1	1 20	5.1	19 —	686	681	4 30	5	9	0	75.4
3	17 21	605	558	22 10	47	19 51	40.1	24.9	22 29	15.2	22 10	709	679	5 30	30	72	1	75.9
4	2 9	600	551	2 53	49	10 59	36.2	14.6	2 29	21.6	0 10	700	669	3 22	31	116	1	75.6
5 D	20 8	757	478	21 10	279	18 46	54.5	1.3	19 33	55.8	19 26	796	678	5 20	118	1475	1	75.7
6	20 58	578	543	18 28	35	2 28	38.3	17.2	18 29	21.1	18 40	719	697	0 38	22	96	0	76.0
7	23 0	580	557	12 15	23	13 9	34.1	26.8	22 59	7.3	14 5	707	699	7 —	8	16	0	76.1
8 D	7 2	588	303	23 23	225	15 40	38.3	11.9	23 38	50.2	15 30	708	595	23 41	113	1083	1	76.2
9 D	17 55	673	703	0 51	603	17 47	39.3	28.7	0 48	66.0	17 55	742	538	0 48	204	4831	2	76.2
10 D	21 40	596	524	16 12	72	12 40	36.3	13.9	21 30	22.4	16 40	721	676	21 43	45	162	1	76.6
11	0 52	598	506	4 19	92	9 26	37.6	14.4	1 19	23.2	0 0	680	602	4 39	78	242	1	76.8
12	21 43	587	556	11 48	31	12 4	33.6	26.3	21 40	7.3	21 30	664	658	0 —	6	20	0	76.2
13	21 47	605	539	11 49	66	12 45	36.6	24.1	21 40	12.5	22 31	671	659	7 30	12	73	0	76.1
14 D	6 22	592	538	15 32	54	14 35	41.0	2.3	20 5	38.7	15 40	708	654	1 19	54	327	1	76.1
15	6 47	584	548	11 14	36	12 47	35.0	21.8	17 10	13.2	17 30	685	667	2 0	18	48	0	75.9
16	22 53	590	549	11 50	41	12 53	35.6	23.5	21 21	12.1	21 30	683	669	2 —	14	45	0	75.1
17 Q	18 18	586	556	11 16	30	13 4	33.4	25.1	0 10	8.3	18 —	678	665	0 35	13	23	0	74.4
18 Q	6 15	592	560	11 50	32	12 50	35.0	28.9	8 21	6.1	20 —	680	672	6 10	8	18	0	74.1
19 Q	5 49	587	567	12 13	20	12 41	34.4	29.0	8 45	5.4	21 —	678	676	3 —	2	9	0	74.3
20	18 7	594	560	23 14	34	11 59	34.6	23.2	22 53	11.4	23 19	681	667	18 —	14	37	0	75.0
21	17 45	584	564	18 39	20	14 5	39.3	26.9	4 44	12.4	18 40	681	664	11 —	17	34	0	76.0
22	1 43	600	542	12 21	58	12 58	40.6	20.6	1 40	20.0	23 50	682	663	3 50	19	109	1	76.8
23 Q	17 11	584	549	10 40	35	18 15	32.2	24.5	0 1	7.7	0 4	683	665	21 —	18	26	0	77.0
24	21 19	584	541	11 21	30	13 37	33.9	21.3	22 21	12.6	14 —	687	661	7 —	26	44	0	76.6
25	23 6	583	557	11 45	26	17 42	34.5	25.9	9 10	8.6	19 20	683	674	8 —	9	21	0	76.0
26	18 52	588	555	21 10	33	16 12	34.9	23.4	22 16	11.5	21 20	6						

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

9. Lerwick. (H.)

14,000 γ ($\cdot 14$ C.G.S. unit) +

February, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day. 1	578	587	581	577	579	579	582	583	582	579	568	561	561	560	568	580	579	579	579	578	578	574	574	577	576	575	576
2	580	578	578	580	579	579	580	580	576	571	562	560	558	557	566	578	579	582	581	582	582	574	579	579	576	575	575
3 Q	575	576	576	575	574	582	579	580	574	561	554	549	553	559	568	573	575	577	578	578	579	580	580	579	580	579	578
4 Q	578	579	580	581	581	582	581	582	579	569	560	557	560	566	570	573	577	581	582	582	581	580	579	580	580	580	578
5 Q	580	580	577	576	579	582	582	582	575	568	559	551	540	551	565	573	579	583	584	581	579	580	582	583	583	584	574
6	584	584	584	585	585	584	580	582	578	573	566	558	553	560	566	572	584	562	573	568	571	577	565	567	544	573	
7	544	549	562	560	566	567	573	579	570	561	554	542	545	549	561	569	572	573	580	576	575	582	586	568	544	566	
8	574	568	573	574	576	576	582	575	571	572	564	561	560	565	566	577	581	579	589	595	641	606	575	572	565	578	
9 D	565	561	563	566	568	566	572	571	565	537	546	538	537	550	557	561	577	579	579	571	566	571	572	568	572	563	
10	572	567	571	571	572	569	573	575	567	554	547	535	523	552	554	572	589	573	568	567	571	571	567	568	566	564	
11	566	571	570	568	569	575	574	574	572	557	543	536	535	546	554	568	560	566	566	572	572	574	572	580	579	564	
12	579	559	560	560	562	568	572	571	563	557	549	543	542	545	554	560	562	567	571	574	577	571	573	577	576	563	
13	576	573	574	575	578	583	584	583	569	566	563	555	554	559	563	566	568	572	575	580	581	581	581	581	580	573	
14 Q	580	580	579	580	581	581	582	581	579	567	556	557	558	558	562	564	566	569	575	576	577	576	581	580	580	573	
15 Q	580	580	580	580	580	583	585	586	583	572	561	558	561	565	565	564	568	574	576	577	579	580	579	579	577	575	
16	577	580	578	581	581	581	584	584	583	580	574	571	569	574	577	574	583	565	571	574	581	588	585	578	601	579	
17 D	601	581	582	582	511	534	558	515	556	538	501	509	536	600	681	720	903	765	684	528	502	195	186	137	358	537	
18 D	358	360	415	469	449	525	543	553	551	515	525	536	537	540	552	555	554	559	563	566	568	561	553	551	559	523	
19	559	560	532	531	447	491	549	565	543	546	543	529	523	523	554	579	591	574	572	572	553	553	560	559	556	546	
20	556	551	547	543	542	561	561	556	556	549	539	535	537	541	552	558	563	568	575	566	564	559	565	565	551	554	
21	551	562	561	558	566	570	578	570	559	551	539	535	531	535	545	561	558	572	573	572	570	557	562	583	567	559	
22	567	552	558	558	555	568	568	568	560	554	549	531	524	547	558	566	567	567	563	565	575	556	534	496	503	553	
23	503	529	535	531	559	559	549	555	564	560	553	548	549	550	545	558	567	568	567	569	573	571	566	561	566	555	
24	566	567	563	559	554	563	567	569	562	553	546	538	538	545	552	559	557	563	564	565	570	570	569	565	567	559	
25	567	568	566	567	566	566	569	570	569	565	556	553	550	551	558	564	569	579	583	573	564	552	505	465	552	558	
26	552	565	563	563	563	565	566	565	562	556	546	543	549	556	562	567	564	568	572	579	603	574	536	384	318	550	
27 D	318	302	361	467	499	527	588	590	566	559	549	548	561	576	614	699	790	760	800	925	570	95	-175	-20	-55	495	
28 D	-55	-285	-25	85	455	454	436	490	497	521	554	569	563	645	740	584	564	581	549	548	553	555	555	555	554	468	
Mean	530	521	534	543	553	561	568	569	565	558	551	547	547	558	572	578	591	586	585	584	573	542	527	522	529	557	

MAGNETIC DECLINATION (WEST).

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

10. Lerwick. (D.)

14° +

February, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	30.1	26.3	24.6	26.0	26.7	28.9	29.0	29.2	29.2	29.0	30.4	32.9	35.6	36.6	34.4	32.9	31.9	31.2	31.0	31.0	30.4	26.7	25.2	27.7	25.0	29.8
2	25.0	29.2	29.0	29.2	29.4	29.6	29.2	28.9	28.9	29.0	30.7	33.0	34.7	36.3	35.5	34.0	31.5	30.9	30.3	29.2	28.9	27.7	27.9	27.5	29.2	30.3
3 Q	29.2	29.5	29.0	28.0	27.8	28.0	27.2	27.3	27.3	26.9	28.7	30.9	33.2	33.8	32.7	31.2	30.8	29.9	29.6	29.2	29.3	29.1	29.4	29.4	29.5	29.2
4 Q	29.4	29.2	29.3	28.7	27.9	27.8	27.8	27.6	27.0	26.6	28.5	30.2	32.3	33.5	32.8	31.7	30.6	29.4	28.8	28.9	28.6	28.4	28.3	28.4	28.2	29.2
5 Q	28.2	28.0	28.1	28.7	27.5	27.2	27.0	27.1	26.4	26.5	27.9	30.1	32.6	33.1	33.9	32.7	31.1	30.1	29.9	30.2	29.6	29.6	28.8	28.8	28.6	29.3
6	28.6	28.8	28.7	28.7	28.3	26.9	27.8	27.0	26.6	26.4	29.0	31.7	34.6	37.1	38.5	39.5	42.0	33.5	33.4	21.9	30.0	28.2	24.8	5.5	22.3	29.3
7	22.3	25.2	27.4	24.8	25.2	26.5	28.6	27.5	26.6	27.0	28.7	29.4	30.7	33.6	33.1	31.6	29.9	30.7	31.0	29.8	26.9	25.0	22.6	26.0	27.2	28.0
8	27.2	30.9	29.9	29.2	28.8	29.2	28.0	28.5	27.8	26.2	28.1	30.2	31.7	32.0	33.4	33.2	37.0	35.1	37.6	37.8	37.6	28.5	28.7	26.6	22.0	30.9
9 D	22.0	26.6	28.0	29.1	30.7	30.5	29.9	28.4	29.1	31.8	30.3	31.6	31.6	36.1	35.1	33.8	28.2	31.6	17.9	26.4	26.6	26.6	23.0	27.0	29.5	29.0
10	29.5	31.4	28.4	29.5	27.4	29.1	28.9	28.5	29.1	29.5	29.5	32.0	32.6	34.0	35.9	37.0	27.6	28.2	29.5	22.6	26.8	28.2	28.2	28.9	29.3	29.7
11	29.3	30.5	30.7	30.1	31.1	29.9	28.5	28.4	27.8	27.2	29.1	32.0	34.1	36.8	32.2	33.4	29.5	26.2	31.1	30.7	29.9	26.8	25.8	26.2	26.0	29.8
12	26.0	25.9	31.9	30.6	30.0	28.1	28.1	28.1	27.5	27.5	29.8	31.7	33.7	34.0	33.5	33.1	30.2	31.3	31.3	31.3	25.4	28.1	29.6	28.6	30.2	29.9
13	30.2	33.2	29.9	27.4	28.3	29.1	28.9	28.5	29.1	30.1	32.0	32.8	33.9	35.9	36.5	34.7	33.6	32.4	30.7	27.9	30.4	31.0	30.0	30.0	30.0	31.1
14 Q	30.1	31.0	31.2	31.6	30.7	29.7	29.4	29.2	29.0	28.2	28.9	30.1	32.5	32.5	31.8	31.6	31.4	30.7	31.1	31.0	31.0	30.7	29.0	30.7	30.7	30.4
15 Q	30.4	30.6	30.6	30.5	30.5	30.2	29.9	29.0	28.6	28.1	29.1	30.1	32.0	33.9	34.4	33.5	32.1	31.7	31.6	31.2	30.3	29.				

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

11. Lerwick. (V.)

46,000 γ (·46 C.G.S. unit) +

February, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	γ 690	γ 689	γ 688	γ 687	γ 688	γ 689	γ 689	γ 689	γ 689	γ 688	γ 689	γ 688	γ 688	γ 688	γ 692	γ 692	γ 693	γ 692	γ 694	γ 689	γ 686	γ 689				
2	686	686	687	687	688	688	688	688	689	689	690	690	690	692	692	693	693	692	692	692	691	693	693	693	692	690
3 Q	692	691	691	691	691	689	690	692	694	696	699	698	699	700	700	700	700	698	699	699	699	698	698	698	698	696
4 Q	698	699	699	698	699	699	700	701	702	702	702	701	701	701	700	700	699	698	700	698	696	695	695	698	697	699
5 Q	697	694	694	696	693	695	693	694	694	695	694	696	695	695	694	693	693	692	692	691	691	690	689	689	688	693
6	688	688	688	687	686	686	685	685	684	685	685	683	683	683	683	683	703	721	715	724	715	712	702	690	682	693
7	682	676	676	661	662	665	667	666	667	667	673	673	672	672	671	671	670	670	669	669	669	667	665	665	664	668
8	664	664	663	664	664	664	663	663	663	661	651	642	634	626	626	627	632	639	655	683	755	782	689	614	607	661
9 D	607	610	613	616	616	618	616	615	615	618	625	625	634	636	651	657	654	644	664	656	656	644	633	630	625	632
10	625	615	598	610	616	620	623	625	625	627	632	632	649	652	649	650	684	682	664	664	653	644	643	639	638	639
11	638	634	634	636	637	635	637	638	640	643	645	645	647	647	652	659	662	662	652	647	644	642	639	631	623	643
12	623	621	623	628	630	635	636	641	645	645	644	644	645	645	647	652	659	659	657	657	654	653	651	646	644	644
13	644	626	626	629	638	643	642	642	643	642	638	640	642	643	647	650	651	651	654	654	652	649	649	649	647	644
14 Q	647	646	645	645	645	646	648	648	648	650	648	648	647	647	649	650	652	654	654	652	652	649	649	646	646	649
15 Q	646	644	644	644	646	648	648	648	648	650	652	650	648	647	647	650	652	652	651	649	649	649	649	649	649	648
16	649	647	647	647	645	645	646	646	646	646	645	645	643	641	642	645	649	655	667	667	655	650	652	652	601	648
17 D	601	616	633	624	556	531	547	556	559	599	625	625	635	698	718	740	762	732	737	733	637	569	537	527	482	631
18 D	482	457	465	405	403	497	590	616	626	633	638	638	636	635	631	636	640	644	652	655	667	679	664	654	630	597
19	630	625	606	591	574	532	547	569	589	601	624	631	638	643	645	655	700	693	663	672	663	660	649	642	632	627
20	632	609	597	602	597	602	611	614	618	620	628	626	625	625	625	625	621	623	620	625	637	632	625	620	609	619
21	609	610	610	605	584	578	578	578	583	589	604	606	600	594	593	596	598	597	597	595	598	613	615	602	571	596
22	571	565	565	570	579	581	584	584	584	586	586	586	589	587	588	595	631	650	625	616	621	590	576	541	513	588
23	513	517	540	522	547	567	570	574	575	575	577	578	578	579	584	588	588	586	586	584	583	578	574	569	557	569
24	557	541	551	556	567	567	571	573	574	573	575	575	573	573	572	577	583	585	587	587	585	582	580	582	582	573
25	582	582	583	583	585	585	585	583	582	582	580	581	579	579	581	584	587	592	601	636	652	639	592	515	554	588
26	554	576	587	592	596	597	597	596	594	594	592	591	590	591	591	593	598	601	601	600	593	586	563	523	558	587
27 D	558	458	464	481	493	529	531	551	564	575	581	585	590	601	620	660	685	715	741	587	609	402	587	533	682	573
28 D	682	734	562	512	500	530	557	582	614	629	644	635	657	684	705	680	669	679	690	660	644	642	639	637	630	631
Mean	627	622	616	613	612	616	623	627	630	634	638	638	640	643	646	650	654	659	660	659	658	642	639	626	625	636

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS :

12. Lerwick.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

February, 1929.

Day.	Terrestrial Magnetic Elements.										Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House 200 + °A.					
	Horizontal Force.			Declination.			Vertical Force.											
	Maximum 14,000 γ +	Minimum 14,000 γ +	Range.	Maximum 14° +	Minimum 14° +	Range.	Maximum 46,000 γ +	Minimum 46,000 γ +	Range.	h. m.				γ				
1	h. m. 1 21	γ 605	557	13 5	48	13 24	37.5	20.9	23 48	16.6	22 —	695	684	1 30	11	73	0	75.8
2	22 33	588	552	12 40	36	13 28	37.4	24.6	0 1	12.8	23 —	694	686	0 —	8	43	0	77.1
3 Q	5 4	587	544	11 30	43	13 9	34.6	25.4	8 45	9.2	15 —	700	689	5 —	11	35	0	77.9
4 Q	2 40	584	556	11 18	28	13 20	33.9	26.0	8 33	7.9	9 —	702	697	24 —	5	19	0	78.0
5 Q	6 52	586	532	11 50	54	13 51	35.4	25.5	8 30	9.9	11 —	696	688	24 —	8	47	0	78.0
6	16 15	608	533	22 40	75	16 11	45.9	-8.7	23 1	54.6	18 39	732	676	23 26	56	621	1	78.1
7	21 56	604	532	1 19	72	12 44	35.0	18.6	21 52	16.4	0 0	685	650	1 50	35	112	1	78.1
8	20 17	704	556	12 19	148	20 22	43.2	20.4	23 59	22.8	20 35	824	600	23 48	224	813	1	78.0
9 D	17 59	598	523	11 27	75	13 35	43.4	-3.1	17 52	46.5	17 53	697	603	0 0	94	533	1	78.0
10	16 9	608	508	11 49	100	14 29	38.6	5.2	16 22	33.4	16 21	732	586	1 59	146	512	1	77.8
11	23 0	592	529	11 39	63	13 23	38.6	20.1	16 41	18.5	16 45	672	610	24 0	62	139	1	77.7
12	19 54	586	538	11 49	48	12 50	35.8	20.9	19 45	14.9	16 4	662	615	0 32	47	85	0	76.8
13	18 55	588	548	11 36	40	13 59	37.4	24.7	18 34	12.7	18 32	661	621	1 40	40	61	0	75.9
14 Q	21 50	587	554	10 32	33	12 18	33.8	26.9	21 47	6.9	17 20	657	645	3 —	12	21	0	75.2
15 Q	7 10	587	556	10 56	31	13 57	35.8	27.8	8 54	8.0	18 —	652	644	2 —	8	22	0	74.7
16	23 44	659	553	17 2	106	15 59	39.3	14.8	23 42	24.5	18 40	672	586	24 0	86	294	1	74.2
17 D	15 51	1062	-305	22 32	1367	20 29	66.9	-34.3	22 36	101.2	16 14	810	398	23 3	412	22216	2	74.0
18 D	19 41	582	289	1 23	293	19 46	39.1	-30.0	1 12	69.1	20 40	689	350	3 30	339	2860	2	74.0
19	15 56	613	377	4 10	236	15 47	42.8	9.6	1 45	33.2	16 30	728	519	5 0	209	1190	1	74.2
20	18 19	583	526	3 20	57	19 31	40.8	21.7	23 20	19.1	20 10	645	591	4 10	54	127	1	74.5
21	23 4	607	526	11 39	81	14 49	40.8	20.4	23 2	20.4	21 30	622	568	24 0	54	169	1	75.0
22	16 33	627	452	23 2	175	13 43	40.4	2.0	21 12	38.4	16 42	668	506	23 39	162</			

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

13. Lerwick. (H.)

14,000 γ (14 C.G.S. unit) +

March, 1929.

Table with 25 columns (0-24) and 31 rows (Day 1-31 Q, Mean). Values range from 324 to 888.

MAGNETIC DECLINATION (WEST).

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

14. Lerwick. (D.)

14° +

March, 1929.

Table with 25 columns (0-24) and 31 rows (Day 1-31 Q, Mean). Values range from 17.2 to 33.8.

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

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

15. Lerwick. (V.)

46,000 γ (.46 C.G.S. unit) +

March, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day. 1	630	612	622	625	629	632	630	631	631	633	633	633	633	633	631	630	643	644	644	643	641	638	629	626	624	632	
2	624	624	624	628	628	626	628	629	629	631	631	628	627	625	628	630	628	628	633	632	628	628	628	625	622	628	
3	622	622	622	622	618	615	618	618	620	618	615	615	614	616	621	621	627	644	657	646	634	626	619	597	597	622	
4 Q	597	601	589	594	601	604	606	607	609	609	611	611	611	608	610	613	613	613	613	611	610	610	610	611	611	607	
5	611	611	611	610	610	606	606	608	608	608	610	611	611	611	611	613	613	615	613	613	613	613	613	613	613	613	611
6 Q	613	613	613	613	613	613	615	612	612	612	612	612	610	610	612	612	612	612	612	612	612	612	612	611	609	606	612
7	606	606	606	606	606	608	608	608	608	608	609	609	609	607	608	608	610	610	612	622	623	633	633	627	617	607	613
8 D	607	600	598	598	597	597	599	599	599	599	602	602	602	602	616	632	654	652	639	628	616	611	608	605	601	611	
9	601	601	601	593	591	593	598	598	600	600	604	604	600	600	602	604	607	610	609	605	607	597	594	592	594	600	
10 Q	594	591	586	586	581	581	584	588	589	591	593	594	594	596	598	599	602	603	602	598	597	597	595	595	593	593	
11 D	593	593	593	593	593	593	590	591	591	592	596	597	599	601	599	602	631	691	693	661	657	656	630	616	601	615	
12	601	538	494	419	404	378	434	413	503	575	598	630	645	649	604	605	620	664	640	639	627	559	577	609	587	559	
13	587	572	545	544	544	539	549	568	581	586	593	594	599	601	601	603	604	609	609	607	607	605	587	557	565	583	
14	565	573	577	583	583	587	590	595	595	595	599	599	602	609	616	621	627	629	627	626	626	616	582	572	586	600	
15 D	586	590	598	600	601	601	603	603	601	600	601	601	601	606	611	665	703	696	702	689	644	557	549	549	515	613	
16 D	515	488	418	402	420	455	497	545	563	571	588	593	634	646	626	623	624	651	664	663	649	633	621	593	575	571	
17	575	567	552	542	535	557	557	582	590	597	600	602	603	608	609	616	631	636	639	631	614	607	614	614	612	596	
18	612	606	609	611	611	608	608	610	611	613	620	618	620	618	621	626	630	640	646	645	644	634	630	629	627	622	
19	627	622	622	619	619	619	622	624	624	624	625	623	619	621	623	624	631	634	639	641	644	636	626	624	626	626	
20	626	626	624	613	597	595	602	610	612	612	612	613	613	616	620	635	672	655	640	660	660	629	589	522	463	615	
21 D	463	503	467	425	428	478	488	488	549	594	607	612	634	659	650	649	665	662	652	644	635	635	635	589	567	578	
22	567	583	605	613	611	591	586	595	603	611	623	633	626	631	651	656	655	678	673	643	640	631	600	606	615	622	
23	615	621	622	622	621	621	619	616	621	622	624	624	622	622	629	637	632	627	636	629	627	617	594	581	569	620	
24	569	571	577	561	562	589	597	597	597	599	611	612	621	627	634	652	662	659	654	639	626	609	609	612	616	611	
25	616	614	616	614	612	611	596	604	611	617	626	626	626	627	631	646	649	652	652	647	641	634	627	607	597	625	
26	597	604	607	616	619	619	617	616	617	619	622	617	612	611	617	625	630	626	628	628	628	626	628	585	583	617	
27	583	590	593	605	610	618	619	619	620	622	622	620	619	620	622	625	625	623	628	633	646	624	606	611	606	617	
28	606	586	564	572	592	603	610	615	617	618	620	617	614	614	614	617	621	626	635	631	630	621	605	569	532	607	
29	532	540	570	555	532	539	569	589	598	603	608	608	605	607	612	618	622	632	627	624	621	617	616	602	598	595	
30 Q	598	593	585	590	601	606	609	614	614	614	612	614	611	609	606	608	614	621	617	613	612	610	610	608	607	608	
31 Q	607	597	594	596	597	601	601	608	610	611	613	613	610	609	609	609	609	609	609	609	611	611	609	607	605	607	
Mean	592	589	584	580	580	583	589	594	601	607	611	612	614	617	617	623	631	637	637	633	629	617	609	598	591	608	

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS:

16. Lerwick. MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

March, 1929.

Day.	Terrestrial Magnetic Elements.										Character ΣR^2 Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + $^{\circ}A.$				
	Horizontal Force.			Declination.			Vertical Force.										
	Maximum 14,000 γ +	Minimum 14,000 γ +	Range.	Maximum 14° +	Minimum 14° +	Range.	Maximum 46,000 γ +	Minimum 46,000 γ +	Range.								
1	h. m. 18 39	γ 584	22 49	h. m. 58	h. m. 14 47	36.5	14.2	18 31	22.3	h. m. 17 10	γ 648	609	h. m. 1 16	γ 39	137	I	74.8
2	18 37	581	10 54	63	13 25	37.3	17.6	19 9	19.7	19 4	642	622	24 0	20	113	O	75.0
3	20 34	588	11 40	58	13 45	36.2	13.5	18 23	22.7	18 20	674	591	23 7	83	195	I	76.0
4 Q	14 50	580	1 19	53	12 42	34.3	21.9	0 25	12.4	16 —	613	582	1 50	31	65	I	76.9
5	12 20	601	12 30	69	12 4	44.1	22.4	7 49	21.7	16 —	616	604	5 30	12	134	I	77.0
6 Q	23 40	588	10 4	45	14 9	33.3	20.0	20 13	13.3	6 —	615	606	24 0	9	52	O	77.1
7	17 59	601	23 30	71	12 42	36.3	11.2	17 50	25.1	20 31	645	606	0 —	39	178	I	77.6
8 D	15 55	639	1 46	167	14 45	43.5	5.3	19 46	48.8	15 53	666	597	3 —	69	751	I	78.0
9	21 5	594	9 52	68	12 33	36.8	13.6	21 0	23.2	17 0	615	589	4 21	26	149	I	78.4
10 Q	22 9	591	12 49	58	12 39	37.0	17.8	22 9	19.2	16 58	605	576	4 12	29	108	I	78.8
11 D	16 51	700	13 54	203	16 40	48.7	9.9	21 50	38.8	17 7	719	589	6 12	130	850	I	78.9
12	15 25	1242	3 8	1646	5 43	108.9	-30.2	3 12	189.1	19 42	694	304	4 49	390	32083	2	79.0
13	22 10	583	0 27	307	14 30	36.7	2.2	0 52	34.5	16 40	611	524	3 22	87	1231	2	79.4
14	15 8	602	22 8	163	22 5	37.4	14.8	22 49	22.6	16 31	630	546	22 30	84	428	1	79.7
15 D	16 55	1114	20 39	792	16 29	47.1	3.5	23 54	43.6	17 33	719	490	23 49	229	7136	2	80.0
16 D	12 12	633	2 24	770	4 36	45.5	-30.4	2 24	75.9	17 40	668	326	2 22	342	8129	2	79.9
17	18 14	610	3 58	229	5 51	36.9	6.2	4 7	30.7	17 32	651	525	3 54	126	852	I	79.5
18	17 20	600	10 32	80	13 41	35.5	18.7	17 13	16.8	17 53	651	602	1 5	49	138	I	79.1
19	16 16	588	10 49	61	12 45	34.6	5.3	21 46	29.3	20 4	646	617	4 43				

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

17. Lerwick (H.)

14,000 γ (·14 C.G.S. unit) +

April, 1929.

Table with 25 columns (0-24 hours) and 25 rows (Day 1-25). Includes a 'Mean' row at the bottom. Values range from 544 to 588.

MAGNETIC DECLINATION (WEST).

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

18. Lerwick. (D.)

14° +

April, 1929.

Table with 25 columns (0-24 hours) and 25 rows (Day 1-25). Includes a 'Mean' row at the bottom. Values range from 20.9 to 33.4.

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

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

19. Lerwick. (V.)

46,000 γ (-46 C.G.S. unit) +

April, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	γ 605	γ 586	γ 591	γ 596	γ 603	γ 604	γ 607	γ 607	γ 606	γ 606	γ 605	γ 605	γ 605	γ 604	γ 604	γ 606	γ 612	γ 617	γ 617	γ 620	γ 620	γ 617	γ 613	γ 601	γ 580	γ 606
2	580	590	599	604	606	609	610	611	613	612	615	614	613	610	608	615	614	617	613	615	615	617	617	618	618	610
3	618	613	600	601	602	607	608	613	618	617	616	616	618	623	631	638	641	646	647	646	645	637	630	612	599	622
4 D	599	604	614	617	618	618	617	617	614	613	614	615	620	624	628	633	637	638	659	640	630	619	612	606	607	621
5	607	607	607	709	609	611	611	611	612	612	612	614	614	611	611	616	621	626	630	632	625	619	614	606	561	613
6	561	571	587	588	593	597	597	599	600	599	602	602	600	600	600	599	600	602	602	602	602	602	602	602	602	597
7	602	600	602	602	602	602	602	602	602	602	602	602	604	604	606	606	606	606	602	602	602	600	602	599	597	602
8	597	592	590	593	597	597	597	597	597	599	595	593	595	599	600	600	600	602	602	604	604	602	600	599	593	598
9 Q	593	595	590	592	595	597	597	597	597	597	597	597	597	597	595	597	597	597	597	597	597	595	595	597	597	596
10	597	597	599	600	599	599	599	600	600	600	599	597	595	597	599	602	602	602	602	602	604	604	604	602	602	600
11	602	599	585	590	597	599	599	600	602	602	600	599	597	597	597	600	602	604	604	604	604	604	602	602	604	600
12	604	604	606	607	607	609	609	609	611	611	609	607	606	602	604	606	609	611	612	612	612	612	611	607	602	608
13	600	595	599	602	604	602	602	604	606	607	607	607	607	609	611	611	614	619	626	626	623	619	618	616	614	610
14 Q	614	612	614	614	612	612	612	612	612	612	612	612	611	607	607	609	611	612	614	616	614	614	612	612	612	612
15	612	612	612	612	612	612	612	612	612	612	612	611	609	607	606	606	606	604	609	612	614	616	604	602	600	610
16 D	600	561	554	536	491	479	519	550	566	569	581	588	595	606	625	635	633	649	670	656	649	640	632	554	542	588
17 D	542	516	517	559	583	592	593	598	603	608	612	611	609	609	611	612	619	621	621	619	612	612	602	595	592	596
18	592	595	599	602	604	602	597	595	607	597	604	604	604	607	609	612	612	612	614	614	614	614	607	599	585	604
19	585	592	600	602	597	595	599	602	606	606	607	607	607	609	612	614	616	619	621	619	619	618	616	616	614	608
20 Q	614	614	616	616	616	616	614	614	614	616	618	612	607	607	610	616	622	626	628	627	626	625	626	627	626	618
21	626	625	625	617	598	586	585	580	592	612	614	618	621	624	624	633	637	636	634	636	638	635	622	612	612	618
22	612	612	608	595	589	596	607	614	624	631	628	628	627	628	628	632	634	635	637	635	635	635	637	637	639	623
23 Q	639	639	641	641	642	642	640	642	640	636	635	633	633	635	636	636	640	643	648	650	648	647	645	643	644	641
24 Q	644	646	648	648	648	646	644	644	644	643	641	639	637	639	641	643	648	655	656	659	661	659	657	654	650	648
25	650	640	649	652	654	656	656	657	656	652	652	650	649	648	651	653	655	658	665	667	669	667	665	657	634	655
26	634	638	646	651	653	653	655	655	656	658	656	656	654	654	656	659	666	670	672	672	670	668	668	658	658	658
27	658	656	650	638	643	653	655	657	657	657	657	655	657	659	660	660	666	662	660	660	660	661	665	665	663	657
28	663	656	652	622	635	641	635	630	632	639	639	637	639	644	649	657	655	661	664	662	655	645	642	642	638	644
29 D	638	638	635	630	628	633	636	638	638	635	634	634	634	637	646	650	656	663	667	665	665	650	639	629	622	642
30 D	622	620	620	620	625	632	635	637	635	630	628	630	630	632	635	640	652	659	657	657	654	651	649	645	642	638
Mean	610	607	608	609	609	610	612	613	615	616	617	616	616	618	620	623	626	629	632	631	629	627	623	617	612	618

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS :

20. Lerwick.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

April, 1929.

Day.	Terrestrial Magnetic Elements.												Character ΣR^4 Figure $\frac{\Sigma R^4}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House 200 + °A.						
	Horizontal Force.						Declination.									Vertical Force.					
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.		Maximum 14° +		Minimum 14° +		Range.					Maximum 46,000 γ +		Minimum 46,000 γ +		Range.	
1	h. m. 23 8	γ 608	531	9 1	77	0 52	35.8	20.7	5 29	15.1	19 30	γ 623	577	1 11	46	121	I	81.0			
2	21 21	605	524	10 10	81	14 11	35.2	18.8	21 18	16.4	21 10	620	571	0 0	49	137	I	80.0			
3	23 54	599	532	11 34	67	13 1	34.6	17.2	23 25	17.4	19 49	648	593	2 10	55	130	I	79.3			
4 D	0 1	595	501	9 29	94	12 14	45.2	17.8	18 4	27.4	17 58	678	592	0 7	86	297	I	78.8			
5	17 41	600	512	11 11	88	23 32	33.7	19.5	7 13	14.2	18 8	637	550	24 0	87	189	I	78.5			
6	18 40	586	518	10 50	68	13 30	33.2	20.0	7 21	13.2	19 20	606	548	0 4	58	111	0	78.7			
7	21 51	600	521	11 53	79	13 20	34.7	20.2	7 31	14.5	15 8	611	597	23 31	14	102	I	79.1			
8	18 37	589	517	9 50	72	12 22	34.5	21.0	8 16	13.5	19 41	607	588	1 42	19	88	I	79.9			
9 Q	2 4	584	518	11 15	66	12 59	33.0	20.8	8 10	12.2	20 —	597	586	2 20	11	72	0	80.3			
10	19 15	597	519	13 27	78	14 15	36.2	20.4	8 31	15.8	20 29	607	592	12 0	15	108	I	80.2			
11	21 21	599	517	10 44	82	1 29	40.7	19.6	8 10	21.1	18 —	604	580	1 55	24	152	I	80.3			
12	21 38	603	520	11 30	83	14 19	34.3	13.9	22 56	20.4	18 20	614	595	23 30	19	146	I	80.3			
13	17 27	608	529	11 29	79	14 4	36.6	17.5	1 7	19.1	18 40	630	592	1 0	38	142	I	80.3			
14 Q	21 24	595	529	11 39	66	13 14	34.5	19.5	8 43	15.0	19 10	619	605	13 30	14	85	0	80.1			
15	20 59	631	524	11 37	107	13 54	34.7	14.6	21 59	20.1	20 55	623	599	22 30	24	193	I	79.9			
16 D	17 9	703	207	3 42	496	3 51	43.0	2.7	1 48	40.3	17 59	683	464	4 15	219	3229	2	79.9			
17 D	18 15	622	349	1 50	273	0 46	38.6	6.1	1 29	32.5	17 41	624	497	1 45	127	1094	2	80.2			
18	18 31	597	519	9 10	78	13 41	34.7	16.9	0 7	17.8	19 15	615	581	23 59	34	129	I	80.1			
19	16 51	587	532	3 54	55	13 59	33.2	19.3	7 28	13.9	18 —	621	581	0 11	40	81	0	80.6			
20 Q	23 2																				

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

21. Lerwick. (H.)

14,000 γ (·14 C.G.S. unit) +

May, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	593	597	581	581	583	580	580	575	566	557	548	542	542	556	556	576	591	593	591	597	596	588	585	584	579	576
2	579	578	558	554	559	568	565	572	567	557	557	557	561	567	573	573	585	595	607	589	591	585	584	584	577	574
3	577	572	544	574	569	568	573	562	545	543	545	546	554	557	577	598	595	586	599	593	594	588	588	586	592	573
4	592	577	559	555	571	578	571	566	559	535	544	550	558	567	570	572	578	585	592	595	593	589	588	589	585	572
5 Q	585	578	576	574	574	576	574	568	562	554	549	543	547	548	561	571	573	584	590	590	588	585	584	585	584	572
6	584	583	582	581	582	579	579	570	556	541	533	536	549	544	557	584	575	595	598	601	600	592	591	589	586	574
7	586	583	579	575	574	579	581	575	560	552	551	546	546	545	557	581	593	602	613	615	605	592	577	577	576	577
8	576	576	577	576	575	574	572	565	557	551	547	552	564	555	559	576	570	584	596	610	609	602	586	582	582	575
9	582	578	574	570	578	575	565	563	559	550	546	556	561	561	576	583	592	594	604	607	599	593	590	589	586	577
10 Q	586	584	584	583	583	580	575	567	563	558	550	551	556	566	567	580	590	600	608	605	600	593	592	591	590	580
11	590	590	591	591	590	587	578	570	561	555	557	550	547	560	573	602	591	602	621	609	598	595	598	600	598	584
12	598	586	571	566	567	553	596	590	576	556	545	524	523	547	549	564	580	621	605	601	597	597	582	580	580	574
13 D	580	579	575	554	524	537	544	555	550	549	523	518	533	576	641	715	625	658	659	587	586	580	573	571	566	579
14 D	566	558	551	544	557	561	563	555	553	546	535	539	544	561	548	584	591	597	596	597	600	603	561	564	564	566
15 D	564	546	555	562	544	562	562	541	537	546	515	527	546	561	619	584	593	612	608	602	616	576	573	559	547	567
16 D	547	548	559	500	517	572	568	561	553	546	543	541	523	556	576	589	625	639	626	603	606	589	574	576	577	569
17	577	557	564	527	537	556	554	553	554	546	536	534	533	553	565	585	598	612	609	599	589	581	577	575	573	565
18 Q	573	572	570	572	574	575	567	560	554	547	543	544	545	550	554	569	575	590	593	594	595	597	578	565	566	569
19	566	567	565	565	577	581	574	568	568	561	554	549	554	555	570	574	584	597	599	607	615	593	573	571	569	575
20	569	581	578	578	580	575	575	566	563	553	555	555	557	561	572	583	581	601	610	610	605	600	595	598	589	580
21 Q	589	587	585	584	584	581	575	570	567	557	552	550	556	566	570	583	594	605	617	611	603	601	595	594	594	582
22 Q	594	588	589	586	582	579	575	570	559	547	544	548	562	570	579	585	593	609	617	617	607	599	591	588	584	582
23 D	584	584	586	578	577	580	551	502	514	504	515	543	562	567	574	573	573	581	592	591	585	580	575	572	573	564
24	573	575	578	579	575	571	565	555	548	542	542	541	541	547	559	576	574	597	596	596	600	591	577	562	544	569
25	544	558	545	556	490	525	531	535	538	537	529	528	528	542	570	594	581	583	598	598	598	590	577	565	579	557
26	579	577	578	572	565	566	564	557	548	541	536	536	539	563	554	577	578	573	602	616	615	598	586	578	575	571
27	575	572	568	573	575	564	556	560	559	544	536	535	539	530	541	565	573	592	608	613	613	599	590	586	584	570
28	584	587	589	583	586	587	580	570	553	541	538	545	546	502	526	569	593	617	618	625	610	595	589	587	589	576
29	589	583	581	584	587	582	572	572	567	552	545	544	548	554	558	582	579	587	608	610	600	596	588	586	582	577
30	582	579	576	578	578	574	569	561	553	536	526	542	547	553	577	593	566	598	614	611	608	600	582	574	573	574
31	573	573	573	575	574	570	563	555	538	518	532	546	544	551	568	582	588	587	603	601	598	594	584	580	579	570
Mean	579	576	572	569	567	571	568	562	555	546	541	543	547	555	568	585	586	599	606	603	601	592	583	580	578	573

MAGNETIC DECLINATION (WEST).

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

22. Lerwick. (D.)

14° +

May, 1929

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	26·1	27·2	24·7	23·8	21·8	21·5	19·3	18·4	19·3	20·3	22·6	25·9	29·2	32·3	32·6	31·9	29·2	27·2	27·0	27·6	25·5	24·3	24·0	25·7	25·3	25·3
2	25·3	25·8	27·7	32·2	29·8	25·4	24·4	24·6	22·9	21·7	24·1	23·9	26·8	27·9	27·9	27·3	27·0	26·2	25·8	24·4	25·4	25·8	26·0	24·6	26·6	26·0
3	26·6	29·4	24·9	22·2	25·9	28·8	23·0	22·0	22·2	23·6	23·6	25·3	29·2	29·4	28·6	27·8	26·9	26·9	27·1	27·1	27·2	25·7	25·3	26·5	26·3	26·0
4	26·3	23·7	23·7	26·8	25·4	20·2	21·2	21·4	22·3	24·8	27·5	28·7	29·5	30·0	30·6	29·7	28·9	28·1	27·7	27·0	26·8	26·2	26·2	27·3	28·1	26·3
5 Q	28·1	24·0	24·0	23·4	22·4	21·1	20·1	21·1	21·3	24·0	25·7	28·8	32·7	32·9	30·9	27·8	26·1	25·5	24·9	24·4	25·1	25·5	25·7	25·7	25·7	25·4
6	25·7	25·6	25·2	24·5	23·9	22·1	20·6	20·0	20·0	21·2	24·1	29·5	33·5	34·3	33·5	31·8	29·3	26·6	25·4	25·4	24·5	22·1	24·7	24·8	25·0	25·7
7	25·0	25·7	25·1	23·8	24·0	22·8	20·3	18·6	19·9	22·1	23·6	26·3	28·8	30·3	30·6	29·9	28·1	25·8	24·1	24·3	23·5	20·4	20·2	24·3	24·7	24·5
8	24·7	24·3	24·3	23·7	22·3	21·4	20·3	20·1	20·7	22·3	24·4	27·3	30·0	30·2	29·6	28·4	28·0	26·9	25·9	25·7	23·0	18·6	21·7	21·9	23·8	24·4
9	23·8	24·7	24·5	26·2	23·5	22·0	21·0	22·0	23·9	26·4	28·3	29·9	30·1	29·9	29·7	27·9	26·2	27·2	27·6	26·6	26·2	26·0	26·0	25·8	25·4	26·1
10 Q	25·4	24·8	24·6	24·2	23·2	22·3	21·1	21·1	21·7	21·5	25·5	28·8	30·6	30·4	29·8	28·8	28·2	28·1	28·3	27·8	26·6	26·4	26·2	25·6	25·1	25·9
11	25·1	24·5	24·3	23·7	22·4	21·4	19·5	19·1	20·0	23·6	26·7	30·4	32·5	32·5	30·6	28·8	26·9	26·7	25·2	26·5	26·5	26·9	27·1	28·		

TERRESTRIAL MAGNETIC FORCE: VERTICAL COMPONENT.

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

May, 1929.

23. Lerwick. (V.)

46,000 γ (·46 C.G.S. unit) +

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	
1	642	627	635	638	642	644	646	646	646	642	642	642	642	642	642	644	646	649	656	656	656	654	652	652	652	645	
2	652	648	647	641	634	636	641	643	643	647	653	653	653	653	653	653	655	655	655	657	655	655	653	653	651	649	
3	651	640	613	621	627	627	628	634	638	643	643	643	645	647	647	649	650	652	652	652	655	655	653	653	640	642	
4	640	639	637	637	635	639	640	644	646	653	653	653	653	653	654	656	658	658	658	658	658	658	658	660	652	650	
5 Q	652	649	654	656	656	656	658	656	656	658	658	659	659	659	661	661	661	661	661	661	661	661	661	661	661	661	658
6	661	661	663	663	663	663	663	663	664	661	657	653	649	655	655	653	658	653	656	658	658	660	656	653	653	658	
7	653	653	654	654	653	648	646	648	646	643	641	641	650	652	650	650	652	654	657	657	659	650	648	650	652	650	
8	652	650	653	655	656	658	660	660	658	651	647	644	647	653	655	656	656	655	655	658	653	653	653	653	653	654	
9	653	657	657	656	654	657	661	659	656	656	647	652	654	659	661	670	676	674	668	667	667	667	667	667	667	662	
10 Q	668	670	672	674	674	674	674	672	670	663	660	657	657	659	665	667	668	668	668	668	670	670	670	668	668	668	
11	668	671	671	673	673	673	673	673	671	668	666	664	662	660	664	668	677	680	682	686	684	675	671	668	657	671	
12	657	651	642	649	653	642	613	627	636	640	644	653	653	653	655	657	658	664	688	691	686	679	680	675	673	656	
13 D	673	669	668	636	529	497	522	550	584	623	636	636	636	654	720	712	725	729	729	705	696	681	674	661	661	647	
14 D	661	663	654	650	654	658	663	670	674	677	677	675	673	677	679	677	681	690	697	697	693	670	638	651	657	671	
15 D	657	653	644	646	648	651	660	670	671	670	673	673	668	668	670	686	684	681	682	684	681	653	644	651	638	665	
16 D	638	624	624	620	585	607	635	651	657	659	659	659	666	664	664	670	675	688	691	690	684	677	679	670	666	656	
17	666	662	660	655	630	627	632	639	645	650	656	660	663	671	676	674	676	676	676	680	678	678	678	676	676	662	
18 Q	676	676	676	676	676	676	676	676	676	676	676	674	674	674	671	671	672	672	671	669	667	667	661	660	656	672	
19	656	641	636	634	632	628	630	632	634	634	636	638	641	645	647	649	649	650	652	652	653	653	653	651	649	643	
20	649	648	646	646	646	648	649	651	649	649	647	647	648	650	650	654	654	652	651	651	653	653	649	640	650		
21 Q	640	636	639	643	645	645	645	646	646	644	642	642	642	644	645	647	644	646	644	646	648	648	648	647	647	644	
22 Q	647	645	643	647	649	650	650	648	648	648	646	645	643	645	645	647	649	650	653	655	657	656	654	654	649		
23 D	654	654	656	655	653	655	648	643	643	650	652	652	653	655	658	659	659	659	658	656	655	655	657	656	656	654	
24	656	658	660	659	661	663	663	663	663	659	657	659	658	658	659	666	671	668	670	668	669	671	670	666	640	663	
25	640	640	629	610	610	593	609	627	639	652	654	658	660	660	665	674	686	688	682	678	678	678	675	673	661	653	
26	661	661	668	671	673	675	675	677	679	682	678	676	675	673	675	678	683	687	686	686	690	691	689	687	677	679	
27	677	658	666	674	679	683	682	682	682	685	690	692	694	697	697	697	697	697	697	698	702	706	708	708	708	690	
28	708	707	711	713	715	719	721	722	724	729	726	726	726	727	727	727	728	731	737	741	740	738	735	733	731	726	
29	731	731	728	728	730	727	726	724	721	719	721	718	718	716	715	717	728	722	714	711	708	706	702	700	698	719	
30	698	698	697	697	696	696	694	691	691	684	674	674	674	674	674	685	698	692	692	689	685	682	679	681	688		
31	681	679	678	680	680	679	680	680	679	676	672	669	671	673	670	672	672	673	671	675	675	677	675	671	669	675	
Mean	663	659	657	657	652	651	654	657	659	661	661	661	662	663	667	669	672	673	674	674	674	670	668	666	663	664	

24. Lerwick. DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS: MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE. May, 1929.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House 200 + °A.
	Horizontal Force.					Declination.					Vertical Force.							
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.	Maximum 14° +		Minimum 14° +		Range.	Maximum 46,000 γ +		Minimum 46,000 γ +		Range.			
1	h. m.	γ	γ	h. m.	γ	h. m.	33.2	17.4	h. m.	6.42	15.8	h. m.	γ	h. m.	γ	110	I	78.9
2	0 40	612	536	11 16	76	12 58	33.2	20.0	6 42	15.8	18 30	660	632	4 30	28	137	I	79.2
3	15 19	610	525	1 34	85	0 21	33.2	20.1	7 32	13.1	22 —	656	605	2 10	51	129	I	79.3
4	18 39	599	527	9 12	72	14 5	31.0	19.6	5 25	11.4	23 5	663	628	0 11	35	87	I	79.4
5 Q	19 25	593	536	11 27	57	12 22	33.8	19.7	5 39	14.1	20 —	661	645	0 29	16	71	O	79.3
6	20 10	613	524	11 34	89	12 45	35.3	19.4	7 21	15.9	5 —	663	644	11 55	19	128	I	79.2
7	18 42	621	536	12 47	85	13 10	31.3	16.6	7 2	14.7	20 21	663	640	8 50	23	116	O	79.8
8	20 37	617	546	10 20	71	13 22	31.3	17.6	20 41	13.7	20 21	662	642	11 30	20	88	O	79.9
9	19 8	614	541	9 58	73	12 38	31.4	20.2	6 30	11.2	15 59	679	650	3 59	29	84	O	79.8
10 Q	18 29	612	548	10 9	64	13 14	31.9	20.1	6 44	11.8	6 —	675	655	11 44	20	70	O	79.7
11	18 14	630	543	11 56	87	12 54	33.5	18.5	6 48	15.0	19 0	689	655	23 41	34	127	I	79.9
12	17 20	634	504	11 21	130	12 52	33.8	16.0	7 50	17.8	18 35	697	605	6 0	92	310	I	80.7
13 D	14 42	759	478	4 19	281	16 55	38.3	3.5	4 59	34.8	17 37	768	480	4 39	286	1824	2	81.6
14 D	21 14	625	528	10 5	97	15 8	38.4	0.2	21 12	38.2	18 28	700	631	21 49	69	404	I	82.2
15 D	14 20	639	497	10 21	142	13 33	34.3	7.9	21 9	26.4	15 20	691	633	23 49	58	361	I	82.1
16 D	16 39	658	418	3 25	240	13 44	33.3	12.1	20 20	21.2	17 12	699	578	3 59	121	803	I	82.0
17	17 40	629	504	3 21	125	12 13	31.1	17.2	0 12	13.9	19 —	681	621	4 30	60	227	I	82.5
18 Q	21 1	608	539	10 31	69	12 55	32.5	15.8	20 56	16.7	6 —							

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

25. Lerwick. (H.)

14,000 γ ($\cdot 14$ C.G.S. unit) +

June, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	γ 579	γ 577	γ 566	γ 574	γ 577	γ 569	γ 560	γ 555	γ 547	γ 538	γ 536	γ 536	γ 548	γ 533	γ 557	γ 566	γ 595	γ 588	γ 597	γ 603	γ 608	γ 594	γ 578	γ 577	γ 571	γ 569
2	571	571	570	571	571	560	546	559	555	545	541	546	548	557	563	588	606	599	601	594	584	580	570	569	563	569
3	563	563	562	569	571	568	562	554	550	542	536	546	560	566	569	570	593	592	601	607	607	587	578	572	568	566
4 Q	566	566	565	567	569	567	561	553	542	534	530	532	544	560	573	593	602	603	595	593	582	575	572	568	566	567
5 Q	566	568	567	568	566	565	560	551	542	532	528	532	545	558	564	578	584	586	588	585	589	584	582	582	580	566
6	580	581	580	580	577	576	572	570	566	556	548	548	554	565	572	581	594	604	612	614	601	594	588	584	583	579
7	583	580	570	557	567	569	567	563	545	541	540	540	546	557	562	573	588	593	599	602	589	586	580	580	572	570
8	572	569	567	568	569	574	572	564	549	541	531	537	543	561	599	574	623	631	602	603	604	589	595	544	550	574
9	550	565	570	571	572	567	556	557	565	553	549	540	548	562	572	584	612	611	617	633	614	603	574	571	543	576
10 D	543	557	520	554	568	556	506	516	526	539	545	539	538	568	558	588	610	675	680	629	593	575	569	556	501	566
11 D	501	542	510	546	534	526	542	531	534	531	523	528	515	546	562	613	665	671	640	623	587	568	569	547	543	561
12	543	560	540	531	544	561	557	552	548	535	533	536	537	558	559	590	609	635	627	634	597	583	568	563	550	567
13	550	551	564	562	561	562	558	554	552	546	541	535	542	554	560	594	605	606	601	596	583	576	574	570	569	567
14 Q	569	570	570	571	571	570	564	554	548	548	549	544	549	554	563	567	572	577	578	584	588	584	581	575	573	567
15	573	569	568	570	570	569	564	553	547	548	543	541	541	546	555	567	603	602	610	612	602	585	574	567	564	570
16	564	566	564	567	575	572	564	567	557	550	546	540	551	567	574	579	583	592	614	613	610	594	582	579	576	574
17	576	567	567	569	570	565	563	560	558	546	540	533	547	557	562	563	576	582	585	589	593	601	588	580	574	568
18 Q	574	576	579	570	559	567	568	563	555	546	545	546	552	552	556	569	579	583	589	592	592	591	586	581	573	570
19	573	573	570	571	570	568	567	565	557	546	542	538	550	560	552	552	560	585	598	600	600	596	590	581	578	569
20	578	576	571	571	571	568	574	570	558	542	533	531	535	546	564	573	582	590	591	599	590	586	584	577	576	569
21	576	576	576	573	574	573	570	564	555	550	546	544	554	559	570	591	615	615	643	609	603	591	580	575	573	578
22 D	573	568	577	573	568	557	545	516	517	558	558	565	563	576	563	590	600	601	617	639	647	614	607	596	586	579
23 D	586	579	582	576	563	571	572	562	547	542	529	519	532	564	575	617	612	631	618	624	614	601	597	578	574	579
24	574	567	560	559	510	527	553	554	550	541	532	527	537	546	595	585	569	577	601	586	582	576	578	576	572	561
25	572	563	562	566	552	522	529	539	547	545	534	539	544	568	568	576	583	584	587	594	587	585	573	577	573	563
26 Q	573	571	566	569	568	563	560	557	549	538	533	531	536	543	560	575	586	593	589	580	576	572	573	571	570	564
27	570	570	571	574	578	580	574	559	544	531	528	532	553	579	606	613	599	596	604	595	600	595	584	577	578	576
28	578	571	576	576	573	570	571	560	550	539	523	526	540	590	638	691	714	678	656	640	591	566	561	562	558	589
29	558	558	562	565	565	563	554	541	529	524	529	532	543	552	561	574	581	580	577	572	571	575	572	566	568	559
30 D	568	565	566	559	563	560	557	541	535	530	526	532	553	576	568	584	597	591	610	609	601	580	562	521	524	564
Mean	567	568	565	567	565	563	559	553	547	542	537	537	545	559	570	585	600	605	608	605	596	586	579	571	565	570

MAGNETIC DECLINATION (WEST).

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

26. Lerwick. (D.)

14° +

June, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	25.3	25.6	25.6	22.5	17.3	15.4	15.2	15.5	17.7	20.8	22.4	26.0	28.8	29.0	27.0	27.4	28.4	27.6	26.9	26.6	23.5	24.5	23.0	22.9	23.1	23.5
2	23.1	25.2	23.9	22.0	22.1	22.5	22.4	20.3	18.8	19.5	21.9	24.9	28.2	28.2	27.3	26.9	27.4	23.5	24.8	26.6	26.8	26.5	26.1	25.9	28.0	24.5
3	28.0	25.6	26.1	24.0	21.9	20.7	19.1	18.5	19.2	20.0	22.9	26.2	29.2	31.1	29.7	29.1	28.0	26.6	26.0	25.6	24.2	26.8	27.2	27.0	26.3	25.1
4 Q	26.4	25.3	23.7	22.0	20.3	18.7	17.7	17.7	18.1	19.7	22.2	25.8	28.6	30.3	30.5	29.3	26.6	23.9	24.7	25.7	25.8	26.4	26.4	26.0	25.1	24.2
5 Q	25.1	23.9	22.6	21.8	21.0	20.1	19.3	19.7	20.3	21.8	24.7	27.4	29.5	29.9	29.7	29.5	28.6	27.8	26.4	25.7	25.7	26.2	26.4	26.4	25.8	25.0
6	25.8	25.7	25.7	22.6	21.4	21.2	20.1	20.6	20.1	22.0	25.1	28.2	31.4	32.6	32.4	31.6	30.9	29.7	27.4	27.2	26.0	25.8	25.8	25.8	24.7	26.0
7	24.7	23.3	23.3	25.8	16.4	17.7	16.8	18.1	20.4	23.7	25.8	29.7	32.2	32.4	33.0	33.2	29.9	26.6	26.2	25.8	24.5	24.7	24.5	23.7	23.1	25.1
8	23.1	21.9	20.3	20.0	20.3	18.6	16.5	15.9	16.1	18.0	21.7	26.1	30.0	32.9	34.2	32.7	33.5	29.2	25.9	27.7	28.8	26.1	22.7	14.0	16.3	23.9
9	16.3	18.6	22.1	21.7	20.2	18.4	14.7	16.3	20.0	20.0	21.9	26.9	31.0	33.1	33.5	33.9	31.0	29.2	29.4	29.4	27.7	20.5	22.5	20.2	27.7	24.3
10 D	27.7	25.0	29.6	21.3	15.5	12.4	18.6	27.5	27.3	22.5	22.3	26.9	31.2	32.5	32.5	31.5	30.2	22.1	23.8	29.6	24.0	28.8	25.7	21.9	18.4	25.2
11 D	18.4	17.6	15.7	20.9	19.4	21.5	21.9	19.2	16.1	17.8	21.7	24.8	28.3	29.8	30.8	32.5	26.9	26.1	28.3	29.6	28.1	30.0	23.2	26.3	25.2	24.1
12	25.2	22.6	26.2	23.5	24.1	19.7	17.9	16.8	16.6	18.3	19.7	23.1	27.8	29.9	31.3	29.5	26.6	25.3	27.4	26.6	28.0	26.4	26.0	26.0	21.8	24.3
13	21.8	23.0	22.0	21.4	20.8	20.4	19.3	18.1	18.1	18.5	20.8	22.8	26													

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

27. Lerwick. (V.)

46,000 γ (.46 C.G.S. unit) +

June, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1	669	663	661	655	656	662	662	661	661	659	657	654	654	656	653	655	655	656	656	658	657	653	653	641	640	657
2	640	642	646	647	647	645	642	642	644	642	641	637	637	638	642	644	645	553	655	651	648	646	644	643	637	644
3	637	635	636	636	638	639	641	641	638	638	638	632	629	631	635	638	638	640	639	641	643	642	642	642	641	638
4 Q	641	639	641	641	640	638	640	639	639	637	636	634	634	634	631	629	633	638	642	642	643	641	643	642	644	638
5 Q	644	644	644	643	645	645	644	644	644	643	643	641	638	640	642	644	646	648	648	649	651	651	650	650	650	645
6	650	652	651	653	655	652	652	650	649	653	653	642	637	642	642	641	643	643	643	642	646	646	646	643	639	647
7	639	634	632	605	605	621	621	622	626	626	625	625	627	628	633	633	633	632	632	632	633	635	635	634	636	628
8	636	636	634	631	631	631	630	630	630	629	627	624	624	623	624	634	635	645	653	648	646	644	626	606	598	632
9	598	614	628	634	638	637	639	635	626	628	626	623	623	625	632	636	652	661	661	661	660	654	640	629	612	636
10 D	612	591	581	595	604	611	615	601	603	612	617	629	639	642	657	661	668	686	684	665	655	630	629	613	567	628
11 D	567	550	573	595	605	607	608	620	634	641	641	639	642	646	651	648	660	660	659	659	642	613	627	629	614	627
12	614	618	618	602	603	619	631	638	640	643	639	641	641	641	641	640	646	654	654	651	649	651	651	648	640	637
13	640	635	639	643	645	648	652	652	652	651	649	649	646	648	652	651	657	659	660	660	658	660	655	653	653	651
14 Q	653	646	648	650	651	651	653	652	650	646	643	643	643	643	642	640	642	639	641	641	640	642	644	642	641	645
15	641	641	641	642	642	642	642	641	641	639	636	638	638	636	637	637	639	646	648	650	650	649	647	645	642	642
16	642	640	640	634	623	623	625	626	632	640	642	645	647	649	652	661	671	675	674	674	674	673	671	669	667	651
17	667	664	664	664	665	667	667	669	668	660	660	661	661	661	661	662	662	664	663	661	661	661	662	660	660	663
18 Q	660	660	659	657	655	650	649	649	650	649	648	648	648	648	650	650	651	651	651	650	648	648	648	647	647	651
19	647	647	646	646	646	645	643	642	643	639	637	635	631	624	624	628	627	625	625	624	622	622	622	621	621	633
20	621	621	619	618	618	618	616	617	617	619	618	618	619	621	623	629	634	637	637	637	638	636	634	634	633	625
21	633	631	633	632	632	630	628	628	628	628	623	621	619	618	620	616	621	632	638	648	643	637	635	632	628	629
22 D	628	621	623	631	631	633	630	630	626	610	616	621	626	630	636	636	647	657	659	662	640	642	651	649	631	635
23 D	631	627	630	636	638	635	635	639	642	642	640	640	641	645	664	679	695	681	682	678	674	657	632	620	634	649
24	634	635	637	643	626	616	622	624	635	643	643	640	644	640	637	653	662	658	652	657	655	649	647	647	646	642
25	646	644	630	638	641	631	611	614	626	644	641	639	645	654	651	649	646	645	646	646	647	647	647	647	646	641
26 Q	646	644	643	644	645	645	645	643	642	642	641	641	640	638	638	638	639	640	642	642	643	641	641	641	640	642
27	640	638	638	638	639	639	641	639	638	638	635	633	626	622	618	624	629	634	640	644	643	641	639	635	631	635
28	631	627	627	624	626	626	624	625	625	632	632	635	637	641	659	685	717	701	695	692	680	675	665	658	656	652
29	656	652	652	651	653	657	657	658	658	652	652	651	649	649	649	648	650	650	649	649	649	649	649	648	648	651
30 D	648	648	646	639	631	633	635	638	642	646	644	641	643	653	665	671	673	673	667	666	663	661	657	628	611	650
Mean	637	635	635	636	636	637	637	637	638	639	638	637	638	639	642	645	651	653	653	653	650	647	644	640	635	641

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

28. Lerwick.

June, 1929.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{\Sigma R^2}{100\gamma^2}$ §	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + °A.
	Horizontal Force.					Declination.					Vertical Force.							
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.	Maximum 14° +		Minimum 14° +		Range.	Maximum 46,000 γ +		Minimum 46,000 γ +		Range.			
1	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	154	I	86.0
2	16 5	617	519	13 0	98	11 59	30.0	14.1	6 28	15.9	0 0	667	631	23 21	36	111	I	85.8
3	17 32	619	530	5 39	89	23 55	29.7	17.4	8 24	12.3	18 4	658	636	11 30	22	113	I	85.2
4 Q	19 59	617	531	10 20	86	12 51	31.6	17.1	7 29	14.5	23 —	642	629	0 28	13	114	I	84.8
5 Q	15 50	612	528	10 9	84	13 0	31.3	16.4	6 22	14.9	24 0	644	625	15 29	19	76	O	83.8
6	17 24	593	526	9 51	67	12 23	30.9	18.3	6 5	12.6	21 —	651	634	12 4	17	104	O	83.0
7	18 31	623	542	10 38	81	13 1	33.0	19.1	5 29	13.9	4 —	655	636	12 —	19	159	I	82.9
8	18 42	609	533	10 48	76	2 45	35.7	14.8	3 55	20.9	24 0	636	587	3 31	49	316	I	82.9
9	17 11	645	524	9 58	121	15 41	35.4	8.8	23 0	26.6	17 50	659	594	23 47	65	294	I	83.0
10 D	18 40	645	529	10 30	116	13 28	36.2	11.9	2 0 56	24.3	17 20 & 19 30	663	590	0 0	73	1082	2	83.6
11 D	17 21	722	446	6 21	276	20 53	37.5	10.5	20 21	27.0	17 16	692	554	23 59	138	918	2	84.0
12	16 28	716	470	0 29	246	20 7	38.5	9.3	1 39	29.2	16 17	664	538	1 2	126	262	I	84.3
13	18 58	654	522	2 52	132	13 39	32.0	14.8	7 58	17.2	18 36	657	598	3 0	59	137	I	85.0
14 Q	16 41	618	524	11 27	94	14 20	32.0	17.0	8 40	15.0	18 —	661	631	1 0	30	59	O	85.0
15	20 30	590	538	11 17	52	15 51	29.0	16.3	6 19	12.7	7 —	654	638	17 30	16	111	O	85.0
16	18 56	618	536	10 41	82	15 27	31.9	16.5	6 23	15.4	20 —	650	636	13 —	14	191	I	85.6
17	18 10	621	530	11 10	91	13 21	34.5	14.3	4 35	20.2	18 —	675	615	4 39	60	124	O	85.9
18 Q	20 59	606	530	10 36	76	13 30	34.6	15.5	8 12	19.1	7 —	670	660	24 0	10	82	O	86.1
19	17																	

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

29. Lerwick. (H.)

14,000 γ ($\cdot 14$ C.G.S. unit) +

July, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1	524	509	487	499	534	538	523	521	513	500	507	513	522	526	550	559	563	564	563	570	573	576	579	573	568	538
2	568	567	565	548	536	543	546	541	544	541	528	518	524	538	541	550	554	567	578	586	589	582	577	570	564	554
3	564	565	563	564	565	565	561	553	543	534	529	529	538	547	554	563	581	591	592	579	575	580	583	579	579	563
4	579	578	575	573	562	556	547	540	541	539	544	545	550	556	556	566	574	592	600	594	586	573	568	562	561	565
5 D	561	563	565	566	567	564	554	548	543	539	538	540	547	552	565	590	670	613	623	637	626	601	547	544	557	573
6 D	557	553	559	566	569	561	492	535	541	518	541	542	543	546	552	570	604	593	593	596	590	586	578	574	563	561
7	563	560	555	557	544	554	556	543	524	511	515	503	519	530	544	565	572	584	613	616	604	589	578	571	568	557
8	568	564	561	564	571	567	558	551	538	517	508	511	526	546	564	582	576	583	598	603	593	583	576	572	573	562
9 Q	573	574	571	569	572	571	560	551	539	531	520	520	531	541	555	573	581	585	582	592	592	583	581	583	581	564
10 D	581	570	571	571	578	578	566	516	512	499	497	534	610	550	622	648	625	795	741	770	688	620	489	200	466	578
11	466	539	541	530	506	511	540	545	548	545	530	524	534	544	552	568	576	586	603	602	581	566	564	554	547	550
12	547	546	548	554	553	542	542	540	534	521	512	513	518	531	540	554	573	579	572	581	577	569	562	552	550	548
13 Q	550	549	547	541	553	552	546	537	531	525	518	519	528	533	533	537	551	568	578	591	588	576	564	558	545	549
14	545	540	553	557	552	547	541	540	535	530	523	523	523	526	537	550	559	624	639	599	599	562	521	478	308	549
15 D	308	242	385	451	457	470	481	478	528	530	521	517	518	533	546	558	584	609	683	663	628	577	472	166	355	497
16 D	355	529	538	543	538	547	539	525	517	500	512	518	535	587	620	855	880	717	722	659	621	565	559	553	542	589
17	542	530	535	548	552	546	540	521	516	521	525	527	584	615	572	569	550	554	560	561	562	565	568	567	559	552
18	559	555	553	551	551	550	543	538	533	527	526	514	517	555	562	568	571	590	585	574	573	570	565	557	556	554
19 Q	556	551	552	557	557	556	551	540	532	529	528	529	534	547	554	563	565	570	570	574	567	565	565	570	567	567
20	567	568	562	562	563	560	553	546	540	529	528	540	557	571	625	590	581	594	586	577	590	587	573	576	579	568
21	579	576	569	568	567	563	558	553	545	529	521	532	550	531	561	551	572	591	602	588	582	572	572	568	566	562
22	566	568	552	553	555	557	555	548	538	506	509	521	527	545	561	570	574	590	582	600	591	578	563	559	557	559
23	557	550	558	559	559	558	556	549	534	524	525	528	536	550	568	577	582	575	582	576	571	566	567	567	566	557
24	566	561	558	556	550	542	547	550	540	530	525	529	540	553	578	590	587	633	641	642	588	579	558	549	554	566
25	554	556	556	552	554	553	554	552	539	526	522	523	519	517	554	545	568	572	570	571	573	571	569	553	547	551
26	547	551	555	557	563	562	556	552	546	539	531	533	542	546	540	572	575	604	592	574	569	569	569	564	564	559
27	564	559	563	568	568	564	563	560	549	543	539	528	543	552	563	562	567	569	567	575	576	575	570	568	565	561
28 Q	565	561	561	563	563	561	561	558	549	539	531	529	537	540	551	563	572	575	577	586	585	580	575	572	571	561
29 Q	571	569	568	568	568	565	560	554	547	540	540	535	535	538	544	554	562	571	581	582	583	585	584	581	574	562
30	574	574	575	576	575	574	571	558	547	534	529	537	545	568	578	568	585	595	602	606	597	591	585	573	568	571
31	568	573	569	574	575	574	566	558	550	542	536	531	532	536	545	560	572	583	595	594	589	600	609	605	582	568
Mean	543	547	551	554	554	553	548	542	537	527	525	526	538	547	561	577	587	597	603	602	591	579	564	539	545	558

MAGNETIC DECLINATION (WEST).

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

30. Lerwick. (D.)

14° +

July, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'
1	18.0	7.2	6.8	6.2	11.6	12.4	17.2	15.1	14.7	17.2	19.0	23.4	27.3	30.0	30.9	28.4	26.9	25.3	24.8	24.6	24.6	25.3	25.3	24.4	22.8	20.4
2	22.8	22.2	22.7	24.9	25.3	22.2	19.5	18.7	19.3	20.8	24.7	27.2	29.1	30.3	30.5	31.0	31.0	29.9	28.0	27.2	26.2	25.6	25.1	24.1	23.3	25.4
3	23.3	22.6	20.6	19.5	18.5	17.2	16.6	16.8	16.2	18.1	21.2	23.7	27.0	28.7	28.0	27.8	28.3	27.8	26.6	26.0	25.3	25.8	25.6	24.3	23.7	23.2
4	23.7	23.0	21.3	20.5	20.0	18.4	19.6	21.1	24.0	23.2	23.4	26.3	30.2	31.7	30.2	27.9	26.9	26.3	25.5	25.2	25.9	25.5	24.4	23.6	24.6	24.6
5 D	23.6	22.8	22.0	20.8	19.1	17.4	16.6	17.4	18.1	19.5	22.6	26.4	30.1	31.8	34.5	36.1	36.5	30.7	28.7	28.7	29.9	26.0	20.1	22.4	21.4	25.0
6 D	21.4	20.3	20.1	20.5	16.9	19.6	29.2	27.7	19.2	20.5	23.6	28.8	32.5	34.6	33.7	32.3	32.1	29.4	29.2	28.6	26.3	25.5	25.7	24.0	24.8	26.0
7	24.8	19.6	17.6	19.2	19.8	18.0	15.5	16.1	16.1	18.4	21.3	25.5	28.3	29.6	29.2	28.1	26.7	26.7	25.9	26.7	26.9	25.5	24.6	24.2	24.4	23.1
8	24.4	24.3	25.3	22.4	19.1	15.6	14.6	16.0	19.1	22.6	25.3	28.5	28.5	29.3	29.7	28.5	26.2	26.0	25.3	23.3	24.1	24.9	24.9	24.7	24.7	23.3
9 Q	24.7	24.3	24.7	23.1	19.7	16.4	15.0	15.6	16.2	19.3	23.5	27.6	30.5	31.8	32.0	30.7	28.3	26.2	26.0	26.4	26.0	25.1	24.9	24.9	25.6	24.3
10 D	25.6	25.0	24.0	21.1	19.6	19.4	19.6	21.7	20.9	23.4	26.3	21.3	19.2	30.8	39.4	34.4	33.8	36.7	34.4	34.0	31.3	29.3	34.9	28.5	13.9	27.0
11	13.9	18.3	15.2	19.3	17.1	13.5	13.3	12.5	12.5	14.1	18.0	25.0	28.8	28.8	27.9											

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

31. Lerwick. (V.)

46,000 γ (-46 C.G.S. unit) +

July, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	611	581	566	568	572	576	597	623	638	652	652	654	653	651	649	644	648	648	648	647	645	643	642	644	644	628
2	644	645	643	639	616	605	616	626	630	641	638	636	633	630	632	632	631	631	631	634	635	635	635	636	636	632
3	638	638	637	637	637	634	634	632	631	633	633	633	635	637	638	638	640	637	641	648	652	649	649	651	649	639
4	649	644	644	648	648	645	640	634	628	611	616	622	628	632	636	645	640	635	635	636	634	632	629	631	631	635
5 D	631	632	632	634	633	631	631	626	624	622	623	623	619	611	605	602	610	681	683	665	661	665	632	612	623	633
6 D	623	605	618	614	608	613	604	545	560	595	602	617	616	616	627	637	639	645	636	629	628	630	628	625	597	614
7	597	595	605	613	620	621	625	628	628	631	631	632	625	630	631	633	643	643	637	637	630	630	631	625	622	626
8	622	626	624	623	623	628	628	629	629	640	637	635	631	627	626	628	634	638	638	639	639	638	636	633	633	632
9 Q	633	630	630	630	629	633	636	634	633	631	626	621	618	616	616	622	630	633	640	637	632	634	631	628	626	629
10 D	626	624	619	619	622	622	623	636	635	639	640	638	646	699	662	674	665	733	799	765	710	652	552	531	540	649
11	540	552	571	609	571	563	549	590	612	631	633	638	632	637	645	645	644	650	649	655	651	647	641	638	617	618
12	617	596	614	623	628	634	636	635	639	653	652	650	643	643	646	643	643	651	657	658	659	659	654	645	644	641
13 Q	644	643	643	640	642	646	649	651	652	652	647	641	640	642	641	641	640	642	645	649	655	655	654	652	651	646
14	651	643	641	642	642	643	643	645	647	641	641	638	634	631	629	628	634	633	645	656	661	614	602	557	535	633
15 D	535	485	383	323	339	365	437	508	539	594	616	627	630	626	631	632	634	657	687	684	673	659	610	482	474	555
16 D	474	509	561	579	595	603	611	620	621	631	628	630	664	693	764	840	817	807	768	750	720	672	672	664	654	666
17	654	640	618	632	635	644	639	645	638	642	645	654	675	745	714	674	660	653	650	648	640	636	633	631	628	651
18	628	630	633	635	632	632	632	629	629	630	630	627	625	624	632	629	627	622	628	627	627	620	618	611	595	627
19 Q	595	593	601	605	608	608	607	609	608	610	612	612	612	611	613	614	616	615	615	614	616	613	613	611	606	610
20	606	606	610	613	618	619	621	620	620	621	621	629	637	646	652	707	701	676	663	659	658	662	660	659	653	642
21	653	624	639	654	659	663	662	662	660	655	655	652	656	667	664	668	672	673	686	688	679	675	667	663	660	662
22	660	653	655	657	657	661	660	660	659	661	657	654	651	650	655	653	654	656	660	659	657	654	647	643	638	655
23	638	636	633	637	639	640	640	640	637	635	633	634	632	634	637	639	646	653	651	647	643	639	637	637	634	639
24	634	636	638	641	640	640	637	636	636	639	639	640	635	631	634	649	656	658	672	672	670	658	645	596	602	642
25	602	621	625	625	624	622	626	634	636	644	643	639	641	643	642	655	653	652	648	646	646	645	645	628	609	637
26	609	609	618	622	628	636	638	637	637	644	642	636	632	636	640	642	651	653	658	658	654	647	642	640	633	638
27	633	627	628	630	637	639	636	638	640	644	635	626	622	624	627	632	634	638	639	639	639	639	637	634	634	634
28 Q	634	636	636	636	635	639	637	639	642	648	647	645	643	647	647	647	648	652	655	652	650	650	648	647	645	644
29 Q	645	645	645	645	645	647	647	647	644	644	644	642	638	635	640	642	644	646	645	645	645	645	643	643	643	643
30	643	641	641	643	643	644	642	642	642	644	642	633	636	636	638	642	642	642	644	645	645	643	641	639	639	641
31	639	635	635	626	630	632	630	630	632	634	634	629	627	631	636	638	640	640	640	642	642	640	640	640	623	635
Mean	620	615	616	617	618	620	623	627	629	635	635	635	636	641	644	649	650	655	658	656	651	644	636	625	620	635

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

July, 1929.

Day.	Terrestrial Magnetic Elements.												Character Σ R ² Figure 100γ ² §	Magnetic Character of Day (0-2).	Temperature in Magnet House 200 + °A.						
	Horizontal Force.						Declination.									Vertical Force.					
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.	Maximum 14° +		Minimum 14° +		Range.	Maximum 46,000 γ +					Minimum 46,000 γ +		Range.			
1	h. m.	γ	γ	h. m.	γ	h. m.	31° 5'	16° 6'	2 44	32.4	h. m.	γ	γ	h. m.	γ	421	I	84.9			
2	21 38	585	473	2 6	112	13 55	31.5	16.6	5 57	15.6	0 —	645	601	4 35	44	127	O	84.8			
3	19 59	593	513	11 20	80	14 59	32.2	15.8	7 46	13.3	19 45	657	630	8 —	27	101	I	84.5			
4	18 39	605	526	10 20	79	16 29	29.1	16.7	4 20	15.8	15 20	649	607	8 35	42	112	I	84.2			
5 D	17 50	603	533	7 46	70	12 44	32.5	15.4	5 49	27.6	17 11	711	587	15 26	124	770	I	84.4			
6 D	16 30	748	529	22 11	219	16 30	43.0	8 4	20.9	16 50	654	536	6 59	118	448	I	84.8				
7	16 4	622	470	6 7	152	6 19	36.4	13.6	6 39	16.8	16 22	649	582	0 20	67	283	I	84.9			
8	18 21	631	494	10 41	137	12 55	30.4	13.9	5 52	17.0	20 —	639	619	2 20	20	170	I	84.7			
9 Q	19 16	608	501	9 20	107	13 58	30.9	13.9	5 52	19.1	18 0	642	614	13 50	28	139	O	85.0			
10 D	19 11	598	517	10 28	81	13 40	33.0	8.1	23 48	47.6	18 20	851	421	21 32	430	9718	2	85.5			
11	16 49	967	103	23 0	864	21 33	55.7	7 36	23.5	18 45	661	516	0 10	145	577	I	85.6				
12	18 53	628	464	0 12	164	15 33	31.6	8.32	16.3	20 —	659	590	0 55	69	153	O	85.7				
13 Q	19 28	585	509	10 35	76	13 20	32.1	16.6	7 3	13.2	20 20	656	638	3 20	18	107	O	85.7			
14	19 4	599	514	10 11	85	14 40	29.8	4.7	23 42	26.3	19 35	696	513	23 43	183	1346	I	85.8			
15 D	17 18	658	360	23 59	298	18 30	31.0	2 29	97.6	18 11	715	310	3 12	405	7862	2	85.8				
16 D	17 54	703	<31	Between 23 4 & 23 26	>672	23 26	78.9	0 1	54.1	15 11	877	429	0 16	448	6228	2	86.2				
17	15 8	968	360	0 1	608	16 31	48.1	5 20	20.3	13 17	782	607	1 58	175	608	I	86.9				
18	12 37	653	502	7 11	151	13 56	33.8	6 26	19.0	2 30	637	591	24 0	46	179	I	87.5				

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

33. Lerwick. (H.)

14,000 γ (14 C.G.S. unit) +

August, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day	γ																										
1 D	582	565	549	562	565	565	564	557	546	542	538	548	573	600	637	674	656	646	635	602	573	516	362	578	554	479	555
2	479	517	549	409	456	548	535	523	525	531	520	521	527	545	552	556	562	562	567	576	585	581	578	554	559	551	537
3	560	554	554	555	557	555	541	530	518	512	519	526	532	551	551	554	569	564	571	577	577	577	568	564	559	551	560
4	559	556	547	554	561	545	545	548	548	544	534	520	533	547	563	577	581	599	595	588	590	585	570	561	521	556	541
5	521	474	435	519	570	569	555	533	524	519	510	512	524	548	548	543	577	579	586	574	568	564	560	559	556	556	541
6	556	553	556	556	556	553	548	542	534	529	527	527	538	549	554	562	569	574	577	575	575	573	571	569	563	555	558
7 Q	563	558	556	559	561	558	553	548	543	534	525	525	535	542	555	567	569	577	586	586	583	574	570	566	568	558	558
8 Q	568	564	564	563	562	560	555	550	539	532	525	521	525	539	547	554	559	561	566	577	577	574	570	569	567	555	555
9 Q	567	567	568	563	564	563	557	550	543	533	525	528	536	549	560	569	573	578	578	579	579	575	573	573	575	561	561
10	575	578	577	577	578	576	573	569	558	546	535	534	542	554	564	570	580	589	588	592	596	589	588	589	594	572	572
11 D	594	593	591	591	592	587	584	565	555	552	556	556	551	569	556	569	590	610	614	617	617	582	574	572	576	580	580
12	576	571	568	565	566	561	559	552	548	537	529	525	532	550	571	569	578	581	588	589	588	588	577	572	566	564	564
13	568	567	568	567	568	565	560	551	550	544	533	530	539	551	568	577	578	581	578	584	580	578	576	572	566	564	564
14 D	566	567	567	568	570	566	562	557	547	540	537	541	546	587	613	654	802	893	980	815	651	501	327	488	162	598	598
15 D	162	295	451	537	539	536	529	536	515	507	503	526	551	534	558	564	594	596	620	601	583	571	563	553	540	530	530
16	540	534	541	554	552	544	522	518	531	520	510	531	538	549	557	599	588	564	590	589	585	566	561	562	560	552	556
17	560	549	543	553	560	554	551	545	539	533	522	523	530	555	563	564	582	575	579	579	578	572	579	572	539	542	547
18 D	539	493	554	517	524	511	518	525	541	533	487	485	528	541	557	586	587	574	572	588	575	560	555	552	547	542	547
19	547	550	528	510	541	537	538	535	532	521	512	518	543	545	556	639	617	565	569	561	556	552	551	551	551	549	549
20	551	538	525	544	546	546	541	534	526	519	517	516	536	546	557	561	563	573	574	570	558	560	562	555	553	547	547
21	553	558	561	553	556	542	545	538	521	516	511	511	521	544	554	559	568	569	566	566	562	562	560	553	542	548	548
22	542	553	546	549	550	547	545	535	521	511	512	520	538	552	560	563	562	566	565	565	562	562	560	558	558	558	558
23	558	556	552	552	550	551	549	541	529	521	518	520	531	541	563	561	556	564	565	566	567	566	568	562	562	550	550
24	562	562	561	561	560	551	558	559	548	534	521	522	527	540	537	556	573	565	556	562	564	566	566	559	558	553	553
25 Q	558	558	559	559	562	559	557	554	544	527	517	511	512	525	539	551	558	560	562	566	566	565	562	562	563	550	550
26	563	562	561	562	561	559	556	548	538	526	520	519	526	539	549	560	568	578	586	580	582	585	587	577	570	558	558
27	570	567	560	558	557	563	563	562	550	537	525	520	527	548	555	562	567	574	571	571	566	566	568	566	560	557	557
28 Q	560	560	559	555	560	558	554	548	542	531	527	527	525	528	540	546	549	556	560	564	566	566	567	567	563	551	551
29	563	565	559	555	555	553	557	553	542	525	516	516	526	539	553	566	567	568	574	579	565	563	561	560	560	553	553
30	560	560	559	553	562	564	560	551	541	532	527	530	535	543	554	561	561	564	564	566	566	570	566	564	566	555	555
31	566	569	556	548	537	554	556	547	536	525	521	526	537	562	557	565	565	583	579	567	573	561	563	573	544	555	555
Mean	545	546	549	549	555	555	551	545	538	529	522	524	534	549	560	573	583	587	592	586	578	567	554	551	544	555	555

MAGNETIC DECLINATION (WEST).

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

34. Lerwick. (D.)

14° +

August, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'
1 D	21.2	21.4	6.7	8.1	10.0	12.9	12.5	14.4	14.2	18.9	20.2	22.3	28.1	32.8	28.9	32.6	28.3	25.2	27.7	30.2	31.2	21.6	18.3	19.2	7.5	20.8
2	7.5	8.6	14.8	12.3	16.9	12.7	20.0	17.1	20.0	21.6	23.7	25.6	27.2	27.4	26.4	25.0	24.1	23.1	23.9	24.5	23.9	21.9	20.4	23.1	20.4	20.8
3	20.4	19.8	21.0	18.9	17.7	16.4	15.8	14.8	16.5	18.7	20.4	23.3	25.6	27.4	25.6	24.8	23.5	23.7	23.3	22.9	23.9	21.6	21.2	22.0	21.2	21.2
4	21.2	19.8	20.2	20.6	18.3	17.5	18.7	16.2	18.9	21.2	23.9	28.1	30.8	31.2	29.9	27.4	24.5	24.3	23.9	23.9	25.0	23.9	19.6	14.0	15.2	22.5
5	15.2	14.2	17.1	21.4	14.2	14.0	13.7	15.0	16.7	18.3	23.3	26.2	29.7	30.2	29.1	27.5	25.0	23.7	22.3	22.7	23.3	22.5	20.6	19.8	21.9	21.2
6	21.9	19.6	19.2	18.7	18.3	17.3	16.4	16.4	17.5	19.6	22.3	25.0	27.0	28.1	27.2	25.0	23.7	22.9	22.5	23.3	23.1	22.7	22.5	21.6	19.8	21.7
7 Q	19.8	18.9	18.3	18.1	17.9	17.1	16.7	17.3	18.3	21.2	24.1	26.6	28.3	29.3	28.3	26.0	24.1	23.7	22.3	23.5	24.1	22.9	22.5	21.9	21.6	22.2
8 Q	21.6	21.0	20.2	19.6	18.3	17.1	16.0	16.5	17.7	18.5	19.8	22.1	26.6	29.1	27.7	26.0	24.1	22.5	22.3	23.3	23.1	22.2	22.3	22.1	21.9	21.7
9 Q	21.9	22.2	21.3	22.4	19.9	18.2	17.8	18.0	18.0	19.3	23.4	26.7	29.8	31.7	30.7	27.8	26.1	24.4	23.4	23.6	23.6	22.2	22.2	22.0	21.3	23.2
10	21.3	20.5	20.3	19.7	18.4	16.6	16.3	16.1	16.4	18.2	20.3	22.6	24.9	26.9	27											

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

35. Lerwick. (V.)

46,000 γ (.46 C.G.S. unit) +

August, 1929.

Table with 25 columns (0-24) and 31 rows (1 D to 31). Each cell contains a numerical value representing magnetic force. A 'Mean' row is at the bottom. Some values are bolded (e.g., 628, 662).

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS :

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

August, 1929.

36. Lerwick.

Table with 13 columns: Day, Horizontal Force (Maximum, Minimum, Range), Declination (Maximum, Minimum, Range), Vertical Force (Maximum, Minimum, Range), Character Figure, Magnetic Character, and Temperature in Magnet House. Rows are numbered 1 D to 31. Includes a 'Mean' row and a 'No. of Days used' row.

§ For explanation see p. 32. Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 56-61.

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

37. Lerwick. (H.)

14,000 γ ($\cdot 14$ C.G.S. unit) +

September, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1	544	539	557	553	555	554	551	543	521	512	506	500	499	503	512	500	506	530	533	550	565	567	568	558	567	535
2	567	585	564	565	560	557	554	543	533	526	535	547	548	558	565	564	565	576	570	575	575	575	576	574	570	561
3 Q	570	568	568	566	567	565	560	554	549	538	531	529	539	552	562	565	562	569	573	580	583	579	575	574	572	562
4 Q	572	572	572	570	567	566	562	557	548	541	536	540	544	552	565	568	570	581	583	584	586	581	584	577	571	566
5 Q	571	570	570	570	569	565	562	554	541	530	524	527	535	551	567	574	575	576	577	581	585	587	579	578	578	563
6	578	576	575	574	572	568	566	562	555	549	549	559	571	568	566	577	591	583	583	583	586	583	582	581	589	578
7 D	589	574	570	534	579	538	528	550	557	520	492	504	524	541	562	569	612	625	609	595	575	569	569	564	552	560
8	552	546	558	558	559	564	561	552	539	533	529	532	531	533	547	556	555	560	571	573	575	570	570	569	537	554
9	537	558	562	559	534	535	566	562	550	540	533	529	529	537	555	556	564	571	585	581	582	578	540	504	528	552
10 D	528	489	501	537	561	566	511	495	470	474	478	507	527	554	548	564	565	624	634	576	583	540	555	546	534	539
11 D	534	438	489	543	568	558	561	552	505	480	500	521	533	529	582	577	633	587	560	563	570	573	562	537	551	544
12	551	547	549	552	562	557	532	537	526	531	527	519	515	527	550	581	623	601	577	573	555	555	542	534	530	551
13	530	496	502	560	512	529	564	555	548	530	529	526	527	545	557	570	583	570	591	574	558	560	561	564	509	547
14 D	509	468	557	562	559	551	506	520	546	508	499	499	532	571	593	614	645	614	608	576	542	539	516	538	539	549
15	539	470	484	543	556	547	545	554	534	526	510	506	520	536	550	557	581	599	609	576	567	559	559	560	553	546
16	553	542	549	549	554	547	542	548	541	529	519	523	529	532	530	572	610	563	571	568	563	556	557	544	549	550
17	549	557	554	541	538	559	553	545	540	528	521	531	530	538	543	548	550	554	563	563	560	560	557	561	559	548
18	559	558	557	551	549	552	552	547	538	533	527	526	529	546	544	543	548	561	565	559	553	553	550	548	554	548
19 Q	554	549	548	548	548	555	555	548	536	532	529	531	536	547	558	562	558	555	561	561	563	565	564	554	558	551
20	558	558	560	560	560	559	559	554	546	532	531	527	528	546	553	555	556	571	570	567	568	567	564	566	560	555
21	560	536	551	559	558	557	560	563	557	547	536	535	531	534	537	560	570	577	553	561	572	572	552	554	539	553
22 D	539	375	485	500	428	514	523	496	516	528	498	462	499	534	600	578	549	603	597	569	568	547	536	543	545	525
23	545	541	544	545	544	544	541	538	530	516	503	495	504	520	529	553	545	563	555	558	556	564	557	553	550	539
24	550	545	543	538	542	567	561	553	541	528	516	512	517	525	534	542	547	554	552	558	556	555	554	558	559	544
25	559	554	543	547	548	551	557	554	551	540	529	524	535	531	507	529	548	554	566	557	558	563	555	562	543	546
26	543	556	550	550	550	551	552	549	543	530	501	505	520	523	535	530	542	554	559	557	552	550	555	553	557	542
27	557	554	555	551	541	547	555	554	550	542	520	494	497	531	554	533	544	551	559	548	573	546	543	549	547	543
28	547	545	540	545	547	547	547	543	536	527	517	513	517	520	533	535	541	547	550	551	547	548	549	548	546	539
29 Q	546	546	543	544	547	546	546	540	533	524	518	515	515	525	532	537	539	544	545	551	551	550	551	551	550	539
30	550	549	549	558	556	555	555	551	543	532	526	521	519	528	522	535	530	546	554	549	549	553	558	558	554	544
Mean	551	535	545	551	550	552	550	546	537	527	519	519	526	538	550	557	567	572	578	567	566	562	558	555	552	549

MAGNETIC DECLINATION (WEST).

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

38. Lerwick. (D.)

14° +

September, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	
1	13.6	11.3	14.6	16.7	17.7	16.9	14.8	14.8	15.7	18.3	22.5	25.6	27.1	26.2	24.4	21.7	21.7	21.7	20.4	21.5	22.9	21.5	23.1	21.9	20.0	20.0	20.0
2	20.0	24.6	18.8	17.5	17.3	17.5	15.9	15.9	17.7	21.0	24.2	26.4	28.1	29.3	25.8	22.3	19.6	19.2	19.4	18.3	21.0	21.3	21.1	21.1	21.3	21.0	21.0
3 Q	21.3	21.4	20.9	19.9	19.1	18.0	17.6	17.6	18.5	21.2	23.8	26.1	28.2	28.4	25.9	22.8	20.7	19.7	20.7	21.1	21.2	19.5	21.2	20.9	19.9	21.5	
4 Q	19.9	19.7	19.7	19.5	19.1	18.2	17.4	17.4	17.8	20.3	23.0	26.3	27.8	28.2	26.7	24.5	21.8	20.9	19.7	21.1	20.7	21.4	21.2	19.1	19.9	21.3	
5 Q	19.9	20.6	19.6	19.2	18.6	17.7	16.9	15.9	16.1	18.8	22.7	27.1	29.1	28.9	27.5	24.8	22.5	21.3	21.7	22.1	21.7	20.6	21.2	21.3	20.6	21.5	
6	20.6	20.0	19.4	19.0	18.5	17.7	17.5	17.1	18.1	20.0	21.9	24.6	27.5	28.1	26.9	24.8	23.9	23.7	24.1	22.7	21.3	21.2	21.3	19.8	20.8	21.7	
7 D	20.8	22.2	13.7	-5.2	-3.3	6.0	15.7	22.2	19.3	27.0	26.9	31.5	29.7	29.7	29.9	27.8	15.7	13.2	18.2	21.3	19.3	19.9	22.4	24.7	18.6	19.5	
8	18.6	19.1	17.6	18.2	17.8	17.6	16.8	17.2	18.2	19.9	22.4	24.7	27.0	27.0	26.7	24.3	22.0	21.8	22.8	22.2	22.0	22.2	17.6	16.0	12.4	20.7	
9	12.4	16.7	19.2	17.5	22.3	17.9	14.0	15.8	16.0	17.1	22.7	27.1	30.6	32.2	31.8	29.5	27.0	24.4	24.3	23.7	21.5	20.0	15.4	1.1	7.1	20.7	
10 D	7.1	17.7	25.0	5.9	14.8	16.1	31.8	35.1	29.1	27.7	27.3	29.7	28.5	27.5	27.7	27.1	23.5	23.5	10.5	20.8	7.3	14.4	17.1	15.4	19.8	21.5	
11 D	19.8	22.8	25.3	19.5	16.2	18.4	17.8	20.9	23.0	25.1	25.1	25.3	25.1	30.9	25.5	27.4	18.9	20.5	22.8	22.6	19.3	15.3	20.5	15.7	21.5	21.9	
12	21.5	20.1	21.5	21.8	20.5	22.0	28.0	23.8	23.6	19.3	21.8	24.9	26.5	28.2	29.6	24.2	14.7	19.5</									

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

39. Lerwick. (V.)

46,000 γ (=46 C.G.S. unit) +

September, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day. 1	630	639	648	660	663	666	669	666	669	675	672	672	674	674	677	680	671	665	680	680	680	680	677	664	658	669	
2	658	646	655	664	664	664	664	667	664	666	663	660	660	660	669	678	678	678	678	679	680	680	680	680	680	680	669
3 Q	680	680	680	683	682	685	685	685	682	688	685	682	679	678	684	696	702	696	696	693	693	693	695	698	698	701	688
4 Q	701	701	701	704	703	703	700	697	694	703	700	693	693	690	690	690	693	693	692	692	692	689	686	683	685	695	
5 Q	685	688	688	691	694	694	693	690	693	693	687	684	680	680	683	686	689	683	685	682	682	682	681	681	681	687	
6	681	681	681	680	680	680	680	679	679	682	679	675	675	672	675	677	680	683	686	688	691	691	688	684	672	681	
7 D	672	648	572	518	530	575	592	610	631	648	666	669	669	671	674	701	775	793	784	768	747	687	686	659	653	664	
8	653	655	676	688	693	699	702	704	707	710	703	700	697	693	699	704	707	707	706	706	706	708	708	695	665	697	
9	665	653	676	682	678	636	648	671	677	697	694	688	687	687	687	692	695	697	697	697	699	699	665	620	605	677	
10 D	605	607	577	574	624	645	630	602	632	661	682	700	699	705	704	710	734	748	757	744	735	693	692	689	662	674	
11 D	662	610	598	622	642	654	668	677	689	703	706	711	729	735	752	755	775	781	768	744	737	728	707	694	691	703	
12	601	696	705	704	704	706	703	703	708	717	719	725	727	724	726	744	780	788	788	778	754	738	720	680	641	725	
13	641	641	631	640	657	639	636	680	688	694	697	702	717	728	731	727	730	738	744	756	752	740	724	712	687	699	
14 D	687	596	605	632	655	670	660	645	647	665	697	703	709	717	750	800	818	805	799	795	717	696	659	632	649	697	
15	649	649	597	639	671	683	694	697	696	708	710	719	718	715	711	711	713	722	727	724	705	693	695	698	691	694	
16	691	679	669	675	680	683	682	679	684	696	698	704	706	709	714	720	746	743	727	724	720	699	674	659	700	700	
17	659	676	682	687	687	683	689	694	697	705	711	719	719	724	733	732	729	722	719	718	718	723	717	707	707	707	
18	707	709	715	714	711	707	710	712	712	711	714	716	719	724	733	732	735	734	734	736	730	717	714	692	698	718	
10 Q	698	697	699	699	701	704	703	703	702	711	710	710	706	706	708	714	716	716	715	715	714	714	713	710	709	708	
20	709	712	717	717	716	716	715	712	711	717	713	710	709	706	708	711	713	713	715	718	717	717	716	710	704	713	
21	704	697	682	693	699	704	707	706	706	708	708	704	704	706	709	711	720	737	761	754	739	729	699	698	695	712	
22 D	695	589	547	537	516	506	524	556	586	642	669	701	707	712	751	735	741	767	776	766	751	720	693	695	698	662	
23	698	703	703	706	708	708	710	710	712	724	723	720	716	719	721	723	720	720	719	716	712	703	693	690	689	711	
24	689	686	682	676	657	654	656	665	673	679	678	678	674	677	676	679	678	681	680	676	673	672	666	665	644	673	
25	644	637	643	645	648	647	647	649	648	657	656	659	652	655	657	654	650	653	652	655	651	654	656	647	631	650	
26	631	628	636	639	641	638	640	642	642	644	653	655	652	648	651	656	656	655	652	657	660	650	644	649	646	647	
27	646	639	630	623	620	622	625	630	630	640	644	648	657	678	688	713	676	663	657	678	626	620	641	641	643	647	
28	643	643	639	641	643	643	644	648	650	653	653	652	648	648	648	651	652	651	649	649	651	649	651	652	654	648	
29 Q	654	653	653	651	648	648	650	651	655	655	652	654	654	652	652	652	654	654	656	656	655	655	655	657	657	653	
30	657	657	657	655	651	650	652	654	658	662	660	664	660	666	675	682	680	678	674	680	678	670	665	653	657	664	
Mean	669	660	655	658	662	664	667	669	674	684	687	689	690	692	698	704	710	712	712	711	702	694	686	677	670	685	

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS :

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

September, 1929.

40. Lerwick.

Day.	Terrestrial Magnetic Elements.										Character Figure ΣR^{\dagger} $\frac{100\gamma^{\ddagger}}$	Magnetic Character of Day (0-2).	Temperature in Magnet House 200°						
	Horizontal Force.					Declination.								Vertical Force.					
	Maximum $14,000 \gamma^+$		Minimum $14,000 \gamma^+$		Range.	Maximum 14°		Minimum 14°		Range.				Maximum $46,000 \gamma^+$		Minimum $46,000 \gamma^+$		Range.	
1	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	188	I	85.0
2	22 11	578	491	10 25	87	11 28	28.5	7.6	0 35	20.9	18 10	683	624	0 10	59	115	I	86.0	
3 Q	0 53	599	523	8 45	76	12 39	30.4	15.2	7 11	15.2	22 —	680	640	1 10	40	70	0	85.2	
4 Q	20 50	584	526	10 59	58	12 38	29.2	17.0	6 40	12.2	16 —	706	675	13 —	31	69	0	85.0	
5 Q	19 56	595	533	10 28	62	12 28	28.8	17.2	7 22	11.6	4 —	706	680	22 30	26	88	0	85.1	
6	23 40	609	543	10 10	66	12 52	28.7	15.9	7 1	12.8	21 —	697	666	23 59	31	82	I	85.0	
7 D	17 31	642	476	10 5	166	10 52	35.2	13.7	3 9	48.9	17 11	799	503	3 18	206	1580	I	84.8	
8	23 0	580	519	12 30	61	12 21	29.0	10.8	23 59	18.2	19 —	709	649	1 0	60	133	I	84.6	
9	17 59	595	471	23 23	124	13 20	33.1	6.8	22 40	39.9	21 10	705	599	23 51	106	552	I	84.8	
10 D	17 29	706	460	8 0	246	6 15	43.4	11.3	19 59	54.7	17 33	799	550	2 28	249	1759	2	84.7	
11 D	15 52	664	359	1 27	305	13 2	34.6	2.4	20 38	32.2	16 42	793	574	1 20	219	1595	I	84.8	
12	15 40	642	483	23 20	159	13 49	31.3	2.4	19 6	28.9	17 0	794	635	23 42	159	654	I	85.0	
13	18 15	616	432	1 21	184	4 49	35.1	8.2	0 59	26.9	18 40	765	619	2 10	146	682	I	85.0	
14 D	16 27	695	397	0 52	298	0 42	41.6	1.0	16 21	42.6	16 19	845	575	0 51	270	1941	I	84.9	
15	18 12	670	377	1 25	293	1 39	29.3	4.6	18 25	24.7	18 10	739	588	2 9	151	1195	I	85.1	
16	15 55	625	511	11 31	114	12 20	29.9	8.2	15 36	21.7	16 32	749	650	23 47	99	313	I	85.2	
17	17 50	567	514	10 3	53	11 41	27.5	16.2	7 39	11.3	14 —	734	658	0 1	76	109	I	84.9	
18	17 33	570	522	10 31	48	12 5	29.1	10.2	20 20	18.9	19 30	742	687	22 52	55	117	I	84.9	
19 Q	22 12	573	526	10 3	47	12 11	27.5	14.2	23 24	13.3	22 0	719	691	0 1	28	61	0	84.9	
20																			

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

41. Lerwick. (H.)

14,000 γ (.14 C.G.S. unit) +

October, 1929.

Table with 25 columns (0-24 hours) and 31 rows (Day 1-31). Columns are labeled 'Hour. G.M.T.' and 'Day.'. Rows are labeled '1 Q', '2 Q', '3', '4', '5', '6', '7 D', '8 D', '9', '10', '11', '12', '13', '14', '15 Q', '16 D', '17 D', '18', '19', '20', '21', '22', '23', '24', '26 Q', '27 Q', '28', '29', '30 D', '31', and 'Mean'. Each cell contains a numerical value representing magnetic force.

MAGNETIC DECLINATION (WEST).

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

42. Lerwick. (D.)

14° +

October, 1929.

Table with 25 columns (0-24 hours) and 31 rows (Day 1-31). Columns are labeled 'Hour. G.M.T.' and 'Day.'. Rows are labeled '1 Q', '2 Q', '3', '4', '5', '6', '7 D', '8 D', '9', '10', '11', '12', '13', '14', '15 Q', '16 D', '17 D', '18', '19', '20', '21', '22', '23', '24', '26 Q', '27 Q', '28', '29', '30 D', '31', and 'Mean'. Each cell contains a numerical value representing magnetic declination.

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

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

46,000 γ (.46 C.G.S. unit) +

October, 1929.

43. Lerwick. (V.)

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day. 1 Q	656	664	669	669	669	669	667	667	666	667	666	666	666	668	666	666	668	666	665	663	660	654	656	656	658	665	
2 Q	658	662	664	664	664	662	659	661	663	661	659	657	655	653	653	652	654	654	656	663	662	663	658	650	649	658	
3	649	649	647	651	651	632	638	641	645	651	648	644	644	642	648	656	658	660	661	659	657	655	653	653	649	650	
4	649	655	653	632	632	644	646	648	648	644	642	646	640	640	641	651	662	664	662	674	653	653	605	577	593	643	
5	593	623	636	642	644	644	644	646	646	651	653	649	645	641	643	649	653	655	654	655	652	642	640	642	640	644	
6	640	640	642	642	641	639	637	637	639	643	647	645	641	636	638	644	648	652	652	652	650	648	644	639	639	643	
7 D	639	639	641	639	639	633	635	637	636	638	640	642	636	665	720	726	739	749	752	717	574	568	576	536	530	649	
8 D	530	513	561	554	554	558	592	627	646	653	667	680	711	698	694	729	710	740	692	669	664	530	625	554	529	632	
9	529	594	617	644	651	647	653	665	669	688	698	702	753	736	727	713	687	676	682	674	655	649	603	619	619	666	
10	619	613	619	625	643	650	648	652	664	675	688	686	685	685	672	670	672	678	680	674	645	636	646	639	640	658	
11	639	641	641	614	621	644	652	657	664	668	672	670	666	661	657	659	666	671	673	669	652	652	658	660	658	656	
12	658	656	628	613	567	596	617	632	647	655	660	662	675	688	700	701	705	713	717	701	682	643	655	647	647	659	
13	647	628	553	559	551	538	573	625	640	652	667	696	698	686	703	709	712	700	689	677	679	674	666	664	666	650	
14	666	662	654	640	640	640	646	646	654	657	657	654	656	658	658	679	674	662	656	653	649	648	650	640	642	654	
15 Q	642	644	648	648	648	644	645	645	647	651	658	660	662	668	668	670	671	665	661	659	659	659	661	661	661	661	656
16 D	661	662	664	662	662	660	652	650	656	658	662	659	661	670	690	684	741	808	707	663	690	656	559	528	478	661	
17 D	478	480	515	519	584	625	638	651	651	647	651	651	653	653	652	654	652	654	656	727	767	675	583	521	579	624	
18	579	519	550	546	554	594	617	624	631	641	648	654	660	669	700	734	738	743	720	678	661	651	596	512	496	632	
19	496	479	459	436	442	465	486	528	583	614	621	627	625	627	654	667	678	722	715	682	665	659	657	648	644	596	
20	644	646	648	648	646	646	642	636	642	646	654	654	656	659	661	682	684	678	684	682	680	667	656	652	646	658	
21	646	635	594	615	636	644	642	640	642	650	657	656	656	656	659	665	663	661	659	661	663	652	635	635	636	647	
22	636	636	640	642	640	638	638	640	640	642	646	644	640	644	644	646	648	648	650	652	656	675	656	648	621	645	
23	621	600	625	635	636	638	640	642	646	650	648	646	642	640	640	642	648	656	663	656	659	661	656	640	604	643	
24	604	594	596	615	631	636	640	638	640	644	644	644	635	633	638	648	656	659	663	665	650	656	656	638	583	638	
25	583	606	621	627	629	631	640	648	650	654	656	654	654	652	657	661	661	659	659	659	661	640	642	650	654	645	
26 Q	654	650	648	650	654	654	654	654	656	657	659	659	659	659	659	659	659	659	659	659	659	661	659	659	657	657	
27 Q	657	650	646	652	654	654	654	654	657	657	659	657	659	659	659	657	657	658	656	656	663	659	661	661	661	657	
28	661	661	663	659	657	656	654	654	656	657	663	663	659	656	656	657	658	656	656	658	658	664	668	670	662	659	
29	662	601	613	643	653	651	649	643	647	653	655	656	660	664	674	672	666	664	662	659	657	657	657	659	661	653	
30 D	661	659	654	650	648	646	642	640	640	644	642	644	644	669	707	697	724	701	694	715	612	657	624	632	643	660	
31	643	597	570	626	641	639	637	620	630	641	651	654	660	662	672	670	668	668	675	683	679	633	622	651	660	646	
Mean	623	618	619	621	625	630	635	640	646	652	656	657	660	661	668	673	677	681	676	672	660	648	638	627	623	649	

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

October, 1929.

44. Lerwick.

Day.	Terrestrial Magnetic Elements.												Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House $200^\circ +$						
	Horizontal Force.						Declination.									Vertical Force.					
	Maximum $14,000 \gamma +$			Minimum $14,000 \gamma +$			Maximum $14^\circ +$			Minimum $14^\circ +$						Maximum $46,000 \gamma +$			Minimum $46,000 \gamma +$		
	h. m.	γ	Range.	h. m.	γ	Range.	h. m.	γ	Range.	h. m.	γ	Range.				h. m.	γ	Range.	h. m.	γ	Range.
1 Q	20 33	578	71	11 50	71	13 38	27.0	15.8	20 29	11.2	16 —	672	646	20 33	26	79	0	83.1			
2 Q	23 24	567	57	11 10	57	13 0	26.6	14.2	22 11	12.4	20 43	669	646	23 25	23	65	1	82.3			
3	23 59	577	66	10 32	66	13 23	29.7	14.4	3 47	15.3	18 5	665	622	5 21	43	104	1	82.2			
4	19 12	597	87	10 50	87	14 54	31.4	10.2	19 9	21.2	18 52	689	565	22 34	124	310	1	82.2			
5	20 54	507	60	8 32	60	13 40	28.5	12.7	0 13	15.8	19 —	659	593	0 1	66	124	0	81.7			
6	4 59	566	53	11 35	53	13 31	29.1	15.8	9 2	13.3	20 —	655	634	13 —	21	64	0	81.2			
7 D	15 48	627	255	22 16	255	22 13	66.5	-9.3	21 12	75.8	16 12	795	463	22 32	332	2783	2	81.3			
8 D	17 40	638	253	20 42	253	20 54	40.9	-2.2	23 45	43.1	17 13	755	434	20 52	321	2002	2	81.3			
9	19 15	591	131	0 1	131	14 11	30.7	-11.9	19 6	42.6	12 15	784	525	0 1	259	1166	1	81.1			
10	19 53	583	102	0 32	102	11 48	27.6	10.1	19 36	17.5	9 51	696	599	0 40	97	253	1	80.9			
11	20 10	572	85	2 50	85	2 45	29.3	15.2	20 0	14.1	18 —	677	589	3 24	88	186	1	80.9			
12	4 21	554	70	2 59	70	13 51	32.9	9.2	18 30	23.7	18 23	726	544	3 44	182	480	1	81.2			
13	16 46	572	112	1 10	112	13 35	32.0	8.2	16 42	23.8	16 30	727	534	5 24	193	600	1	81.1			
14	21 10	556	39	9 40	39	14 11	27.6	13.7	22 50	13.9	15 1	685	633	2 46	52	77	1	81.3			
15 Q	21 58	555	50	10 45	50	13 19	27.8	11.2	21 28	16.6	15 52	677	638	0 14	39	89	0	81.3			
16 D	18 6	821	831	20 54	831	18 11	72.9	-32.9	21 2	105.8	20 56	1019	462	18 10	557	12015	2	80.8			
17 D	19 30	773	625	22 7	625	2 30	54.2	-17.4	22 20	71.6	19 28	788	368	22 36	420	6588	2				

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

45. Lerwick. (H.)

14,000 γ ($\cdot 14$ C.G.S. unit) +

November, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	γ 545	γ 545	γ 555	γ 560	γ 559	γ 554	γ 559	γ 566	γ 564	γ 560	γ 548	γ 555	γ 546	γ 551	γ 547	γ 549	γ 554	γ 556	γ 557	γ 564	γ 554	γ 529	γ 518	γ 524	γ 496	γ 550
2 D	496	530	534	543	553	552	559	548	529	512	515	529	530	536	540	550	550	542	551	557	562	515	535	496	344	533
3 D	344	520	500	473	496	485	445	386	470	516	457	471	594	601	582	639	591	635	544	579	476	435	427	367	531	505
4 D	531	495	461	415	484	528	526	533	523	517	520	503	515	532	539	533	557	555	558	535	537	543	528	487	527	519
5 D	527	535	526	535	528	526	534	547	538	521	523	524	512	528	540	539	554	559	581	545	556	533	539	543	511	537
6	511	516	499	506	539	547	532	535	530	522	507	507	532	540	546	544	547	577	540	543	548	530	540	519	519	532
7	519	542	542	543	542	536	543	536	532	527	524	526	503	535	550	553	563	548	533	543	532	529	486	531	535	535
8	535	537	537	537	528	541	549	543	534	522	518	520	525	527	534	533	539	544	547	548	550	551	559	558	559	539
9	559	556	553	551	553	553	551	547	547	545	542	544	543	560	567	557	564	547	545	542	543	543	543	542	539	549
10 Q	539	538	540	541	542	542	542	539	537	532	527	526	528	533	533	539	541	546	548	551	552	551	552	552	550	541
11 Q	550	551	552	552	554	555	553	548	545	537	529	524	529	533	539	544	548	551	555	556	557	556	556	555	554	547
12	554	553	552	553	552	561	558	555	551	546	543	543	546	549	551	548	549	551	550	548	550	551	548	545	536	550
13	536	545	551	551	556	551	555	555	551	544	535	530	529	532	539	541	544	548	550	554	547	536	525	534	539	543
14	539	539	542	547	548	553	554	552	549	545	544	539	541	541	541	541	543	540	552	555	550	546	543	523	534	544
15	534	523	531	550	556	568	556	543	543	538	522	537	539	540	539	548	531	544	549	542	543	539	545	549	544	542
16 D	544	541	545	551	547	514	540	525	518	517	520	510	510	523	556	646	574	578	649	690	334	447	528	537	528	539
17	528	523	528	530	534	535	535	531	528	526	524	523	523	532	535	538	541	544	546	547	546	545	543	540	541	535
18 Q	541	542	543	545	547	547	549	549	546	537	534	526	530	537	545	543	545	545	546	547	545	548	546	545	546	543
19	546	545	546	545	548	550	556	563	555	544	543	543	545	541	536	545	546	545	547	550	548	546	545	543	545	547
20	545	543	546	547	543	541	548	552	552	548	545	544	548	552	553	552	569	603	706	670	567	551	540	532	528	562
21	528	531	532	532	535	540	544	551	549	544	533	526	531	545	546	546	549	555	560	560	547	543	548	544	542	543
22	542	542	544	548	547	548	548	547	543	538	535	533	535	543	549	555	559	552	552	554	554	553	553	553	558	547
23	558	557	546	548	549	555	558	555	554	550	543	542	541	545	551	555	558	561	560	559	559	553	553	552	553	552
24 Q	553	554	554	553	558	559	559	561	560	555	551	550	550	553	556	556	556	558	560	557	563	563	563	560	560	557
25 Q	560	558	559	559	560	562	564	564	559	552	546	550	549	543	547	539	551	555	562	565	565	564	562	560	559	556
26	559	556	556	558	557	559	561	561	564	563	561	556	547	553	563	562	563	564	571	569	559	557	561	559	538	560
27	538	538	532	538	540	546	549	549	549	548	546	545	546	543	543	552	549	547	551	546	552	556	568	544	533	546
28	533	548	549	546	543	540	545	548	550	548	555	551	549	551	557	555	557	559	562	538	525	551	547	553	546	549
29	546	546	546	549	544	544	553	555	551	546	538	538	538	539	547	551	536	555	553	556	551	554	557	554	554	548
30	554	553	552	551	552	553	557	553	552	548	539	539	543	545	549	544	541	557	550	553	561	567	557	548	555	551
Mean	533	540	539	539	543	545	546	543	542	538	532	532	537	543	547	553	552	557	561	561	541	539	540	535	533	543

MAGNETIC DECLINATION (WEST).

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

46. Lerwick. (D.)

14° +

November, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	19.9	22.5	19.4	17.7	17.9	18.8	20.4	20.4	19.6	19.4	20.6	23.6	23.3	23.6	22.5	21.3	21.1	21.3	21.5	22.1	17.3	16.1	11.1	9.4	19.2	19.6
2 D	19.2	13.6	9.4	11.5	12.8	13.6	17.1	18.2	19.0	24.0	21.9	21.7	24.0	26.5	23.5	24.8	26.0	24.0	24.2	22.3	19.8	24.6	14.2	17.1	14.8	19.6
3 D	14.8	8.8	5.5	5.3	9.0	22.9	24.6	34.6	30.2	26.9	26.9	26.3	26.9	22.5	24.2	6.7	23.3	8.0	14.8	15.9	17.9	-4.1	22.3	30.2	14.4	18.5
4 D	14.4	12.4	16.6	19.3	20.6	15.6	15.1	20.5	21.0	18.7	21.4	23.2	22.6	26.2	25.1	21.0	16.8	12.5	-3.1	12.5	16.4	16.8	16.4	14.7	18.1	17.4
5 D	18.1	20.1	20.6	20.3	17.2	20.6	19.1	18.7	18.5	17.4	18.5	22.8	23.0	21.8	24.5	18.7	15.1	14.9	7.7	11.8	11.0	20.8	16.4	19.9	22.4	18.3
6	22.4	19.4	15.1	20.2	17.5	16.9	18.4	22.3	23.1	20.4	20.2	22.9	22.5	23.1	22.3	20.9	20.0	8.0	18.4	19.8	12.8	14.8	12.8	16.3	14.6	18.6
7	14.6	17.1	18.0	17.1	16.9	19.2	18.8	18.0	17.3	16.5	17.8	24.6	28.3	28.3	26.1	21.7	1.1	10.9	19.0	15.1	18.2	10.9	20.0	11.5	15.0	17.8
8	15.0	15.3	13.0	16.5	20.5	18.0	22.5	22.3	23.8	23.8	24.4	23.8	28.1	22.5	22.3	21.3	20.5	20.2	20.5	20.5	19.6	19.6	19.2	18.8	20.4	18.8
9	18.8	18.5	18.3	18.3	18.5	18.1	18.3	18.1	18.3	18.3	19.7	22.0	22.8	25.1	27.6	23.5	21.0	22.6	24.1	19.5	18.7	18.7	18.5	18.5	18.3	20.2
10 Q	18.3	17.8	18.0	17.8	17.6	17.5	17.3	17.3	17.3	17.5	18.6	19.8	20.5	20.9	20.5	20.3	20.2	20.0	19.8	19.4	18.8	18.4	18.4	18.4	18.4	18.8
11 Q	18.4	18.4	18.6	18.4	18.2	18.0	17.8	17.3	17.1	17.3	18.4	20.7	21.5	20.9	20.3	20.5	20.3	20.0	19.8	19.6	19.2	18.8	18.4	18.6	18.6	19.0
12	18.6	19.0	19.6	19.4	20.0	19.2	16.5	16.5	16.7	16.9	17.8	20.2	21.1	21.1	20.7	20.2	19.6	19.4	19.6	19.4	20.0	18.2	13.6	9.3	20.9	18.5
13	20.9	16.5	17.1	17.8	18.0	19.6	19.4	18.2	17.8	18.4	20.2	22.5	23.6	22.5												

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

47. Lerwick. (V.)

46,000 γ (·46 C.G.S. unit) +

November, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	
1	657	653	655	659	661	659	649	644	645	647	647	647	653	655	657	659	657	655	651	649	657	659	632	649	590	651	
2 D	590	604	581	597	614	622	620	622	629	627	643	658	650	654	682	690	681	681	692	694	696	568	591	567	525	634	
3 D	525	584	555	475	504	519	552	545	587	623	687	714	725	733	725	778	765	763	683	674	579	547	564	549	558	624	
4 D	558	590	602	569	577	602	628	640	642	654	663	667	662	663	673	694	722	722	715	694	688	675	625	559	580	646	
5 D	580	625	633	633	633	646	650	660	662	663	669	671	666	662	664	681	679	685	666	653	638	605	619	609	577	648	
6	577	562	573	583	586	605	617	623	628	632	643	647	659	659	663	652	644	644	642	639	631	618	612	599	544	622	
7	544	580	606	612	612	616	612	620	623	622	629	627	637	642	658	660	702	676	674	685	670	636	577	577	598	630	
8	598	598	600	607	609	607	609	617	624	634	632	632	636	637	638	638	638	640	640	642	640	640	635	633	631	627	
9	631	635	637	637	635	637	637	639	637	639	641	643	651	660	693	708	717	696	679	672	664	662	660	662	663	658	
10 Q	663	663	663	663	663	665	665	667	669	671	678	678	676	678	678	677	675	675	675	675	675	677	675	677	679	672	
11 Q	679	679	677	676	676	676	678	680	682	688	692	692	690	690	684	682	684	682	679	679	679	681	679	679	681	682	
12	681	681	679	677	675	666	667	669	670	672	676	674	672	670	672	674	678	676	677	681	679	679	671	668	664	674	
13	664	654	664	673	673	675	669	670	672	674	680	680	678	680	684	689	688	686	684	683	685	687	688	660	656	677	
14	656	658	671	679	677	677	675	673	674	674	674	674	676	678	680	682	689	695	684	678	679	679	677	648	641	675	
15	641	633	607	624	650	652	652	652	656	659	670	670	676	680	685	685	710	708	695	702	695	684	675	643	597	666	
16 D	597	618	639	641	646	629	595	624	639	648	682	687	716	750	737	822	797	780	826	782	691	583	652	673	677	687	
17	677	663	669	675	675	677	679	681	682	681	682	683	687	687	687	689	689	687	685	681	690	700	710	711	713	685	
18 Q	713	713	713	713	713	713	711	711	713	715	715	715	716	717	729	740	742	740	736	733	731	729	725	723	724	722	
19	724	724	726	728	728	726	724	716	718	718	716	715	720	729	727	729	740	742	742	742	738	734	729	725	725	727	
20	712	709	713	720	724	722	720	716	711	707	709	707	707	707	710	730	763	814	871	913	833	784	748	730	710	745	
21	710	704	701	695	690	686	684	682	682	676	676	676	674	669	669	672	670	668	668	683	719	687	668	664	660	681	
22	660	656	652	648	650	650	650	650	650	650	648	646	642	640	638	642	641	647	652	666	673	656	647	641	620	649	
23	620	611	620	626	629	631	631	629	629	629	631	629	627	625	625	625	625	626	628	630	630	631	630	628	624	627	
24 Q	624	624	622	620	618	617	615	615	615	619	623	621	621	619	617	619	621	621	622	622	622	622	622	622	622	622	620
25 Q	622	622	620	618	618	616	617	617	619	621	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
27	—	—	—	—	—	—	—	—	—	—	—	—	*	730	734	728	725	739	741	735	726	716	699	697	703	—	
28	703	692	690	690	689	687	685	682	680	678	680	684	686	686	686	688	691	690	692	711	708	700	698	692	692	690	
29	692	683	681	682	682	674	663	674	678	683	689	691	693	693	694	696	704	700	698	696	694	690	684	674	682	687	
30	682	688	690	†	—	—	—	—	—	—	—	—	698	708	710	713	—	—	—	—	—	—	—	—	—	—	
Mean†	641	646	647	646	650	651	651	654	658	661	668	670	673	675	679	689	693	692	691	691	680	662	657	649	639	666	

* Instrument dismantled.

† Mean of 26 days : 25th, 26th, 27th and 30th omitted.

‡ Clock stopped.

DAILY EXTREMES OF TERRESTRIAL MAGNETIC ELEMENTS :

48. Lerwick.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

November, 1929.

Day.	Terrestrial Magnetic Elements.												Character Figure $\frac{\Sigma R^2}{100\gamma^2}$ §	Magnetic Character of Day (0-2).	Temperature in Magnet House. 200 + °A.			
	Horizontal Force.				Declination.				Vertical Force.									
	Maximum 14,000 γ +		Minimum 14,000 γ +		Range.	Maximum 14° +		Minimum 14° +		Range.	Maximum 46,000 γ +					Minimum 46,000 γ +		Range.
1	h. m.	γ	γ	h. m.	γ	h. m.	h. m.	h. m.	h. m.	h. m.	γ	h. m.	γ	h. m.	γ	438	I	78·3
2 D	19 48	578	431	23 51	147	23 54	28·3	6·7	20 25	21·6	20 35	697	579	23 59	118	2631	2	79·0
3 D	20 31	630	204	23 57	426	21 18	36·0	-11·5	20 30	47·5	20 19	707	504	23 41	203	7037	2	79·2
4 D	19 17	826	174	0 10	652	6 50	42·6	-31·4	17 8	74·0	16 59	847	422	3 8	425	1689	I	79·1
5 D	17 40	614	358	3 14	256	13 27	28·6	-18·0	17 47	46·6	17 40	793	539	3 9	254	1080	I	79·1
6	17 49	649	488	23 59	161	20 40	30·1	-27·6	17 48	57·7	17 44	723	573	23 59	150	—	—	—
7	17 0	605	475	1 58	130	20 58	26·9	1·3	16 46	25·6	14 16	671	523	23 46	148	505	I	80·0
8	16 22	584	438	22 8	146	22 5	39·1	-16·9	16 9	56·0	16 9	727	525	22 30	202	1183	I	80·2
9	21 52	571	513	9 7	58	9 31	26·3	10·9	1 52	15·4	18 31	646	594	1 41	52	103	I	80·0
10 Q	14 18	588	534	11 47	54	13 50	30·5	17·2	7 39	13·3	15 40	742	631	0 30	111	184	I	80·0
11 Q	21 40	555	520	10 27	35	13 0	21·9	16·7	7 32	5·2	10 30	684	659	0 1	25	23	0	79·3
12	20 13	559	520	11 22	39	11 47	22·5	15·9	8 21	6·6	11 24	697	672	4 10	25	29	0	78·3
13	5 16	569	532	22 31	37	23 59	22·3	6·8	22 54	15·5	18 53	685	662	5 13	23	24	0	78·0
14	6 19	560	518	21 32	42	0 14	24·4	6·1	21 27	18·3	21 44	700	645	0 48	55	107	I	77·4
15	20 38	559	505	23 2	54	15 48	25·9	3·0	23 29	22·9	16 47	701	633	23 49	68	169	I	77·1
16 D	5 24	572	507	1 25	65	8 11	26·5	-3·0	19 20	29·5	16 13	722	593	23 59	129	365	I	77·2
17	18 38	772	—	20 18	774	19 57	50·7	-14·4	20 18	65·1	15 22	925	531	20 31	394	8299	2	76·9
18 Q	13 21	563	518	0 42	45	13 15	22·8	15·6	8 54	7·2	23 30	714	656	0 46	58	63	0	76·4
19	22 11	550	522	11 3	28	12 5	23·0											

TERRESTRIAL MAGNETIC FORCE: HORIZONTAL COMPONENT.

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

49. Lerwick. (H.)

14,000 γ (.14 C.G.S. unit) +

December, 1929.

Table with 25 columns (0-24) and 31 rows (Day 1-31, Mean). Columns 1-12 are labeled 0-11, Noon, 13-24. Columns 1-12 are labeled γ. Columns 13-24 are labeled γ. Mean column is labeled γ. Rows 1-31 are labeled Day 1-31. Rows 1-31 are labeled 1 Q, 2 Q, 3, 4 D, 5 D, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 D, 17 D, 18, 19 Q, 20 Q, 21 Q, 22 D, 23, 24, 25, 26, 27, 28, 29, 30, 31, Mean.

MAGNETIC DECLINATION (WEST).

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

50. Lerwick. (D.)

14° +

December, 1929.

Table with 25 columns (0-24) and 31 rows (Day 1-31, Mean). Columns 1-12 are labeled 0-11, Noon, 13-24. Columns 1-12 are labeled γ. Columns 13-24 are labeled γ. Mean column is labeled γ. Rows 1-31 are labeled Day 1-31. Rows 1-31 are labeled 1 Q, 2 Q, 3, 4 D, 5 D, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 D, 17 D, 18, 19 Q, 20 Q, 21 Q, 22 D, 23, 24, 25, 26, 27, 28, 29, 30, 31, Mean.

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

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

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

Table 53: Lerwick. HORIZONTAL FORCE (all days). 1929. 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 54: Lerwick. DECLINATION (all days). 1929. 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 55: Lerwick. VERTICAL FORCE (all days except Nov. 25, 26, 27, 30; Dec. 14). 1929. 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 TERRESTRIAL MAGNETIC ELEMENTS.—INTERNATIONAL QUIET DAYS.

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

Table for 56. Lerwick. HORIZONTAL FORCE (QUIET DAYS). 1929. Columns: Hour (I-24), G.M.T. (1-24). Rows: Month and Season (Jan-Dec, Year, Winter, Equinox, Summer). Values range from -12.3 to 29.9.

Table for 57. Lerwick. DECLINATION (QUIET DAYS). 1929. Columns: Hour (I-24), G.M.T. (1-24). Rows: Month and Season (Jan-Dec, Year, Winter, Equinox, Summer). Values range from -1.56 to 6.07.

Table for 58. Lerwick. VERTICAL FORCE (QUIET DAYS). 1929. Columns: Hour (I-24), G.M.T. (1-24). Rows: Month and Season (Jan-Dec, Year, Winter, Equinox, Summer). Values range from -3.3 to 5.4.

*For four days only, 25th omitted.

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

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

Table for 59. Lerwick. HORIZONTAL FORCE (DISTURBED DAYS). 1929. Columns: Hour. 1-24, G.M.T. 1-24. Rows: Months (Jan-Dec), Year, Winter, Eqnx., Sumr. Values in gamma (γ) format.

Table for 60. Lerwick. DECLINATION (DISTURBED DAYS). 1929. Columns: Hour. 1-24, G.M.T. 1-24. Rows: Months (Jan-Dec), Year, Winter, Eqnx., Sumr. Values in gamma (γ) format.

Table for 61. Lerwick. VERTICAL FORCE (DISTURBED DAYS). 1929. Columns: Hour. 1-24, G.M.T. 1-24. Rows: Months (Jan-Dec), Year, Winter, Eqnx., Sumr. Values in gamma (γ) format.

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS, YEAR AND SEASONS OF 1929.

NOTE.—The ranges are those shown in Tables 53 to 61 in the preparation of which the non-cyclic change has been eliminated.

62. Lerwick. 1929.

Month and Season.	"All" Days.			Quiet Days.			Disturbed Days.		
	H.	D.	V.	H.	D.	V.	H.	D.	V.
January ...	γ 19.6	γ 7.10	γ 11.4	γ 17.3	γ 4.48	γ 2.0	γ 102.9	γ 15.71	γ 50.9
February ...	70.5	10.52	49.6	28.0	6.15	4.8	349.5	30.36	169.3
March ...	83.5	10.35	58.1	37.4	10.01	16.5	229.3	20.59	135.8
April ...	55.5	12.48	23.3	52.0	11.71	11.5	78.0	18.09	66.4
May ...	65.5	12.31	22.7	58.4	12.96	5.7	92.0	14.92	78.7
June ...	70.9	13.07	19.9	50.7	12.28	6.5	105.2	14.79	67.9
July ...	77.3	12.51	42.0	57.0	12.49	10.2	272.2	19.51	160.9
August ...	70.8	12.37	34.2	50.7	12.41	4.4	216.4	15.58	127.9
September ...	53.9	11.42	57.0	44.7	9.88	9.3	138.9	19.55	198.5
October ...	37.8	10.88	62.5	35.1	7.25	5.9	121.3	19.13	167.8
November ...	29.3	7.38	52.9	19.3	4.30	10.4	95.4	14.11	154.7
December ...	33.3	9.01	64.4	16.7	4.81	12.6	147.4	17.61	189.1
Year ...	48.6	8.83	38.2	37.4	8.75	4.8	126.5	12.90	111.9
Winter ...	34.6	7.94	40.6	20.2	4.73	5.8	151.4	16.52	120.4
Equinox ...	51.2	10.10	48.2	40.5	9.63	6.2	114.6	16.07	134.4
Summer ...	71.1	12.32	28.0	53.3	12.39	5.9	147.8	13.54	96.6

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

63. Lerwick. 1929.

Month and Season.	"All" Days.			Quiet Days.			Disturbed Days.		
	H.	D.	V.	H.	D.	V.	H.	D.	V.
January ...	γ 4.6	γ 1.75	γ 3.6	γ 3.9	γ 1.02	γ 0.5	γ 12.8	γ 3.60	γ 12.4
February ...	17.6	2.86	13.2	7.4	1.26	1.4	85.5	6.56	40.5
March ...	17.0	2.79	15.9	9.1	2.06	3.3	33.8	4.89	33.4
April ...	12.9	3.04	6.2	13.1	2.23	2.5	21.0	4.90	17.1
May ...	15.6	2.77	5.9	13.8	3.16	1.5	23.0	3.52	16.5
June ...	17.6	3.26	5.8	13.0	2.91	1.8	28.7	4.09	17.0
July ...	19.5	3.43	11.4	13.9	3.04	2.5	50.0	4.86	42.6
August ...	15.6	2.83	8.1	13.0	2.57	0.9	46.0	4.42	28.1
September ...	12.3	2.48	15.6	10.9	2.10	1.6	26.7	4.96	51.8
October ...	8.8	2.59	17.5	9.5	1.75	1.6	22.5	4.02	41.3
November ...	6.4	1.75	15.3	5.2	1.23	2.7	24.5	3.54	44.9
December ...	7.1	2.14	18.9	3.9	1.21	3.3	28.9	4.38	49.2
Year ...	11.3	2.50	11.0	9.2	1.93	1.1	29.8	3.55	31.5
Winter ...	8.5	2.04	12.3	5.1	1.17	1.5	33.3	3.95	34.9
Equinox ...	11.2	2.69	13.5	10.5	1.96	1.4	24.1	3.95	35.2
Summer ...	16.6	3.03	7.5	13.4	2.90	1.4	36.2	4.08	25.9

NON-CYCLIC CHANGE (24h.—oh.).

64. Lerwick. 1929.

Month.	"All" Days.			Quiet Days.			Disturbed Days.		
	H.	D.	V.	H.	D.	V.	H.	D.	V.
January ...	γ +0.1	γ 0.00	γ +0.2	γ +2.8	γ +1.86	γ 0.0	γ -6.4	γ -2.80	γ +3.4
February ...	-0.9	-0.15	-2.1	+1.2	-0.32	-0.4	+40.2	+2.40	+23.8
March ...	+0.9	+0.04	-0.8	+5.2	-0.24	+2.6	+2.2	+0.82	+19.0
April ...	+0.5	-0.03	+1.2	+5.4	+0.23	+5.0	-1.0	+0.74	+0.8
May ...	-0.5	-0.02	+0.9	-1.8	-1.68	+0.6	-2.8	-1.64	-1.0
June ...	-1.8	-0.24	-1.9	+2.8	-0.42	-4.4	-8.6	-1.41	-5.8
July ...	+1.9	+0.10	+0.4	+4.8	-0.48	+4.0	+24.0	+0.74	-0.2
August ...	-1.2	-0.24	-0.2	+4.0	+0.18	-1.4	-27.8	-2.98	-21.0
September ...	+0.3	+0.27	+0.9	+3.2	+0.12	+3.2	+4.4	+2.14	+6.4
October ...	-0.3	-0.06	+0.1	+3.0	-0.34	+3.8	-30.6	-3.94	-42.0
November ...	+0.3	-0.17	-2.1	+5.2	+0.18	+6.7	-0.2	+0.76	+13.4
December ...	-1.0	-0.16	+0.6	+4.4	+0.02	-6.0	+6.8	-3.70	+12.4
Year... ..	—	—	—	—	—	—	—	—	—

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

65. Lerwick. 1929.

R _H ²	R _D ²	R _V ²	R _H ² + R _D ²	R _H ² + R _D ² + R _V ²	Mean Character Figure.
175	93	28	268	296	0.35
3035	675	505	3710	4215	0.82
1482	266	206	1748	1954	1.00
165	73	40	238	277	0.77
134	66	49	200	248	0.80
149	72	32	222	254	0.70
644	143	237	788	1025	0.84
689	140	100	829	929	0.74
243	125	164	368	532	0.87
526	253	384	779	1163	0.94
487	165	256*	652	993*	0.83
358	189	455	547	1001	0.90
674	188	205	862	1074	0.80

* Mean of 26 days: 25th, 26th, 27th and 30th omitted.

**R_D in this Table is used to signify the range in declination converted into units of force of the component perpendicular to the magnetic meridian. See also p. 32.

MEAN MONTHLY AND ANNUAL VALUES OF TERRESTRIAL MAGNETIC ELEMENTS.

(All days except those noted in monthly tables).

66. Lerwick. 1929.

1929.

Month.	North Component.	West Component.	Vertical Component.	Total Force.	Declination. (West.)	Inclination (North.)	Horizontal Force.
January ...	γ 14108	γ 3650	γ 46679	γ 48901	γ 14 30.4	γ 72 39.7	γ 14573
February ...	14097	3630	46636	48855	14 28.5	72 39.9	14557
March ...	14092	3630	46608	48827	14 26.7	72 39.6	14552
April ...	14106	3630	46618	48840	14 25.9	72 38.9	14565
May ...	14114	3629	46664	48886	14 25.2	72 39.4	14573
June ...	14111	3626	46641	48864	14 24.6	72 39.1	14570
July ...	14102	3617	46635	48854	14 23.1	72 39.8	14558
August ...	14100	3610	46646	48864	14 21.6	72 40.3	14555
September ...	14095	3607	46685	48899	14 21.3	72 41.5	14549
October ...	14087	3601	46649	48862	14 20.4	72 41.3	14540
November ...	14092	3594	46666	48879	14 18.5	72 41.4	14543
December ...	14090	3590	46689	48901	14 17.6	72 42.2	14540
Year 1929 ...	14100	3618	46651	48869	14 23.6	72 40.3	14556

GENERAL AURORAL TABLE (contd.).

68 Other Scottish Stations (contd.).

1929.

Date.	Month.	Date.	Month.	Date.	Month.	Date.	Month.
	November (contd.).		November (contd.).		December (contd.).		December (contd.).
2	H. glow over most of N. quadrant of sky 19.00. Arch N.E. to W. 19.20. Rays up to near zenith 19.20 to 23.30; B.; Wick; D. 20.00; Stornoway; Arbroath; Tiree; Eskdalemuir.	20	H. glow above W. horizon, rays in N.W. and N. 18.10 to 18.30; B.; A. visible after 17.00, moderately bright arch, hidden by cloud later, seen till 22.00.	4	H. glow visible through breaks in clouds 21.00. Arch N.E. to W.N.W., apex passing over Vega and η U. Major, rays from horizon to arch 22.00 to 22.30, moving W. End of arch now in W., 22.45; B.; Kirkwall, low arch, N.N.W.; 18.00 to 24.00; D. 20.00 to 24.00; A. 18.00 to 23.00, moderate arch at 18.00, patchy glow later.	16	D., 17.00; Kirkwall, W.S.W. and N.W., 18.30, brilliant, but dimmed by full moon; A. 18.00. Moderately bright streamers visible through cloud breaks; Arbroath.
3	H. glow 19.00 to 23.00; B.; G.C.; Eskdalemuir.	24	Nairn.	5	H. bright glow visible through breaks in clouds, 21.30 to 23.00; Kirkwall, 19.30 and later.	22	H. glow visible through breaks in clouds 19.00 to 22.45; Stornoway.
5	H. glow visible through breaks in clouds 21.30 to 23.00; B.	26	H. glow N.E. to W., 18.30 to 23.15; Wick; G.C.	6	H. two arches, one from W. to E. passing over U. Major. The other low down near horizon. Few rays in N. 18.10 to 19.30. Upper arch still visible 20.00. Glow 20.30 to 22.30; B.; Wick.	23	H. glow visible through breaks in clouds 19.00 to 23.00.
6	H.; B.; Wick; G.C.; Eskdalemuir, glow.	27	H. glow N.N.E. to N.W., rays low in N., 18.00 to 18.30. Glow visible through breaks in clouds N.E. to W., 19.00 to 20.00.	9	H. glow visible through breaks in clouds 22.00 to 23.00; G.C.	24	H. glow visible through breaks in clouds 19.00 to 23.15.
8	H. glow over N. quadrant of sky 22.30 to 23.45; B.; A. General faint diffuse auroral show, brightness E.N.E. and W.S.W., 20.00 to 23.00.	30	H. glow N.E. to W., 19.00 to 24.00.	10	H. glow visible through breaks in clouds 19.00 to 22.30.	26	H. glow near horizon N.N.E. to N.W., 19.00 to 23.10.
9	H. glow over N. quadrant of sky 21.00 to 23.00; B.		December.			27	A. faint green-white, 23.30.
10	H. glow at 20.00 to 04.00; B.	1	H. glow visible through breaks in clouds E.N.E. to W.N.W., 19.00 to 23.00.			29	H. faint glow visible through breaks in clouds 19.00 to 22.45; G.C.; A. faint glow at 18.00.
12	A. very faint glow 18.00 to 24.00 about N. and N.E.	3	H. glow and faint rays along N. horizon 17.10 to 17.30. Glow visible through breaks in clouds 18.00 to 23.10; Wick, 22.00.	9		30	H. glow visible through breaks in clouds 19.00 to 23.00.
14	Kirkwall; A. very faint green-white, 20.00 to 23.00.			10		31	H. bright glow visible through breaks in clouds 21.30 to 24.00.
16	Onich; A. visible 20.00 and intermittently till 22.00 streamers moderately bright at times; Oban.						

NOTE—For brevity, stations which figure frequently in the above Table are represented by their initials, viz., D—Deerness, B—Baltasound, A—Aberdeen, G.C.—Gordon Castle, H—Haroldswick, Shetland, where a continuous watch was kept.

Air Ministry
METEOROLOGICAL OFFICE

THE
OBSERVATORIES' YEAR BOOK
1929

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.

ABERDEEN

Published by the authority of the
METEOROLOGICAL COMMITTEE



LONDON :
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

ABERDEEN OBSERVATORY.

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

Heights in metres above Sea-Level.

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

Heights in metres above ground.

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

INTRODUCTION.

SITE

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

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

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

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

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

METEOROLOGY.

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

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

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

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

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

Rainfall.—The recording instrument in use is Beckley rain-gauge No. 2 with an area of 101.1 square inches (653 cm²). The procedure adopted in tabulating the records is similar to that described in the General Introduction and calls for no comment. Control was by check gauge M.O. 266 during the year 1929.

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

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

Sunshine.—The sunshine recorder (Campbell-Stokes type) is exposed on the small circular tower on the Observatory roof on which the Robinson Cup Anemograph is erected. It is rigidly held by lead flaps soldered to the lead roof. The actual diameter of the sunshine sphere is 4.02 inches, and the focal length 2.97 inches, these figures being slightly in excess of the standard values (diameter 4.00 ± 0.05 inches, focal length 2.95 ± 0.01 inches). The exposure is excellent; the only obstruction is a flagpole to the east, of angular diameter about 1° , which may obstruct 0.1 hr. record about 7h between April and September. This loss has been allowed for, whenever practicable, in tabulating the records. In computing the percentage duration of sunshine the actual possible values for each day of the year 1929 have been employed, a procedure similar to that adopted from 1926 onwards.

Wind-Speed and Direction.—As stated in the General Introduction, the values for 1929 are tabulated from the records obtained by the Dines Pressure-tube Anemograph. This instrument is one of the "standard mounting" type, and is situated in a field about $\frac{1}{2}$ km. east of the Observatory. The exposure is a more open one than is that of the Cup Anemograph, the records of which were tabulated previous to 1926. The effect of this exposure upon the recorded values is given in the Table in the General Introduction.

In a few instances where the records of the Pressure-tube instrument have been defective, the required values have been obtained from the records of the Cup instrument, a suitable adjustment of such values having been made in accordance with the data given in the above-mentioned table. Values thus obtained are entered in italics.

Temperature in the Ground.—This is recorded by a thermometer (unnumbered), which is kept at a depth of 124 cm. (four feet). At Aberdeen the thermometer is carried in a slot near the end of a long bar of wood, about three inches (7.5 cm.) square in section. This bar fits closely into a wooden sleeve, sunk vertically into the earth, so that the bulb of the thermometer is at the required depth. The thermometer itself is enclosed in a glass tube, and its bulb is embedded in paraffin wax so as to render the thermometer insensible to sudden changes of temperature. This allows of its being drawn to the surface and read before the temperature of the bulb has time to change appreciably. As underground temperature changes very slowly, the loss of sensitiveness, resulting from the coating of wax, does not lead to inaccuracies in the determination of the temperature of the earth. The thermometer is read at 9h each morning. The thermometer has a correction of -0.2° A; this correction is applied to all readings.

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

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

In the case of Nimbus it is the custom at Aberdeen to enter "Nb" on all occasions when the cloud layer from which rain is falling is obviously dense and has developed from A-St, even when no Fr-Nb is visible below it. This is done because it is not always certain to the observer whether the cloud-layer is actually uniform low A-St developed

as far as rain, or whether a slight mist-film exists below the ragged Fr-Nb., obscuring the latter from view, and thus giving it the appearance of a uniform featureless sheet. (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.

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

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

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

VISIBILITY OBJECTS AT ABERDEEN.

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

This year the values of the 24-hour term-amplitude, c_1 vary very greatly from month to month, reaching the unusually high value of $\cdot 78$ mb. in December, while the phase-angles, α_1 , exhibit the usual irregularity.

In the case of the 12-hour term, the values of c_2 show spring and autumn maxima, and summer and winter minima more sharply marked than they are on the average. The phase-angles, α_2 do not depart widely from their mean value, except in the month of December which shows a value about 50° below the normal. The corresponding amplitude, c_2 , for that month has, however, only half its average value, being only $\cdot 12$ mb. December was remarkable for its very high value of c_1 ($\cdot 78$ mb.), its disturbed and very low pressure, and great pressure-range.

The 8-hour and 6-hour terms follow their usual courses fairly well. The seasonal variations in amplitude of the former term, though definite, are not so strongly developed as in 1928, but the reversal of phase from winter to summer is very regular. In the case of the 6-hour term the value of c_4 at the winter maximum is considerably above the average; this was likewise the case in 1928.

The variation in the individual monthly values of c_2 , c_3 and c_4 is somewhat less than in the preceding year, but is greater in the case of c_1 .

Temperature.—The outstanding feature of the year 1929 was the coldness of January and February, which months were $1\cdot 2^\circ$ A and $1\cdot 6^\circ$ A respectively below their normal values. This was followed by a great upward surge of temperature which resulted in March having an excess of $1\cdot 6^\circ$ A. Temperature fell again in April when there was a deficit of $1\cdot 1^\circ$ A; April being in fact actually colder than March. After this irregularity the monthly values agreed fairly well with the normal, except in September and December, both of which months had excesses of $1\cdot 4^\circ$ A.

Rainfall.—1929 was a year of excess precipitation; the eight years since 1922 have now yielded a total excess of 520 mm., of which amount 1929 has contributed 35 mm. But the year was one of great contrasts in rainfall; March with only 5 mm.—a deficiency of 56 mm.—was almost a record month for dryness; and September again had a deficiency of 23 mm. Against these there are to be mentioned an excess of 24 mm. in July, and a very large excess of 85 mm. in December.

Viewed in the light of its general distribution the rainfall of 1929 showed considerable relation to the pressure; the unusually high pressure of January, February and March coincided with a deficiency of 72 mm. of rain, while the very low pressure of October, November, and December was accompanied by an excess of 104 mm. In December the incidence of rainfall during the night was well marked.

Relative Humidity.—This was higher than normal in January and February during the very cloudy weather of that period, and lower during the period from June to October. Some slight general relation to the distribution of sunshine is shown, but none to the incidence of rainfall. Particularly worthy of note are the cases of March, which, with only slight precipitation, had a relative humidity slightly above normal, and December, which, with more than double its usual rainfall, had a relative humidity well below the average.

Sunshine.—The total amount of sunshine during the year was slightly above the average. There was a large deficiency during the anticyclonic weather of January and February—the latter of these two months received only 14 per cent. of the possible, i.e. only half the usual amount—but March showed an excess of 8 per cent. Thereafter there was no great departure from the normal monthly values until September, which, with an excess of 9 per cent., showed the highest monthly percentage of possible sunshine. From September onwards to the end of the year there was a continued excess of sunshine amounting to an average of about 8 per cent. over the whole period. This is the more remarkable inasmuch as the period from October to December was very much wetter than usual.

Wind.—The average velocity of the wind for the year was 4.4 m.p.s.; this is less than the value for 1928, nevertheless there is a considerably greater range between the individual monthly values in the present year. The windiest months were December (6.4 m.p.s.) and February (6.0 m.p.s.), the most quiet was March (3.3 m.p.s.). Despite the general storminess of December, only one gale was recorded,—that of December 25th, during which the highest gust of the year occurred; it reached 31.1 m.p.s. (70 m.p.h.) The prevailing winds were from the southerly and westerly sectors.

Aurora.—The number of occasions upon which aurora was observed was 17, all but 2 of which occurred in the latter half of the year. There were thus 8 fewer occasions than in the previous year. November was again the month of maximum frequency. The dates of occurrence will be found in the General Auroral Table.

General.—The year as a whole was one of marked contrasts. A cold, dry, dull and windy January and February were followed by an unusually quiet, warm, sunny, and abnormally dry March. April was cool but otherwise fairly normal. The period from May to August was likewise fairly normal except that July was wetter than usual. September was dry, warm and sunny. October, November and December were all much brighter than usual, October and November having rather more than the normal rainfall, but average temperature; while December was exceptionally wet, stormy and warmer than usual.

Readings in millibars at exact hours, Greenwich Mean Time.

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

January, 1929.

Table for Aberdeen in January 1929. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level). Rows show hourly pressure readings in millibars.

70. Aberdeen : H_b = 26.0 metres.

February, 1929.

Table for Aberdeen in February 1929. Columns include Hour G.M.T., Station Level (1-28), and Mean (Station level). Rows show hourly pressure readings in millibars.

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

Readings in millibars at exact hours, Greenwich Mean Time.

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

March, 1929.

Table for Aberdeen in March 1929. Columns include Hour, G.M.T., Station Level (1-31), and Mean (Station level/Sea level). Rows show hourly pressure readings in millibars.

72. Aberdeen : H_b = 26.0 metres.

April, 1929.

Table for Aberdeen in April 1929. 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.

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

May, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
↑ Day.	mb.	mb.																								
1	006.8	006.6	006.4	006.1	006.1	005.9	006.0	005.7	005.7	005.6	005.4	005.3	005.5	005.2	005.0	005.0	005.3	005.5	006.0	006.3	006.6	006.8	007.1	007.2	006.0	
2	007.6	007.9	008.0	008.0	008.4	008.8	009.2	009.4	009.9	010.2	010.6	010.9	011.3	011.5	011.7	011.9	012.1	012.3	012.6	013.3	013.4	013.5	013.7	014.0	010.7	
3	013.9	014.0	014.1	014.3	014.3	014.4	014.4	014.4	014.5	014.2	014.1	014.0	013.7	013.4	012.9	012.4	012.2	012.1	011.7	011.4	011.1	010.5	009.8	008.9	013.1	
4	008.1	006.9	006.2	005.3	004.7	003.8	002.6	002.0	001.4	000.9	000.9	000.8	000.9	000.7	000.4	000.1	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.7	
5	993.8	993.9	992.1	990.7	990.7	990.1	989.9	989.9	989.8	990.0	989.9	989.5	989.3	988.5	988.3	988.3	989.0	990.3	990.5	991.2	991.5	991.9	992.4	992.8	990.8	
6	993.2	993.2	993.2	993.1	993.5	993.4	993.5	993.3	993.0	992.4	991.9	990.6	989.6	989.0	987.6	985.9	984.6	983.5	982.8	982.5	982.4	982.3	982.4	982.6	988.9	
7	982.9	983.7	984.6	985.7	986.8	987.9	988.9	990.0	991.0	992.3	993.3	993.7	994.0	994.6	995.1	995.4	996.0	996.6	997.2	997.7	998.1	997.8	997.8	997.9	992.1	
8	997.8	997.7	997.7	997.5	997.6	997.6	997.9	998.0	998.2	998.6	998.7	998.8	999.2	999.5	1000.2	1001.6	1002.2	1003.5	1004.9	1006.0	1007.3	1008.2	1009.6	1010.2	000.9	
9	010.6	011.5	012.5	013.3	014.0	014.8	015.5	016.1	016.2	016.0	015.9	015.8	015.5	015.4	015.5	015.3	015.0	014.7	014.5	014.1	013.8	013.6	012.7	012.3	014.3	
10	011.3	010.0	009.5	008.5	007.3	006.7	006.2	005.9	005.6	005.4	005.0	004.6	004.5	004.0	003.5	003.6	003.3	002.8	002.3	002.6	002.5	002.3	000.8	999.9	005.1	
11	999.6	998.9	999.3	1000.1	1001.1	1002.4	1003.0	1003.5	1004.0	1004.7	1005.2	1005.3	1006.0	1006.4	1006.8	1006.9	1006.6	1006.7	1007.0	1007.1	1007.2	1007.0	1007.3	1007.2	004.4	
12	007.1	006.8	006.9	006.6	006.8	007.0	007.0	007.0	007.0	007.1	007.0	007.1	007.2	007.1	006.8	006.9	007.2	007.5	007.9	007.7	007.9	007.9	008.0	007.9	007.2	
13	008.1	007.9	007.9	007.9	008.0	008.2	008.1	008.1	008.0	007.5	007.2	007.0	006.7	006.4	005.8	004.9	004.1	002.8	001.6	000.9	000.5	999.9	999.2	998.3	005.4	
14	997.9	997.6	997.1	996.7	996.4	996.1	995.8	995.1	994.9	994.2	993.6	993.0	992.6	991.7	991.3	990.9	990.5	990.0	989.9	990.0	990.1	990.2	990.4	990.6	993.3	
15	991.1	991.3	992.0	992.8	993.5	994.3	995.1	996.0	997.0	997.8	998.3	999.7	1000.6	1001.7	1002.8	1003.9	1004.6	1005.6	1006.9	1008.4	1007.4	1008.4	1010.0	1010.5	000.0	
16	011.1	011.7	012.6	013.1	013.9	014.5	015.2	016.0	016.8	017.4	018.1	018.8	019.2	019.7	020.1	020.4	020.7	021.1	021.4	022.0	022.2	022.6	022.9	023.2	017.9	
17	023.2	023.4	023.6	023.6	023.6	024.1	024.3	024.3	024.4	024.3	024.3	024.3	024.2	023.9	023.7	023.8	023.7	023.7	023.6	023.7	023.7	023.7	023.9	024.0	023.8	
18	024.0	024.0	023.9	023.8	023.9	024.1	024.2	024.1	024.2	024.0	023.9	023.7	023.7	023.2	022.8	022.8	022.6	022.5	022.6	022.5	022.6	022.7	022.6	022.6	023.4	
19	022.8	022.7	022.6	022.5	022.6	022.7	022.7	022.6	022.5	022.1	021.5	021.1	020.7	020.5	020.0	019.8	019.5	019.3	019.1	018.9	018.9	018.9	018.5	018.0	021.0	
20	017.7	017.5	017.2	017.3	017.2	017.5	017.5	017.3	017.4	017.3	017.4	017.2	017.0	017.3	017.2	016.7	016.4	016.2	016.3	016.2	016.2	016.1	015.6	015.1	016.9	
21	014.6	014.1	013.5	013.3	013.3	013.3	012.8	012.7	012.7	012.6	012.1	011.6	011.0	010.3	009.7	008.8	008.1	007.9	007.2	006.5	006.4	005.7	005.0	004.4	010.5	
22	004.1	003.5	003.0	003.2	003.3	002.8	002.9	003.2	003.5	003.3	003.8	003.7	004.1	004.4	004.4	004.2	004.2	004.0	003.9	004.1	003.9	003.8	003.7	003.6	003.7	
23	003.5	003.7	003.9	004.4	004.6	005.1	005.7	006.3	006.9	007.1	007.4	007.7	008.1	008.5	008.8	009.2	009.4	009.7	010.3	010.6	010.9	011.3	011.5	011.4	007.6	
24	011.3	011.0	010.9	010.6	010.6	010.8	010.8	010.9	011.0	011.1	011.0	011.0	011.0	010.9	010.7	010.6	011.1	010.9	010.9	010.8	010.9	010.9	011.2	011.1	010.9	
25	011.1	011.0	011.4	011.2	011.6	011.9	012.3	012.5	012.7	012.7	012.8	012.7	012.5	012.5	012.6	012.6	012.6	012.6	012.8	013.4	014.0	014.4	014.1	013.9	012.5	
26	014.1	013.9	013.8	013.7	013.9	014.1	014.4	014.5	014.6	014.9	015.1	015.1	015.3	015.4	015.5	015.3	015.3	015.2	015.4	015.8	016.4	016.7	016.8	017.0	015.0	
27	017.0	017.0	017.1	017.3	017.6	017.7	018.3	018.7	019.2	019.5	019.6	019.6	019.6	019.8	020.1	020.1	020.3	020.7	021.0	021.6	022.3	022.3	023.1	023.3	019.6	
28	023.5	023.5	023.8	024.1	024.6	025.2	026.1	026.4	026.6	026.8	027.5	027.4	027.5	027.6	027.7	027.7	027.7	027.7	027.7	027.8	028.1	028.1	028.0	028.2	026.5	
29	028.0	027.8	027.7	027.7	027.7	028.0	028.2	028.6	028.6	028.4	028.3	028.2	028.2	028.0	028.0	027.8	027.9	028.0	028.2	028.3	028.5	028.5	028.5	028.5	028.1	
30	028.4	028.2	028.1	027.9	027.8	027.7	027.5	027.0	027.0	027.1	026.8	026.7	026.4	025.9	025.6	024.8	024.1	023.4	022.9	022.7	022.8	022.9	022.9	022.9	025.8	
31	022.7	022.3	021.8	021.8	022.2	022.3	022.5	022.8	022.9	022.8	022.8	022.7	022.7	022.7	022.7	022.8	022.8	022.8	022.5	022.5	022.4	022.2	021.8	021.6	022.5	
Mean (Station level)	1009.90	1009.75	1009.74	1009.76	1009.92	1010.09	1010.27	1010.40	1010.56	1010.59	1010.63	1010.54	1010.51	1010.47	1010.40	1010.30	1010.26	1010.23	1010.26	1010.40	1010.57	1010.58	1010.55	1010.45	1010.29	
Mean (Sea level)	1013.10	1012.96	1012.95	1012.97	1013.13	1013.29	1013.47	1013.58	1013.74	1013.77	1013.80	1013.70	1013.68	1013.64	1013.56	1013.47	1013.43	1013.41	1013.44	1013.59	1013.76	1013.78	1013.75	1013.65	1013.47	

74. Aberdeen : H_b = 26.0 metres.

June, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
↑ Day.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.	mb.														
1	021.3	020.8	020.3	019.8	019.4	019.2	018.9	018.4	018.1	017.9	017.4	017.0	016.2	015.8	015.3	014.6	014.1	013.8	012.8	012.3	011.8	011.2	010.4	009.5	016.3	
2	008.9	008.6	007.9	007.0	006.4	005.6	005.2	004.0	003.4	002.7	001.8	001.3	000.7	000.2	999.8	999.6	999.8	999.8	999.8	999.9	1000.1	1000.5	1000.3	1000.0	002.8	
3	999.5	998.9	998.1	997.1	995.9	995.4	994.7	993.7	993.3	992.6	991.2	991.7	990.7	995.6	996.8	997.3	997.7	998.3	998.5	998.8	999.6	999.9	1000.2	1000.5	996.7	
4	000.4	000.6	001.0	000.9	000.8	001.6	001.8	001.9	002.3	002.7	002.6	002.9	003.1	003.4	003.9	003.7	004.1	004.3	004.7	004.7	004.7	004.9	004.8	004.8	002.9	
5	004.7	004.2	003.8	003.6	003.4	003.3	002.8	002.1	002.3	001.9	001.3	000.9	000.6	000.0	999.4	998.9	998.5	998.0	997.6	997.2	997.1	996.7	996.3	995.8	000.6	
6	995.3	994.6	993.9	993.3	992.9	992.5	992.3	991.9	991.6	991.4	991.1	990.5	989.9	989.4	988.8	988.3	987.8	987.3	987.0	987.2	987.5	987.6	988.0	988.5	990.5	
7	989.1	988.8	989.4	991.1	992.0	992.9	993.7	994.5	995.4	996.5	997.3	998.2	998.8	999.8	1000.7	1001.2	1001.8	1002.0	1002.7	1003.3	1003.8	1004.6	1005.1	1005.4	997.6	
8	005.6	005.7	006.0	006.1	006.6	006.9	007.2	007.4	007.4	007.3	007.2	007.2	007.0	006.8	006.7	006.5	006.2	005.9	006.0	006.1	006.0	006.3	006.5	006.4	006.5	
9	006.4	006.3	006.5	007.0	007.4	007.8	008.3	008.8	009.4	009.6	009.9	011.0	011.1													

Readings in millibars at exact hours, Greenwich Mean Time.

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

July, 1929.

Table for Aberdeen July 1929. Columns: Hour G.M.T., Station Level (1-31), Mean (Station level), Mean (Sea level). Rows: 1-31 hours, Mean, Mean.

76. Aberdeen : H_b = 26.0 metres.

August, 1929.

Table for Aberdeen August 1929. Columns: Hour G.M.T., Station Level (1-31), Mean (Station level), Mean (Sea level). Rows: 1-31 hours, Mean, Mean.

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

Readings in millibars at exact hours, Greenwich Mean Time.

77. Aberdeen : H_b (Height of barometer cistern above M.S.L.) = 26.0 metres.

September, 1929.

Hour. G.M.T.	Station Level																								Mean
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
Day. 1	998.4	997.9	997.4	997.0	996.6	996.8	996.5	996.5	996.2	996.3	996.6	996.8	997.5	998.3	998.9	999.8	001.0	002.4	003.1	004.2	004.9	005.1	006.0	006.2	999.4
2	006.6	006.9	007.0	007.3	007.9	008.4	008.7	007.9	009.5	010.3	011.0	011.8	012.4	013.1	013.9	014.5	015.3	016.2	016.8	017.6	017.8	017.8	018.2	018.1	012.0
3	018.0	018.1	018.1	017.8	017.9	017.6	017.7	017.3	016.9	016.7	016.9	015.2	014.7	014.2	013.4	012.7	012.4	012.1	012.0	012.0	011.5	010.9	010.5	009.9	014.9
4	009.4	009.1	008.9	008.6	008.8	009.1	009.4	009.6	010.1	010.5	010.9	011.2	011.3	011.6	011.5	011.6	011.8	011.9	012.3	012.5	012.6	012.4	012.4	012.3	010.8
5	012.2	011.9	011.6	011.3	011.4	011.2	011.3	011.0	011.4	011.4	011.3	011.2	011.3	011.5	011.5	011.7	011.8	011.9	013.0	013.9	014.6	015.5	016.2	016.6	012.3
6	017.3	017.8	018.1	018.7	019.3	019.9	020.5	020.9	021.6	021.5	021.6	022.1	022.1	022.3	022.1	022.4	022.4	022.5	022.8	023.3	023.4	023.2	023.1	022.9	021.2
7	022.6	022.1	021.4	021.1	020.8	020.6	020.4	020.5	020.7	020.7	020.8	020.5	020.4	020.1	019.5	019.6	019.8	020.0	020.2	020.4	020.2	019.9	019.6	019.0	020.5
8	018.3	017.7	017.4	016.8	016.4	015.9	015.6	015.4	014.9	014.0	013.8	013.2	012.7	012.3	012.0	011.2	011.1	011.3	011.3	011.7	011.5	011.6	011.5	011.2	013.9
9	010.7	010.7	010.7	010.5	010.7	010.9	011.3	011.6	012.0	012.3	012.5	012.8	013.0	013.0	013.5	013.7	014.3	014.7	015.1	015.9	016.3	016.6	016.9	016.9	013.1
10	016.8	017.0	016.8	016.9	017.3	017.7	017.7	017.8	018.1	018.4	018.3	018.3	018.2	018.1	017.6	017.4	017.0	016.9	016.9	016.9	017.0	016.8	016.4	016.4	017.4
11	016.2	016.3	016.2	016.0	016.0	015.9	015.7	015.5	015.3	014.8	014.4	014.1	013.4	013.4	012.8	012.4	012.7	012.7	011.9	011.7	011.6	011.4	011.1	010.9	014.1
12	010.8	010.4	010.2	009.7	009.6	009.9	009.7	009.3	008.8	008.4	008.2	008.4	008.5	008.6	008.9	009.4	009.9	011.0	011.0	010.7	010.0	009.9	009.6	010.7	013.3
13	015.9	015.9	016.0	015.6	015.7	015.8	015.7	015.5	015.2	014.6	014.0	013.5	013.0	012.4	011.6	011.4	011.0	010.7	010.0	009.9	009.9	009.6	009.4	009.7	009.7
14	009.3	008.9	008.2	007.7	007.8	008.0	008.5	008.5	008.5	008.8	008.8	009.0	009.2	009.4	009.5	009.5	009.8	010.9	011.5	012.0	012.2	012.7	013.0	013.1	009.7
15	013.3	013.5	013.6	013.7	014.1	014.3	014.6	015.1	015.2	015.2	015.5	015.3	015.4	015.6	015.8	016.0	016.7	017.7	018.8	019.7	020.9	021.5	021.9	022.3	016.3
16	022.5	023.1	023.5	023.9	024.0	024.4	024.8	025.0	024.9	024.9	024.7	024.6	024.4	023.9	023.5	023.1	023.2	023.0	022.7	022.8	022.5	022.2	021.7	021.1	023.5
17	020.7	020.0	019.6	018.9	018.2	018.0	017.8	017.3	016.7	016.0	015.3	014.5	013.7	013.1	012.8	012.3	011.8	012.0	011.7	011.7	011.5	011.0	010.7	010.2	015.0
18	009.8	009.2	008.4	007.4	007.7	007.4	007.3	006.9	006.7	006.1	005.7	005.5	005.4	005.0	004.3	004.2	004.4	004.4	004.6	004.9	004.8	004.2	003.9	003.4	006.0
19	003.1	002.9	002.6	002.4	002.0	001.9	001.9	001.3	001.0	000.5	000.5	000.7	000.6	000.5	000.1	000.1	000.1	000.1	000.1	000.1	000.1	000.1	000.1	000.1	000.1
20	988.0	987.6	987.0	986.9	986.8	987.2	989.6	992.4	994.5	995.9	998.1	999.4	000.4	001.6	002.7	003.1	004.0	005.1	005.7	006.1	006.1	006.1	005.9	005.4	997.4
21	004.3	003.5	001.8	000.0	998.2	995.7	993.8	993.1	992.6	992.3	992.1	992.8	994.7	996.2	997.7	998.4	999.9	002.2	002.8	003.6	003.8	003.8	004.6	005.2	998.9
22	005.7	006.3	006.7	006.9	007.5	008.0	008.3	009.0	009.3	009.6	009.9	010.2	010.2	010.0	009.9	010.3	010.6	010.6	010.9	011.0	011.2	011.5	011.6	011.9	009.3
23	012.2	012.3	012.7	012.8	013.3	014.0	014.3	014.5	014.9	014.8	014.9	014.7	014.7	014.5	014.4	014.3	014.5	015.0	015.7	016.3	016.4	016.7	016.9	017.0	014.5
24	017.7	017.9	018.3	018.7	019.6	019.9	020.5	020.7	020.7	020.7	020.7	020.7	020.5	020.3	020.2	020.3	020.4	021.0	021.6	021.9	022.1	022.2	022.3	022.5	020.3
25	022.7	022.7	023.0	023.4	023.5	024.2	024.6	025.0	025.3	025.5	025.6	025.6	025.5	025.3	025.2	025.4	025.5	025.9	026.1	026.1	026.1	026.1	026.0	025.8	024.9
26	025.4	024.7	024.2	023.9	023.6	023.5	023.3	023.1	022.9	022.4	022.1	021.4	020.4	019.6	018.8	018.4	018.0	017.6	017.7	017.0	016.8	016.4	015.5	015.1	020.7
27	014.9	014.5	014.3	014.0	013.8	013.9	013.9	014.1	014.6	015.2	016.9	016.7	016.9	017.1	017.2	017.1	017.0	016.7	016.6	016.1	015.3	014.0	012.4	011.4	015.3
28	009.8	009.9	007.0	006.3	005.2	004.1	003.4	002.9	002.9	002.7	002.4	002.3	002.4	002.3	002.4	003.8	004.4	004.6	005.3	006.3	006.6	006.7	007.0	007.0	005.0
29	006.8	006.4	006.3	006.0	005.1	005.9	006.0	006.2	006.2	006.2	006.1	006.1	006.2	006.2	006.3	006.4	006.6	006.9	007.3	007.7	008.2	007.9	007.7	007.3	006.7
30	007.0	006.2	005.1	004.8	004.5	004.4	004.0	004.3	004.5	004.6	004.6	004.7	004.7	004.6	004.5	004.2	004.2	004.3	004.3	004.5	004.6	004.4	004.3	004.2	004.7
Mean (Station level)	1012.21	1011.98	1011.74	1011.49	1011.43	1011.45	1011.52	1011.60	1011.73	1011.73	1011.73	1011.69	1011.68	1011.66	1011.59	1011.60	1011.81	1012.19	1012.51	1012.84	1012.90	1012.81	1012.74	1012.56	1011.96
Mean (Sea level)	1015.38	1015.15	1014.91	1014.66	1014.61	1014.62	1014.69	1014.76	1014.88	1014.87	1014.86	1014.82	1014.80	1014.79	1014.71	1014.72	1014.94	1015.33	1015.66	1016.00	1016.07	1015.98	1015.91	1015.73	1015.11

78. Aberdeen : H_b = 26.0 metres.

October, 1929.

Hour. G.M.T.	Station Level																								Mean
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
1	004.2	004.1	003.7	003.8	004.0	004.3	004.6	004.7	005.1	004.8	004.5	004.2	003.4	002.8	002.0	001.3	000.1	998.7	997.2	994.8	992.2	989.4	986.4	938.8	006.6
2	981.7	980.7	979.7	978.8	978.5	978.5	978.3	978.5	978.8	979.2	979.7	979.8	980.2	980.4	980.5	981.0	981.3	981.7	981.9	981.8	981.7	981.1	980.7	980.6	980.3
3	980.2	979.7	979.1	978.2	978.1	977.6	977.4	976.8	977.2	977.9	978.3	978.1	978.6	978.5	979.0	979.8	981.0	982.3	984.1	986.0	987.0	988.3	989.6	990.9	980.8
4	991.6	993.0	993.7	994.6	995.2	996.3	997.6	998.0	998.9	999.8	000.3	000.5	001.0	001.0	001.2	001.4	001.7	001.8	001.5	001.7	001.7	001.7	001.7	001.7	998.7
5	000.1	999.4	998.8	997.8	996.9	996.0	995.5	994.8	994.4	994.0	994.0	994.1	994.0	993.8	993.4	993.3	993.2	992.8	992.2	991.3	990.4	989.4	988.7	987.9	994.3
6	986.9	985.9	984.7	983.0	982.0	981.6	981.5	981.7	981.8	981.9	981.7	980.4	980.9	980.9	980.8	980.7	980.6	980.5	980.4	980.3	980.2	980.1	980.1	980.1	979.9
7	973.4	973.5	974.2	975.9	977.0	978.4	980.4	982.4	983.6	986.3	988.4	990.0	991.4	992.9	993.5	994.8	995.7	996.2	996.5	996.7	996.5	996.5	996.3	996.3	987.2
8	996.0	995.5	994.7	994.4	994.1	993.6	993.6	993.6	993.6	993.5	993.5	993.4	993.5	993.8	994.0	994.3	995.1	996.0	996.7	997.1	997.4	998.1	998.5	998.6	995.1
9	998.8	999.8	000.4	001.5	002.7	003.8	004.8	005.8	006.7	007.5	008.2	009.1	009.7	010.5	011.1	011.3	012.0	012.8	012.9	012.9	012.9	012.9	012.9	012.9	007.7
10	010.5	009.9	009.2	008.7	008.7	008.8	009.2	009.1	008.7	008.2	007.5	006.6	005.3	004.2	003.1	001.9	999.8	998.4	997.7	997.7	997.7	997.7	997.7	997.7	004.8
11	001.5	002.1	002.5	002.7	003.5	004.1	004.7	005.5	006.3	006.6	006.7	007.7	008.4	008.1	008.8	009.8	010.9	012.3	013.2	013.7	014.7	015.3	016.0	016.1	008.1

Readings in millibars at exact hours, Greenwich Mean Time.

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

November, 1929.

Table for Aberdeen in November 1929. Columns include Hour G.M.T., Station Level (1-30), and Mean (Station level/Sea level). Rows show hourly pressure readings in millibars.

80. Aberdeen : H_b = 26.0 metres.

December, 1929.

Table for Aberdeen in December 1929. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level/Sea level). Rows show hourly pressure readings in millibars.

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

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

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

81. Aberdeen : $H_b = 26.0$ metres.

1929.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Station Level.	mb. 009.09	mb. 008.95	mb. 008.80	mb. 008.68	mb. 008.63	mb. 008.67	mb. 008.79	mb. 008.94	mb. 009.08	mb. 009.16	mb. 009.17	mb. 009.11	mb. 009.03	mb. 008.97	mb. 008.93	mb. 008.90	mb. 008.95	mb. 009.06	mb. 009.16	mb. 009.28	mb. 009.36	mb. 009.35	mb. 009.30	mb. 009.19	mb. 009.02
Sea Level.	012.30	012.16	012.01	011.89	011.84	011.88	012.00	012.14	012.28	012.35	012.36	012.29	012.21	012.15	012.11	012.09	012.13	012.25	012.35	012.48	012.57	012.56	012.51	012.40	012.22

PRESSURE AT STATION LEVEL; MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

82. Aberdeen : $H_b = 26.0$ metres.

1929.

Month	Mean.	Hour, GMT.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	mb. 1022.32	mb. 01.05	mb. 01.14	mb. 01.16	mb. 01.25	mb. 01.39	mb. 01.42	mb. 01.38	mb. 01.20	mb. 01.06	mb. 01.19	mb. 01.26	mb. 01.11	mb. 01.13	mb. 01.15	mb. 01.09	mb. 01.00	mb. 01.07	mb. 01.12	mb. 01.19	mb. 01.23	mb. 01.33	mb. 01.34	mb. 01.30	mb. 01.16	
Feb.	1015.30	+0.03	-0.03	-0.14	-0.22	-0.25	-0.25	-0.15	0.00	+0.17	+0.25	+0.36	+0.33	+0.19	-0.04	-0.17	-0.15	-0.08	+0.01	-0.04	+0.03	+0.04	+0.04	+0.03	+0.03	
Mar.	1021.55	-0.03	-0.11	-0.37	-0.46	-0.46	-0.34	-0.10	+0.15	+0.31	+0.43	+0.41	+0.34	+0.18	0.00	-0.18	-0.32	-0.35	-0.13	+0.02	+0.19	+0.22	+0.27	+0.21	+0.11	
April	1013.41	+0.07	-0.01	-0.12	-0.31	-0.37	-0.31	-0.17	-0.11	-0.01	+0.09	+0.12	+0.11	+0.14	+0.01	-0.13	-0.21	-0.25	-0.13	+0.06	+0.33	+0.35	+0.31	+0.29	+0.24	
May	1010.29	-0.17	-0.34	-0.37	-0.37	-0.23	-0.08	+0.09	+0.19	+0.33	+0.35	+0.36	+0.25	+0.21	+0.15	+0.05	-0.06	-0.13	-0.17	-0.16	-0.04	+0.11	+0.10	+0.04	-0.08	
June	1009.45	+0.21	-0.03	-0.22	-0.35	-0.46	-0.43	-0.32	-0.34	-0.26	-0.25	-0.28	-0.20	-0.16	-0.05	+0.07	+0.02	+0.10	+0.17	+0.24	+0.40	+0.56	+0.63	+0.56	+0.39	
July	1011.03	+0.20	+0.09	-0.04	-0.11	-0.04	+0.05	+0.16	+0.23	+0.23	+0.22	+0.16	+0.08	+0.01	-0.04	-0.15	-0.30	-0.44	-0.47	-0.38	-0.24	+0.07	+0.21	+0.27	+0.24	
Aug.	1006.95	-0.08	-0.21	-0.35	-0.45	-0.38	-0.26	-0.11	+0.13	+0.20	+0.21	+0.18	+0.11	+0.09	+0.05	-0.02	-0.10	-0.10	-0.09	+0.11	+0.23	+0.31	+0.27	+0.21	+0.03	
Sept.	1011.96	+0.34	+0.10	-0.15	-0.41	-0.47	-0.47	-0.40	-0.33	-0.21	-0.22	-0.22	-0.27	-0.29	-0.31	-0.39	-0.40	-0.19	+0.18	+0.49	+0.81	+0.87	+0.76	+0.69	+0.50	
Oct.	998.81	+0.05	-0.10	-0.35	-0.48	-0.57	-0.58	-0.39	-0.19	-0.06	+0.02	+0.09	-0.01	-0.03	-0.15	-0.18	-0.11	+0.06	+0.35	+0.48	+0.49	+0.59	+0.53	+0.33	+0.21	
Nov.	996.43	-0.03	-0.19	-0.31	-0.36	-0.36	-0.23	-0.04	+0.28	+0.46	+0.54	+0.47	+0.29	+0.07	-0.15	-0.28	-0.30	-0.21	-0.05	-0.03	+0.01	+0.13	+0.10	+0.11	+0.09	
Dec.	991.25	+0.08	-0.04	-0.23	-0.52	-0.86	-1.05	-1.03	-0.86	-0.62	-0.21	-0.14	-0.09	-0.12	+0.11	+0.38	+0.54	+0.65	+0.75	+0.70	+0.73	+0.63	+0.52	+0.43	+0.26	
Year	1009.02	+0.05	-0.08	-0.24	-0.36	-0.40	-0.36	-0.24	-0.09	+0.05	+0.14	+0.15	+0.09	+0.01	-0.05	-0.09	-0.12	-0.07	+0.04	+0.14	+0.26	+0.35	+0.34	+0.29	+0.18	

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY.

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

83. Aberdeen : $H_b = 26.0$ metres.

1929.

Month.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
	Day.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	mb. 027.7	mb. 019.5	mb. 006.2	999.9	034.9	029.0	007.9	000.3	007.2	004.9	021.6	009.5	009.0	005.8	003.7	984.1	006.2	996.1	005.2	983.8	022.1	019.4	990.7	985.6
2	033.9	027.7	005.3	001.3	029.2	026.5	016.8	007.3	014.0	007.2	009.5	999.3	005.8	001.7	009.2	003.7	018.2	006.2	983.8	978.0	019.9	009.8	988.1	967.0
3	034.7	033.0	010.8	004.1	027.2	023.8	015.5	013.8	014.5	008.9	000.5	991.6	004.5	001.4	006.1	992.4	018.3	009.9	990.9	976.8	020.6	010.5	992.8	980.0
4	033.9	030.4	017.9	010.4	025.6	016.0	014.3	002.1	008.9	994.8	004.9	000.3	006.5	004.3	001.1	992.2	012.6	008.5	001.8	990.9	020.2	003.3	991.2	987.2
5	030.8	025.8	020.1	017.9	017.9	013.9	017.1	006.2	994.8	989.2	004.8	995.8	007.1	005.4	004.3	000.9	016.6	011.0	000.6	987.8	003.3	990.9	987.2	957.1
6	025.8	021.9	022.3	018.6	023.8	016.5	018.5	017.0	993.6	982.2	995.8	986.9	013.2	006.9	004.0	000.3	023.5	016.6	987.9	973.4	999.1	994.6	976.7	957.2
7	033.8	024.8	022.6	015.8	024.2	022.6	018.5	016.7	998.1	982.6	005.4	988.5	018.7	013.1	010.8	000.6	022.9	019.0	996.7	973.2	001.5	985.1	979.2	958.0
8	038.4	033.8	015.9	010.9	022.9	019.9	016.7	011.5	010.2	997.4	007.5	005.4	018.6	014.9	011.4	007.3	019.0	011.1	998.6	993.3	000.5	983.1	981.0	971.7
9	037.9	028.5	011.2	005.2	022.9	020.2	016.4	012.8	016.3	010.2	013.7	006.2	015.0	007.7	009.1	005.8	017.0	010.3	013.0	998.5	998.7	992.8	978.5	973.9
10	039.1	028.1	013.7	005.0	020.8	017.3	027.0	016.2	012.3	999.7	018.0	012.9	008.0	002.2	010.5	007.5	018.4	016.3	011.3	997.6	998.1	992.1	990.0	978.4
11	042.3	039.1	016.4	010.8	026.1	017.1	029.8	026.9	007.3	998.8	018.1	014.8	016.1	008.0	009.3	005.0	016.4	010.8	016.3	000.9	997.3	963.1	987.2	975.5
12	041.0	038.4	020.1	016.3	033.1	026.1	028.8	024.4	008.1	006.5	015.4	008.6	024.0	016.0	016.0	009.2	015.7	008.1	017.4	012.9	984.1	973.5	008.3	978.2
13	038.4	031.2	017.6	014.3	032.9	030.7	024.5	018.9	008.3	998.2	008.6	996.1	024.9	023.7	016.8	009.5	016.0	009.6	015.9	010.2	993.2	984.0	008.5	998.4
14	031.3	015.4	015.4	011.6	030.7	028.2	018.9	013.0	998.3	989.8	003.0	001.3	025.1	024.0	012.2	008.6	013.1	007.6	024.1	009.3	998.5	993.1	010.7	999.3
15	015.4	009.6	011.6	004.8	030.2	027.6	017.3	011.9	010.5	990.6	004.4	997.4	024.9	021.4	012.0	006.8	022.3	013.0	024.7	013.7	998.9	993.3	025.8	010.7
16	014.8	009.4	015.8	004.4	027.6	021.7	021.7	017.3	023.2	010.5	009.4	995.4	021.4	015.3	009.2	003.5	025.0	021.1	013.7	992.7	001.2	993.1	032.7	025.7
17	009.4	007.0	022.3	015.8	023.4	021.1	021.0	011.8	024.5	023.1	018.5	009.4	015.5	010.3	004.5	000.3	021.2	010.2	002.3	997.5	014.9	001.2	033.8	027.5
18	011.1	005.9	023.9	021.9	024.0	022.5	012.0	005.8	024.4	022.4	017.2	014.0	014.0	010.2	017.2	004.5	010.2	003.2	002.0	000.6	015.5	999.9	027.5	022.0
19	014.5	010.8	025.7	023.7	023.2	017.4	014.0	005.6	022.8	018.0	015.5	010.0	014.8	012.9	017.1	015.4	003.5	988.5	002.3	993.0	999.9	984.3	022.0	006.3
20	017.1	013.9	025.2	024.0	017.4	008.8	021.4	013.9	018.0	015.1	021.9	011.9	013.0	009.4	015.5	011.4	006.3	986.7	001.4	982.8	999.1	984.0	006.3	986.0
21	020.2	016.8	024.5	016.4	008.9	004.9	020.3	017.3	015.1	004.4	022.9	016.1	010.0	008.4	011.5	005.1	005.4	992.1	006.7	998.9	999.3	996.9	989.4	980.9
22	024.7	020.1	016.4	008.5	009.9	006.5	018.6	009.8	004.5	002.5	016.1	003.8	010.3	007.6	009.3	002.5	012.0	005.2	999.4	993.0	998.0	990.8	989.5	987.8
23	027.5	024.4	008.5	003.3	013.9	009.8	012.0	005.8	011.5	003.3	009.2	001.4	010.3	006.7	005.4	998.8	017.1	011.9	993.3	976.8	990.8	978.9	987.8	984.1
24	028.0	023.1	012.2	003.5	015.7	012.2	012.4	004.9	011.5	010.5	012													

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

84. Aberdeen : North Wall Screen on Tower : h_t (height of thermometer bulb above the ground) = 12.5 metres. January, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	a.																									
1	75.0	75.4	75.8	76.4	76.7	76.8	76.5	76.1	76.4	76.5	76.5	76.8	77.2	77.0	76.6	76.2	75.8	75.6	75.8	75.4	76.0	74.9	74.2	74.6	76.0	
2	73.8	73.3	73.3	73.0	72.3	72.5	72.2	71.8	71.6	71.7	72.2	73.0	74.2	74.1	74.1	74.4	74.0	73.1	73.2	72.8	72.5	72.9	72.3	72.4	73.0	
3	72.2	71.8	71.6	71.5	71.4	71.1	71.8	73.5	74.1	74.6	75.1	75.5	75.7	75.8	75.7	75.6	75.3	75.1	74.9	74.8	74.4	74.0	72.7	71.8	73.8	
4	71.4	70.8	70.3	70.2	70.2	70.2	69.9	69.6	70.0	71.0	71.4	71.9	72.4	72.5	72.3	71.4	71.5	71.6	71.9	70.6	69.9	69.9	73.5	73.4	71.2	
5	73.2	73.1	73.1	73.2	73.2	72.7	72.5	72.9	72.5	73.2	73.7	73.7	74.1	76.4	74.8	76.0	76.8	77.0	77.1	77.1	77.0	77.0	77.1	77.1	76.9	74.7
6	76.9	76.7	76.5	76.5	77.2	77.5	77.1	77.5	77.5	77.6	77.4	77.7	77.5	77.1	77.6	76.9	77.4	76.5	76.8	77.1	77.2	77.0	77.0	76.9	77.1	
7	77.0	76.9	76.8	76.5	76.5	76.7	76.0	76.3	77.1	77.1	77.3	77.4	77.5	77.1	76.1	75.0	74.1	73.6	73.4	72.9	72.6	72.6	72.9	71.7	75.6	
8	71.3	71.4	70.2	70.8	71.6	71.9	71.8	72.4	72.6	73.0	73.5	73.7	74.2	74.2	74.6	75.0	75.2	75.1	75.2	75.0	75.1	74.7	74.6	74.8	73.3	
9	74.4	74.4	74.4	75.2	74.9	75.3	75.3	75.4	75.6	75.6	76.2	76.3	76.6	75.5	75.1	75.3	75.6	75.6	76.0	76.2	76.3	76.4	76.5	76.8	75.6	
10	77.0	76.9	77.2	77.2	77.5	77.6	77.7	77.6	77.8	77.9	78.1	78.1	78.0	78.1	77.5	77.7	77.5	77.2	76.9	77.7	77.6	77.4	76.8	76.5	77.5	
11	76.5	76.5	76.5	76.6	76.9	77.0	76.9	76.9	76.7	76.9	76.7	77.0	77.3	76.8	76.1	76.4	75.7	76.3	76.2	77.0	77.1	76.2	75.8	75.9	76.6	
12	75.7	75.4	75.3	75.3	75.2	74.9	74.8	75.2	75.4	75.5	75.9	76.2	76.4	76.4	76.1	75.8	75.5	75.2	75.3	74.9	74.8	74.5	74.2	73.6	75.4	
13	73.6	73.9	74.5	75.3	75.8	76.3	76.4	76.7	77.1	77.5	77.6	77.9	77.6	77.2	77.3	76.9	76.4	75.8	75.2	75.6	75.8	75.9	75.4	75.1	76.1	
14	74.6	74.7	74.8	75.4	74.8	74.9	75.0	74.8	74.8	75.4	75.1	75.3	74.9	74.9	75.0	74.5	74.4	74.8	75.1	75.4	76.1	76.4	77.2	77.9	75.2	
15	77.9	77.9	77.8	77.6	76.5	75.7	75.5	74.6	74.7	75.0	74.7	75.0	75.2	74.2	73.9	74.1	74.0	74.1	74.4	74.0	72.7	73.2	73.4	72.4	75.0	
16	72.5	72.2	72.1	71.0	72.1	72.0	71.3	70.8	70.9	71.9	72.7	72.4	72.7	73.2	73.6	72.9	72.8	72.9	72.5	72.9	72.8	72.7	72.5	72.0	72.3	
17	72.1	72.4	72.6	72.8	73.2	73.0	72.5	72.4	72.1	72.1	72.6	73.3	73.6	73.4	72.8	71.9	71.0	69.8	69.2	69.7	69.7	68.6	68.8	69.1	71.7	
18	69.2	70.8	72.3	73.4	73.0	73.5	74.2	75.0	75.7	75.9	76.1	77.0	77.4	77.9	77.4	76.6	76.8	76.6	76.1	76.2	76.4	76.1	77.6	77.5	75.2	
19	77.4	77.8	78.0	77.8	77.4	77.0	77.0	77.5	78.0	79.0	79.2	80.5	80.4	80.0	79.1	78.8	78.4	78.3	77.9	77.2	76.6	76.2	77.0	77.9	78.1	
20	76.5	76.8	78.0	78.2	79.2	79.0	78.8	79.3	79.6	79.5	79.6	79.7	79.9	79.9	79.9	79.0	78.9	78.6	78.7	78.6	78.4	78.1	78.3	78.0	78.7	
21	77.6	77.1	76.8	76.9	76.8	75.4	75.0	74.6	76.1	76.0	76.5	77.1	77.5	77.5	77.3	77.3	77.6	77.7	77.7	77.7	77.6	77.5	77.6	77.5	76.9	
22	77.4	77.4	77.3	77.3	77.3	77.2	77.2	77.5	76.7	77.0	77.1	77.4	77.4	77.6	77.5	77.5	77.5	77.2	76.7	76.9	78.0	76.6	76.5	76.4	77.2	
23	76.3	76.2	76.5	76.5	76.2	76.5	76.7	76.4	75.7	76.6	77.0	77.6	77.3	77.1	76.1	75.4	74.5	74.4	74.5	74.5	74.1	74.3	74.5	73.8	75.8	
24	73.5	73.8	73.5	73.8	74.0	74.5	74.2	74.4	74.5	75.6	75.8	76.0	76.5	77.1	76.2	75.0	75.0	74.5	74.6	74.6	74.5	74.1	74.3	74.5	74.8	
25	74.4	74.0	74.0	74.1	74.1	74.0	74.0	73.9	74.1	74.5	74.9	75.0	76.0	75.2	75.0	75.0	75.2	74.5	75.2	75.2	75.2	75.3	74.9	74.1	74.7	
26	73.9	74.1	74.0	73.6	74.2	73.8	73.8	73.9	74.1	74.0	74.0	74.1	74.7	75.2	75.1	74.5	73.7	73.4	73.6	73.7	73.0	72.2	72.4	72.9	73.9	
27	72.4	72.7	72.6	72.0	71.9	71.6	71.6	71.7	71.9	72.9	73.5	73.9	74.3	74.3	74.6	74.5	74.0	74.0	73.8	73.8	73.3	72.4	72.4	71.4	73.0	
28	70.6	70.4	70.8	70.8	70.0	69.9	69.7	69.0	69.0	70.6	71.6	72.1	72.3	72.7	72.3	71.3	70.0	69.3	68.9	68.6	68.1	68.6	68.6	68.9	70.2	
29	70.5	75.8	75.8	76.2	76.5	76.7	77.1	77.4	77.4	77.0	76.9	77.3	77.2	77.0	76.9	77.1	77.2	77.1	77.2	77.0	77.2	77.6	77.6	77.6	76.5	
30	77.8	77.9	78.1	78.0	78.0	78.3	78.5	78.5	78.8	79.1	79.7	80.7	82.0	82.8	82.4	83.1	82.8	81.1	81.5	81.7	81.4	81.5	81.3	81.2	80.2	
31	80.9	80.5	80.6	80.2	79.8	79.6	79.8	80.0	80.4	80.7	80.8	80.7	80.8	81.2	80.7	80.4	80.2	80.1	80.0	80.0	79.9	79.5	79.4	79.2	80.3	
Mean ...	74.6	74.8	74.9	74.9	75.0	74.9	74.9	74.9	75.1	75.5	75.8	76.1	76.4	76.4	76.1	75.8	75.6	75.4	75.4	75.3	75.2	75.0	75.1	74.9	75.3	

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

February, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	79.0	78.8	78.8	78.8	78.8	78.8	78.7	78.4	78.4	78.4	78.3	78.4	78.3	78.3	78.1	78.2	78.2	78.2	78.4	78.8	78.9	78.9	78.6	78.5	78.6
2	78.4	79.1	79.2	79.4	79.0	79.2	79.1	79.2	79.4	79.6	80.0	80.4	79.6	79.7	79.9	79.4	79.2	79.0	78.8	78.7	79.0	78.9	78.9	78.9	79.2
3	78.9	79.0	79.0	78.9	78.8	78.8	78.7	78.6	78.5	78.4	78.4	78.4	78.3	78.1	78.1	78.1	78.1	78.0	78.0	78.0	78.0	77.9	78.0	78.1	78.4
4	78.4	78.8	78.9	79.0	78.9	78.4	78.3	78.3	78.6	80.0	81.3	82.2	83.3	83.0	82.5	82.1	81.6	80.7	80.1	79.7	79.2	79.8	79.2	79.4	80.0
5	79.5	79.1	78.9	78.7	78.8	78.6	78.3	78.4	78.6	78.7	79.0	79.8	80.0	80.4	80.5	79.8	79.0	78.5	78.1	77.4	77.7	77.1	76.5	76.3	78.7
6	76.0	75.8	75.8	75.3	75.7	75.5	76.2	76.7	77.4	77.8	78.2	78.6	78.6	78.5	78.4	78.2	78.1	77.9	77.8	77.5	77.2	77.0	77.0	77.0	77.2
7	76.9	77.0	77.0	77.3	77.1	77.0	76.9	77.0	77.1	77.1	77.0	76.8	76.4	76.0	76.3	76.2	76.4	76.4	76.4	76.4	76.4	75.8	75.5	75.4	76.6
8	75.8	76.1	76.0	76.1	76.1	76.1	76.4	77.0	77.1	77.4	77.8	78.2	78.7	78.6	78.8	78.5	78.4	78.2	78.1	77.9	77.8	77.6	77.6	77.2	77.4
9	77.1	76.9	76.4	76.2	75.9	75.8	76.0	75.7	75.6	76.5	77.2	77.8	78.9	78.9	78.3	77.8	77.8	77.1	77.0	77.1	76.5	76.3	76.3	76.0	76.9
10	76.1	75.9	75.7	75.4	75.1	74.6	73.7	73.3	73.6	74.3	75.7	77.0	77.7	77.7	77.3	77.3	76.8	76.4	76.9	76.5	76.3	76.3	75.7	75.4	75.9
11	75.1	74.9	74.6	74.3	74.2	74.0	73.8	73.7	73.4	73.2	73.0	73.1	73.2	73.3	73.3	73.3	73.3	73.3	73.3	73.4	73.6	73.6	73.6	73.5	73.7
12																									

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

86. Aberdeen : North Wall Screen on Tower : h_t (height of thermometer bulb above ground) = 12.5 metres. March, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	a.																									
1	70.9	71.4	71.4	71.1	71.5	71.1	71.4	71.7	72.9	73.7	74.1	74.7	75.0	75.4	75.4	75.3	75.1	75.1	74.8	74.4	74.5	74.5	74.5	74.9	74.9	73.4
2	75.1	74.8	75.1	75.2	75.1	75.1	75.2	75.7	76.0	76.5	77.4	77.8	78.2	80.4	80.1	80.0	79.3	77.5	77.3	76.9	77.4	77.4	77.6	77.1	77.0	77.0
3	78.6	79.4	79.7	79.5	79.3	78.1	77.1	77.0	77.7	79.8	80.2	80.7	81.3	80.9	81.5	81.0	80.8	80.3	79.9	79.7	79.7	78.7	77.9	77.5	77.5	79.4
4	77.2	76.8	76.7	76.7	76.6	76.7	76.1	76.4	77.1	77.4	78.0	78.1	78.2	78.4	78.5	78.2	78.0	77.1	76.9	77.2	77.9	77.2	77.6	77.7	77.5	77.4
5	77.7	77.8	77.9	77.7	77.9	78.2	78.0	78.6	79.3	79.7	79.6	79.7	80.1	80.1	80.0	79.6	79.4	78.6	78.0	78.9	79.1	78.5	78.3	78.5	78.8	78.8
6	78.9	79.4	79.5	79.4	79.6	79.5	79.3	79.2	79.8	80.3	80.7	80.8	81.2	81.2	81.4	81.5	81.1	80.2	79.1	78.3	77.7	77.5	76.9	76.4	79.6	79.6
7	75.6	75.4	75.1	74.9	74.0	73.4	73.8	74.3	76.1	78.9	81.3	82.4	82.9	80.1	80.5	80.5	79.4	78.8	78.2	76.3	76.1	75.6	75.5	75.2	77.3	77.3
8	74.1	72.8	72.8	73.0	73.2	73.7	73.1	73.8	75.6	78.1	81.6	80.2	81.9	82.5	83.7	83.7	81.7	79.9	78.8	77.4	77.2	76.0	75.3	77.0	77.4	77.4
9	75.3	74.8	74.1	73.7	73.8	73.3	73.5	73.3	74.1	76.0	78.3	80.9	82.2	83.4	82.5	82.5	81.9	80.4	79.3	77.8	77.4	76.4	75.6	77.1	75.0	77.3
10	75.5	74.5	74.5	74.9	74.4	74.1	74.0	75.0	75.4	77.9	80.2	80.3	80.4	79.7	80.7	79.2	78.8	78.4	77.8	76.4	75.5	75.5	75.2	74.8	76.8	76.8
11	75.2	75.6	75.7	75.2	73.8	73.7	73.6	74.2	76.3	78.5	79.7	82.0	83.4	85.0	85.0	84.7	84.0	83.1	82.3	80.2	78.9	79.5	79.4	79.7	79.0	79.0
12	80.1	80.2	81.0	81.2	81.3	80.4	79.7	79.7	80.7	81.3	81.9	82.7	82.5	82.6	82.5	82.8	82.0	80.9	79.1	78.4	77.0	76.2	75.4	75.0	80.3	80.3
13	75.4	75.1	74.6	74.4	73.9	74.0	73.5	73.6	75.4	78.2	79.5	79.0	79.3	79.4	78.6	78.6	78.5	77.9	77.6	77.1	77.4	77.1	77.0	77.0	77.0	76.7
14	76.7	76.1	75.5	74.3	72.9	72.7	72.3	72.3	72.8	73.6	75.9	77.2	78.0	78.4	77.9	77.7	77.8	77.6	77.1	76.0	76.8	75.9	75.8	75.8	76.0	75.7
15	74.9	74.4	74.5	74.8	75.2	75.8	75.8	76.7	77.1	78.3	78.9	79.1	79.1	79.0	78.8	79.0	78.9	78.7	78.5	78.4	78.2	78.1	77.9	77.6	77.4	77.4
16	77.4	77.2	77.0	76.9	76.6	76.4	76.5	76.6	76.8	77.0	77.0	76.9	76.9	76.9	76.6	76.4	76.0	75.7	75.6	75.8	75.6	75.6	75.4	75.4	76.5	76.5
17	75.2	75.1	74.8	74.3	73.5	72.4	72.6	73.8	74.2	75.4	76.2	76.0	76.4	76.6	76.7	76.6	76.5	76.5	76.3	76.0	75.7	75.5	75.6	75.5	75.5	75.3
18	75.2	75.1	75.1	75.1	74.8	74.9	74.9	75.3	75.6	75.9	76.1	76.9	77.1	77.1	77.0	76.9	76.6	76.4	76.3	76.2	76.4	76.2	76.1	76.0	76.1	76.0
19	75.8	75.9	75.8	75.5	75.6	75.4	75.4	75.7	76.0	76.6	76.7	77.0	77.2	77.3	77.0	76.9	76.6	76.4	76.3	76.2	76.1	76.0	75.9	75.9	76.1	76.2
20	76.1	76.2	76.3	75.8	75.5	75.4	75.2	75.4	75.5	76.2	76.4	77.1	77.2	77.9	78.4	78.4	78.6	78.5	78.4	78.2	78.7	78.5	79.0	79.3	77.1	77.1
21	79.3	79.5	79.9	81.0	79.9	81.3	81.2	81.4	81.5	82.0	82.0	82.5	83.5	83.9	84.4	83.7	83.1	82.9	82.8	82.0	81.9	81.7	81.6	81.5	81.5	81.8
22	81.3	80.5	80.4	79.8	78.2	77.0	78.4	79.2	81.1	82.0	82.8	83.8	84.0	84.8	85.1	85.1	84.8	83.6	82.5	81.3	81.0	80.8	80.4	79.4	81.6	81.6
23	78.2	77.6	77.2	77.0	76.5	76.0	76.8	78.7	80.8	82.2	83.7	84.3	84.8	85.9	85.9	84.9	84.0	83.0	82.8	82.9	82.4	82.5	82.5	82.5	82.5	81.3
24	82.7	83.0	82.9	82.8	82.2	81.9	82.2	83.3	84.0	84.8	85.7	86.4	87.4	87.0	87.7	87.1	86.0	84.4	83.5	82.5	82.0	82.0	80.5	80.4	80.4	83.9
25	80.3	80.4	80.5	80.4	81.4	82.0	83.5	84.8	84.8	85.0	84.1	84.2	84.2	84.4	84.4	84.1	83.5	82.8	81.8	81.4	80.7	79.7	79.6	78.7	82.3	82.3
26	78.2	77.5	77.6	76.9	76.6	76.7	77.1	79.0	81.4	82.2	83.5	82.9	81.5	81.8	81.9	82.6	82.8	83.1	81.8	81.9	81.8	80.6	80.4	79.4	80.4	80.4
27	78.1	78.2	78.1	79.2	79.0	78.1	80.2	82.5	85.1	87.3	86.6	86.5	88.2	84.5	83.0	82.8	83.4	82.6	81.3	80.6	82.1	81.3	80.4	79.4	82.0	82.0
28	78.9	77.6	76.6	76.6	76.8	76.5	76.7	78.7	81.1	84.0	83.8	84.7	84.5	85.0	85.1	85.0	84.0	81.4	80.1	79.7	79.1	78.7	78.5	78.5	80.5	80.5
29	77.6	76.6	77.3	78.3	78.4	77.6	78.9	80.9	82.4	85.1	86.8	86.9	86.7	87.2	87.5	87.6	87.1	86.3	83.9	83.0	82.4	82.0	81.7	81.5	82.6	82.6
30	81.4	81.1	80.2	80.0	79.9	79.5	80.2	81.9	83.1	84.2	85.0	85.5	85.5	84.7	84.5	83.4	83.1	84.0	83.9	84.5	86.0	85.1	84.6	83.9	83.1	83.1
31	81.7	80.5	80.5	79.9	79.3	79.2	79.6	80.1	80.5	81.5	82.4	82.3	83.2	82.8	82.9	82.4	82.0	81.0	80.0	80.0	79.0	78.5	78.1	78.4	80.8	80.8
Mean ...	77.4	77.1	77.0	77.0	76.6	76.4	76.6	77.3	78.4	79.7	80.5	80.9	81.4	81.4	81.5	81.2	80.8	80.1	79.4	78.9	78.7	78.3	78.1	77.9	78.9	78.9

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

April, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
1	77.6	77.3	78.1	77.7	77.7	77.4	77.2	78.1	77.4	78.9	76.9	76.3	77.0	79.7	79.6	76.2	78.5	76.9	75.5	75.4	75.0	75.2	75.1	75.0	77.1	77.1
2	75.1	75.4	75.5	76.1	76.2	76.8	77.2	78.5	78.6	79.0	78.0	79.4	79.3	79.4	79.7	79.4	79.1	78.8	78.0	76.3	76.6	76.2	76.1	76.4	77.5	77.5
3	76.9	76.9	76.6	75.9	76.0	76.1	76.2	77.8	78.3	78.4	79.3	79.3	77.1	80.2	80.7	80.1	80.0	79.2	78.7	78.1	77.4	76.9	76.9	76.9	77.9	77.9
4	76.9	76.7	76.7	77.1	77.1	77.2	77.8	78.1	77.8	78.2	78.3	79.7	81.0	81.5	81.3	81.7	81.9	81.2	80.9	80.5	80.4	78.9	78.9	78.5	79.1	79.1
5	78.0	77.7	77.0	76.6	76.9	76.0	77.3	78.2	78.8	78.6	79.0	79.2	79.4	79.6	79.6	79.3	78.9	78.9	78.4	77.8	77.3	76.9	76.6	76.3	78.1	78.1
6	76.1	75.7	75.0	75.0	74.6	74.5	75.9	77.9	80.9	82.8	83.1	83.4	83.5	83.2	83.5	83.4	82.9	81.1	80.6	80.2	79.9	78.5	77.9	77.4	77.1	79.3
7	78.2	77.7	77.8	76.7	75.6	75.6	77.6	79.5	82.2	83.3	84.0	84.4	84.7	83.0	83.9	81.4	81.1	80.6	80.2	80.1	80.2	80.1	79.9	79.8	80.3	80.3
8	79.7	79.6	79.6	79.6	79.7	79.6	79.7	79.9	80.7	82.7	82.9	83.0	81.5	83.3	83.1	82.4	82.5	80.9	80.0	79.7	79.3	79.2	79.7	79.7	80.7	80.7
9	79.5	78.9	79.1	79.2	79.5	80.0	80.1	80.1	79.9	79.6	79.9	80.1	80.2	80.7	80.6	80.2	79.9	79.4	78.1	77.9	77.6	77.6	77.8	78.1	79.4	79.4
10	78.5	78.9	78.8	78.9	78.6	79.5	80.0	79.9	80.4	81.4	81.1	81.1	80.7													

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

88. Aberdeen : North Wall Screen on Tower : h_t (height of thermometer bulb above ground) = 12.5 metres. May, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	74.6	73.9	73.6	73.4	73.4	76.0	77.6	78.6	80.3	81.2	81.5	81.5	81.2	81.9	82.0	82.0	81.4	79.1	78.9	78.9	78.6	78.2	77.8	77.6	78.4
2	78.2	77.8	77.4	77.3	77.0	77.4	79.1	79.4	79.6	80.0	79.9	79.9	79.6	79.3	79.5	79.1	79.5	78.8	78.9	77.9	77.8	77.5	75.5	74.3	78.4
3	73.7	73.2	73.0	73.4	73.8	75.2	78.3	78.6	79.8	80.8	80.2	80.2	80.0	79.9	80.0	80.2	80.0	79.6	78.8	78.4	78.1	78.3	78.2	78.2	77.8
4	78.5	78.6	78.4	78.4	78.5	78.2	78.2	78.2	78.7	79.0	80.2	81.3	81.6	81.5	82.2	81.4	81.0	80.6	80.2	79.6	79.7	79.5	79.2	79.2	79.6
5	79.0	79.1	79.0	78.9	78.8	79.0	79.8	80.9	81.6	81.4	82.4	83.2	82.9	82.0	83.0	83.8	81.3	81.7	81.4	81.0	80.0	78.9	77.9	77.9	80.7
6	77.0	76.5	75.8	75.8	76.1	77.3	79.0	80.0	80.3	80.7	80.2	80.2	79.9	79.7	79.6	79.5	79.6	79.8	79.9	79.9	79.9	79.9	79.9	79.9	80.0
7	79.6	78.8	79.0	78.7	78.3	78.4	78.9	80.0	80.7	82.1	83.4	83.6	85.5	85.0	84.2	85.0	85.0	83.6	83.1	81.6	81.1	81.0	80.5	79.8	81.5
8	78.6	78.1	77.9	76.9	76.4	79.8	80.4	81.1	82.3	83.5	83.7	82.8	82.6	83.5	83.3	80.7	81.0	81.1	79.9	79.7	79.3	78.4	78.0	77.6	80.3
9	77.2	77.1	77.0	76.3	77.0	78.7	79.5	80.1	81.0	82.3	82.6	82.2	82.5	82.1	81.5	82.2	81.9	81.4	81.2	80.6	80.4	80.5	80.5	80.5	80.5
10	80.4	80.6	80.4	80.5	80.1	80.9	81.5	82.1	82.5	83.1	83.6	84.1	85.0	84.9	85.5	85.2	84.6	86.2	85.7	85.1	84.7	84.2	83.8	83.9	83.2
11	84.5	84.4	83.6	83.9	83.2	83.9	84.4	85.0	86.0	86.7	87.2	87.4	87.4	87.3	87.2	87.0	86.6	85.9	85.2	84.7	83.9	83.5	83.0	82.8	85.2
12	82.4	81.1	79.9	80.8	81.0	82.4	84.1	84.5	85.1	85.7	85.6	84.9	83.6	83.5	85.1	84.2	83.2	82.4	82.3	81.7	81.1	81.0	80.9	80.1	82.8
13	79.2	78.5	78.3	78.9	79.3	81.0	82.0	83.2	83.5	84.2	84.0	84.1	83.2	83.6	82.5	82.7	82.2	81.9	81.8	81.6	81.3	81.0	81.0	81.0	81.7
14	81.0	80.5	80.0	79.8	80.3	81.0	80.8	81.1	81.2	81.7	82.4	82.6	83.0	82.4	83.1	82.6	81.1	81.2	81.0	80.6	80.5	80.6	80.5	80.7	81.2
15	80.6	80.8	81.0	80.9	81.1	81.2	81.9	82.4	82.4	83.3	83.8	84.4	84.7	85.0	84.3	84.0	84.4	84.3	83.9	83.4	82.9	82.8	82.3	82.0	82.8
16	81.4	81.2	80.5	80.2	80.9	81.7	82.4	83.2	84.1	84.9	84.5	84.7	85.9	86.1	86.2	83.3	82.4	83.0	82.5	81.6	81.1	80.7	80.4	80.9	82.7
17	80.9	80.7	80.7	80.5	80.5	80.5	80.6	80.8	80.9	81.5	81.8	81.6	82.4	81.4	81.6	81.5	81.9	82.0	81.7	81.0	80.1	79.6	79.2	79.4	81.0
18	79.4	79.2	78.8	78.9	79.1	79.3	79.9	80.5	81.7	81.5	81.2	82.0	82.2	82.6	82.8	82.1	82.0	81.9	81.5	82.0	81.9	81.5	81.7	81.5	81.0
19	81.5	81.9	82.0	81.5	81.6	81.8	82.6	83.9	85.0	85.2	86.0	88.0	88.3	89.1	88.5	88.9	87.4	86.8	85.9	85.8	85.6	85.1	84.4	84.4	85.0
20	84.4	84.1	83.7	83.4	84.0	84.9	86.2	86.3	86.6	86.8	85.9	85.7	84.4	82.8	82.0	82.0	82.3	82.6	82.6	82.4	82.1	82.7	82.4	82.4	83.9
21	82.0	81.4	81.4	80.6	80.0	80.1	80.0	80.4	80.8	81.0	81.0	81.5	81.5	82.3	82.6	84.8	86.4	85.7	84.4	83.7	83.3	83.0	82.9	82.6	82.2
22	82.6	82.6	82.1	82.9	82.8	83.1	83.9	85.0	84.7	86.1	86.4	86.1	86.9	86.5	86.3	87.7	85.7	85.1	85.0	84.7	84.2	83.1	83.3	83.0	84.6
23	83.3	83.3	83.4	83.7	83.5	83.9	84.0	84.9	84.4	84.8	86.2	86.9	88.0	87.7	86.6	84.9	84.1	84.6	83.5	83.0	82.5	82.8	82.3	82.0	84.4
24	81.9	83.2	82.5	82.7	83.2	83.3	84.0	84.1	84.9	85.8	85.9	84.3	84.4	84.2	84.1	83.8	83.6	82.8	82.8	82.0	82.9	82.8	82.3	82.0	83.0
25	83.3	82.8	82.8	82.8	83.1	83.4	85.0	86.4	87.7	88.9	88.1	87.5	89.2	89.4	89.1	89.0	90.6	90.3	89.4	87.6	86.3	86.5	86.4	85.9	86.7
26	85.0	84.1	83.9	83.6	84.5	86.2	87.9	88.4	89.0	89.8	90.5	91.0	90.8	89.2	87.1	88.0	88.5	89.3	89.4	88.4	84.0	83.5	83.2	82.8	87.1
27	83.3	83.1	82.6	82.4	82.6	82.4	83.9	84.8	84.7	84.1	83.9	84.8	85.9	86.4	86.2	85.9	86.6	86.5	86.8	85.7	85.4	84.7	84.3	84.3	84.6
28	84.6	85.0	84.5	84.1	84.5	85.1	83.7	83.9	85.3	85.9	85.3	85.6	84.9	85.4	86.0	84.6	85.3	84.9	84.4	83.9	83.1	82.4	82.2	81.7	84.5
29	81.4	81.2	81.3	81.0	80.8	81.3	81.8	82.3	82.5	83.3	83.9	84.2	84.7	85.0	85.3	85.1	84.5	83.1	83.8	82.6	81.2	81.0	81.0	81.0	82.7
30	81.0	80.8	81.1	81.1	81.2	81.4	82.2	82.6	82.9	83.3	83.4	83.5	83.5	83.9	85.0	85.8	87.1	86.6	86.8	86.4	84.8	82.5	81.6	80.9	83.3
31	80.4	81.4	81.5	81.9	82.4	82.1	82.6	82.4	81.6	81.6	82.3	82.8	83.6	84.0	83.6	82.9	82.7	82.7	82.4	82.2	81.9	81.8	81.7	81.5	82.2
Mean ...	80.7	80.5	80.2	80.2	80.3	81.0	81.8	82.4	83.0	83.5	83.7	83.9	84.2	84.1	84.0	83.9	83.7	83.4	83.1	82.6	81.9	81.6	81.3	81.1	82.3

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

June, 1929.

1	81.5	81.7	81.9	81.9	82.2	82.5	83.0	84.0	84.9	84.9	85.2	84.9	85.4	85.0	85.6	85.5	85.6	84.5	83.6	83.4	82.6	82.6	82.4	82.5	83.6
2	82.4	82.4	82.4	82.4	82.4	82.3	82.3	82.2	82.1	82.3	82.4	83.8	83.9	84.0	84.3	83.9	84.9	87.5	86.1	85.0	82.5	82.2	82.0	82.0	83.3
3	82.0	82.4	82.2	82.4	83.2	84.3	85.0	85.6	85.7	86.5	87.2	86.8	82.7	81.7	81.8	81.3	81.5	81.7	81.4	81.2	79.9	79.6	79.2	78.5	82.7
4	78.1	77.6	77.6	77.9	77.9	79.0	80.0	80.4	80.4	80.4	81.8	82.0	81.7	81.4	81.4	82.3	81.9	81.4	79.9	80.1	78.9	78.4	77.7	77.8	79.8
5	77.2	76.5	76.4	76.3	78.0	79.0	80.4	80.8	81.0	81.5	82.6	82.1	81.9	82.3	83.5	83.1	82.4	82.0	81.6	81.1	80.6	80.3	80.1	80.0	80.4
6	79.5	78.5	78.8	80.0	80.5	81.0	81.6	81.6	81.5	81.2	80.4	80.2	80.0	79.9	80.0	80.0	80.1	80.3	80.5	80.1	80.3	80.1	79.7	79.3	80.2
7	79.3	79.3	79.0	79.0	79.4	80.0	81.1	81.0	82.4	82.5	83.3	83.8	84.5	84.7	82.7	82.0	81.4	83.2	82.9	82.6	82.4	81.5	81.1	80.1	81.6
8	78.8	78.5	77.8	76.8	78.2	80.2	81.4	82.2	83.0	83.5	83.9	84.0	84.6	84.8	84.0	83.5	83.1	82.9	82.6	82.4	82.3	82.1	82.1	82.2	81.8
9	82.2	82.1	81.3	80.9	81.7	83.1	84.4	85.0	86.2	86.5	85.4	86.1	85.3	84.1	84.4	83.5	84.4	84.0	82.8	83.1	82.2	82.1	81.4	81.3	83.7
10	81.2	80.9	81.3	81.5	82.1	82.4	84.4	85.5	86.8	87.7	88.2	85.4	86.6	85.4	85.6	86.4	86.2	86.8	86.5	85.7	84.6	84.0	83.6	84.0	84.7
11	83.6	83.0	83.5	83.5	84.1	85.0	85.8	86.5	87.1	86.3	86.2	86.1	86.3	86.2	86.4	88.0	90.0	88.3	87.7	87.6	85.8	85.1	85.6	84.7	85.9
12	83.7	83.7	83.5	83.7	84.2	85.8	87.3	88.3	89.5	90.4	90.0	89.4	90.5	91.6	88.3	88.0	87.1	85.9	84.4	84.1	83.9	83.8			

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

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

July, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	a.																									
1	84.7	84.5	84.3	84.4	84.8	85.0	84.0	83.8	84.8	85.1	85.0	85.4	85.4	85.2	85.5	84.9	84.8	84.5	84.1	83.9	83.8	84.0	84.0	83.9	84.6	
2	84.0	83.9	84.1	83.6	83.8	84.2	84.8	85.6	87.0	87.3	86.0	85.5	85.9	85.5	86.0	86.8	88.7	90.0	88.7	87.8	87.2	86.5	86.1	85.2	86.0	
3	85.3	85.1	85.2	85.0	84.9	85.7	85.9	86.2	86.3	87.6	88.8	89.4	89.1	89.0	89.2	88.2	87.9	88.7	87.9	87.3	86.5	85.7	85.0	84.7	86.9	
4	83.9	83.1	83.3	83.9	83.2	83.3	83.6	84.0	84.1	83.7	83.8	84.2	84.8	84.3	84.5	84.5	84.6	84.2	84.0	83.9	83.9	84.0	83.9	83.9	83.9	84.0
5	83.9	83.8	83.3	83.6	83.7	83.8	83.7	83.6	83.2	83.4	83.7	83.8	84.8	84.0	84.0	84.0	83.9	83.5	83.4	83.2	83.1	83.0	82.8	82.5	83.6	
6	82.4	82.2	82.1	82.1	82.1	82.1	82.0	82.6	82.9	83.3	84.3	83.5	84.2	83.5	82.6	82.7	82.4	82.8	83.1	82.8	82.6	82.3	82.1	81.4	82.7	
7	81.6	81.5	81.3	82.1	81.9	82.7	82.9	82.5	83.9	84.5	84.3	84.5	84.4	83.7	84.4	84.1	84.3	84.0	84.6	83.8	82.3	81.4	80.1	80.1	83.0	
8	79.3	78.9	79.0	78.7	79.5	81.2	82.9	83.5	84.3	84.6	85.4	85.8	86.5	86.3	84.8	84.8	85.4	85.0	84.2	84.1	83.7	83.5	83.2	83.0	83.2	
9	82.5	81.5	81.1	81.5	82.5	84.4	86.6	88.1	89.1	88.6	88.0	88.1	88.3	89.1	88.5	87.1	87.2	87.4	87.3	87.2	86.8	86.3	86.3	86.3	86.2	
10	86.1	86.5	86.3	85.7	85.7	85.8	86.5	86.4	87.2	87.2	86.7	86.8	86.8	87.4	87.4	88.1	88.2	87.6	87.4	87.4	86.9	86.2	85.9	85.9	87.1	
11	88.7	88.4	88.2	88.1	87.6	87.9	88.2	87.9	89.0	89.7	89.6	89.3	88.4	88.2	88.6	87.4	89.4	90.1	91.2	90.8	87.2	85.2	84.5	84.6	88.3	
12	84.8	84.7	84.3	84.0	85.1	85.9	87.4	88.1	89.5	90.0	90.7	91.7	91.7	92.6	91.8	90.8	88.0	87.5	86.5	86.6	85.9	84.7	84.4	84.2	87.5	
13	83.1	83.2	84.5	84.1	84.4	85.1	86.8	87.5	89.1	89.1	89.2	91.4	88.9	87.4	87.1	86.4	87.5	87.9	87.9	87.0	86.5	85.4	85.0	84.7	86.6	
14	84.6	84.0	83.9	83.4	84.4	86.0	87.2	88.1	89.5	89.9	90.0	90.1	89.8	89.5	89.5	88.9	89.5	89.1	87.8	86.3	86.1	86.0	85.9	85.2	87.3	
15	84.5	84.1	83.8	83.2	84.1	86.2	87.2	89.1	89.3	89.6	90.0	89.6	89.9	89.7	90.1	89.6	89.5	88.9	88.2	87.3	86.8	86.6	86.4	86.1	87.5	
16	85.7	85.2	84.9	84.5	85.8	86.1	86.6	87.6	88.5	89.8	89.4	89.1	89.4	89.9	90.0	89.8	90.0	89.2	89.3	88.1	86.3	86.1	85.9	86.0	87.6	
17	84.8	85.7	85.6	86.0	85.8	86.6	86.7	87.0	87.5	87.8	87.9	88.1	87.8	88.2	88.4	88.9	87.2	87.3	87.4	86.8	86.9	86.5	86.4	86.3	87.0	
18	86.0	85.7	86.4	86.4	87.0	88.4	89.5	90.0	90.4	90.7	93.0	93.6	93.2	92.4	91.6	92.8	91.7	92.4	92.2	90.8	90.0	89.4	89.1	88.0	90.0	
19	87.9	87.6	87.4	87.4	87.9	88.1	88.2	89.0	90.4	91.6	92.4	93.0	92.9	92.2	91.1	91.0	90.2	90.3	90.5	89.1	88.1	88.1	88.5	88.4	89.6	
20	88.7	88.1	87.6	86.9	87.8	88.7	90.1	90.4	91.2	92.0	92.1	93.6	93.1	92.0	91.9	92.4	93.5	93.0	92.4	92.2	91.0	90.2	89.5	88.9	90.7	
21	88.8	87.8	86.8	86.3	87.0	88.1	89.3	90.1	91.5	92.2	91.6	93.4	92.9	92.4	92.5	92.4	91.6	91.1	90.4	89.5	88.2	88.0	87.6	87.6	90.0	
22	86.8	85.9	85.5	85.3	84.5	84.8	84.7	86.0	87.1	88.1	89.0	88.4	89.1	88.5	87.3	86.4	86.0	86.1	86.4	86.0	85.5	85.0	84.7	84.3	86.4	
23	83.8	83.4	81.9	81.6	82.2	83.0	84.9	86.0	86.9	88.1	88.1	89.0	91.3	91.3	91.9	92.8	93.6	93.2	92.7	90.1	88.3	87.5	87.2	86.9	87.7	
24	86.9	86.6	86.3	84.5	84.3	84.5	84.4	85.3	85.5	86.0	87.2	87.4	88.0	87.9	88.0	87.9	87.4	88.2	87.5	86.0	84.3	83.4	81.3	81.0	85.9	
25	81.1	80.5	79.9	79.6	79.7	81.6	84.0	85.1	86.4	87.3	87.7	88.4	87.1	86.9	86.7	86.3	87.0	86.6	86.1	85.9	85.5	84.7	83.9	84.2	84.6	
26	84.3	84.3	84.2	84.3	84.3	84.4	84.8	85.4	86.6	86.7	86.2	86.1	86.3	86.8	86.8	86.7	87.5	88.2	87.1	86.0	85.5	85.3	85.2	85.0	85.7	
27	84.8	84.2	82.4	81.7	81.6	82.9	84.4	85.7	86.9	87.5	88.5	89.0	88.9	88.3	89.6	89.9	88.4	88.1	88.2	87.6	87.4	87.4	87.4	87.4	86.6	
28	87.2	86.3	85.1	84.2	85.1	86.0	89.0	89.6	88.8	88.0	89.1	88.9	88.5	88.8	88.2	87.8	87.3	86.7	86.5	86.4	86.5	86.4	86.3	86.1	87.2	
29	86.1	86.1	85.9	85.9	86.0	86.4	86.8	87.1	87.7	88.0	88.7	89.5	89.2	87.9	88.0	88.9	88.8	88.8	88.9	88.2	87.4	87.1	86.7	86.5	87.5	
30	85.9	85.3	85.6	85.6	85.8	86.2	87.0	88.3	89.0	90.1	90.5	91.4	91.0	88.4	88.2	88.5	88.2	88.3	87.7	87.6	87.1	87.0	86.6	86.5	87.7	
31	86.1	86.0	85.8	85.3	84.7	85.3	86.4	86.5	87.0	87.3	87.6	86.9	86.0	85.9	85.6	85.5	85.6	85.5	85.5	85.4	85.3	85.1	85.2	85.3	85.9	
Mean ...	85.0	84.6	84.4	84.2	84.4	85.2	86.0	86.6	87.4	87.9	88.2	88.5	88.5	88.2	88.1	87.9	87.9	87.9	87.6	86.9	86.3	85.9	85.5	85.3	86.6	

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

August, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	85.3	85.4	85.5	85.5	85.5	85.3	85.7	85.8	86.6	86.5	86.0	85.1	85.4	85.7	84.3	84.9	84.6	85.5	83.4	83.0	82.7	82.1	82.0	81.9	84.8
2	81.6	81.6	81.3	81.3	81.2	81.4	83.1	83.7	84.6	85.7	85.3	86.4	87.0	87.6	88.3	87.4	86.9	86.7	87.1	86.3	85.7	84.7	84.4	83.9	84.7
3	83.7	84.0	83.7	83.6	83.2	84.1	84.1	84.2	84.1	84.2	84.1	85.0	85.7	86.6	87.3	89.2	91.3	90.4	89.4	88.7	87.7	87.3	87.3	87.1	86.2
4	86.6	86.2	86.7	86.3	86.7	87.4	88.3	88.4	86.6	86.8	86.6	86.5	86.4	84.9	83.8	83.5	83.2	83.1	83.1	83.4	83.0	82.4	81.8	81.5	85.2
5	81.0	80.9	80.4	81.1	80.9	81.7	82.8	83.2	84.1	85.0	85.2	86.5	87.3	85.9	85.1	86.7	86.6	87.0	86.0	85.5	84.6	84.1	83.6	82.5	84.1
6	81.7	81.1	80.0	79.7	79.4	80.3	81.6	83.7	85.3	85.9	85.9	85.7	86.4	85.9	84.9	84.7	84.2	84.3	84.3	83.9	83.6	83.7	84.0	84.1	83.5
7	84.0	84.0	83.7	83.2	83.0	83.0	84.1	85.0	85.7	86.0	86.7	87.4	87.4	87.6	87.3	87.2	86.9	86.4	86.1	85.9	85.4	85.1	84.9	84.7	85.4
8	84.5	84.2	84.0	84.0	84.0	84.1	85.1	86.7	87.1	87.7	87.7	87.5	87.5	87.4	88.3	87.8	87.9	88.2	87.8	87.0	86.5	86.0	85.6	85.3	86.3
9	84.8	84.6	84.8	84.7	85.2	85.9	86.8	88.0	89.2	89.8	89.8	89.8	90.2	90.6	91.1	91.2	90.9	88.5	88.6	87.7	87.6	87.5	87.0	86.9	87.7
10	87.1	86.5	86.3	85.9	85.9	86.7	88.4	88.2	89.3	90.7	90.9	92.2	92.1	91.3	90.9	91.2	90.6	90.2	89.8	89.5	88.5	87.6	87.1	87.1	88.9
11	86.9	86.7	86.6	86.6	86.1	85.9	85.5	86.0	86.8	87.4	89.3	89.8	88.0	88.7	89.9	89.1	89.0	88.1	87.8	87.6	86.5	85.7	85.2		

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

92. Aberdeen : North Wall Screen on Tower : h_t (height of thermometer bulb above ground) = 12.5 metres. September, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	87.2	87.0	86.8	86.8	86.5	86.9	87.4	87.9	89.2	89.1	90.3	90.5	91.2	91.6	91.5	91.0	90.1	89.0	87.7	86.5	85.6	85.5	85.1	84.9	88.2
2	84.4	84.3	84.4	84.9	84.4	85.4	85.7	86.8	87.5	88.4	88.9	89.2	89.6	89.0	88.5	88.0	87.1	86.8	85.9	85.3	84.1	83.5	83.6	83.7	86.3
3	83.7	83.5	83.5	83.4	83.5	83.5	83.9	84.2	84.9	85.0	85.2	85.6	85.7	86.0	85.8	85.9	85.7	85.5	85.2	85.1	85.1	84.9	84.8	84.9	84.7
4	85.1	85.2	85.3	85.4	84.9	84.9	85.6	86.5	87.7	87.8	86.7	86.6	86.3	86.0	86.0	85.8	85.8	85.4	85.5	85.4	85.5	85.5	85.5	85.5	85.8
5	85.5	85.5	85.3	85.4	85.5	85.4	85.6	86.6	87.7	88.1	89.0	90.0	88.1	87.8	88.2	87.8	87.5	87.5	87.0	86.4	85.1	84.4	84.1	84.0	86.6
6	84.0	83.9	83.9	83.7	83.4	82.8	83.5	84.2	84.9	85.3	86.0	86.1	85.5	85.3	85.5	85.6	85.3	85.0	84.6	84.4	84.5	84.4	84.3	84.2	84.6
7	84.3	84.4	84.6	84.8	84.9	85.1	85.6	86.4	87.9	88.9	90.0	93.1	93.3	94.1	96.6	94.3	90.7	90.2	89.4	89.4	88.7	89.0	89.0	88.6	88.8
8	88.5	89.0	88.0	87.2	86.6	87.1	87.4	89.4	90.7	92.7	93.9	95.1	96.5	97.1	97.2	97.2	95.9	94.3	93.0	91.5	90.2	89.7	89.1	89.3	91.5
9	88.4	87.9	86.4	86.1	85.7	85.4	85.7	85.9	86.5	87.1	87.6	88.2	88.5	88.9	89.1	89.0	88.3	87.5	86.7	85.9	85.1	84.6	84.5	84.5	86.9
10	83.7	83.0	82.7	82.9	83.1	83.4	84.1	85.1	85.9	86.5	86.4	86.7	87.5	87.3	87.2	86.8	86.5	86.3	85.9	85.6	85.3	84.9	84.6	84.1	85.2
11	83.7	83.4	82.5	82.6	81.9	81.9	83.2	85.0	87.4	88.4	88.9	89.7	89.7	88.8	87.8	87.9	88.1	87.5	87.8	86.9	86.5	86.4	86.4	86.2	86.1
12	86.6	86.6	86.2	86.2	86.2	86.2	86.8	87.7	89.1	90.2	90.1	90.7	91.1	92.2	93.0	91.9	91.2	86.5	85.7	85.3	84.9	83.9	83.2	82.2	87.7
13	81.8	81.2	80.5	79.8	79.0	79.1	81.2	83.7	85.5	86.6	87.1	87.0	87.7	88.0	88.7	87.7	87.2	86.6	86.0	85.5	85.1	84.5	84.1	84.4	84.5
14	83.8	83.0	83.0	83.5	84.0	84.4	84.7	84.8	85.2	86.0	87.4	87.5	87.3	87.3	88.0	88.4	88.0	86.6	85.6	85.7	85.7	85.5	84.5	84.1	84.1
15	82.9	82.5	81.8	81.5	81.0	81.6	81.8	83.6	86.4	88.3	89.3	88.7	89.9	91.0	90.9	90.8	88.8	88.8	87.9	86.5	85.0	84.1	83.2	82.3	85.9
16	81.1	80.4	79.6	80.4	80.5	80.8	80.9	82.4	87.3	85.3	86.3	86.9	87.0	86.6	86.2	86.1	85.8	85.4	85.0	84.7	84.3	84.1	83.4	83.6	83.8
17	83.1	82.4	82.0	82.0	82.2	82.2	83.1	83.7	85.3	86.1	87.4	88.6	89.4	89.5	90.0	90.0	89.5	88.4	87.9	87.2	86.9	86.6	86.0	85.6	86.0
18	84.6	84.3	83.9	83.6	83.5	83.1	84.3	86.0	87.4	89.6	88.9	88.5	87.9	86.6	86.6	86.7	86.2	84.9	84.2	83.2	82.7	82.7	82.4	82.0	85.2
19	81.9	81.8	81.9	82.1	81.4	81.5	82.5	83.5	83.4	83.1	83.7	84.2	85.5	87.0	86.6	88.3	87.4	86.8	86.1	86.6	86.0	84.7	83.6	83.7	84.3
20	84.5	83.5	83.5	82.9	82.4	82.0	81.9	82.2	82.6	82.8	82.8	82.2	82.9	83.0	82.4	82.3	82.1	81.0	80.4	80.2	80.1	79.9	79.8	79.3	82.1
21	80.1	80.1	80.1	80.5	79.8	80.5	81.0	83.1	85.6	87.4	87.7	87.8	87.0	86.3	86.1	85.7	84.4	83.5	82.9	82.6	82.6	82.6	82.3	82.1	83.3
22	82.2	82.4	82.4	82.5	81.9	80.6	81.9	83.5	84.5	85.0	85.8	86.2	86.2	86.1	86.6	86.0	85.0	83.9	83.9	84.1	84.1	84.9	85.4	85.7	84.1
23	85.2	86.0	85.7	84.9	84.8	84.3	86.0	87.1	88.9	89.1	90.7	90.6	91.3	91.3	91.7	91.3	90.1	89.1	88.1	87.2	87.0	86.9	86.7	86.2	87.9
24	85.8	85.9	86.0	85.9	85.4	85.0	86.5	88.2	89.4	90.6	91.7	91.3	92.4	92.1	92.1	91.5	90.4	89.1	87.9	87.3	86.9	86.4	85.8	85.5	88.3
25	85.1	85.1	84.9	84.9	85.0	85.0	85.8	86.7	88.4	88.5	88.9	89.6	90.2	90.4	90.4	89.5	88.7	87.7	87.4	86.7	86.5	86.3	86.1	85.9	87.2
26	85.6	85.5	85.5	85.2	85.3	85.0	85.9	86.4	86.5	87.2	87.8	88.9	89.5	89.6	89.7	89.6	88.6	88.5	88.1	87.4	87.7	87.1	86.9	86.5	87.2
27	86.0	86.1	86.0	86.3	86.2	85.8	86.4	86.3	86.7	88.1	84.1	84.6	85.0	84.9	84.5	84.2	84.3	84.4	84.5	84.7	84.8	84.6	85.2	85.8	85.4
28	85.8	85.7	85.5	85.0	84.9	85.0	85.2	85.9	86.3	86.8	87.1	87.9	89.6	88.9	88.5	88.3	87.4	86.4	85.2	84.5	83.9	83.8	83.6	82.1	86.1
29	82.3	82.1	82.4	82.2	81.2	81.2	80.9	81.5	82.9	84.9	85.9	86.3	87.3	87.5	86.8	86.3	86.0	84.4	83.5	82.6	81.8	81.4	81.0	81.2	83.5
30	81.2	81.4	81.5	82.4	82.9	82.4	82.1	82.2	82.5	83.9	84.9	85.0	85.7	85.7	85.1	85.3	83.9	82.4	81.4	79.8	79.1	78.0	79.5	78.2	82.4
Mean ...	84.3	84.1	83.9	83.8	83.6	83.6	84.2	85.2	86.4	87.2	87.7	88.1	88.5	88.5	88.6	88.3	87.6	86.6	86.0	85.5	85.0	84.7	84.5	84.2	85.8

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

October, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	78.5	78.6	77.3	77.2	77.3	78.5	77.8	79.3	81.1	82.6	84.1	84.8	85.3	85.6	85.1	84.4	84.0	83.9	81.9	82.0	82.1	82.8	83.0	83.2	81.6
2	83.2	82.9	82.9	83.0	82.4	81.5	81.8	82.9	83.4	84.6	84.7	85.4	85.8	85.4	85.2	84.5	83.4	82.4	81.6	81.0	80.5	80.8	80.5	80.4	83.0
3	79.7	79.5	79.1	78.7	79.1	79.5	80.2	80.9	81.1	82.8	83.8	84.0	83.9	84.2	83.6	83.5	84.2	83.2	82.5	81.6	81.2	80.9	80.7	80.3	81.6
4	79.9	79.5	79.3	79.1	79.0	78.7	79.1	80.1	80.5	80.9	81.3	80.9	82.2	82.0	82.0	80.2	79.9	79.1	77.8	77.1	76.5	75.2	74.7	74.1	79.3
5	74.3	74.2	74.3	74.8	75.1	76.0	80.0	80.4	78.6	79.8	80.9	81.3	81.7	81.8	82.6	80.7	80.9	80.7	80.8	83.2	83.6	83.3	82.9	82.7	79.6
6	82.9	82.5	83.7	83.4	84.2	84.6	84.7	84.2	83.8	83.7	83.1	82.6	82.0	81.6	81.3	80.7	80.1	80.2	80.1	79.7	79.5	79.2	78.9	78.9	82.0
7	79.3	79.8	81.1	81.0	81.4	81.5	81.6	82.0	82.1	82.1	82.2	82.6	83.7	84.0	84.9	84.1	83.1	81.6	81.1	80.8	80.3	80.4	80.3	80.2	81.7
8	79.6	79.3	79.0	79.1	79.4	78.7	78.4	79.7	80.8	80.9	81.0	81.0	81.1	81.4	81.6	81.4	80.8	79.3	78.4	78.8	78.2	77.7	77.4	78.1	79.6
9	79.5	80.6	80.9	80.9	79.8	79.3	79.2	79.6	80.1	80.2	80.8	81.5	81.5	81.3	81.1	80.6	80.0	79.8	79.7	79.6	79.1	80.1	79.8	79.8	80.1
10	79.7	80.1	80.3	81.0	83.2	82.5	83.5	83.4	83.6	84.5	85.0	85.7	87.4	86.5	86.0	85.5	84.8	84.7	84.5	84.5	86.1	85.5	84.3	83.8	83.9
11	83.5	83.6	83.2	83.0	82.6	82.2	82.5	83.1	83.7	84.5	85.0	85.1	84.4	85.5	85.2	84.3	83.9	83.4	82.5	82.4	82.1	81.5	81.1	81.8	83.4
12	81.6	81.6	81.5	82.0	81.6	81.9	82.4	82.6	83.3	84.6	85.5	85.8	87.9	88.6	88.4	87.9	86.9	86.1	86.2	86.1	86.0	85.9	85.8	86.3	84.8
13	86.4																								

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

94. Aberdeen : North Wall Screen on Tower : h₁ (height of thermometer bulb above ground) = 12.5 metres. November, 1929.

Table with 25 columns (1-24) and 1 Mean column. Rows represent hours from 1 to 30. Each cell contains a temperature reading in degrees absolute. The 'Mean' row at the bottom shows the average for each hour.

95. Aberdeen : North Wall Screen on Tower : h₁ = 12.5 metres.

December, 1929.

Table with 25 columns (1-24) and 1 Mean column. Rows represent hours from 1 to 31. Each cell contains a temperature reading in degrees absolute. The 'Mean' row at the bottom shows the average for each hour.

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

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

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

1929.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
a.	79.83	79.68	79.58	79.49	79.52	79.75	80.16	80.64	81.19	81.71	82.13	82.45	82.68	82.72	82.61	82.37	82.08	81.74	81.37	80.98	80.64	80.36	80.18	80.00	80.99

TEMPERATURE : MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

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

1929.

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.	275.34	a.	-0.64	-0.47	-0.41	-0.34	-0.32	-0.36	-0.45	-0.37	-0.18	+0.16	+0.45	+0.80	+1.06	+1.08	+0.75	+0.48	+0.26	+0.01	-0.03	-0.08	-0.20	-0.38	-0.34	-0.49
Feb.	274.97	a.	-0.26	-0.39	-0.39	-0.46	-0.63	-0.85	-0.80	-0.59	-0.36	-0.17	+0.26	+0.44	+0.71	+0.88	+0.84	+0.70	+0.57	+0.34	+0.29	+0.18	+0.07	-0.04	-0.18	-0.22
Mar.	278.86	a.	-1.38	-1.65	-1.73	-1.83	-2.14	-2.36	-2.22	-1.48	-0.44	+0.82	+1.69	+2.09	+2.48	+2.55	+2.57	+2.34	+1.89	+1.18	+0.49	-0.05	-0.23	-0.62	-0.85	-1.07
April	278.19	a.	-1.26	-1.51	-1.61	-1.71	-1.78	-1.32	-0.70	+0.15	+0.68	+0.97	+1.16	+1.38	+1.28	+1.62	+1.77	+1.48	+1.47	+1.05	+0.45	-0.24	-0.60	-0.82	-0.91	-1.11
May	282.33	a.	-1.56	-1.76	-2.02	-2.09	-1.98	-1.28	-0.47	+0.13	+0.66	+1.22	+1.42	+1.59	+1.82	+1.77	+1.68	+1.52	+1.31	+1.04	+0.69	+0.15	-0.48	-0.82	-1.17	-1.38
June	284.29	a.	-1.87	-2.17	-2.39	-2.47	-1.89	-1.06	-0.28	+0.22	+0.77	+1.13	+1.45	+1.52	+1.98	+2.06	+1.85	+1.81	+1.40	+1.27	+0.77	+0.20	-0.43	-1.03	-1.32	-1.57
July	286.61	a.	-1.60	-1.96	-2.21	-2.45	-2.18	-1.44	-0.56	+0.04	+0.80	+1.29	+1.60	+1.94	+1.86	+1.59	+1.45	+1.33	+1.30	+1.27	+0.97	+0.33	-0.28	-0.76	-1.09	-1.35
Aug.	286.34	a.	-1.66	-1.93	-2.09	-2.34	-1.75	-0.95	-0.09	+0.62	+1.19	+1.53	+1.95	+2.17	+2.30	+2.17	+1.82	+1.49	+1.18	+0.66	+0.14	-0.42	-0.95	-1.20	-1.45	
Sept.	285.85	a.	-1.72	-1.88	-2.09	-2.12	-2.34	-1.69	-0.68	+0.50	+1.35	+1.82	+2.26	+2.65	+2.72	+2.77	+2.50	+1.79	+0.87	+0.25	-0.28	-0.71	-1.03	-1.23	-1.49	
Oct.	281.26	a.	-0.92	-0.98	-0.98	-1.08	-1.09	-1.19	-1.04	-0.72	-0.28	+0.53	+1.17	+1.60	+2.01	+2.02	+1.82	+1.27	+0.76	+0.30	-0.20	-0.32	-0.47	-0.56	-0.83	
Nov.	279.10	a.	-0.62	-0.54	-0.56	-0.61	-0.60	-0.64	-0.62	-0.66	-0.32	+0.09	+0.71	+1.11	+1.19	+1.22	+1.01	+0.74	+0.48	+0.25	+0.09	-0.13	-0.37	-0.43	-0.36	
Dec.	278.33	a.	-0.45	-0.51	-0.42	-0.46	-0.34	-0.28	-0.26	-0.21	-0.17	-0.03	+0.35	+0.66	+0.90	+0.89	+0.67	+0.43	+0.21	+0.15	-0.01	-0.12	-0.19	-0.20	-0.26	
Year	280.99	a.	-1.16	-1.31	-1.41	-1.49	-1.47	-1.24	-0.84	-0.35	+0.19	+0.71	+1.13	+1.45	+1.68	+1.73	+1.61	+1.37	+1.08	+0.74	+0.37	-0.02	-0.36	-0.64	-0.81	

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

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

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

1929.

Month	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
Day.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	77.2	74.0	79.2	78.0	75.5	70.6	80.2	74.8	82.3	72.5	85.9	81.4	85.9	83.7	86.7	81.9	91.9	84.7	85.8	76.4	82.9	77.8	81.1	77.0
2	74.7	71.3	80.4	78.3	80.5	74.7	79.8	74.9	80.3	74.3	87.6	82.0	90.1	83.6	88.8	81.0	89.7	83.3	86.0	80.2	83.3	78.3	82.6	76.8
3	75.9	71.0	79.0	77.8	81.6	76.3	81.0	75.8	80.9	72.9	87.4	78.3	89.6	84.7	92.0	83.2	86.2	83.3	84.6	78.5	81.4	75.7	81.6	76.5
4	73.7	69.3	83.6	78.1	78.5	76.1	82.0	76.6	83.0	78.1	82.4	76.8	85.0	82.5	88.6	81.5	88.0	84.8	82.3	74.1	84.4	77.2	81.9	78.5
5	77.1	72.4	80.4	76.3	80.2	77.5	79.7	75.7	83.9	77.7	83.6	76.1	84.2	82.5	88.1	80.3	90.1	84.0	83.7	73.9	85.4	80.9	82.6	80.3
6	77.8	76.1	78.7	75.1	81.6	76.4	83.6	74.4	80.8	75.3	81.7	78.2	84.4	81.4	86.5	79.2	86.5	82.6	84.8	78.7	82.4	77.7	82.4	78.8
7	77.6	71.7	77.4	75.2	83.9	73.2	85.0	75.4	85.8	78.2	85.0	78.9	85.6	79.4	87.9	82.7	96.8	84.2	85.0	78.9	83.0	74.6	80.5	77.6
8	75.5	70.2	78.9	75.3	84.3	72.0	84.0	79.1	84.0	76.2	84.9	76.7	86.7	78.2	88.4	83.8	97.4	85.8	82.3	77.4	85.1	75.2	80.0	75.3
9	76.8	74.3	79.1	75.3	83.4	72.8	81.0	77.4	83.1	76.3	87.0	80.8	89.5	80.7	89.5	80.7	89.3	83.3	81.8	78.1	79.2	75.0	78.6	74.8
10	78.2	76.4	77.8	73.0	81.6	73.7	81.5	78.1	86.3	80.1	88.3	80.7	89.3	85.6	92.5	85.7	88.0	82.6	87.9	79.8	79.5	74.8	78.6	75.2
11	77.4	76.3	75.4	72.9	85.2	73.3	80.4	77.4	87.8	82.8	90.0	82.9	91.7	84.4	90.4	84.7	90.3	81.5	85.9	81.0	83.8	74.9	79.6	75.3
12	76.5	73.6	73.5	71.1	82.9	75.0	80.1	77.1	86.4	79.8	91.6	83.1	92.8	83.8	91.3	83.3	93.1	82.2	88.6	81.0	79.1	73.3	80.1	76.0
13	77.9	73.5	72.6	68.7	79.7	73.2	79.2	76.5	84.5	78.1	90.2	83.1	91.4	82.8	88.4	82.7	89.1	78.5	88.0	83.9	77.7	73.1	84.7	76.0
14	78.0	74.3	73.2	66.4	79.0	72.0	79.2	74.5	83.2	79.6	88.6	82.9	90.3	83.0	91.7	83.3	88.5	82.9	90.9	79.7	77.4	71.3	81.1	78.3
15	78.0	72.3	73.7	70.2	79.2	74.3	79.5	77.0	85.3	80.6	90.2	81.5	90.3	83.0	90.4	82.1	91.3	80.7	83.8	77.1	77.4	70.8	79.1	76.5
16	73.6	70.3	72.8	67.8	77.6	75.3	81.0	77.0	86.2	80.1	91.2	82.8	90.6	84.4	87.6	82.8	87.1	79.5	85.3	83.8	76.8	70.9	79.0	74.9
17	73.7	67.9	74.8	68.1	76.8	72.3	84.1	76.4	82.4	79.1	90.6	83.1	88.9	85.5	86.0	84.0	90.2	81.7	85.3	79.2	77.6	72.8	77.2	74.4
18	78.0	68.8	75.6	73.0	77.2	74.7	88.9	81.8	83.1	78.7	92.1	83.8	94.0	85.7	86.6	80.9	90.0	82.0	84.2	79.2	79.0	70.8	81.1	76.0
19	80.6	75.8	75.2	74.4	77.3	75.3	83.2	76.0	89.4	81.4	85.3	93.2	87.3	89.1	80.8	88.3	81.3	82.6	79.9	83.6	77.7	70.8	80.6	78.7
20	80.1	76.1	76.2	74.1	79.3	75.2	78.3	73.8	87.0	81.9	89.7	82.7	94.0	86.8	89.4	83.4	84.7	79.2	83.4	79.4	83.9	80.6	79.3	75.6
21	78.0	74.5	77.5	75.6	84.6	78.9	80.1	74.2	86.8	79.7	87.6	81.9	93.4	86.2	92.3	85.6	88.0	79.2	84.1	81.5	82.5	79.9	78.1	72.3
22	78.0	76.2	80.7	74.9	85.3	76.6	82.8	74.0	87.7	82.1	90.4	82.9	89.6	84.3	90.8	84.0	86.7	80.5	84.2	78.5	83.3	81.6	79.3	72.0
23	78.1	73.8	77.3	75.0	86.2	75.8	80.5	74.4	88.2	82.0	86.2	80.5	93.6	81.5	91.9	83.2	91.9	84.3	84.4	81.2	83.1	80.6	80.1	77.2
24	77.2	73.4	77.1	72.9	87.9	80.3	79.2	73.4	86.2	81.7	84.9	79.8	88.5	80.6	90.5	81.4	92.4	84.4	83.5	75.8	82.2	78.3	79.6	76.8
25	76.4	73.8	73.3	71.2	85.6	78.7	79.1	73.1	91.1	82.5	84.8	81.0	88.5	79.5	89.5	83.7	90.6	84.6	80.2	73.2	83.2	77.7	80.3	74.9
26	75.2	72.1	72.8	70.5	85.1	76.1	79.0	72.4	91.3	82.7	87.5	81.8	88.4	84.1	88.5	83.1	89.7	84.9	80.7	72.1	80.5	78.0	79.4	77.1
27	74.7	71.4	73.5	71.8	88.8	77.4	76.6	81.3	87.0	82.2	86.6	81.4	90.3	81.5	91.3	84.7	88.3	84.1	79.9	74.1	79.1	76.3	79.1	74.5

RELATIVE HUMIDITY.

Percentages at exact hours, Greenwich Mean Time.

99. Aberdeen : North Wall Screen on Tower : h_1 (height of thermometer bulbs above the ground) = 12.5 metres. January, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	78	77	77	76	75	78	82	85	87	85	87	85	87	87	88	87	88	87	82	84	81	84	87	85	83.2	6.3	
2	89	86	86	86	87	87	87	88	88	87	85	84	80	80	81	84	85	90	90	90	90	91	92	92	86.7	5.3	
3	92	92	93	93	94	94	95	93	90	80	73	70	69	70	70	72	69	71	71	74	75	77	79	80	80.5	5.2	
4	81	84	85	84	83	85	85	83	82	80	76	75	76	71	69	76	77	78	79	85	87	84	79	80	80.2	4.3	
5	82	85	86	90	92	93	94	95	96	96	94	91	89	78	85	78	69	69	68	66	66	64	66	65	81.9	5.7	
6	69	75	80	78	66	70	72	73	76	71	79	67	70	77	70	82	79	80	70	74	71	75	70	73	73.5	6.0	
7	70	75	80	87	90	88	91	93	85	74	76	74	81	82	90	91	94	92	94	94	94	94	94	94	86.1	6.3	
8	94	94	94	94	94	94	94	93	93	93	93	92	92	92	93	91	87	82	75	77	75	78	75	75	88.6	5.5	
9	80	80	85	80	78	80	79	80	77	80	73	76	73	85	91	94	93	91	91	93	95	93	93	93	84.3	6.2	
10	90	93	90	90	89	90	89	90	89	87	80	77	78	77	82	82	87	90	76	74	71	74	75	75	83.5	7.0	
11	70	73	72	72	72	66	69	75	69	73	70	67	70	72	79	76	80	76	78	72	72	78	79	81	78.3	5.8	
12	83	84	84	85	85	85	86	84	82	82	82	80	80	76	78	77	77	80	77	82	82	76	73	76	80.8	5.9	
13	78	78	78	75	77	78	83	83	82	84	86	84	82	97	93	90	82	80	85	82	80	80	85	85	83.0	6.3	
14	89	90	90	80	88	88	85	85	88	90	91	85	88	86	85	89	89	84	77	75	76	80	80	79	84.9	6.1	
15	82	82	84	79	83	84	82	91	84	82	91	82	80	89	90	81	83	81	76	74	85	88	83	90	83.4	5.9	
16	90	90	90	90	89	88	86	85	86	86	86	87	88	88	88	88	87	87	86	86	85	82	81	81	86.9	5.0	
17	81	79	78	77	77	81	83	83	84	84	78	77	76	75	76	80	84	87	87	84	82	84	82	85	80.9	4.5	
18	87	89	89	88	87	83	81	80	82	85	87	82	84	81	87	92	92	93	90	87	92	91	82	82	86.4	6.2	
19	84	82	84	86	87	92	93	92	87	87	86	80	82	85	93	91	92	92	92	92	96	93	90	87	88.5	7.8	
20	95	93	89	92	88	93	93	90	88	88	88	88	86	83	81	78	78	82	80	83	85	85	82	83	86.4	7.9	
21	84	84	83	78	75	82	84	85	88	91	92	88	87	86	89	89	84	81	79	79	78	81	76	78	83.5	6.7	
22	77	77	77	79	79	77	76	73	82	78	80	77	76	76	78	78	76	79	82	82	74	83	85	87	78.5	6.5	
23	85	85	83	88	88	83	77	76	80	73	75	74	77	79	85	85	87	85	89	89	92	89	83	87	83.1	6.2	
24	87	87	88	90	89	87	91	89	91	87	88	85	82	68	80	87	89	89	87	89	91	94	94	91	87.4	6.1	
25	89	94	94	92	92	90	85	87	89	89	90	93	88	93	91	85	87	85	87	79	85	79	80	83	88.0	6.1	
26	85	85	90	89	91	94	94	92	90	92	92	89	85	80	80	83	87	88	89	89	90	89	89	85	88.2	5.8	
27	84	83	82	82	84	86	84	83	85	85	84	86	89	90	89	87	89	87	90	87	87	87	84	84	85.8	5.2	
28	86	84	82	82	83	84	86	87	87	82	74	74	70	69	67	78	83	87	88	88	90	90	90	90	82.4	4.1	
29	85	88	89	88	87	90	88	90	87	87	82	82	84	85	88	90	90	90	92	95	97	94	94	94	89.1	7.0	
30	95	95	96	96	97	97	98	99	97	97	96	91	92	91	92	87	87	94	92	89	91	92	91	91	93.5	9.5	
31	90	93	91	93	94	96	96	96	94	94	94	96	96	94	96	96	98	98	100	99	99	100	100	100	95.8	9.8	
Mean ...	84.2	85.0	85.5	85.1	85.2	85.8	86.2	86.3	85.9	84.8	84.3	81.9	82.2	82.0	84.0	84.6	84.9	84.9	83.8	83.7	84.2	84.7	83.7	84.2	84.5	6.2†	
Vapour Pressure*	mb. 5.8	mb. 5.9	mb. 6.0	mb. 6.1	mb. 6.1	mb. 6.2	mb. 6.3	mb. 6.3	mb. 6.4	mb. 6.4	mb. 6.4	mb. 6.3	mb. 6.3	mb. 6.2	mb. 6.1	mb. 6.0	mb. 6.0	mb. 6.0	mb. 5.9	mb. 5.9	mb. 6.1†						

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

February, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure.*	
1	100	100	100	99	99	96	93	96	96	94	94	94	96	94	97	94	95	95	96	96	100	100	97	96	96.6	8.8	
2	96	96	96	96	99	96	97	97	96	93	93	91	91	91	90	93	94	96	96	96	93	94	94	94	94.5	9.0	
3	96	96	97	97	96	94	96	94	94	94	94	92	92	94	92	92	92	92	92	92	92	92	94	95	95	94.1	8.4
4	96	94	96	94	94	94	94	94	94	85	82	80	70	70	75	73	77	80	81	77	81	78	81	81	84.5	8.5	
5	83	87	87	86	87	85	85	82	82	86	84	80	78	79	82	83	87	86	83	87	87	85	87	90	84.3	7.7	
6	90	91	89	91	89	91	90	87	85	86	83	83	83	83	87	89	92	92	92	90	92	92	92	90	88.7	7.3	
7	92	92	92	92	85	82	80	80	80	82	80	82	80	83	82	83	82	82	82	82	83	82	82	85	84	83.8	6.6
8	84	83	82	88	90	90	90	95	92	94	92	92	90	89	88	91	92	94	94	96	96	92	90	90	90.5	7.6	
9	90	88	92	87	88	84	83	84	85	85	80	74	67	69	75	81	84	84	75	69	75	78	80	83	81.0	6.6	
10	83	86	85	87	89	89	94	94	90	82	74	73	68	70	70	74	88	90	82	82	78	78	77	77	81.8	6.2	
11	77	75	75	78	73	74	71	67	67	68	64	62	61	60	59	59	59	57	58	57	56	56	56	55	64.8	4.2	
12	54	52	55	60	73	70	65	59	57	50	76	85	85	72	68	69	62	80	75	62	61	63	68	56	65.7	3.9	
13	65	72	71	66	71	72	72	76	72	64	75	74	70	71	67	67	66	84	69	77	83	84	82	76	73.0	4.0	
14	75	86	88	88	86	86	78	70	67	65	72	77	70	72	81	74	72	71	68	67	54	53	54	58	72.5	3.8	
15	62	72	76	83	80	80	87	78	79	79	74	85	87	69	79	82	85	86	89	87	88	87	90	89	80.7	4.6	
16	74	81	80	73	88	87	75	69	73	86	80	76	70	77	81	78	74	73	72	75	83	84	85	85	78.4	4.1	
17	84	83	84	83	84	84	84	88	91	91	90	86	84	84	85	86											

Percentages at exact hours, Greenwich Mean Time.

101. Aberdeen : North Wall Screen on Tower : h_t (height of thermometer bulbs above the ground) = 12.5 metres. March, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure.*
Day. 1	78	80	82	82	81	82	82	82	80	78	77	77	75	73	70	72	71	71	73	76	74	76	78	78	77.0	mb. 4.8
2	78	82	80	80	82	84	88	80	83	78	76	81	81	60	62	61	65	74	73	78	76	76	76	80	76.1	6.2
3	83	83	83	83	84	86	88	92	89	76	74	76	75	75	71	75	75	80	88	90	96	93	94	92	83.1	8.0
4	93	92	92	85	78	77	81	82	77	79	72	69	69	71	71	74	77	78	80	79	86	89	89	89	79.8	6.7
5	87	86	87	90	92	87	87	86	86	80	76	72	70	71	69	71	72	79	81	84	86	88	89	85	81.8	7.6
6	83	81	81	83	83	83	81	86	83	79	79	79	75	73	69	69	74	76	83	85	84	84	85	88	80.2	7.8
7	87	89	91	88	90	89	92	87	88	79	67	71	65	80	79	72	78	84	84	92	96	93	93	96	84.4	7.0
8	96	94	92	90	96	84	83	85	80	78	66	61	52	44	43	50	70	79	81	79	81	70	72	72	75.7	6.3
9	77	80	92	86	84	83	81	81	81	79	77	61	61	58	61	55	62	69	74	78	83	84	91	89	75.8	6.3
10	82	87	83	82	82	81	80	77	77	79	72	74	72	80	82	82	84	82	82	88	89	85	87	88	81.6	6.5
11	87	87	84	82	87	86	85	85	76	77	77	73	64	57	56	56	61	66	65	70	83	88	88	88	76.2	7.1
12	90	90	86	85	86	89	90	90	88	84	80	74	72	71	67	68	73	76	86	80	84	85	89	89	82.1	8.4
13	89	91	91	91	90	89	87	89	82	69	78	82	86	86	89	88	88	89	90	92	93	97	97	97	88.2	7.0
14	95	96	93	94	94	94	94	94	93	93	93	89	87	87	87	90	89	90	90	93	90	91	91	91	91.7	6.8
15	93	94	96	93	94	94	93	93	93	92	88	86	83	79	82	87	84	82	86	85	83	80	82	82	87.9	7.4
16	82	84	85	87	87	87	87	88	85	85	84	84	84	84	85	87	87	87	89	88	89	91	93	94	86.5	6.8
17	96	96	95	96	94	94	96	98	96	94	93	95	93	92	90	92	93	93	95	96	94	94	94	94	94.3	6.8
18	96	96	96	96	96	96	96	94	96	96	96	90	90	88	90	92	90	90	90	92	92	92	90	90	93.0	7.1
19	91	90	88	89	89	89	89	87	88	85	85	85	82	80	84	84	88	87	87	88	88	90	91	93	87.3	6.7
20	91	93	93	94	96	94	96	96	96	93	93	90	89	90	86	89	89	89	87	90	90	93	87	84	91.4	7.5
21	86	86	83	79	87	88	88	89	91	89	93	94	91	89	87	92	94	96	96	97	98	98	96	98	90.7	10.3
22	96	96	96	98	97	97	92	93	86	83	79	65	63	60	57	54	56	60	65	69	68	71	69	72	77.3	8.6
23	77	78	80	82	83	85	83	76	67	61	54	55	61	53	57	63	70	76	78	68	72	69	71	76	70.5	7.7
24	76	75	78	78	80	81	80	76	67	72	68	66	54	57	53	50	70	70	75	76	78	85	86	86	71.0	9.3
25	86	86	86	88	89	88	84	74	66	66	58	58	50	49	47	49	53	57	64	69	68	73	70	71	69.0	8.1
26	78	79	73	77	77	77	76	72	62	72	63	73	81	83	83	82	79	75	77	74	74	77	79	79	75.7	7.8
27	78	78	75	69	70	74	70	67	57	49	59	61	46	72	74	76	75	79	84	86	72	70	73	75	70.5	8.1
28	78	81	80	83	83	83	80	79	68	69	68	65	65	63	63	62	67	81	86	88	87	86	85	85	77.0	8.0
29	87	90	85	86	85	84	83	81	74	61	55	58	58	57	56	56	62	69	72	74	73	73	71	71	71.4	8.5
30	70	72	79	77	77	80	80	72	67	62	65	60	60	60	60	65	67	63	65	66	44	50	57	57	65.9	8.2
31	67	67	59	66	71	59	57	59	60	50	48	39	38	46	44	51	48	57	61	65	65	67	69	69	57.5	6.1
Mean ...	84.9	85.8	85.3	85.1	85.9	85.3	84.7	83.6	80.4	77.0	74.6	73.1	70.7	70.6	70.1	71.4	73.9	77.3	79.9	81.7	81.5	82.5	83.4	83.8	79.7	7.4†
Vapour Pressure* ...	mb. 7.1	mb. 7.0	mb. 7.0	mb. 6.9	mb. 6.8	mb. 6.7	mb. 6.7	mb. 7.0	mb. 7.2	mb. 7.5	mb. 7.8	mb. 7.7	mb. 7.6	mb. 7.5	mb. 7.4	mb. 7.3	mb. 7.3	mb. 7.3	mb. 7.4†							

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

April, 1929.

1	73	76	72	74	81	85	84	77	80	66	85	87	84	67	62	83	72	75	89	89	89	87	84	85	79.1	mb. 6.5
2	85	82	80	81	85	88	90	80	79	65	72	66	60	64	52	55	62	63	75	85	83	87	85	85	75.4	6.4
3	80	80	82	85	87	87	79	74	75	71	71	81	84	68	64	62	63	69	74	80	79	82	82	84	77.1	6.7
4	88	87	85	79	80	80	87	76	75	86	87	91	82	81	91	82	87	91	88	90	90	91	83	85	85.9	8.1
5	90	84	87	88	87	88	85	78	72	70	65	60	57	60	62	69	71	71	75	79	79	77	75	71	75.3	6.6
6	73	74	80	80	82	83	82	81	72	64	68	68	65	66	64	64	63	78	84	84	85	84	84	84	75.2	7.2
7	81	82	81	85	87	87	82	80	71	73	64	63	58	74	74	80	83	88	90	91	93	93	94	94	81.7	8.4
8	93	93	94	94	96	94	96	96	93	88	86	87	89	76	74	80	83	88	88	90	91	91	91	93	89.4	9.4
9	91	90	90	90	87	91	84	76	63	71	73	76	70	58	60	62	65	71	83	84	81	82	84	86	78.0	7.5
10	85	81	78	74	75	77	74	71	76	69	70	79	79	79	79	77	70	90	83	79	74	75	73	74	77.0	7.5
11	73	72	74	72	74	71	72	69	72	72	73	71	76	77	72	73	70	70	69	70	70	72	81	87	72.7	6.8
12	86	78	78	84	85	81	80	80	82	74	64	65	66	70	72	72	76	76	79	77	77	75	75	79	76.5	6.9
13	78	82	84	82	84	84	82	77	77	76	80	77	80	80	78	80	83	83	83	82	83	86	87	88	81.2	7.1
14	91	91	91	93	91	93	92	86	78	77	81	81	82	83	82	83	82	80	82	83	83	83	84	80	84.8	7.2
15	80	80	80	82	84	84	80	80	85	85	85	78	83	86	78	83	83	82	82	86	86	89	86	88	83.0	7.3
16	86	81	80	84	84	83	81	77	69	69	79	58	58	63	60	60	59	59	68	73	73	74	80	77	72.5	6.7
17	76	77	80	82	82	84	86	82	74	72	68	74	71	72	73	72	76	81	83	88	87	87	80	82	78.6	8.3
18	80	82	87	87	89	89	89	89	85	80	73	77	72	65	73	82	68	59	63	84	89	88	88	88	80.1	11.5
19	78	73	70	69	68	66	65	67	69	91	84	82	76	68	60	50	65	60	63	80	77	77	73	78	71.4	7.1
20	79	84	84	82	83	78	87	77	52	65	73	48	62	60	56	64	73	53	70	84	83	68	67	70	71.1	5.4
21	74	80	82	88	91	91	87	76	62	53	48	45	43	46	44	45	46	51	58	63	74	72	77	77	65.4	5.3
22	71	76	69	66	70	65	66	64	64	63	61	61	80	71	58	49	47	64	63	66	70	77	77	77	66.5	5.9
23	74	72	77	77	83	76	74	63	70	57	57	53	47	48	47	47	50	54	57	60	63	60	60	68	62.4	5.4
24	75	82	84	82	84	87	84	89	75	74	80	82	81	57	49	65	58	79	89	90	89	84	82	76	78.0	5.7
25	78	81	84	83	83	83	75	69	62	58	62	59	49	57	51	58	52	68	75	77	82	81	79			

Percentages at exact hours, Greenwich Mean Time.

103. Aberdeen : North Wall Screen on Tower : h_1 (height of thermometer bulbs above the ground) = 12.5 metres. May, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	75	79	82	78	80	74	59	57	54	48	48	54	56	52	53	54	61	79	78	79	82	83	86	86	68.0	6.1	
2	74	78	80	80	84	82	69	68	67	67	67	69	77	75	70	60	63	64	62	64	64	63	75	82	71.3	6.4	
3	86	87	88	87	85	85	72	67	63	57	55	55	59	60	61	62	63	68	72	74	78	80	78	81	71.8	6.2	
4	83	79	78	77	79	87	90	90	88	90	90	86	86	84	81	74	81	85	82	86	91	93	93	93	85.0	8.3	
5	93	93	96	96	94	93	94	90	83	82	82	74	78	86	74	75	87	91	88	90	91	93	92	90	87.8	9.2	
6	93	93	94	93	95	93	91	87	89	88	90	93	96	99	99	100	100	100	100	100	100	100	100	99	95.3	8.9	
7	99	91	90	88	86	85	86	78	73	71	70	67	53	65	71	68	61	74	75	79	82	85	86	88	78.2	8.7	
8	91	90	90	92	93	90	88	85	82	79	72	83	84	72	71	89	90	85	86	86	84	83	84	82	82	84.7	8.7
9	82	80	78	83	80	74	74	69	59	60	56	60	60	66	69	70	72	77	78	82	82	79	82	82	73.1	7.4	
10	86	80	79	77	86	81	79	80	80	78	77	76	73	75	76	79	82	65	70	75	79	83	87	89	78.7	9.8	
11	87	88	90	89	75	74	59	54	49	49	46	48	44	46	46	51	48	48	61	58	63	64	68	69	61.8	8.8	
12	74	81	87	79	82	76	62	66	63	67	70	76	85	84	79	78	79	80	88	82	92	90	88	88	79.8	9.7	
13	90	91	89	88	87	81	80	71	68	68	73	70	70	73	79	77	79	80	81	84	84	88	92	94	80.6	9.1	
14	93	91	88	84	85	81	82	83	85	83	82	82	82	82	82	78	79	91	87	88	91	94	93	91	86.2	9.4	
15	90	90	86	86	85	85	81	76	75	72	68	66	64	65	68	70	69	68	69	72	74	75	76	78	75.6	9.2	
16	79	81	82	82	79	78	76	71	68	67	72	69	63	62	59	79	87	83	86	89	91	91	93	93	78.0	9.4	
17	94	91	88	83	83	85	83	82	82	79	77	79	76	78	79	76	76	80	81	84	87	87	87	88	82.5	8.8	
18	88	90	90	90	90	87	88	84	84	85	86	86	83	84	83	87	88	88	92	88	89	92	91	92	87.8	9.4	
19	92	87	86	92	93	93	88	85	82	79	78	71	69	70	66	58	56	56	55	53	56	58	67	64	73.7	10.3	
20	69	72	73	76	77	76	74	68	72	76	78	85	87	89	93	95	93	92	92	93	95	95	96	93	83.1	10.8	
21	92	92	89	93	99	99	99	99	96	93	94	93	92	87	86	78	70	73	77	79	82	84	87	88	88.5	10.3	
22	86	80	84	75	79	78	76	71	74	71	70	72	69	72	72	71	81	83	86	88	88	87	86	86	78.6	10.7	
23	82	83	84	83	82	82	83	80	82	80	76	73	72	71	75	81	84	82	88	88	91	89	92	93	82.2	11.1	
24	95	90	91	91	91	92	87	86	84	85	85	88	88	88	87	90	91	94	92	94	95	96	96	95	90.4	11.5	
25	96	96	98	96	96	96	94	88	78	70	68	66	60	58	56	58	55	56	65	70	75	75	75	77	76.3	12.0	
26	80	83	82	81	82	80	75	75	71	69	70	69	68	72	77	73	69	67	67	69	87	90	93	94	76.4	12.3	
27	92	92	92	95	95	92	86	86	86	90	90	90	88	86	90	89	81	79	78	75	74	75	77	79	86.2	11.8	
28	80	78	81	85	86	87	90	85	78	70	73	70	73	71	66	74	63	65	67	68	76	68	69	69	74.7	10.1	
29	69	69	70	71	71	70	71	70	67	69	65	65	64	63	63	64	65	71	65	70	77	76	78	78	69.0	8.3	
30	78	81	77	77	75	73	71	71	70	71	71	70	70	69	66	66	63	64	66	69	78	87	89	89	73.1	9.2	
31	89	92	94	95	96	98	96	95	98	91	86	76	67	67	72	75	74	73	72	70	72	72	72	71	82.2	9.6	
Mean ...	85.7	85.4	85.7	85.2	85.5	84.3	81.3	78.1	75.8	74.2	73.7	73.6	72.8	73.3	73.1	74.3	74.9	76.2	77.5	79.2	82.0	83.3	84.7	85.2	79.4	9.4†	
Vapour Pressure* ...	mb. 9.0	mb. 8.8	mb. 8.7	mb. 8.6	mb. 8.7	mb. 9.0	mb. 9.2	mb. 9.2	mb. 9.3	mb. 9.4	mb. 9.5	mb. 9.6	mb. 9.7	mb. 9.7	mb. 9.6	mb. 9.7	mb. 9.6	mb. 9.6	mb. 9.6	mb. 9.4	mb. 9.4	mb. 9.3	mb. 9.3	mb. 9.2	mb. 9.3†		

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

June, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
1	% 73	% 77	% 81	% 76	% 76	% 75	% 73	% 73	% 72	% 71	% 71	% 73	% 72	% 74	% 74	% 75	% 75	% 82	% 87	% 88	% 92	% 92	% 95	% 95	% 78.3	mb. 10.0	
2	93	92	95	95	96	98	98	99	99	99	99	98	95	94	96	93	93	96	77	82	88	94	95	95	93	93.9	11.8
3	95	93	95	93	96	97	96	95	97	99	97	93	84	78	76	77	78	76	77	81	84	83	82	85	81	81.2	9.8
4	85	82	87	87	82	79	72	68	62	69	58	56	68	65	65	58	67	65	77	73	77	80	82	84	72.8	7.2	
5	85	83	82	80	74	72	69	65	65	62	59	67	67	62	61	61	61	62	68	68	72	73	76	75	69.7	7.2	
6	78	80	82	75	74	73	73	71	74	69	82	87	87	90	93	94	96	98	99	99	98	98	94	96	85.4	8.7	
7	94	93	91	91	91	87	83	85	61	65	60	55	56	54	73	74	84	74	73	78	79	79	82	87	77.2	8.6	
8	88	83	87	90	90	84	86	87	85	82	87	87	84	78	85	87	91	91	92	89	92	92	92	91	87.5	9.9	
9	91	91	91	89	87	78	67	61	53	51	62	73	66	73	75	81	75	70	73	73	78	79	81	81	74.9	9.6	
10	83	85	81	74	72	80	76	69	68	60	55	80	69	83	78	78	76	68	70	80	83	86	89	85	76.1	10.5	
11	77	76	75	76	78	79	80	77	77	78	77	76	72	71	71	64	62	65	68	64	73	74	66	68	73.0	10.9	
12	70	65	65	62	63	61	58	63	58	56	56	62	58	57	71	70	78	85	89	92	93	93	94	95	70.9	10.9	
13	95	95	96	95	96	96	97	98	98	98	98	96	91	88	78	70	74	68	69	70	80	82	83	82	85	87.4	12.7
14	83	85	87	85	83	81	77	78	75	73	68	68	67	68	70	65	76	77	81	82	82	83	88	86	78.0	11.5	
15	86	86	87	88	88	87	75	67	71	70	66	64	64	60	60	67	62	66	68	70	71	84	88	87	74.2	11.2	
16	85	89	88	84	78	80	78	76	76	80	69	64	60	58	60	58	59	72	70	61	66	68	68	72	71.9	11.5	
17	74	69	67	68	69	62	58	57																			

Percentages at exact hours, Greenwich Mean Time.

105. Aberdeen : North Wall Screen on Tower : h_t (height of thermometer bulbs above the ground) = 12.5 metres. July, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	85	87	92	93	91	91	93	90	85	82	83	82	82	83	82	81	84	87	89	90	92	93	94	94	94	87.5	11.9
2	93	94	93	94	93	90	87	85	73	74	82	91	83	90	82	80	70	61	65	70	75	81	80	88	88	82.2	12.3
3	79	82	80	83	84	80	80	76	78	70	63	60	55	62	58	64	68	62	68	74	79	83	88	88	88	73.3	11.7
4	89	88	89	93	96	96	95	97	93	94	93	90	88	89	89	89	88	89	90	89	87	93	94	94	94	91.2	12.0
5	95	94	94	94	94	93	93	95	95	96	95	97	97	98	97	98	95	95	95	95	94	94	94	94	95	95.1	12.2
6	93	92	92	91	89	89	91	87	84	78	73	76	74	74	88	83	86	82	76	75	76	76	77	77	77	82.8	10.0
7	74	74	77	72	83	76	82	87	70	63	65	57	61	71	63	63	62	63	62	65	75	71	84	86	71.3	8.8	
8	86	87	82	80	81	75	68	63	55	54	52	52	48	61	67	64	64	64	63	73	74	73	76	79	69.1	8.6	
9	80	83	85	84	88	78	71	71	66	70	78	76	73	61	66	78	77	73	77	82	84	85	86	87	77.3	11.7	
10	88	87	91	91	91	91	91	90	89	86	88	87	88	86	86	86	87	88	90	92	91	88	82	77	88.2	14.2	
11	74	75	75	75	81	80	80	85	80	79	78	82	86	87	86	91	88	90	86	81	86	86	87	84	84	82.4	14.3
12	78	79	74	74	68	67	62	61	51	49	47	46	45	46	51	55	69	69	76	75	77	81	82	81	81	65.2	10.8
13	83	84	75	75	73	73	67	65	59	60	61	57	73	77	76	82	75	72	73	78	77	78	78	81	81	73.0	11.4
14	80	81	75	73	75	68	64	62	60	61	59	57	56	56	68	72	66	66	76	85	85	86	85	88	88	70.9	11.6
15	87	85	84	84	85	82	81	73	66	66	65	67	64	65	64	68	69	74	77	82	84	85	86	87	87	76.3	12.6
16	89	93	91	92	91	91	90	85	79	74	76	79	78	75	73	73	70	74	71	74	87	88	90	90	90	82.1	13.6
17	90	90	90	87	88	87	87	88	86	85	87	86	88	85	85	82	88	88	88	92	93	95	95	94	94	88.4	14.1
18	94	92	90	90	90	80	76	72	69	71	66	60	63	65	68	63	68	62	63	68	71	74	77	81	81	74.1	14.4
19	82	83	84	85	83	82	83	82	71	70	69	67	65	70	70	72	74	73	71	77	82	83	79	79	79	76.5	14.5
20	76	80	82	85	83	80	78	77	73	71	72	70	73	76	76	71	69	70	73	67	68	72	75	81	81	74.9	15.2
21	81	86	89	88	79	78	71	65	67	63	63	55	55	59	58	53	55	64	68	70	70	74	73	72	72	69.2	13.4
22	80	87	90	86	89	88	86	70	67	58	50	65	68	68	72	80	82	82	82	83	83	74	74	74	74	76.5	11.8
23	71	73	74	77	75	70	66	59	62	68	69	64	38	39	39	34	33	37	41	51	56	58	61	61	61	56.7	9.5
24	64	67	70	72	73	71	71	65	68	56	53	50	49	48	47	46	49	47	54	62	68	70	77	76	76	61.1	9.1
25	77	80	79	78	78	76	64	66	59	52	51	50	68	69	70	70	68	68	71	72	72	75	77	78	78	69.5	9.5
26	78	80	81	82	79	77	73	71	60	59	71	68	62	66	59	60	59	55	57	66	73	78	79	82	82	70.0	10.3
27	71	85	87	89	88	86	83	75	70	66	63	62	62	60	66	64	73	73	67	75	78	80	83	86	86	75.0	11.7
28	79	83	87	86	89	88	77	75	77	88	84	84	86	89	90	87	93	95	96	96	94	95	96	96	96	87.7	14.2
29	96	96	98	98	99	99	98	98	97	93	90	86	87	93	94	88	86	87	87	91	94	95	95	93	93	93.3	15.4
30	94	95	93	93	93	93	92	83	74	67	65	63	65	84	89	89	88	85	89	76	86	77	80	83	83	83.4	14.0
31	85	82	82	88	91	87	86	86	87	87	86	88	93	94	98	98	98	99	99	99	99	100	99	98	91.7	13.6	
Mean ...	83.3	84.6	84.7	84.9	85.2	82.6	80.2	77.5	73.2	71.3	70.9	70.1	70.3	72.5	73.5	73.9	74.3	73.9	75.7	77.9	80.8	82.2	83.2	83.9	83.9	77.9	12.2†
Vapour Pressure* ...	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.	mb.	11.7
Pressure* ...	11.7	11.6	11.4	11.3	11.5	11.7	12.0	12.1	12.0	12.1	12.3	12.4	12.4	12.5	12.6	12.6	12.6	12.5	12.6	12.4	12.4	12.2	12.1	12.0	12.0	12.1	12.1†

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

August, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
1	98	95	94	93	91	91	88	88	85	86	87	88	77	73	76	73	74	65	78	84	82	87	87	80	84.5	mb.	
2	86	81	82	82	83	79	75	68	61	58	62	57	57	56	55	60	72	70	70	65	67	70	73	75	69.4	11.7	
3	76	76	79	83	90	92	94	94	90	89	84	82	83	83	86	83	76	73	73	75	84	91	91	91	83.7	9.5	
4	88	87	82	82	74	73	71	71	75	72	73	73	73	79	85	87	87	86	86	80	82	86	89	89	89	80.5	12.7
5	89	89	89	86	88	87	82	78	69	61	57	54	52	68	76	69	69	70	74	79	80	80	84	91	75.8	11.4	
6	92	93	88	93	93	93	92	90	87	86	77	87	80	80	90	87	92	92	93	94	93	94	94	93	93	89.7	10.0
7	92	92	85	87	86	87	81	72	69	64	59	62	59	60	64	66	73	70	77	77	78	80	81	83	83	75.4	11.4
8	86	88	87	87	87	89	88	63	62	64	64	70	64	61	60	68	74	72	70	71	75	77	81	80	74.6	11.4	
9	85	86	87	89	91	91	89	86	78	67	70	66	69	60	58	56	65	77	77	82	82	84	85	86	87	77.6	13.0
10	81	85	85	87	83	81	75	71	67	67	62	58	61	66	72	71	71	76	75	70	81	87	90	92	75.5	13.6	
11	94	95	96	95	95	93	89	86	83	73	66	73	73	73	61	71	73	76	74	71	69	77	76	78	80.8	13.2	
12	79	84	76	75	76	73	74	69	63	59	59	56	55	51	55	67	69	68	72	74	76	75	73	77	69.0	11.2	
13	77	77	78	83	78	81	78	72	77	73	74	71	75	71	70	76	89	93	94	93	95	95	95	95	81.2	11.8	
14	95	94	93	91	88	84	75	70	62	60	57	57	50	52	52	70	74	65	72	75	82	82	86	86	73.9	11.9	
15	79	81	82	83	82	75	72	68	64	60	62	56	59	62	63	69	77										

Percentages at exact hours, Greenwich Mean Time.

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

September, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	92	91	91	90	90	87	87	87	83	83	72	72	63	61	56	57	59	65	62	65	69	64	65	66	66	74.3	12.9
2	70	68	66	64	67	62	60	57	56	57	56	55	55	57	59	65	70	69	72	72	75	80	79	77	65.1	9.9	
3	77	79	80	82	82	80	82	84	86	84	90	90	89	89	93	93	94	91	92	94	94	95	97	96	96	87.7	12.1
4	96	96	96	95	95	95	95	94	88	88	93	92	91	93	91	93	93	94	94	95	96	96	96	96	96	93.8	13.9
5	96	97	99	98	97	98	97	95	92	92	87	84	90	92	90	90	92	92	95	93	95	95	94	87	93.4	14.5	
6	89	89	89	89	84	83	82	77	73	73	73	76	85	87	82	86	88	93	96	93	96	96	97	97	97	86.2	11.8
7	96	97	97	96	97	96	95	94	90	87	85	83	83	80	59	72	86	88	91	93	94	95	93	94	94	89.3	16.0
8	90	88	90	93	93	93	92	82	78	61	62	54	52	54	54	55	58	62	63	70	75	71	78	76	73.0	15.6	
9	86	90	89	91	90	87	82	81	76	70	68	66	61	59	61	63	64	68	75	78	82	84	85	85	85	76.5	12.2
10	85	84	86	87	86	84	83	78	72	65	73	72	69	71	66	71	76	87	89	88	78	80	80	83	83	78.9	11.2
11	84	82	87	86	87	88	84	80	72	72	73	74	72	65	74	77	77	83	78	85	90	91	94	94	94	81.0	12.2
12	93	93	94	94	94	93	93	88	84	78	80	77	76	69	68	72	75	88	85	82	79	77	78	83	83	83.3	13.9
13	86	82	84	84	85	86	81	74	70	63	61	66	66	67	68	75	78	82	85	88	87	81	77	79	77.3	10.5	
14	83	86	86	85	85	84	86	86	87	86	81	85	87	88	89	85	90	87	85	85	85	88	91	92	92	86.1	12.6
15	91	87	89	88	86	84	87	81	73	69	70	77	62	59	60	59	63	77	65	70	79	80	81	83	83	76.0	11.3
16	85	85	86	85	83	85	85	82	64	69	65	68	74	75	76	80	81	83	86	89	91	90	94	92	92	81.2	10.5
17	88	83	78	77	74	76	74	73	71	69	67	62	60	58	60	59	60	64	64	67	70	71	76	77	77	70.2	10.5
18	80	80	83	84	84	87	83	80	78	72	79	81	82	94	94	85	94	85	94	90	93	94	80	82	83	84.7	12.0
19	81	81	83	83	86	84	80	76	82	86	84	81	83	81	90	70	78	82	88	72	73	75	83	87	87	81.1	10.9
20	72	68	67	65	70	72	86	83	65	62	60	74	69	65	71	70	72	81	80	82	80	79	76	78	78	73.0	8.4
21	76	76	76	74	86	86	88	82	75	62	58	53	56	63	65	61	69	67	63	66	66	67	67	66	66	69.7	8.7
22	65	66	69	67	71	77	72	69	65	66	61	63	68	73	69	74	86	94	95	97	97	93	91	88	88	76.0	10.0
23	88	80	78	81	80	83	80	77	75	65	68	68	66	65	70	68	71	74	76	82	84	85	86	87	87	77.0	13.1
24	88	87	86	87	90	89	86	82	79	72	70	74	68	67	64	63	68	69	78	78	78	77	82	81	81	77.7	13.5
25	83	82	83	84	83	85	83	81	73	72	71	69	61	56	58	60	64	69	67	71	72	74	76	80	80	73.2	11.9
26	81	85	86	84	79	80	77	77	77	79	81	79	77	78	79	77	80	77	72	72	70	77	78	81	81	78.4	12.7
27	95	86	88	87	88	90	88	88	89	86	87	87	88	86	91	90	85	82	80	85	91	98	97	96	96	87.9	12.7
28	86	95	93	90	89	90	88	85	85	84	86	84	53	45	48	49	53	55	55	62	64	65	65	75	75	73.5	11.1
29	71	70	69	71	75	75	75	73	69	60	54	52	52	51	54	60	53	61	65	67	73	74	73	79	79	65.6	8.3
30	81	79	81	79	76	82	84	81	82	68	59	55	50	52	58	53	51	61	66	71	71	72	63	68	68	68.7	8.1
Mean ...	84.5	83.7	84.2	84.0	84.4	84.7	83.8	80.9	77.0	73.7	72.5	72.4	70.3	70.0	70.6	71.4	74.0	77.8	78.4	80.2	81.6	81.7	82.5	83.5	83.5	78.7	11.8†
Vapour Pressure* ...	mb. 11.3	mb. 11.1	mb. 11.0	mb. 10.9	mb. 10.8	mb. 10.8	mb. 11.2	mb. 11.5	mb. 11.8	mb. 12.0	mb. 12.1	mb. 12.4	mb. 12.4	mb. 12.4	mb. 12.5	mb. 12.4	mb. 12.3	mb. 12.2	mb. 11.8	mb. 11.6	mb. 11.5	mb. 11.2	mb. 11.2	mb. 11.1	mb. 11.1	mb. 11.7†	

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

October, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
1	% 70	% 67	% 76	% 77	% 76	% 74	% 79	% 71	% 66	% 59	% 50	% 47	% 48	% 48	% 60	% 60	% 65	% 71	% 86	% 86	% 83	% 86	% 88	% 87	% 87	% 69.6	mb. 7.8
2	89	87	83	72	70	77	74	65	66	56	53	49	47	49	47	54	60	64	67	73	68	68	67	68	67	65.2	7.8
3	75	74	76	76	75	78	76	71	75	64	67	62	63	58	64	64	59	64	72	76	74	72	69	70	69	69.7	8.0
4	72	74	74	76	76	77	78	71	73	69	67	67	65	63	60	73	72	78	81	80	87	87	90	89	89	74.6	7.1
5	89	92	91	90	89	93	87	90	93	94	89	87	87	87	79	91	89	94	94	87	90	90	91	94	94	89.8	8.8
6	95	95	97	98	95	92	91	95	90	87	92	94	95	96	96	91	93	93	93	91	91	91	91	88	88	93.0	10.7
7	88	87	89	85	86	77	76	71	67	66	62	64	60	60	53	51	61	70	75	78	80	79	80	80	80	72.9	8.2
8	84	86	87	87	83	86	85	86	86	81	75	73	64	66	66	69	65	76	80	73	78	76	79	82	78	78.0	7.6
9	83	86	88	89	88	87	87	84	80	83	75	70	70	66	71	73	78	71	74	77	83	73	76	77	77	78.8	8.0
10	81	83	85	83	75	80	72	75	79	75	76	77	66	72	76	81	83	84	85	85	58	53	51	55	55	75.0	9.8
11	57	55	59	58	61	65	66	60	61	55	52	52	57	47	51	53	53	56	64	61	65	67	70	64	64	58.5	7.4
12	65	65	67	63	70	72	72	75	75	74	75	76	59	57	59	62	65	66	67	72	72	70	72	71	71	68.2	9.4
13	71	77	76	87	88	88	88	86	81	71	69	69	65	67	71	73	77	78	82	83	83	78	80	79	79	78.5	11.8
14	82	81	84	84	84	85	86	86	85	78	79	76	62	67	66	64	63	67	61	64	62	67	66	67	67	73.8	10.9
15	69	71	73	75	77	78	77	77	85	91	93	93	89	89	99	98	99	99	100	100	98	98	98	99	99	87.9	9.3
16	99	98	98	97	98	98	97	93	94	96	91	88	91	91	95	96	91										

Percentages at exact hours, Greenwich Mean Time.

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

November, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	79	80	83	85	82	85	84	83	85	83	86	86	87	89	91	91	89	91	89	89	91	92	93	95	86.6	9.2	
2	93	95	95	96	98	96	96	95	98	98	96	96	94	90	94	94	96	88	79	73	77	78	68	75	90.3	10.2	
3	75	78	76	84	85	83	83	81	81	87	86	83	90	91	94	92	93	93	89	92	92	93	93	89	85.4	8.8	
4	71	72	73	81	80	81	73	81	81	87	86	83	90	91	94	92	93	93	89	92	92	93	93	89	85.4	8.8	
5	85	82	86	87	87	88	87	86	88	88	87	85	87	88	88	83	83	79	76	76	80	78	80	85	84.2	11.2	
6	85	86	87	91	90	91	87	83	83	84	79	74	72	72	78	81	83	86	87	78	78	77	73	78	81.9	8.1	
7	87	80	83	82	87	86	87	84	78	74	72	74	82	86	87	87	86	89	89	91	92	94	95	96	85.0	8.2	
8	96	94	95	94	73	70	71	71	72	59	57	62	77	66	61	58	62	66	66	71	73	71	73	82	72.8	7.2	
9	85	88	85	85	82	71	70	72	73	71	68	67	69	66	67	76	76	77	77	77	79	76	78	80	75.7	6.3	
10	84	87	92	78	75	77	80	78	74	67	66	59	59	62	62	66	69	72	73	82	79	79	80	79	74.1	6.0	
11	75	82	79	71	76	84	84	83	83	86	90	90	92	89	94	92	87	73	69	70	69	68	61	63	79.9	7.5	
12	69	64	66	70	71	68	68	68	68	66	60	53	54	55	61	66	68	69	73	73	75	74	74	75	66.7	5.0	
13	76	73	72	73	70	70	71	71	67	65	60	60	57	55	59	65	70	74	70	76	73	74	73	73	69.1	5.0	
14	72	71	73	76	82	80	81	86	85	81	72	63	65	63	69	69	81	83	84	85	86	81	86	87	77.3	5.0	
15	87	88	87	84	81	83	81	82	81	78	74	72	71	73	73	82	86	89	90	91	91	91	91	90	83.1	5.4	
16	90	90	90	90	91	91	90	90	88	86	85	87	87	90	94	91	91	88	90	82	90	85	87	87	88.8	5.7	
17	89	90	92	94	96	91	91	94	80	86	85	88	84	77	73	78	74	70	74	73	82	85	87	90	84.2	6.0	
18	90	90	92	91	87	87	88	88	88	86	83	80	82	81	81	71	70	81	81	80	79	72	74	82	82.8	5.6	
19	87	87	89	93	83	94	96	96	97	96	93	93	93	93	88	87	91	93	93	99	100	99	96	95	93.1	9.3	
20	94	93	95	91	92	76	80	77	77	82	82	79	79	84	86	89	87	84	83	89	90	88	90	89	85.8	9.8	
21	90	93	93	94	94	98	98	98	99	96	95	96	93	92	95	95	93	93	92	92	92	95	93	95	94.2	10.5	
22	96	95	93	93	93	92	94	94	94	92	91	91	92	92	92	91	90	91	89	88	89	91	92	91	92.0	11.1	
23	91	89	88	88	88	89	91	92	95	94	89	84	86	87	92	91	93	96	95	89	88	83	88	85	89.5	10.6	
24	86	85	82	83	81	86	85	86	86	82	84	80	77	80	83	84	85	86	84	84	84	85	88	82	83.7	8.9	
25	84	84	83	86	91	89	88	91	89	92	89	91	88	89	96	95	96	99	99	98	87	83	86	90	90.0	10.3	
26	87	84	85	87	83	83	87	87	86	84	83	82	80	80	84	87	90	86	87	87	87	87	88	88	85.4	8.3	
27	89	86	83	82	82	82	85	84	85	85	84	80	81	83	85	87	88	90	91	92	92	89	89	86	85.9	7.4	
28	89	92	91	86	88	90	93	98	99	98	98	94	96	98	98	99	98	99	99	100	100	100	99	99	95.6	10.1	
29	100	99	99	99	98	99	99	96	98	98	96	96	94	96	98	94	98	98	98	99	99	99	99	96	97.8	10.7	
30	94	96	96	92	92	91	94	93	93	93	92	92	88	87	86	87	87	87	89	96	99	98	94	94	92.2	10.0	
Mean ...	85.8	85.8	86.1	86.2	85.6	85.0	85.4	85.3	84.7	83.5	81.6	80.0	80.5	80.5	82.4	83.2	84.2	84.8	84.1	84.8	85.3	84.6	84.4	85.5	84.1	8.1†	
Vapour Pressure* ...	mb. 7.7	mb. 7.8	mb. 7.8	mb. 7.8	mb. 7.7	mb. 7.6	mb. 7.7	mb. 7.7	mb. 7.8	mb. 7.9	mb. 8.1	mb. 8.1	mb. 8.2	mb. 8.3	mb. 8.3	mb. 8.3	mb. 8.2	mb. 8.1	mb. 8.0	mb. 7.9	mb. 7.9	mb. 7.8	mb. 7.8	mb. 7.8	mb. 7.9†		

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

December, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure.*	
1	94	96	96	96	94	94	94	94	93	90	90	86	86	88	86	82	88	91	88	90	92	85	85	90	90.4	8.9	
2	94	91	88	85	82	83	90	92	91	91	92	91	92	93	78	71	74	75	76	80	80	81	82	87	85.0	8.6	
3	83	83	78	84	82	79	84	81	81	86	81	82	81	82	82	84	81	82	81	79	82	86	88	87	82.5	7.9	
4	88	86	86	83	84	84	84	87	93	96	93	91	89	88	88	84	81	83	84	88	88	84	84	85	87.0	9.1	
5	86	85	83	83	84	89	92	89	87	84	87	88	87	89	86	83	81	76	74	76	77	81	83	81	83.9	9.5	
6	83	76	72	74	77	79	78	76	73	76	73	72	73	72	76	74	75	74	72	74	78	82	87	87	76.3	8.0	
7	86	90	86	84	87	88	91	92	92	85	77	79	78	74	72	68	71	69	66	66	65	69	66	59	78.1	7.4	
8	62	71	72	68	79	75	82	81	86	90	88	86	87	87	85	87	84	82	73	73	76	73	77	80	78.9	6.7	
9	73	74	79	85	82	79	74	75	72	73	72	72	72	70	74	76	78	77	72	72	73	69	72	70	74.6	6.1	
10	72	69	74	69	67	69	70	73	70	69	69	68	68	72	72	68	68	71	70	71	77	75	80	85	71.2	5.8	
11	87	86	79	84	86	92	90	88	87	88	94	97	96	96	96	94	92	94	94	94	91	78	80	79	89.4	7.9	
12	70	72	66	69	68	74	75	81	81	76	72	68	70	66	68	74	71	71	71	80	77	77	79	79	83	73.0	6.5
13	77	80	76	76	86	89	92	91	91	94	91	91	89	87	84	79	76	78	80	82	82	79	79	69	68	83.0	8.8
14	76	71	69	64	63	74	75	74	75	72	65	61	56	57	64	62	67	72	70	67	65	64	65	67	67.3	6.7	
15	66	67	69	74	74	73	71	68	72	73	71	69	67	65	66	67	68	71	70	72	70	70	68	73	69.6	5.9	
16	73	78	70	71	69	69	71	78	75	77	70	69	69	69	72	76	79	79	83	82	82	83	81	78	75.0	6.0	
17	79	81	79	79	79	76	77	79	82	77	78	75	72	70	75	77	77	80	83	78	85	84	82	83	78.5	5.8	
18	82	82	84	88	90	89	86	87	90	91	88																

HUMIDITY: ANNUAL MEANS FROM HOURLY VALUES.

For exact hours, Greenwich Mean Time.

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

1929.

Hour. G.M.T.	1.	2.	3.	5.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Relative Humidity ...	% 83.5	% 83.9	% 84.0	% 84.0	% 84.0	% 83.4	% 82.3	% 80.6	% 78.4	% 76.5	% 75.3	% 74.4	% 73.2	% 73.1	% 73.8	% 74.9	% 76.2	% 77.6	% 78.8	% 80.2	% 81.5	% 82.0	% 82.6	% 83.1	% 79.5
Vapour Pressure, in millibars* ...	mb. 8.3	mb. 8.2	mb. 8.2	mb. 8.1	mb. 8.1	mb. 8.2	mb. 8.3	mb. 8.4	mb. 8.5	mb. 8.6	mb. 8.7	mb. 8.8	mb. 8.7	mb. 8.6	mb. 8.5	mb. 8.4	mb. 8.4	mb. 8.3	mb. 8.5						

* Computed from the mean temperature and mean relative humidity.

RELATIVE HUMIDITY: MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

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

1929.

Month.	Mean.	Hour. 1.	Hour. 2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	% 84.5	% +0.1	% +0.8	% +1.2	% +0.9	% +0.9	% +1.5	% +1.9	% +2.0	% +1.5	% +0.4	% -0.1	% -2.6	% -2.3	% -2.5	% -0.5	% 0.0	% +0.3	% +0.3	% -0.8	% -1.0	% -0.5	% +0.1	% -1.0	% -0.5
Feb.	81.0	+0.7	+1.8	+2.4	+2.9	+3.1	+2.5	+2.2	+1.3	+1.1	+0.7	-1.3	-0.9	-2.7	-4.7	-3.4	-2.4	-0.8	-0.5	-1.5	-1.3	-0.7	-0.3	+1.2	+0.7
Mar.	79.7	+5.1	+6.0	+5.5	+5.4	+6.2	+5.5	+5.0	+3.8	+0.7	-2.7	-5.1	-6.6	-9.0	-9.1	-9.5	-8.3	-5.7	-2.4	+0.3	+2.1	+1.9	+2.9	+3.7	+4.2
April	76.6	+5.0	+5.1	+5.6	+6.1	+7.2	+6.1	+3.9	+0.6	-2.9	-4.7	-3.7	-5.7	-5.6	-7.2	-10.1	-7.6	-7.8	-4.1	-0.9	+2.9	+4.2	+4.1	+4.5	+5.0
May	79.4	+6.2	+5.9	+6.2	+5.8	+6.0	+4.9	+1.9	-1.3	-3.6	-5.2	-5.7	-5.8	-6.6	-6.1	-6.3	-5.1	-4.4	-3.1	-1.8	-0.1	+2.7	+4.0	+5.5	+5.9
June	75.4	+7.1	+6.8	+6.4	+5.8	+4.4	+2.5	-0.4	-2.0	-4.8	-5.4	-6.2	-5.2	-6.6	-7.2	-5.1	-5.7	-3.1	-3.2	-0.9	+0.9	+3.5	+5.6	+6.2	+6.5
July	77.9	+5.5	+6.9	+6.9	+7.1	+7.4	+4.8	+2.4	-0.3	-4.6	-6.6	-7.0	-7.8	-7.7	-5.5	-4.5	-4.1	-3.8	-4.2	-2.4	-0.1	+2.7	+4.0	+5.1	+5.8
Aug.	78.2	+7.7	+8.1	+7.4	+7.7	+6.8	+5.7	+3.7	-0.1	-3.4	-6.5	-7.6	-9.1	-11.5	-10.9	-9.8	-6.5	-3.9	-2.8	+0.1	+1.6	+3.6	+5.6	+6.7	+7.5
Sept.	78.7	+5.4	+4.7	+5.3	+5.1	+5.5	+5.8	+5.0	+2.1	-1.8	-5.1	-6.2	-6.2	-8.4	-8.6	-8.0	-7.2	-4.5	-0.7	0.0	+1.8	+3.2	+3.3	+4.2	+5.3
Oct.	78.0	+2.8	+3.4	+4.1	+3.8	+4.1	+4.9	+4.9	+3.7	+2.5	-0.9	-3.8	-5.9	-8.9	-9.5	-7.3	-4.9	-3.1	-1.1	+1.8	+2.4	+2.7	+1.2	+1.7	+1.5
Nov.	84.1	+1.9	+1.9	+2.2	+2.3	+1.6	+1.0	+1.3	+1.2	+0.6	-0.6	-2.5	-4.2	-3.6	-3.6	-1.8	-1.1	0.0	+0.5	-0.2	+0.5	+1.0	+0.3	0.0	+1.1
Dec.	80.4	+0.4	+0.8	+0.4	+0.9	+0.6	+1.5	+2.4	+2.7	+2.4	+1.5	-0.2	-0.9	-1.5	-1.6	-1.6	-2.0	-1.7	-1.5	-1.7	-0.5	-0.1	-0.6	-0.3	+0.6
Year	79.5	+4.0	+4.3	+4.5	+4.5	+4.5	+3.9	+2.9	+1.1	-1.0	-2.9	-4.1	-5.1	-6.2	-6.4	-5.7	-4.6	-3.2	-1.9	-0.7	+0.8	+2.0	+2.5	+3.1	+3.6

RAINFALL: ANNUAL TOTALS OF HOURLY VALUES.

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

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

1929.

Hour. G.M.T.	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	10 to 11	11 to Noon	Noon to 13	13 to 14	14 to 15	15 to 16	16 to 17	17 to 18	18 to 19	19 to 20	20 to 21	21 to 22	22 to 23	23 to 24	0 to 24
Amount ...	mm. 28.8	mm. 28.2	mm. 30.9	mm. 33.5	mm. 30.1	mm. 33.0	mm. 43.9	mm. 42.7	mm. 32.5	mm. 25.0	mm. 25.1	mm. 25.5	mm. 23.4	mm. 34.1	mm. 35.5	mm. 33.3	mm. 32.7	mm. 40.1	mm. 32.9	mm. 39.2	mm. 32.3	mm. 33.6	mm. 36.7	mm. 29.7	mm. 782.7
Duration ...	hr. 28.7	hr. 29.9	hr. 31.0	hr. 29.4	hr. 22.5	hr. 28.8	hr. 34.1	hr. 30.1	hr. 29.2	hr. 22.3	hr. 26.3	hr. 27.8	hr. 23.4	hr. 22.5	hr. 25.4	hr. 25.8	hr. 27.9	hr. 32.4	hr. 28.0	hr. 31.8	hr. 28.2	hr. 30.3	hr. 31.1	hr. 31.9	hr. 678.8

114. Aberdeen.

NOTES ON RAINFALL.

1929.

Notable Falls of the Year.—The most notable fall during the year was one of 51 mm. on the 31st July. It is referred to below. There was no instance of a high rate of rainfall, the highest being 5 mm. in 20 minutes on 29th July.

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

Mar. 5—20. 16 days with no rainfall. From 28th February to 20th March, a period of 21 days, only 0.6 mm. fell. The whole month of March yielded only 5 mm. of rainfall.

July 11—21. 11 days with no rainfall, followed by another period of 5 days from July 23—27, also with no rainfall.

Sept. 10—17. 8 days with 0.2 mm. of precipitation.

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

July 29—31. Following a dry spell, 72 mm. fell on these three days, 51 mm. of which fell in less than 12 hours, and 25 mm. in 4 hours, on the 31st.

Nov. 19. 22 mm. fell in a little over 9 hours.

Dec. 20—25. During this period 118 mm. of rain were recorded, of which 25 mm. fell in a little over 4 hours on the 21st. December was a particularly wet month throughout, 167 mm. in all were recorded.

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

115. Aberdeen : H_r (height of receiving surface above M.S.L.) = H (Height of station above M.S.L.) + h , (height of receiving surface above ground) = 11.4 metres + 0.6 metres. January, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	hr.																									
1	0.1	0.2
2
3
4
5	0.3	0.9
6	2	1	...	...	...	...	...	...	...	...	...	...	4	...	2	5	1	...	...	...	...	...	...	1.5	2.3
7	2	4	6	1.1	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.9	2.3
8
9
10	2	5	3	3	...	...	...	...	...	...	...	5	9	...	...	...	...	...	...	...	4.0	6.8
11
12
13	2	1	1	...	...	...	...	...	...	...	...	...	0.4	1.2
14	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.4
15	2	4	1	5	...	8	...	4	3	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(3)	(4)	(3)	(4)	(4)	(4)	(6.0)	(8.2)	
16	(3)	(4)	(4)	(4)	(2)	(1)	(...)	(...)	(2)	(4)	(5)	(4)	(5)	(5)	(5)	(5)	(5)	(5)	(1)	(1)	(...)	(...)	(...)	(...)	(6.5)	(7.7)	
17
18
19
20
21
22
23	1.0	(0.8)
24	1.5	2.2
25	...	3	4	4	1	...	...	...	...	...	...	...	1	1.0	3	...	1	...	...	...	...	...	...	...	...	3.0	4.8
26	4	4	4	1	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	2.8
27	0.1	(1.0)
28
29	3	4	4	6	7	7	4	1	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	6.1	8.9
30	1.6	1.2	1.1	6	2	6	8	9	5	8	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.5	10.1
31
Sum.	2.1	2.3	2.5	2.4	1.1	2.9	3.0	3.8	2.8	1.6	1.6	1.4	0.9	2.0	2.1	1.4	2.0	2.8	1.1	1.5	1.0	0.6	1.9	1.9	46.7	63.3	
Total Duration.	hr. 1.7	hr. 3.5	hr. 3.9	hr. 3.7	hr. 2.9	hr. 3.5	hr. 3.8	hr. 4.2	hr. 4.7	hr. 1.7	hr. 2.2	hr. 3.1	hr. 1.4	hr. 2.2	hr. 2.9	hr. 2.1	hr. 2.5	hr. 2.9	hr. 2.0	hr. 2.3	hr. 1.5	hr. 1.3	hr. 1.8	hr. 1.5	hr. 63.3		

116. Aberdeen : $H_r = 11.4$ metres + 0.6 metres.

February, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration.	
Day.	mm.	hr.																									
1	...	...	...	...	...	...	...	1.4	1	2	4	5	1.0	...	4	3	3	3	2.5	1.4	...	2	...	...	9.0	8.3	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	1	6	6	1.6	4.1	
3	...	1	...	...	...	...	3	(1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	(0.8)
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	1	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.9
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	1	1	1	...	0.7	3.9
7	3	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	2.6
8	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	3	1	...	...	...	...	...	...	...	0.7	1.8
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	7	7	...	...	...	...	...	...	1.7	1.4
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	(*)	(1)	(1)	(1)	(2)	(1)	(1)	(1)	(2)	(1)	(2)	...	...	...	...	...	...	...	(1.3)	(3.6)
13	...	...	...	...	...	...	...	(*)	(*)	(*)	(1)	(1)	(*)	(*)	(1)	(*)	(*)	(1)	(1)	(*)	(*)	(*)	(*)	(*)	(*)	(1.7)	(4.2)
14	(2)	(1)	(2)	(1)	(2)	(1)	(1)	(*)	(*)	(*)	(1)	(1)	(*)	(*)	(1)	(*)	(*)	(1)	(2)	(1)	(*)	(*)	(*)	(*)	(1.7)	(4.2)	
15	(*)	(1)	(2)	(3)	(3)	(3)	(3)	(*)	(1)	(1)	(*)	(2)	(1)	(*)	(*)	(1)	(*)	(1)	(2)	(1)	(1)	(1)	(1)	(1)	(2.9)	(9.2)	
16	(2)	(2)	(2)	(2)	(1)	(1)	(1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(1.1)	(2.5)
17	...	...	...	...	...	...	...	(4)	(4)	(1)	(1)	(1)	(1)	(1)	(*)	(1)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(2)	(2)	(1.8)	(4.4)
18	(3)	(3)	(3)	(3)	(2)	(2)	(1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(1.7)	(2.8)
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	0.1	0.6
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.5
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	1.0	2.4	1.1	9	6	7	8	4	1	2	3	3	4	3	...	...	1	1	2	2	2	2	3	...	2.0	4.6
25	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(*)	(1)	(1)	(*)	(*)	...	...	...	...	...	...	(*)	(*)	(*)	(*)	(*)	(1)	(1)	(11.0)	(15.7)
26	(1)	(*)	(*)	(1)	(*)	(1)	(1)	(4)	(3)	(4)	(1)	(*)	(*)	...	...	...	...	...	...	...	...	...	...	...	...	(1.6)	(3.7)
27	...	...	...	...	...	...	...	(1)	(1)	(4)	(4)	(5)	(3)	...	...	...	...	...	...	...	...	...	...	...	...	(1.8)	(2.6)
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	1.2	2.1	3.7	2.3	1.8	1.5	1.8	3.2	1.6	1.6	1.5	2.2	1.9	0.6	1.2	1.1	1.3	2.3	4.0	2.2	0.6	1.0	1.3	1.7	43.7	83.2	
Total Duration.	hr. 2.9	hr. 4.5	hr. 4.5	hr. 3.5	hr. 2.9	hr. 3.1	hr. 3.4	hr. 4.0	hr. 5.1	hr. 4.4	hr. 2.7	hr. 4.6	hr. 2.7	hr. 1.2	hr. 2.4	hr. 3.5	hr. 3.0	hr. 5.2	hr. 3.3	hr. 3.2	hr. 2.5	hr. 4.1	hr. 3.3	hr. 3.2	hr. 83.2		

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

117. 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) = 11.4 metres + 0.6 metres. March, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1
2
3
4	·1	·1	(·1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·3	0·6
5	0·3	1·0
6
7
8	≡	(0·1)	...
9	≡	(...)	...
10
11
12
13
14
15
16
17
18
19
20
21	3·3	4·0
22	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·1	0·3
23
24
25	0·6	0·9
26
27
28
29
30
31	·2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·2	0·5
Sum.	0·3	0·1	0·2	...	0·5	0·1	0·2	...	...	0·1	1·2	0·3	0·1	...	...	0·1	...	...	0·1	0·2	1·0	0·1	0·2	0·1	4·9	7·3	
Total Duration.	hr. 0·8	hr. 0·3	hr. 0·7	hr. ...	hr. 0·7	hr. 0·2	hr. 0·3	hr. ...	hr. ...	hr. 0·3	hr. 0·7	hr. 0·5	hr. 0·3	hr. ...	hr. ...	hr. 0·2	hr. ...	hr. ...	hr. 0·1	hr. 0·3	hr. 1·3	hr. 0·4	hr. 0·2	hr. ...	hr. 7·3		

118. Aberdeen: $H_r = 11.4$ metres + 0.6 metres.

April, 1929.

	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	...	...	...	...	...	·3	·3	...	...	...	·2	·3	...	...	...	·3	·4	...	·8	·2	·5	...	...	...	...	3·4	3·4
2	...	·1	...	...	...	...	·3	...	...	...	...	...	...	...	...	...	...	...	...	...	·4	...	...	...	·2	1·0	1·1
3	...	...	...	...	...	·1	...	...	...	·1	...	...	1·3	·1	...	...	...	...	...	...	...	...	...	...	...	1·6	0·8
4	·3	...	...	...	...	...	...	...	...	·9	·4	·9	1·0	·2	·2	1·4	·5	·3	·1	·2	...	...	...	...	·1	6·5	5·6
5	...	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·1	0·1
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·2	0·6
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·2	0·2
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·8	1·8
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·5	1·0
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·1	0·3
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·8	1·4
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·9	2·5
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·0	2·3
20	·1	·4	(·2)	(·1)	(·2)	(·1)	(·2)	(·1)	...	...	·1	...	·1	...	·2	...	·1	...	...	...	...	...	...	...	...	1·9	(2·8)
21	...	...	...	·4	·2	·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·1	1·0
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·7	0·7
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	·1	·1	·3	·2	·2	·1	...	·8	·2	...	·2	·2	·4	·1	...	...	...	·1	(·4)	(·2)	(·2)	*△	*△	*△	...	3·8	(5·2)
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4·3	5·8
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10·1	15·4
29	·6	1·9	·2	·3	·8	·2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4·3	4·5
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	1·1	2·7	0·7	1·0	1·4	2·6	1·6	1·4	1·9	2·1	3·7	3·0	3·8	2·4	2·4	1·0	0·9	0·8	2·5	1·7	2·8	1·1	0·3	2·2	45·1	56·7	
Total Duration.	hr. 1·6	hr. 2·1	hr. 1·0	hr. 1·3	hr. 1·3	hr. 2·6	hr. 2·0	hr. 1·5	hr. 2·7	hr. 2·6	hr. 4·6	hr. 4·1	hr. 4·0	hr. 3·0	hr. 2·4	hr. 1·5	hr. 1·3	hr. 1·7	hr. 3·5	hr. 2·7	hr. 2·9	hr. 2·0	hr. 1·1	hr. 3·2	hr. 56·7		
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24		

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

119. 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) = 11.4 metres + 0.6 metres. of receiving May, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	hr.																									
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	5	1.6	1.2	4	2	2	...	...	...	...	...	...	...	2	...	2	2	1	...	4.8	4.7	
5	1	1	...	...	...	...	...	...	...	...	...	...	...	1.1	1	...	1.4	7	...	...	...	...	...	...	3.5	1.3	
6	...	...	...	...	...	...	...	...	...	...	...	...	1	1.6	2.1	3.4	3.1	4.8	2.4	3	...	...	...	...	17.8	6.5	
7	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.9
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.8	2.7	...	...	...	...	...	...	...	...	6.5	1.4
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	5	3	...	...	4	...	...	...	...	...	...	...	...	...	...	(1)	...	...	...	...	...	...	...	...	...	1.3	(1.7)
11	...	1	2	1.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	1.3
12	...	...	...	...	...	...	...	...	...	...	...	2	3.2	4	3	...	...	2.5	6	1	...	...	...	...	...	7.3	3.2
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	3.2	...	5.5	2.0
14	1.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	2	1.5	1	...	...	1	...	3.4	3.2
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	1.7	1.4
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	2	...	...	...	...	0.7	2.1
23	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	1.6
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	3	3	3	...	2.3	1.7
25	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.8
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	1.0
Sum.	2.2	0.6	0.3	1.4	0.4	0.7	1.9	1.4	0.4	0.2	0.2	0.2	3.3	3.1	2.5	7.4	7.3	8.8	3.7	2.1	1.9	0.8	3.8	3.7	57.8	34.8	
Total Duration.	hr. 3.1	hr. 1.0	hr. 0.8	hr. 1.1	hr. 0.5	hr. 0.9	hr. 2.1	hr. 1.3	hr. 0.5	hr. 0.2	hr. 0.5	hr. 0.3	hr. 1.0	hr. 1.4	hr. 1.3	hr. 2.4	hr. 1.9	hr. 2.9	hr. 2.4	hr. 2.3	hr. 1.3	hr. 0.9	hr. 2.1	hr. 2.6	hr. 34.8		

120. Aberdeen : $H_r = 11.4$ metres + 0.6 metres.

June, 1929.

	mm.	hr.																										
1	11.6	8.4	
2	7	1.0	1.7	2.3	1.2	8	2.6	9	3	...	1	...	...	...	...	...	...	...	...	...	0.7	0.8	
3	1	...	...	...	...	...	...	...	...	...	...	...	...	0.7	1.6	
4	1	...	...	...	...	...	...	...	...	...	3	...	1	...	1	1	...	...	...	...	...	...	...	...	...
5	
6	8	3	3	1.2	3	1.0	6	2	3	8	2	6	9	1.0	8.5	13.6
7	6	3	2	1	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...	...	...	...	...	...	...	1.6	3.8
8	
9	1	3	2	5	1.7	1	...	...	...	...	...	...	...	2.9	2.1	
10	1	...	...	...	...	...	...	4	6	2	1.7	1.1	3	...	...	...	...	...	...	...	4.6	3.0	
11	
12	1	...	0.1	0.5	
13	4	1.1	5	7	1.2	5	4	(1)	1.0	...	3	4	3	3	...	...	...	...	...	...	...	...	...	...	...	7.2	7.6
14	
15	1	3	5	...	0.9	1.3	
16	1	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	0.3	0.5	
17	
18	
19	4	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	1.0	
20	
21	2	2	0.9	1.3
22	1	1	1	...	0.5	0.8
23	3	...	1.1	1.4	0.6
24	1.7	...	6	2	...	...	1	3	1	...	1	...	...	3	...	...	...	...	...	...	...	...	3.4	2.6	
25
26
27
28
29
30
Sum.	1.0	1.4	0.9	2.6	1.6	2.1	1.6	2.0	3.3	1.3	2.7	4.8	2.3	4.2	3.5	1.6	2.2	0.8	0.5	1.5	0.9	0.8	1.4	1.8	46.3	50.2		
Total Duration.	hr. 1.5	hr. 1.9	hr. 2.3	hr. 1.8	hr. 0.7	hr. 2.3	hr. 2.0	hr. 2.4	hr. 1.8	hr. 1.3	hr. 2.9	hr. 3.6	hr. 4.0	hr. 3.6	hr. 2.1	hr. 1.7	hr. 1.9	hr. 1.8	hr. 1.4	hr. 1.9	hr. 1.5	hr. 1.4	hr. 2.0	hr. 2.4	hr. 50.2			
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24			

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

121. 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) = 11.4 metres + 0.6 metres. July, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1	·1	·1	...	·1	·1	...	...	...	...	...	...	...	...	...	...	...	...	·3	·1	·1	·1	·3	1.3	2.7	
2	1.9	·2	·4	...	...	...	...	...	...	...	...	...	...	...	2.5	1.5
3
4	·3	...	...	...	...	...	...	...	...	...	...	...	·2	·3	0.8	0.9
5	·2	...	...	...	...	·1	·3	1.6	1.4	1.5	1.1	·9	·9	·7	1.1	·6	·3	1.3	·8	·2	·3	·1	·6	·2	14.2	16.2	
6	·6	·4	·7	·1	...	...	·5	...	·1	...	...	...	...	·1	·6	·1	...	...	...	...	...	...	...	...	...	3.2	5.2
7	·1	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.5
8
9	·1	·1	...	...	...	...	...	...	...	...	0.2	0.5
10	·1	·5	·4	...	·1	·2	...	...	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	3.5
11
12
13
14
15
16
17
18
19
20
21
22
23	...	·6	·7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	1.6
24
25
26
27
28	·1	·1	...	·2	·1	·1	...	·2	·1	·2	·1	·2	1.1	3.1
29	...	·2	·5	·3	·6	·8	·2	...	...	...	...	...	4.5	3.1	·2	·1	·7	...	...	...	...	...	...	...	11.2	6.9	
30	·4	·3	...	...	...	...	...	2.2	2.7	2.2	·4	...	...	...	...	...	...	...	...	8.2	3.2	
31	·4	...	3.5	4.5	4.1	5.0	3.6	5.6	7.7	6.9	4.5	3.4	49.2	10.2	
Sum.	0.8	1.2	2.1	1.0	1.0	1.4	1.6	1.9	1.5	1.5	1.5	2.8	1.5	8.0	11.1	7.7	5.0	7.2	4.5	6.2	8.1	7.3	5.5	4.4	94.8	56.0	
Total Duration.	hr. 1.5	hr. 1.9	hr. 3.3	hr. 2.5	hr. 1.6	hr. 2.0	hr. 2.7	hr. 2.3	hr. 1.1	hr. 1.0	hr. 1.5	hr. 2.0	hr. 1.7	hr. 2.8	hr. 4.0	hr. 3.6	hr. 2.9	hr. 3.2	hr. 2.3	hr. 2.2	hr. 1.7	hr. 1.8	hr. 2.8	hr. 3.6	hr. 56.0		

122. Aberdeen : H_r = 11.4 metres + 0.6 metres.

August, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
Day.	mm.	mm.	hr.																									
1	1.5	·7	...	...	...	...	...	...	...	...	...	·2	...	...	...	...	...	...	...	·1	...	...	...	...	...	2.5	2.4
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	·1	1.9	1.2	·4	·9	·8	...	·2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.5	5.3
4	...	...	...	...	...	...	...	...	...	...	...	...	...	·1	1.1	1.4	·8	·2	·2	...	...	...	...	...	...	3.8	4.4
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·5	·8	...	·2	...	...	...	...	...	...	...	1.5	0.7
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·3	·8	1.3	2.4	·5	...	...	...	...	5.3	4.2
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·8	...	...	...	...	...	...	...	...	0.8	0.6
8	0.2	0.7
9	...	...	...	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.2
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·3	·4	·3	1.0	3.0
11	·5	·5	·6	·6	·4	·3	·4	...	...	...	...	...	·3	3.4	...	...	...	...	...	...	...	...	...	...	...	7.0	7.3
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·2	...	...	...	...	...	...	...	...	0.2	0.2
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	3.6	2.5	1.2	·2	2.5	1.6	1.1	14.0	7.6	
14	2.0	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	·4	...	...	...	...	...	...	...	...	4.0	1.5
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	...	...	...	...	...	...	...	...	1.2	0.3
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·2	...	...	...	·1	·3	·8	·7	2.4	3.9	
17	2.3	2.6	·1	·1	...	...	...	·1	1.2	·2	·1	·2	...	...	...	...	·2	...	...	·1	·4	·8	1.5	·9	7	11.1	9.4
18	·5	·1	·2	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	2.3
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	1.1
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	·1	·5	·1	...	...	...	...	...	...	...	...	...	...	...	...	·1	·2	·2	·4	·1	...	...	1.7	3.4
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.5
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·4	·6	...	...	...	...	1.0	0.9
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·2	·1	·6	·1	1.0	1.6	
28	·4	2.2	·2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·6	·5	·5	...	...	...	...	...	4.4	3.2
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.4
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	2.3
31	·3	·4	...	...	·1	·3	·2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	2.7
Sum.	7.8	6.6	1.1	1.1	2.9	1.9	1.0	1.1	2.0	0.2	0.4	0.5	0.3	3.5	1.6	4.6	5.9	5.8	5.1	5.4	2.1	5.2	4.5	2.9	73.3	70.1		
Total Duration.	hr. 6.8	hr. 5.4	hr. 2.1	hr. 1.8	hr. 2.6	hr. 2.6	hr. 2.3	hr. 1.4	hr. 1.9	hr. 0.5	hr. 1.0	hr. 0.8	hr. 0.1	hr. 0.3	hr. 1.2	hr. 2.7	hr. 5.8	hr. 4.1	hr. 3.4	hr. 5.1	hr. 3.6	hr. 5.3	hr. 5.3	hr. 4.2	hr. 70.1			

DURATION OF BRIGHT SUNSHINE.

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

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

January, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	—	—	—	—	—	.1	.5	—	—	—	—	—	—	—	—	—	0.6	9
2	—	—	—	—	—	—	—	.3	1.0	1.0	1.0	—	—	—	—	—	—	—	—	3.3	49
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	.1	1.0	1.0	1.0	1.0	.2	—	—	—	—	—	—	—	4.3	63
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	.1	—	.1	—	—	—	—	—	—	—	0.2	3
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	.3	—	—	—	—	—	—	—	—	—	—	—	—	0.3	4
14	—	—	—	—	—	—	—	—	.1	—	—	—	—	—	—	—	—	—	—	0.1	1
15	—	—	—	—	—	—	.3	.6	.8	.5	.2	—	—	—	—	—	—	—	—	2.4	33
16	—	—	—	—	—	—	.2	.2	.2	.1	.5	.2	—	—	—	—	—	—	—	1.4	19
17	—	—	—	—	—	—	.3	1.0	1.0	1.0	1.0	1.0	.1	—	—	—	—	—	—	5.4	73
18	—	—	—	—	—	—	—	—	.4	—	—	.3	—	—	—	—	—	—	—	0.7	9
19	—	—	—	—	—	—	—	—	.1	—	—	—	—	—	—	—	—	—	—	0.5	7
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	—	—	—	—	—	—	—	.4	1.0	1.0	.8	—	—	—	—	—	—	—	—	3.2	42
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	—	—	—	—	—	—	.1	.3	.5	.1	.5	—	—	—	—	—	—	—	—	1.5	19
24	—	—	—	—	—	.1	.5	.5	.5	.9	.7	.4	—	—	—	—	—	—	—	3.6	46
25	—	—	—	—	—	—	—	.8	.6	.5	.2	—	—	—	—	—	—	—	—	2.1	27
26	—	—	—	—	—	—	—	.3	.1	.8	.5	—	—	—	—	—	—	—	—	1.7	22
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	—	—	—	—	—	.4	1.0	1.0	1.0	1.0	1.0	—	—	—	—	—	—	—	—	5.4	67
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sum.	—	—	—	—	—	0.5	2.8	6.5	8.7	8.5	7.4	2.2	0.1	—	—	—	—	—	—	36.7	—
Mean.	—	—	—	—	—	.02	.09	.21	.28	.27	.24	.07	.00	—	—	—	—	—	—	1.18	16

128. Aberdeen : h_s = 20.7 metres.

February, 1929.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	.2	1.0	1.0	1.0	.5	.5	1.0	.2	—	—	—	—	—	—	—	5.4
5	—	—	—	—	—	—	—	—	.1	—	.4	—	—	—	—	—	—	—	—	—	0.5
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	.8	1.0	1.0	.8	—	—	—	—	—	—	—	—	3.6
10	—	—	—	—	—	.6	1.0	1.0	1.0	1.0	1.0	1.0	.1	—	—	—	—	—	—	—	6.7
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	.2	.1	—	.2	.3	.3	—	—	—	—	—	—	—	—	0.2
14	—	—	—	—	—	—	.1	—	.2	.2	—	—	—	—	—	—	—	—	—	—	1.1
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5
16	—	—	—	—	—	—	—	.2	.1	.3	—	—	—	—	—	—	—	—	—	—	0.6
17	—	—	—	—	—	—	—	—	—	.1	—	.1	—	—	—	—	—	—	—	—	0.2
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	—	—	—	—	—	.5	1.0	.9	.4	1.0	.8	.1	.1	—	—	—	—	—	—	—	4.8
23	—	—	—	—	—	—	.2	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—	.2	.6	.7	.6	.7	.2	—	—	—	—	—	—	3.0
26	—	—	—	—	—	—	—	.7	.2	.8	.6	.3	.1	—	—	—	—	—	—	—	2.7
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	—	—	—	—	—	.9	1.0	1.0	1.0	1.0	1.0	1.0	.9	—	—	—	—	—	—	—	7.8
Sum.	—	—	—	—	—	2.2	4.5	4.9	5.0	6.7	6.3	5.4	2.1	0.2	—	—	—	—	—	—	37.3
Mean.	—	—	—	—	—	.08	.16	.17	.18	.24	.23	.19	.07	.01	—	—	—	—	—	—	1.33
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	

DURATION OF BRIGHT SUNSHINE.

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

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

March, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%						
1	—	—	—	2	...	...	6	2	5	...	...	...	—	—	—	1.5	14	
2	—	—	—	7	3	1	...	...	...	—	—	—	1.1	10	
3	—	—	—	9	1.0	1.0	7	2	2	...	...	...	—	—	—	5.0	47	
4	—	—	—	6	6	...	—	—	—	1.2	11	
5	—	—	—	1	7	7	1	1	1	...	1	...	—	—	—	2.5	23	
6	—	—	—	2	5	6	...	...	...	...	3	...	—	—	—	1.6	15	
7	—	—	—	9	1.0	9	1.0	1.0	1.0	1.0	5	...	—	—	—	8.3	75	
8	—	—	—	7	1.0	3	1.0	9	1.0	8	2	...	—	—	—	6.4	58	
9	—	—	—	8	1.0	1.0	1.0	1.0	6	...	—	—	—	6.9	62	
10	—	—	—	2	9	1.0	1.0	1.0	1.0	1.0	5	...	—	—	—	8.6	76	
11	—	—	—	...	3	7	9	1.0	1.0	1.0	1.0	1.0	7	...	—	—	—	8.6	75		
12	—	—	—	...	8	1	...	...	...	...	...	7	8	...	—	—	—	2.4	21	
13	—	—	—	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	...	—	—	—	9.2	80		
14	—	—	—	8	1.0	9	3	8	7	...	—	—	—	5.0	43	
15	—	—	—	—	—	—	
16	—	—	—	—	—	—	
17	—	—	—	—	—	—	
18	—	—	—	—	—	—	
19	—	—	—	—	—	—	
20	—	—	—	—	—	—	
21	—	—	—	—	—	—	
22	—	—	1.0	1.0	1.0	1.0	4	7	7	9	1.0	1.0	5	...	—	—	9.2	75	
23	—	—	3	1.0	1.0	1.0	5	5	4	5	...	...	...	—	—	—	6.2	50	
24	—	—	6	4	3	6	9	1.0	...	—	—	—	3.8	31	
25	—	—	...	3	9	4	3	6	1	4	4	1.0	1.0	...	...	—	—	—	5.4	43
26	—	—	3	...	...	1	1	...	...	...	1	2	...	—	—	0.8	6	
27	—	—	...	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	—	—	11.8	89	
28	—	—	...	6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2	...	—	—	10.8	85	
29	—	—	...	6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	5	...	—	—	10.8	84	
30	—	—	...	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	1.0	2	...	—	—	10.9	84	
31	—	—	...	8	1.0	1.0	1.0	9	5	6	9	5	3	...	1	...	—	—	7.6	58	
Sum.	—	—	...	4.3	9.7	13.2	15.4	15.4	14.2	15.7	13.7	15.2	14.9	11.3	2.1	...	—	—	145.1	—	
Mean	—	—14	.31	.43	.50	.50	.46	.51	.44	.49	.48	.36	.07	...	—	—	4.68	40	

130. Aberdeen : h_s = 20.7 metres.

April, 1929.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%						
1	—	—	7	2	4	3	6	5	1.0	9	4	6	...	—	—	—	5.6	43	
2	—	—	...	1	8	...	...	...	...	...	...	1	...	...	...	—	—	—	1.0	8
3	—	—	...	4	8	1	...	2	6	4	5	9	9	8	...	—	—	—	5.6	42	
4	—	—	1	1	...	...	—	—	—	0.2	2	
5	—	—	...	9	8	3	...	...	2	8	8	1.0	1.0	8	7	...	—	—	7.3	54
6	—	—	...	9	1.0	1.0	1.0	1.0	9	3	5	1.0	1.0	1.0	6	...	—	—	10.2	76	
7	—	—	2	9	1.0	1.0	1.0	2	...	5	1	1	...	...	...	—	—	—	5.0	37
8	—	—	7	1.0	5	...	...	...	1	...	...	—	—	—	2.3	17	
9	—	—	...	1	3	6	...	9	7	4	4	5	5	3	1	...	—	—	4.8	35	
10	—	—	...	7	3	1	3	7	9	1.0	1.0	1.0	1.0	4	...	—	—	—	8.4	61	
11	—	—	1	8	4	3	1.0	1.0	1.0	1.0	1.0	8	1.0	6	...	—	—	—	9.0	65	
12	—	—	2	1.0	1.0	9	1.0	9	1	...	—	—	—	6.0	43	
13	—	—	2	3	1	...	...	...	9	9	2	...	—	—	2.6	19	
14	—	—	1	3	2	6	9	1.0	1.0	8	3	3	1	...	...	—	—	—	5.6	40
15	—	—	1	4	...	...	...	...	...	—	—	—	0.5	4	
16	—	...	1	6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	...	—	—	12.3	86	
17	—	1	1.0	4	...	5	4	...	1	6	...	...	...	—	—	—	3.1	22	
18	—	2	...	...	...	—	—	—	0.2	1	
19	—	1	8	1.0	5	9	6	...	—	3.9	27	
20	—	3	8	1.0	6	7	1.0	6	6	8	8	7	1.0	5	...	—	9.4	64	
21	—	1	6	8	5	6	9	1.0	1.0	1.0	9	1.0	4	...	—	8.8	60	
22	—	...	3	1	...	1	...	...	...	...	5	9	6	6	...	—	—	—	3.2	22
23	—	1	...	...	...	...	5	4	3	3	2	1	...	—	—	—	1.9	13	
24	—	3	8	8	8	7	5	9	8	9	7	5	1	...	—	7.8	52	
25	—	...	7	1.0	1.0	6	2	7	7	1.0	8	3	5	8	2	5	...	—	9.0	60	
26	—	...	1.0	1.0	1.0	1.0	6	2	3	1	6	1.0	8	6	...	—	—	—	8.2	54	
27	—	...	5	1	...	...	...	...	...	...	...	1	...	...	...	—	—	—	0.7	5
28	—	—	—	—	
29	—	—	—	—	
30	—	1	9	3	8	7	3	7	7	7	9	8	9	9	9	1.0	4	...	11.0	71	
Sum.	—	0.1	3.9	8.7	12.3	10.4	9.9	11.9	13.5	12.3	12.8	15.7	16.0	13.8	8.2	3.7	0.4	—	153.6	—	
Mean.	—	.00	.13	.29	.41	.35	.33	.40	.45	.41	.43	.52	.53	.46	.27	.12	.01	—	5.12	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.

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

May, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%						
1	—	4	9	1.0	1.0	1.0	8	4	...	...	1	2	...	...	4	...	...	...	6.2	40
2	—	...	...	1	8	5	7	1	2	2	2	5	4	7	6	7	3	—	6.0	39
3	—	...	...	5	8	7	7	7	6	3	3	4	6	1.0	1.0	3	...	...	7.9	51
4	—	...	...	...	...	...	...	...	...	1	7	1	5	6	...	...	...	...	2.0	13
5	—	...	...	...	...	...	...	...	1	3	...	3	3	2	...	3	...	...	1.5	10
6	—	...	6	9	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	11
7	—	...	...	...	...	...	...	5	7	1.0	9	9	1.0	1.0	7	1.0	2	—	7.9	50
8	—	...	...	6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2	...	...	...	...	...	...	7.8	49
9	—	5	1.0	1.0	1.0	1.0	1.0	9	1.0	8	1	...	1	...	...	...	...	...	8.4	52
10	—	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	0.1	1
11	...	...	9	1.0	1.0	1.0	1.0	9	5	1	...	...	...	...	...	...	...	...	6.4	39
12	...	2	8	1.0	1.0	8	1.0	5	2	...	1	5	5	4	...	...	...	...	7.0	43
13	...	4	1.0	1.0	1.0	7	1.0	5	1.0	7	1	...	...	...	...	...	...	...	7.4	45
14	...	1	5	...	...	...	...	8	1.0	9	2	7	4	...	...	...	...	...	4.6	28
15	...	...	...	...	...	5	5	3	7	4	5	1	7	5	1	...	...	...	4.3	26
16	...	...	...	1	5	3	2	...	...	1	...	...	2	...	5	8	4	...	3.1	19
17	...	...	...	...	...	...	...	2	...	1	7	1.0	1.0	1.0	1.0	1.0	6	...	6.6	40
18	...	...	...	...	1	3	8	2	7	4	...	...	...	...	...	...	...	...	2.5	15
19	...	...	...	...	4	5	2	9	1.0	7	5	2	5	...	...	...	...	...	4.9	29
20	...	...	4	2	...	2	...	1	6	1.0	6	...	...	...	...	...	...	...	3.1	19
21	...	...	...	...	...	...	...	1	...	8	1.0	1.0	1.0	1.0	1.0	8	...	...	6.7	40
22	...	...	...	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	0.3	2
23	...	...	...	...	7	...	1	2	7	3	...	...	...	...	7	...	...	...	2.7	16
24	...	...	...	1	...	...	5	6	9	9	1.0	7	1	...	...	...	...	...	4.8	28
25	...	...	...	5	1.0	1.0	1.0	1.0	9	1.0	1.0	5	9	1.0	1.0	1.0	4	...	12.2	72
26	...	...	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	88
27	...	...	...	1	1.0	1.0	1.0	8	2	2	1.0	5	9	1.0	1.0	1.0	8	...	10.5	61
28	...	...	1	...	...	...	4	1	2	5	1	2	...	...	1	...	...	...	1.9	11
29	...	...	...	...	6	8	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...	12.3	72
30	...	...	...	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	...	13.3	77
31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	0.1	1
Sum.	...	1.6	7.1	9.4	14.1	12.9	14.8	14.0	14.9	15.2	13.0	11.4	11.7	11.6	11.6	10.1	5.7	0.1	179.2	—	
Mean.	...	.05	.23	.30	.45	.42	.48	.45	.48	.49	.42	.37	.38	.37	.33	.18	.00	...	5.78	35

132. Aberdeen : h_s = 20.7 metres.

June, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
1	2	1.0	1.0	1.0	6	4	9	5	6	7	...	...	...	6.9	40
2	1	...	...	6	2	...	0.9	5
3	1	4	...	...	...	...	...	...	...	...	0.5	3
4	...	1	3	8	8	7	6	6	7	1	4	3	...	3	6	...	...	...	6.3	36
5	...	6	1.0	1.0	9	2	2	2	2	1	...	6	1.0	7	...	2	...	...	6.9	39
6
7	...	2	4	4	3	7	8	6	6	9	7	1	...	...	5	7	1	1	7.1	40
8	...	7	5	2	1	3	2	...	2	8	4	2	...	...	...	...	...	...	3.6	20
9	...	5	1.0	1.0	1.0	1.0	8	4	...	2	4	3	6	2	3	...	...	...	7.7	44
10	7	9	8	6	5	2	3	...	3	8	2	2	9	5	...	6.9	39
11	...	1	4	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	0.7	4
12	...	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	8	9	1	...	...	...	...	...	10.5	59
13	1	9	1.0	3	4	8	1.0	...	4.5	25
14	...	5	1.0	9	6	9	1.0	9	1.0	1.0	1.0	8	1.0	9	2	3	...	...	12.0	67
15	5	1.0	1.0	1.0	6	1.0	1.0	1.0	7	5	...	3	4	1	...	...	9.1	51
16	...	9	6	4	8	9	7	9	1.0	7	6	3	3	5	2	2	1	...	9.1	51
17	...	9	1.0	8	9	9	5	...	...	5	8	6	8	9	1.0	2	...	...	9.8	55
18	4	...	...	...	...	5	1	...	...	...	...	...	...	1.0	6
19	5	7	...	9	9	9	5	...	...	4.4	25
20	3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	9	7	1	1	2	...	4	...	11.5	65
21	...	9	1.0	8	6	7	...	...	...	...	...	...	...	...	...	...	...	...	4.0	22
22	3	3	7	9	8	1	5	2	...	...	...	...	...	...	3.8	21
23	...	7	8	7	9	1.0	9	1.0	1.0	4	3	...	3	2	6	9	4	...	10.1	57
24	...	3	2	7	8	1.0	3	...	...	1	4	...	1	...	5	...	...	...	4.4	25
25	1	...	...	...	3	...	...	...	4	...	...	0.8	4
26	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	...	12.6	71
27	1	1	4	4	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	...	9.9	56
28	7	1.0	1.0	7	...	...	...	3.4	19
29	1	4	...	...	3	1	...	...	0.9	5
30
Sum.	0.3	8.2	10.8	11.5	13.1	14.0	12.8	12.1	11.8	11.4	11.7	10.4	10.3	9.1	9.8	8.3	3.6	0.1	169.3	—
Mean.	.01	.27	.36	.38	.44	.47	.43	.40	.39	.38	.39	.35	.34	.30	.33	.28	.12	.00	5.64	32
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.

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

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

July, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%						
1	9	5	4	2	3	2.3	13
2	1	1	3	4	6	1.5	8
3	1	...	1	1.0	2	...	3	3	1	7	3	...	...	3.1	18	
4
5
6
7	1	2	2	...	4	1	...	1	...	...	1	7	4	9	8	2	4.2	24	
8	...	8	1.0	1.0	1.0	8	2	5	7	8	3	4	1.0	1.0	1.0	5	...	...	11.0	63
9	...	2	5	8	1.0	4	1	...	...	...	...	...	...	...	1	...	...	...	3.1	18
10	2	3	...	...	...	...	0.5	3	
11
12	...	3	5	1.0	1.0	9	9	1.0	1.0	9	1.0	7	2	...	1	1	...	...	9.6	55
13	2	...	5	...	1	6	9	5	1	9	1.0	1.0	1.0	8	...	7.6	44	
14	...	9	1.0	1.0	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	6	1.0	1.0	...	...	13.6	79
15	...	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	
16	1	8	9	1.0	1.0	1.0	1.0	1.0	9	1.0	1.0	1.0	1.0	4	...	12.1	70	
17	8	...	9	1.0	9	1.0	8	2	5	1	1	...	...	...	...	...	6.3	37	
18	...	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	1	1	1	3	...	...	11.3	66
19	1	1	4	7	9	3	1	1	5	2	1	5	...	...	4.0	66	
20	...	5	6	4	4	7	1.0	9	1.0	4	...	...	1	8	9	1.0	8	...	9.5	56
21	...	8	1.0	8	5	1.0	1.0	2	6	3	...	...	...	...	...	...	...	...	6.2	37
22	7	1.0	1.0	1.0	1.0	7	1	...	...	...	...	...	...	...	5.5	33	
23	1	8	7	5	7	7	5	3	...	6	1.0	1.0	1.0	8	2	...	8.9	53	
24	5	3	4	9	1.0	1.0	9	1.0	5	8	1.0	8	6	...	9.7	58	
25	...	7	1.0	1.0	1.0	1.0	1.0	9	5	5	7	6	9	9	7	1	...	...	11.5	69
26	1	...	...	5	6	9	9	1.0	1.0	1.0	1.0	1.0	...	...	8.0	48	
27	7	3	1	9	1.0	9	8	...	...	...	...	...	4.7	28	
28	...	1	4	6	4	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	9
29
30	7	3	1	8	3	1	...	...	...	3	...	...	...	2.6	16	
31	2	...	...	3	2	...	...	...	...	...	...	...	...	...	...	0.7	4	
Sum.	...	4.5	9.0	10.1	11.8	13.9	14.1	13.6	15.3	13.0	10.1	9.7	11.0	10.5	11.7	11.0	3.9	0.2	173.4	—	
Mean.15	.29	.33	.38	.45	.45	.44	.49	.42	.33	.31	.35	.34	.38	.35	.13	.01	5.59	33	

134. Aberdeen : $h_s + 20.7$ metres.

August, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
1	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	1.0	6						
2	2	8	1.0	1.0	9	4	5	1	5	3	3	1	4	3	...	...	6.8	42	
3	1	4	7	9	8	1	...	...	3.0	19	
4	3	9	6	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	11	
5	1	7	5	8	9	8	8	9	4	3	8	1	2	1	...	...	7.4	47	
6	1	4	3	...	...	...	...	...	...	...	...	...	...	...	0.8	5	
7	7	10	1.0	6	3	7	3	...	...	...	3	...	...	...	...	4.9	31	
8	1	6	5	4	...	1	...	...	3	3	...	...	...	...	...	2.3	15	
9	5	1	2	...	2	3	3	1	3	1	1	...	...	2.2	14	
10	6	6	...	6	1.0	4	8	9	4	...	...	...	...	...	...	...	5.3	34	
11	1	1	5	4	6	1	...	...	...	...	...	1.8	12	
12	6	1	9	6	7	9	4	4	7	9	1	2	4	...	...	...	6.9	45	
13	1	1	...	9	4	1	4	...	1	...	...	...	...	...	...	...	2.1	14	
14	6	1.0	1.0	1.0	7	6	4	9	3	...	5	6	...	...	...	7.6	50	
15	7	6	3	4	1.0	6	9	4	1.0	1.0	5	5	9	2	...	...	9.0	59	
16	1	...	...	...	...	...	...	...	...	...	...	...	0.1	1	
17
18	2	3	5	6	7	8	1.0	1.0	1.0	1.0	9	...	...	...	8.0	53	
19
20	1	1	...	...	6	1.0	4	3	1	4	...	...	...	...	3.0	20	
21	3	...	...	1	3	4	6	3	4	...	...	...	...	...	2.4	16	
22	9	1.0	1.0	1.0	1.0	1.0	8	9	4	8	1.0	6	...	...	...	...	10.4	71	
23	1	2	...	1	3	8	7	6	...	5	...	...	...	3.3	23	
24	6	1.0	1.0	8	6	7	1	5	1.0	6	7	3	...	1	...	...	8.0	55	
25	8	1.0	1.0	7	5	3	1	1	7	1	...	1	5	1	...	...	6.0	41	
26	1	5	5	5	1.0	4	...	...	...	...	...	...	...	2.5	17	
27	7	1.0	1.0	1	9	8	...	...	...	...	...	...	...	...	...	4.5	31	
28	1	5	5	1	8	1.0	6	3	9	4	...	1	...	...	5.3	37	
29	5	9	5	1.0	3	1	3	8	2	3	7	2	...	...	...	...	5.8	41	
30	4	9	6	...	1	...	...	...	...	...	...	...	...	...	...	2.0	14	
31	1	1	...	...	...	1	...	...	...	...	...	...	0.3	2	
Sum.	5.4	10.2	12.1	13.8	11.3	9.0	10.4	11.0	11.0	8.7	8.1	5.6	5.6	1.9	0.4	...	124.5	—	
Mean.17	.33	.39	.45	.36	.29	.34	.35	.35	.28	.26	.18	.18	.06	.01	...	4.02	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.

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

September, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	.1	.1	.1	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.4	.5	.3	—	—	9.4	68
2	—	—	.1	.2	.9	.8	1.0	1.0	.8	1.0	.5	.5	.2	—	—	—	—	—	7.1	51
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	.2	.5	.2	.2	—	—	—	—	—	—	—	—	—	—	—	1.1	8
5	—	—	—	—	.2	.1	.3	1.0	.5	.2	—	.4	—	—	—	—	—	—	2.7	20
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	.1	.1	.2	.5	.8	.6	.8	1.0	.4	—	—	—	—	4.5	34
8	—	—	—	.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.7	—	—	—	11.1	83
9	—	—	—	—	—	.3	.6	.8	.8	.9	1.0	1.0	1.0	1.0	.4	—	—	—	7.8	59
10	—	—	—	—	—	—	—	—	.2	.6	.7	.5	.8	.9	.4	—	—	—	4.1	31
11	—	—	—	.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.6	—	—	—	11.1	85
12	—	—	—	—	.1	.9	1.0	1.0	.9	.6	.3	.9	.3	—	—	—	—	—	6.0	46
13	—	—	—	.5	.9	.4	.9	.9	.7	.6	.5	.9	.8	—	—	—	—	—	7.1	55
14	—	—	—	—	—	—	—	—	—	—	—	—	.2	—	—	—	—	—	0.2	2
15	—	—	—	.8	.9	1.0	1.0	.9	.1	.3	.4	.2	.5	.4	.2	—	—	—	6.7	52
16	—	—	—	—	.7	.9	.3	.9	1.0	1.0	1.0	1.0	1.0	.9	—	—	—	—	8.7	69
17	—	—	—	.3	.4	1.0	1.0	1.0	1.0	1.0	.5	1.0	.9	.7	.2	—	—	—	9.0	71
18	—	—	—	.5	.7	.6	.8	.5	—	—	—	—	—	—	—	—	—	—	3.1	25
19	—	—	—	—	—	—	—	—	—	—	—	—	.1	.2	—	—	—	—	0.3	2
20	—	—	—	—	.2	.6	1.0	.9	.7	.8	.8	.7	.7	.7	.1	—	—	—	7.2	58
21	—	—	—	.1	.8	.8	.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.5	—	—	—	9.5	77
22	—	—	—	.3	.6	.8	.5	—	—	—	—	—	—	—	—	—	—	—	2.2	18
23	—	—	—	.3	.7	.9	.5	1.0	.6	.7	.6	.6	.7	.2	.4	—	—	—	7.2	60
24	—	—	—	.3	1.0	1.0	1.0	1.0	.6	1.0	1.0	.9	1.0	1.0	.2	—	—	—	10.0	83
25	—	—	—	.1	.6	1.0	.9	.2	.5	.8	.9	1.0	.7	.1	—	—	—	—	6.8	57
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	—	—	—	—	—	—	—	—	—	.2	.5	.1	.8	.3	—	—	—	—	1.9	16
29	—	—	—	—	—	.3	1.0	1.0	1.0	.9	.8	.9	.7	1.0	.2	—	—	—	7.8	67
30	—	—	—	—	—	—	.3	.9	.9	.3	.7	.4	.3	.1	—	—	—	—	3.9	34
Sum.	—	—	0.2	4.6	11.3	14.6	15.7	17.2	14.8	15.7	14.8	15.8	15.7	11.3	4.5	0.3	—	—	156.5	—
Mean.	—	—	.01	.15	.38	.49	.52	.57	.49	.52	.49	.53	.52	.38	.15	.01	—	—	5.22	41

136. Aberdeen : h_s = 20.7 metres.

October, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
1	—	—	—	—	.9	1.0	1.0	1.0	1.0	.9	.7	.4	—	—	—	—	—	—	6.9	60
2	—	—	—	—	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	1.0	1.0	—	—	—	—	9.9	87
3	—	—	—	—	—	.2	.2	.7	.2	.5	—	.1	.2	.5	—	—	—	—	2.6	23
4	—	—	—	—	.9	1.0	1.0	1.0	1.0	1.0	.7	.9	.4	—	—	—	—	—	7.9	70
5	—	—	—	—	—	—	.1	.8	.9	.5	.5	—	—	—	—	—	—	—	2.8	25
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	.1	.9	1.0	.8	—	—	—	—	2.8	25
8	—	—	—	—	—	—	—	—	—	—	—	—	.3	.6	—	—	—	—	0.9	8
9	—	—	—	—	.3	.2	.7	.8	.6	.9	.8	.8	.3	.2	—	—	—	—	5.6	51
10	—	—	—	—	—	—	—	—	—	.4	.4	—	—	—	—	—	—	—	0.8	7
11	—	—	—	—	.8	1.0	1.0	1.0	1.0	.8	1.0	1.0	.9	.3	—	—	—	—	8.8	82
12	—	—	—	—	—	.2	.2	—	—	.1	.2	.1	—	—	—	—	—	—	0.6	6
13	—	—	—	—	—	.2	—	.4	.8	.9	1.0	.9	.9	.4	—	—	—	—	5.5	52
14	—	—	—	—	—	—	.5	.1	—	.6	.2	.4	1.0	.8	—	—	—	—	3.6	35
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	—	—	—	—	—	—	—	—	—	—	—	—	—	.1	—	—	—	—	0.1	1
17	—	—	—	—	.1	.3	1.0	1.0	1.0	1.0	1.0	1.0	.7	—	—	—	—	—	7.1	70
18	—	—	—	—	.2	.6	.9	1.0	.9	.9	.9	.1	.2	—	—	—	—	—	5.7	56
19	—	—	—	—	—	.3	1.0	.9	.2	.5	.5	.2	—	—	—	—	—	—	3.6	36
20	—	—	—	—	—	—	—	—	—	.3	—	—	—	—	—	—	—	—	0.3	3
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	—	—	—	—	—	.6	.3	.1	—	.3	.3	—	—	—	—	—	—	—	1.6	16
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	1.0	.5	.9	1.0	.8	.4	1.0	.7	—	—	—	—	—	6.3	66
26	—	—	—	—	.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.8	.3	—	—	—	—	8.3	87
27	—	—	—	—	.2	1.0	1.0	1.0	1.0	1.0	1.0	.9	.3	.1	—	—	—	—	7.5	80
28	—	—	—	—	—	—	—	—	.2	.5	.2	.2	.1	—	—	—	—	—	1.2	13
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	.4	.7	.7	.8	.9	.4	—	—	—	—	—	—	—	3.9	42
31	—	—	—	—	—	—	.9	1.0	1.0	1.0	1.0	1.0	.5	—	—	—	—	—	6.4	70
Sum.	—	—	—	—	4.6	9.2	13.3	14.6	13.7	15.8	13.3	11.8	9.3	5.1	—	—	—	—	110.7	—
Mean.	—	—	—	—	.15	.30	.43	.47	.44	.51	.43	.38	.30	.16	—	—	—	—	3.57	35
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.

DURATION OF BRIGHT SUNSHINE.

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

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

November, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	11
3	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	66
4	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	13
6	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	17
7	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	36
8	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	69
9	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	69
10	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.1	85
11	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.4	78
13	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.9	84
14	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.8	84
15	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.6	83
16	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.8	60
17	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	35
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	15
19	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1	40
20	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.4	44
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	5
24	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	24
25	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
26	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
27	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	59
28	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	—	—	—	—	...	4.7	11.2	14.0	14.0	13.3	10.7	7.8	4.5	...	—	—	—	—	80.2	—	
Mean	—	—	—	—	...	.16	.37	.47	.47	.44	.36	.26	.15	...	—	—	—	—	2.67	33	

138. Aberdeen : h_s = 20.7 metres.

December and Year, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
1	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.2	45
2	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	24
4	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.0	58
7	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	9
8	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	15
9	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	28
10	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	16
13	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
14	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.7	41
15	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.5	53
16	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.6	70
17	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.0	76
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.3	35
19	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	25
20	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.4	36
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	5
24	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	15
27	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0	45
30	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	61
31	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.5	82
Sum.	—	—	—	—	...	3.6	9.1	10.9	12.8	9.4	4.2	...	—	—	—	—	—	—	49.5	—	
Mean	—	—	—	—	...	.12	.29	.35	.40	.30	.14	...	—	—	—	—	—	—	1.60	24	
Annual Totals	0.3	14.4	36.4	58.8	89.0	109.4	129.4	142.3	147.2	150.0	134.2	118.3	103.7	78.5	53.5	35.3	14.0	0.4	1416.0	—	
Annual Mean	.00	.04	.10	.16	.24	.30	.35	.39	.40	.41	.37	.32	.28	.22	.15	.10	.04	.00	3.88	32	
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	

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

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

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	290	4.3	300	5.4	300	6.4	300	6.4	290	6.1	310	6.8	310	7.0	310	6.6	310	6.2	300	6.0	310	6.2	310	5.7
2	290	3.6	290	4.0	290	3.5	280	2.7	280	1.7	270	2.0	280	2.6	280	2.4	280	2.5	290	2.3	290	2.5	290	2.0
3	280	1.8	290	2.3	290	1.7	—	1.4	—	—	—	1.0	—	0.8	230	1.7	—	0.8	—	1.5	—	1.0	—	1.1
4	260	2.0	250	1.7	250	2.7	250	2.4	260	2.1	250	2.1	260	2.2	240	2.7	250	2.5	280	3.0	270	3.3	240	3.0
5	—	1.2	—	1.2	—	1.2	280	2.0	—	1.4	290	2.5	290	1.8	290	1.8	—	1.5	290	2.2	—	1.5	290	1.8
6	140	4.3	130	5.1	130	7.3	130	6.9	120	7.2	120	8.0	110	8.3	110	10.2	110	10.1	110	8.4	110	9.2	110	10.0
7	140	6.0	140	4.8	130	4.4	120	3.6	120	3.7	110	4.1	—	1.5	120	4.6	130	4.4	120	5.1	120	4.5	110	3.2
8	290	3.6	280	2.9	290	2.8	290	3.5	280	2.4	290	2.7	290	2.9	290	2.4	300	2.7	300	2.6	300	2.5	300	2.0
9	220	2.0	220	2.5	210	3.0	200	3.7	210	2.6	200	3.6	200	4.0	190	4.1	200	4.7	200	4.4	190	5.5	190	5.2
10	150	5.0	160	3.8	150	5.0	150	4.6	150	5.4	150	5.5	140	6.2	140	6.9	140	6.6	130	8.0	130	7.5	130	6.8
11	100	6.7	90	5.6	90	4.8	90	5.5	80	5.6	70	6.0	80	6.1	80	5.0	80	6.0	80	5.3	70	5.6	60	4.0
12	310	2.5	310	2.1	310	2.1	310	2.2	310	2.5	320	2.5	300	2.5	310	2.8	300	3.5	310	3.8	300	3.6	310	4.2
13	290	5.6	290	4.9	290	5.0	290	4.5	300	5.5	300	6.6	300	6.8	300	6.4	300	6.7	300	7.5	310	7.7	310	7.4
14	320	4.6	330	5.8	330	4.9	320	5.5	330	4.9	330	6.1	330	4.5	320	4.1	320	4.9	310	4.1	320	4.0	320	4.9
15	300	9.6	300	10.5	320	9.5	330	8.5	320	8.8	330	8.0	330	7.4	330	7.2	320	6.7	320	7.2	330	7.6	330	8.0
16	360	8.0	350	6.1	340	4.4	310	4.1	310	4.6	290	4.5	290	4.2	290	4.1	300	4.1	310	5.8	310	6.3	310	6.4
17	300	5.0	310	6.4	310	5.8	310	6.3	310	6.3	290	4.0	290	3.6	290	3.6	300	3.6	290	4.0	290	4.1	280	3.5
18	—	0.9	—	0.4	—	0.5	—	0.8	—	1.1	240	3.3	270	3.1	260	1.8	260	3.6	260	2.5	250	2.2	260	2.8
19	—	0.8	240	4.5	240	4.2	230	4.2	230	4.0	210	3.7	210	3.6	230	4.1	230	3.6	—	0.8	240	2.2	270	2.5
20	220	2.1	—	1.5	220	3.5	210	5.2	210	4.5	230	2.4	220	2.4	210	4.8	210	5.5	210	4.4	190	4.8	200	5.4
21	220	3.7	200	3.5	210	3.4	210	3.5	210	2.5	—	1.1	—	1.4	—	0.6	200	1.7	210	1.9	200	2.5	200	3.6
22	140	2.8	140	2.4	130	1.8	—	1.5	110	1.8	100	3.0	130	1.9	130	1.6	—	0.5	—	0.6	—	0.6	—	0.5
23	310	3.3	300	3.5	300	3.5	310	2.4	320	2.6	340	3.4	350	3.3	340	2.6	330	2.7	330	2.6	340	3.2	320	3.4
24	320	4.4	320	4.6	310	4.8	310	4.4	310	4.7	330	5.0	310	4.5	310	4.6	310	4.9	330	5.3	330	5.8	320	5.9
25	310	6.1	300	5.3	300	5.1	310	5.8	310	5.5	310	5.7	310	6.3	310	5.7	300	6.1	310	7.5	310	7.4	310	6.6
26	310	3.8	310	2.7	290	4.1	300	4.6	300	4.8	300	4.1	300	5.0	300	3.5	300	3.2	300	4.0	300	4.8	310	4.1
27	270	2.1	260	2.4	260	2.1	290	2.1	—	1.5	290	1.8	290	1.7	—	1.0	—	0.7	—	1.5	300	2.2	290	2.4
28	290	3.5	290	3.1	290	3.8	290	3.1	270	2.6	280	2.7	280	4.1	280	3.6	—	0.9	260	1.6	260	2.7	270	1.9
29	190	4.5	140	7.6	140	8.1	150	8.5	140	8.5	130	9.5	130	9.4	140	9.4	140	8.7	150	8.8	150	7.0	140	8.0
30	180	3.6	170	3.0	180	3.2	190	3.8	200	4.5	190	4.8	190	3.6	190	2.8	190	4.0	200	5.4	190	5.0	160	4.0
31	210	5.9	210	5.4	210	4.6	180	3.3	180	3.4	190	3.5	190	3.7	190	4.0	200	3.7	200	3.7	180	3.5	190	3.9
Mean	—	4.0	—	4.0	—	4.1	—	4.1	—	4.0	—	4.2	—	4.1	—	4.1	—	4.1	—	4.3	—	4.4	—	4.3

140. Aberdeen : H_a = 8 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	160	8.8	160	8.0	150	7.1	150	9.3	150	9.2	150	9.7	150	8.5	150	8.8	150	9.5	150	11.1	150	10.4	150	10.4
2	200	4.4	210	5.7	200	3.6	190	3.3	190	4.4	170	4.0	170	4.0	190	3.1	170	2.6	180	5.5	160	5.7	150	6.1
3	180	6.7	180	7.5	170	6.2	170	6.5	180	7.2	180	7.6	180	6.8	170	6.6	170	7.8	180	7.1	180	6.2	180	7.1
4	180	4.3	180	4.2	190	2.8	170	2.8	190	3.5	190	4.2	200	4.8	200	3.9	210	3.5	230	3.7	230	4.4	240	3.5
5	300	5.6	300	5.5	290	5.5	280	4.0	280	3.5	300	4.3	300	5.1	290	4.0	290	2.2	300	2.2	300	3.3	—	1.5
6	220	2.4	210	2.1	210	1.9	230	1.6	—	1.5	220	2.1	230	2.4	220	2.1	210	2.2	200	3.0	200	3.8	190	4.0
7	210	4.1	210	4.4	210	4.4	210	4.7	200	4.8	200	4.6	190	5.7	180	5.6	190	4.6	180	5.6	190	5.0	170	6.1
8	190	4.6	200	5.8	190	5.2	180	4.4	160	2.9	190	3.5	220	2.5	210	3.7	210	3.8	210	4.0	200	5.4	210	3.5
9	—	0.6	—	0.5	—	0.6	—	1.0	—	0.4	—	1.3	—	1.0	—	0.8	—	0.4	—	1.2	—	1.3	230	2.9
10	220	2.0	—	0.6	—	1.4	—	0.9	—	0.8	—	1.2	—	1.0	—	0.7	—	1.4	290	2.0	310	2.5	340	3.0
11	150	11.1	150	11.4	150	12.5	150	13.2	150	13.7	150	13.0	150	13.3	150	13.8	150	14.8	160	13.7	160	13.7	160	13.5
12	150	13.9	150	13.3	160	11.1	160	11.0	150	10.4	160	9.3	170	7.6	160	7.8	160	7.6	170	7.0	150	8.4	190	6.5
13	180	8.2	200	7.4	190	7.6	190	6.8	230	4.1	230	3.3	250	2.5	220	3.0	200	5.7	190	5.8	200	5.1	200	5.1
14	290	2.6	—	1.4	—	1.1	—	0.8	—	0.3	—	0.9	—	0.9	230	2.5	230	2.0	240	1.6	—	0.7	—	3.3
15	120	6.6	120	7.1	130	6.4	120	10.8	120	12.5	120	12.4	120	13.4	120	13.6	130	13.2	130	13.0	130	12.0	130	11.6
16	140	6.2	140	6.0	150	7.0	140	7.8	150	7.5	150	7.5	150	8.0	150	6.5	180	4.5	220	3.2	230	3.1	220	1.9
17	290	2.3	290	2.1	—	1.2	290	2.0	—	1.0	290	2.4	280	2.0	—	1.5	290	3.4	290	2.4	290	2.3	290	1.7
18	140	6.7	140	8.3	150	7.5	150	7.8	140	8.9	140	10.1	140	9.8	140	10.2								

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

M.S.L. + h_a (height of anemograph above ground) = 8 metres + 13 metres.

January, 1929.

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.	
310	6.7	310	5.9	300	5.9	310	5.4	300	4.4	300	3.6	300	3.5	300	3.7	290	3.8	300	4.0	300	3.6	290	3.7	5.3	1
290	2.0	290	3.6	300	1.6	280	2.0	270	2.3	—	1.1	—	1.4	—	1.4	290	1.8	260	1.6	290	2.1	290	2.4	2.3	2
220	1.6	240	1.7	250	1.8	270	2.5	260	2.0	270	2.6	250	1.7	270	1.6	250	1.8	240	2.2	240	3.1	250	3.0	1.7	3
250	3.3	240	2.5	—	1.5	230	1.8	220	1.6	240	1.8	230	1.8	—	1.5	—	1.5	240	2.5	230	2.2	—	1.2	2.2	4
300	2.0	120	3.6	300	1.8	130	3.5	110	4.2	120	5.2	120	5.6	120	5.8	120	5.7	130	5.9	120	6.5	120	6.4	3.1	5
100	9.1	100	9.0	100	10.3	110	10.0	110	10.8	120	9.9	130	10.4	140	9.2	130	10.0	130	9.1	130	8.1	130	7.4	8.7	6
110	2.4	—	1.4	300	2.5	290	2.5	290	2.2	300	3.0	300	3.1	290	2.5	290	2.3	300	2.5	290	3.0	290	3.1	3.4	7
300	1.6	300	1.6	—	0.5	—	0.4	—	0.4	170	1.7	170	1.7	200	3.2	210	3.2	210	3.1	220	2.4	210	1.8	2.3	8
190	5.7	200	4.5	190	4.1	180	4.5	180	5.0	180	5.5	170	6.0	170	6.4	180	4.3	180	4.4	170	4.4	170	3.8	4.3	9
130	6.4	130	7.1	130	6.5	110	6.3	120	5.0	130	6.0	110	9.2	100	8.8	100	8.5	100	7.6	100	7.4	100	7.1	6.5	10
30	2.8	330	3.0	310	2.2	330	1.9	300	2.6	330	2.1	340	1.9	340	1.8	330	2.1	290	2.8	300	2.9	310	3.1	4.1	11
310	4.5	300	4.4	310	4.9	290	4.7	290	5.0	300	4.2	320	4.5	300	4.0	310	3.7	310	4.2	290	4.7	280	5.8	3.7	12
310	7.2	320	5.1	320	3.7	330	4.2	330	3.7	320	3.4	320	3.7	330	5.0	330	4.7	330	4.7	320	5.6	320	6.1	5.5	13
300	5.4	310	5.8	310	5.7	300	5.4	300	5.4	300	5.8	300	6.6	300	7.1	290	7.5	290	7.1	290	7.6	290	7.7	5.6	14
340	8.7	340	8.4	340	8.6	350	8.8	330	7.0	340	7.5	330	6.0	360	4.4	340	6.5	340	4.7	340	7.5	360	6.6	7.7	15
310	6.6	310	6.2	310	5.7	310	6.0	300	6.6	300	6.4	310	5.5	300	5.6	300	6.1	300	5.6	300	5.2	300	4.6	5.6	16
270	2.5	250	2.4	260	1.6	250	1.7	—	1.1	240	1.7	240	1.7	—	1.4	250	1.7	—	0.9	—	1.4	—	1.1	3.2	17
260	1.8	—	1.3	—	1.4	—	0.0	—	0.1	—	0.6	—	0.4	—	0.7	—	0.3	—	0.6	—	1.4	220	1.7	1.4	18
220	4.2	200	3.2	210	3.5	210	2.5	200	2.5	210	3.1	—	1.5	—	0.8	—	0.9	—	1.0	250	2.9	230	3.3	2.8	19
200	5.2	220	3.6	210	4.5	230	3.2	230	1.8	180	2.3	210	2.6	210	4.2	210	4.2	220	4.6	210	5.2	200	3.0	3.8	20
200	3.3	210	3.0	200	1.7	200	1.6	170	2.2	160	3.0	150	3.5	150	3.4	150	2.4	140	2.6	150	2.5	150	2.4	2.6	21
—	0.6	—	0.3	—	0.2	—	0.6	—	1.0	—	1.1	300	1.7	—	1.1	50	2.0	300	1.6	300	3.1	300	3.0	1.5	22
310	4.2	320	4.8	310	3.8	300	4.0	300	3.5	300	4.0	320	4.5	300	4.4	300	4.3	320	5.0	330	4.4	310	4.5	3.6	23
310	5.7	320	6.0	320	6.4	320	5.8	320	5.9	310	5.2	310	5.6	310	5.5	310	5.8	300	5.8	310	4.5	300	4.5	5.2	24
310	5.0	330	6.1	310	5.7	330	4.9	320	5.4	330	5.6	330	5.1	330	4.5	330	4.5	330	4.4	330	4.4	310	2.9	5.5	25
290	3.8	290	2.6	290	2.1	—	1.5	—	1.2	—	1.0	—	0.6	—	0.4	—	0.6	—	1.2	—	0.9	260	2.4	2.8	26
290	2.8	290	2.5	290	3.1	310	4.2	310	4.0	310	3.6	300	3.7	300	4.0	300	4.6	300	4.5	300	5.3	290	2.6	2.8	27
260	2.5	280	1.6	—	0.6	—	0.8	300	2.0	300	3.1	290	2.4	300	2.0	300	2.0	300	1.8	300	1.9	300	2.7	2.4	28
140	7.8	150	5.8	150	4.6	160	4.5	160	4.1	180	3.4	180	3.5	190	2.6	190	2.7	170	3.6	170	2.6	170	3.8	6.1	29
220	1.8	230	4.6	130	2.1	200	6.1	190	5.8	180	5.7	210	5.6	210	6.2	210	6.0	200	5.8	200	4.5	190	3.0	4.4	30
190	4.1	190	4.2	200	4.1	190	4.4	180	4.1	180	4.3	190	3.6	180	5.4	170	5.5	160	6.7	160	6.2	150	7.4	4.4	31
—	4.2	—	4.1	—	3.6	—	3.7	—	3.6	—	3.8	—	3.8	—	3.8	—	3.9	—	3.9	—	4.1	—	3.9	4.0	

February, 1929.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
150	10.0	140	10.5	150	9.8	140	9.7	150	9.9	150	9.3	150	9.1	160	6.8	170	6.1	190	5.5	200	4.9	210	4.5	8.7	1
160	8.7	160	7.5	160	7.9	150	9.1	150	9.6	150	11.4	150	12.6	160	9.5	160	9.3	170	8.2	170	8.2	180	7.5	6.7	2
180	6.0	170	6.1	170	7.3	170	6.6	170	6.6	180	6.8	180	6.5	190	6.0	180	5.5	180	5.0	180	4.6	190	4.6	6.5	3
280	5.0	280	5.0	290	6.1	300	5.7	290	4.6	290	3.6	290	4.6	280	4.7	280	4.5	300	4.5	300	4.5	280	4.5	4.3	4
—	0.9	—	0.8	190	1.7	190	2.6	190	2.7	180	2.0	190	2.0	180	2.2	190	2.8	190	3.0	200	2.6	210	3.1	3.1	5
190	4.8	190	4.6	200	4.4	200	2.8	200	3.1	200	2.9	200	3.6	210	4.1	210	4.3	210	4.2	210	4.1	210	4.4	3.2	6
180	5.9	170	6.0	180	5.4	180	5.4	180	5.1	180	5.6	180	5.3	180	6.2	190	5.6	200	4.6	190	4.7	200	5.1	5.2	7
200	3.0	220	3.3	210	5.6	210	3.0	210	3.1	210	4.1	220	3.5	220	3.6	240	2.0	—	1.1	280	1.6	—	0.9	3.6	8
220	4.1	220	4.5	230	3.5	210	2.4	200	3.4	210	3.5	200	4.6	210	4.5	200	2.8	210	2.4	220	3.0	—	1.5	2.2	9
10	3.8	30	3.4	40	3.3	50	3.2	70	2.2	150	4.0	140	9.5	150	10.0	150	10.7	140	10.6	150	10.4	140	11.0	3.9	10
160	13.6	160	13.6	160	13.8	160	13.3	160	13.7	160	13.0	160	12.6	160	13.2	160	13.6	150	13.4	150	14.4	150	13.7	13.3	11
170	8.1	150	9.5	160	9.6	170	8.5	160	8.8	170	8.6	170	8.5	170	8.8	160	9.1	160	9.0	160	9.2	160	9.0	9.3	12
200	5.5	190	5.4	180	5.3	170	5.6	170	5.8	180	4.1	160	6.0	170	5.0	210	4.0	220	3.1	250	3.0	250	4.4	5.2	13
140	6.2	150	8.5	140	10.0	150	9.0	150	9.2	150	7.8	140	8.4	130	8.6	120	9.6	130	7.0	130	5.8	130	5.0	4.7	14
130	11.4	130	10.6	120	10.8	130	9.8	130	11.4	130	11.5	120	11.4	120	10.2	130	8.6	140	8.4	140	6.2	150	6.2	10.4	15
180	3.4	150	5.9	170	5.5	170	6.2	170	6.0	190	4.0	220	3.0	230	2.4	250	1.8	—	0.8	260	1.6	290	1.7	4.7	16
—	1.0	—	1.0	—	1.4	140	7.0	140	5.8	140	7.2	130	7.5	140	7.6	140	7.6	150	7.0	150	7.1	140	6.7	3.7	17
150	8.9	150	8.8	150	7.9	160	6.2	170	6.1	180	5.8	180	5.7	180	5.7	180	5.6	190	5.8	190	5.8	190	5.8	7.7	18
190	6.5	180	6.3	180	7.0	180	7.8	180	7.0	170	6.7	160	7.8	170	7.8	170	7.4	170	8.0	170	8.3	170	9.3	6.9	19
190	6.6	190	5.8	190	7.1	190	6.0	200	4.5	200	5.1	190	4.9	190	4.7	190	4.1	200	5.5	200	6.0	200	5.5	6.5	20
200	5.5	210	5.6	220	5.3	210	5.4	200	3.8	200	3.3	210	3.6	220	2.0	—	1.1	—	0.5	—	0.8	—	0.9	4.0	21
310	4.9	310	5.2	320	3.9	320	3.7</																		

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

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

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	210	4.8	200	4.9	200	4.7	200	5.0	200	6.0	210	6.7	210	6.4	210	5.9	210	6.5	210	6.6	200	9.2	200	10.8
2	200	5.2	200	4.5	200	4.6	200	4.2	200	2.5	210	3.5	220	3.2	220	1.7	—	1.4	250	1.8	—	0.8	—	0.8
3	290	3.0	290	4.7	290	4.2	290	3.9	290	3.9	280	2.2	280	2.3	—	1.4	310	1.8	320	4.5	320	5.1	320	5.9
4	350	4.0	360	3.9	340	3.3	350	2.9	340	3.3	330	2.9	310	2.0	330	2.3	330	2.1	—	1.4	—	1.4	—	1.5
5	310	3.7	310	4.6	300	6.2	300	5.3	300	5.4	300	5.2	310	5.9	310	5.7	330	6.4	340	8.1	340	8.2	330	8.6
6	310	5.1	310	4.2	300	4.3	320	5.2	320	7.6	320	8.2	310	7.3	320	6.0	320	6.6	320	7.0	330	7.5	330	7.4
7	260	1.7	—	1.5	250	1.8	—	1.0	—	0.8	290	2.1	—	1.5	280	2.4	290	1.9	—	1.5	120	2.1	140	3.5
8	—	1.5	—	1.4	—	1.4	290	1.8	290	2.4	280	2.7	290	2.5	280	2.5	330	2.0	270	1.8	360	2.6	30	2.5
9	—	1.2	—	1.5	280	1.8	280	2.3	280	2.0	280	1.8	270	2.6	290	2.3	290	1.8	300	2.4	—	1.5	140	2.5
10	—	1.1	280	1.7	280	2.5	—	1.4	270	1.9	290	1.6	280	2.0	280	2.6	340	2.0	—	1.5	90	2.0	110	1.6
11	290	2.6	290	2.9	280	2.5	280	2.1	—	1.5	—	1.1	—	1.3	—	1.5	—	1.3	—	0.5	—	1.2	40	1.7
12	290	1.8	300	1.6	310	3.6	310	3.9	300	2.7	320	2.5	300	3.7	300	5.2	310	5.0	320	4.2	310	3.4	320	4.4
13	280	3.3	280	3.4	280	3.3	280	1.7	280	1.8	280	2.9	280	2.1	300	2.1	—	1.1	50	1.7	50	2.7	90	3.6
14	180	1.7	210	1.9	220	1.9	230	2.1	—	1.5	330	1.7	—	1.5	—	1.3	300	1.6	—	1.3	40	1.7	120	2.2
15	290	2.8	290	3.4	300	3.4	300	3.4	300	3.4	300	3.1	—	1.5	280	1.7	—	1.3	—	0.3	—	1.4	130	3.0
16	200	4.7	200	4.2	200	4.6	200	4.3	200	5.0	200	4.7	200	4.0	190	3.9	190	4.3	190	4.8	190	5.6	190	5.5
17	200	3.9	200	3.6	200	3.1	240	1.7	—	1.5	—	0.7	—	0.1	—	0.2	—	0.3	—	0.1	—	0.6	—	1.4
18	—	0.4	—	0.5	—	0.0	—	0.3	—	0.9	—	0.6	—	1.0	—	1.3	—	1.5	210	1.7	190	2.4	180	3.3
19	180	3.9	170	4.4	170	4.1	160	4.7	170	4.4	180	4.6	170	4.4	180	4.4	180	4.6	180	5.0	170	5.4	170	5.9
20	190	4.7	190	4.1	180	4.6	180	4.6	190	5.1	200	4.4	200	5.7	190	5.3	190	4.6	180	5.6	180	6.5	190	4.6
21	190	4.6	210	3.0	190	4.9	180	4.2	200	4.0	200	4.4	210	1.8	180	4.2	190	2.6	200	4.2	200	4.5	200	4.0
22	220	1.6	—	1.1	—	1.4	—	0.6	—	1.1	270	1.7	230	3.5	230	3.1	210	3.8	190	5.1	190	5.1	230	4.7
23	—	0.5	—	1.4	—	1.0	—	0.5	—	1.2	—	1.4	—	0.3	—	1.3	220	3.8	230	4.5	240	3.7	200	3.3
24	220	3.6	230	4.6	230	4.0	230	3.3	230	4.5	230	3.0	220	2.3	220	1.8	260	2.6	—	1.5	160	1.9	170	2.7
25	180	3.5	180	3.3	180	3.8	190	3.1	190	1.8	210	2.4	220	2.0	270	3.7	290	5.6	310	5.5	310	6.6	320	6.5
26	—	0.8	240	1.7	—	1.4	220	1.7	—	0.6	—	0.5	—	0.7	—	0.8	—	1.1	—	1.0	—	1.5	20	3.1
27	—	0.8	—	1.1	280	2.7	280	2.7	—	1.5	260	2.1	260	3.1	250	3.4	260	1.6	280	2.2	50	2.9	130	3.0
28	—	1.4	—	1.0	290	2.5	290	2.1	280	2.2	280	2.0	290	1.6	—	1.5	—	1.3	110	3.1	120	3.8	160	4.9
29	280	1.6	300	3.2	300	3.5	310	3.0	—	0.9	260	1.6	—	1.4	—	0.8	160	2.0	330	2.8	310	3.9	60	3.7
30	290	5.8	280	5.0	280	1.7	290	3.6	280	4.1	260	2.2	290	2.6	290	3.4	300	3.8	290	2.8	170	3.4	170	5.1
31	290	8.3	290	7.0	290	8.6	290	8.8	300	8.7	290	8.1	290	9.7	300	10.6	300	11.5	300	12.7	300	12.9	300	12.8
Mean	—	3.0	—	3.1	—	3.3	—	3.1	—	3.0	—	3.0	—	2.9	—	3.0	—	3.2	—	3.5	—	3.9	—	4.3

142. Aberdeen : H_a = 8 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	290	4.9	280	2.7	270	4.1	260	3.7	240	3.9	250	3.8	300	6.4	310	8.6	320	8.9	310	9.8	330	9.0	330	8.4
2	310	5.4	310	5.8	310	6.1	310	6.6	310	6.0	300	5.4	330	5.2	350	6.2	360	8.0	350	8.4	350	8.0	360	7.2
3	300	4.7	310	4.8	310	4.6	300	3.7	320	3.6	310	4.5	300	4.8	320	5.5	340	6.4	330	6.0	340	6.4	350	6.8
4	310	4.1	300	3.2	300	3.6	290	3.8	290	4.3	290	4.4	280	3.1	280	3.5	270	3.4	240	3.2	220	3.3	260	4.4
5	30	6.4	10	4.5	340	4.2	330	3.7	320	3.3	330	3.4	340	4.0	360	4.9	20	4.9	40	5.6	50	5.6	60	5.2
6	220	2.9	220	2.1	—	1.5	—	1.0	—	0.8	—	0.5	—	0.9	—	0.5	290	2.0	360	2.8	120	3.5	130	3.7
7	290	3.7	300	4.0	290	3.4	290	3.8	290	3.2	280	1.6	—	0.4	—	0.1	—	1.0	120	3.1	140	2.8	160	3.0
8	—	1.4	360	1.6	—	1.5	—	1.0	—	1.4	—	1.0	—	1.1	—	0.8	—	1.2	150	2.7	120	4.4	120	4.4
9	330	3.2	320	4.4	310	4.5	310	4.6	310	5.7	340	4.9	340	5.9	340	7.6	340	8.7	330	7.9	330	9.0	330	8.7
10	330	8.0	350	8.3	350	8.3	350	8.4	350	6.8	350	6.6	350	7.9	360	8.8	360	9.2	10.0	10.0	20	10.5	40	9.2
11	10	3.7	360	3.4	360	2.8	360	2.6	350	2.9	350	3.3	10	3.4	20	4.5	40	4.6	60	5.5	70	5.0	70	4.6
12	40	5.1	40	5.8	60	6.1	60	5.6	50	4.8	40	4.5	50	5.4	70	4.6	60	4.1	70	4.1	90	4.3	50	4.8
13	30	2.5	—	1.5	340	2.5	330	2.6	330	3.1	330	2.5	360	3.3	30	4.8	40	5.4	60	5.7	70	5.4	60	5.1
14	320	2.6	310	2.8	310	2.8	310	3.3	310	3.6	310	3.6	320	2.1	10	3.3	30	4.5	40	4.4	50	5.0	60	5.7
15	340	2.5	340	2.2	340	2.5	340	2.1	—	1.0	20	2.0	80	3.4	110	3.5	110	4.2	140	4.4	140	4.4	130	4.0
16	160	3.4	140	4.3	160	3.4	160	2.6	160	3.0	150	4.0	150	5.7	150	6.1	150	6.4	170	6.8	170	7.2	160	7.5
17	190	4.1	190	3.8	190	4.6	200	3.8	200	3.5	190	3.4	190	3.9	190	4.7	190	5.1	180	5.7	180	6.4	190	5.6
18	220	4.3	210	3.7	210	4.4	210	3.7	210	3.8	200	2.4	200	3.7	220	4.6	220	3.5	240	3.2	260	3.0	180	1.7
19	240	3.4	240	3.4	240	3.1	250	3.0	270	3.0	250	4.3	250	3.9	270	4.1	300	5.3	350	7.2	340	8.0	330	8.6
20	310	8.5	310	7.4	310	6.6	310	6.8	320	7.1	320	9.4	320	7.0	330	8.4	340	10.0	330	8.4	330	9.3	340	10.2
21	290	6.2	300	5.4	320	5.7	320	3.4	310	2.8	300	3.6	300	3.8	320	3.8	340	4.7	340	5.8	330	5.9	330	6.1
22	270	2.1	240	2.1	260	2.5	270	2.8	270	2.5	260	3.8	260	4.2	280	6.1	280	7.4	280	8.2	300	8.5	310	9.2
23	300	4.1	320	5.0	310	4.1	310	5.0	310	5.0	320	5.2	330	5.6	330	6.1	330	6.0	330	6.7	320	7.2	330	7.4
24	320	11.2	340	7.6	320	5.7	320	5.5	310	5.0	320	6.7	320	7.2	330	7.0	330	8.6	310	8.8	330	10.5	350	10.5
25	310	7.2	300	6.7	300	6.4	300	6.1	290	5.1	300	6.7	290	6.8	310	7.8	310	7.8	310	8.3	310	8.6		

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

M.S.L. + h_a (height of anemograph above ground) = 8 metres + 13 metres.

March, 1929.

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.	
210	8.4	210	7.1	210	6.6	210	6.5	210	9.0	210	8.8	210	8.6	210	8.5	210	9.5	210	8.0	210	5.0	210	5.4	7.0	1
—	1.2	—	1.5	10	1.6	—	1.0	—	0.6	—	1.3	280	1.6	—	1.1	—	0.5	—	0.7	240	1.6	—	1.5	2.1	2
310	6.0	320	6.0	310	6.4	310	6.1	320	6.3	320	6.2	330	5.8	350	4.8	350	4.1	360	4.5	20	4.6	340	3.2	4.4	3
170	1.6	210	2.2	190	2.6	190	3.4	190	3.5	220	2.5	—	1.4	290	2.1	300	3.5	300	4.2	300	4.1	300	4.1	2.7	4
340	8.8	340	9.0	340	8.7	330	7.8	330	6.4	320	6.0	310	6.4	320	6.4	320	5.2	310	6.0	310	5.4	300	4.1	6.4	5
330	7.5	330	7.4	320	6.1	330	5.6	330	3.6	320	3.2	310	2.9	290	2.4	290	2.6	280	2.5	270	2.3	260	2.1	5.2	6
120	3.5	60	3.1	40	3.0	40	2.6	10	2.4	—	1.3	—	1.4	20	2.1	40	2.1	50	1.7	—	1.0	—	1.5	2.0	7
190	1.9	110	1.6	130	1.6	60	1.8	—	1.2	—	0.8	—	0.7	—	1.5	—	1.0	260	1.7	200	1.6	—	1.1	1.7	8
160	2.4	140	3.7	170	3.0	180	2.2	170	1.6	—	1.5	—	0.6	—	0.5	—	1.0	—	0.8	—	1.0	—	1.5	1.8	9
100	3.2	90	2.7	360	2.4	50	2.0	—	0.9	—	1.4	—	1.4	—	1.4	290	1.7	290	2.6	290	2.6	280	2.0	1.9	10
110	2.0	110	2.1	110	1.6	—	1.3	—	0.4	—	0.6	330	2.0	300	2.5	320	2.3	330	1.6	—	1.5	280	2.4	1.7	11
320	4.2	330	3.6	330	4.0	330	3.8	360	3.9	350	2.0	—	1.5	290	2.2	290	3.0	290	2.7	290	3.3	290	2.7	3.3	12
110	2.6	110	3.3	110	2.7	110	1.9	120	1.6	150	2.2	—	1.2	—	0.9	—	1.0	—	0.4	—	0.0	—	1.4	2.1	13
120	3.0	90	1.7	110	1.7	120	1.6	—	0.8	—	0.3	—	0.6	280	1.7	300	2.6	300	3.4	300	3.5	300	3.1	1.8	14
140	3.7	140	3.6	140	3.6	160	3.2	170	3.1	180	3.1	190	3.0	180	3.5	180	3.5	190	3.8	190	3.4	200	4.0	2.9	15
190	5.6	180	6.0	190	6.3	180	6.0	180	5.5	180	5.3	190	5.0	190	5.0	200	4.6	190	5.6	200	6.5	200	5.3	5.1	16
110	1.6	—	1.4	—	1.5	—	1.4	—	1.0	—	1.2	—	1.5	—	1.5	100	1.7	—	1.1	—	0.5	—	0.4	1.4	17
170	4.1	180	4.5	170	4.7	170	4.8	160	4.2	160	4.1	170	3.6	180	3.6	180	3.4	180	3.2	180	4.1	180	3.5	2.5	18
170	6.0	180	5.7	180	5.7	180	5.6	170	5.4	170	4.8	180	5.4	180	5.1	180	5.1	180	5.2	180	4.6	180	4.8	4.9	19
190	5.3	190	3.9	170	4.6	170	3.4	180	3.3	180	4.2	190	4.2	160	4.4	180	4.5	170	5.2	180	3.6	200	4.2	4.6	20
210	2.9	200	2.5	—	1.5	180	2.4	200	2.0	—	1.1	—	0.7	340	2.5	—	1.5	—	1.1	—	1.5	—	1.1	2.9	21
220	5.4	210	3.8	220	4.0	210	5.1	220	4.7	230	2.9	230	3.5	230	3.2	240	4.0	230	3.4	230	3.4	250	2.0	3.2	22
170	4.4	240	4.6	260	5.8	240	5.7	210	5.1	200	4.2	210	3.5	220	3.8	200	4.5	210	4.2	210	4.0	200	3.7	3.1	23
230	3.7	210	2.7	200	3.8	220	5.8	210	5.1	190	3.4	200	2.9	200	3.6	210	4.9	200	4.0	180	3.6	170	3.4	3.5	24
330	6.0	320	6.5	320	6.1	340	5.2	340	3.6	340	2.5	—	0.8	—	0.4	—	0.2	230	2.1	240	2.3	—	1.0	3.6	25
40	1.6	70	1.6	—	0.6	—	0.7	—	0.7	—	1.5	—	1.1	—	1.5	290	2.3	290	2.5	270	1.9	—	0.9	1.3	26
140	4.1	100	3.1	60	2.6	40	2.0	—	0.4	—	0.2	—	0.0	—	0.4	—	0.5	—	1.2	280	1.7	290	2.0	1.9	27
170	5.0	170	4.2	160	4.6	160	4.5	160	3.8	100	2.7	—	1.4	—	0.0	300	1.7	—	1.5	290	2.4	290	3.4	2.6	28
160	3.6	160	3.2	170	3.6	190	3.2	210	2.0	20	1.6	—	1.0	—	0.5	—	1.1	290	3.1	290	3.8	300	4.7	2.5	29
180	6.7	180	7.1	190	6.7	180	5.6	190	6.5	200	5.2	220	3.4	220	2.6	240	5.7	240	5.3	250	3.5	280	6.7	4.5	30
300	12.4	290	9.4	290	9.6	290	9.5	290	8.4	290	7.6	280	6.8	260	3.7	260	4.5	260	4.1	270	4.3	290	6.6	8.6	31
—	4.5	—	4.2	—	4.1	—	3.9	—	3.5	—	3.0	—	2.7	—	2.7	—	3.0	—	3.1	—	3.0	—	3.0	3.3	

April, 1929.

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.	
320	7.5	320	8.3	320	8.3	330	8.1	320	6.2	320	7.1	320	6.1	310	4.7	310	6.0	310	5.7	310	6.2	310	5.8	6.4	1
340	7.7	340	7.8	350	9.0	350	7.9	340	6.8	330	4.8	320	4.4	320	4.4	290	3.5	310	4.9	310	3.7	300	3.6	6.2	2
350	6.0	350	6.4	10	6.0	360	5.3	330	4.9	330	3.4	330	2.7	310	3.0	300	2.7	290	2.5	300	3.0	300	3.8	4.6	3
280	5.5	290	6.2	300	5.9	330	6.3	320	6.4	320	6.3	320	5.7	330	5.8	340	5.5	350	7.4	20	7.0	40	6.4	4.9	4
70	4.4	80	3.6	100	3.6	110	3.3	130	3.2	140	2.9	180	2.9	200	3.1	210	2.9	220	2.8	210	3.0	210	3.4	4.0	5
140	3.9	160	4.5	160	4.6	170	4.4	140	3.4	70	2.1	—	1.1	—	0.4	290	1.6	290	1.9	290	1.6	—	1.5	2.3	6
130	4.0	130	3.3	140	2.7	120	3.6	110	2.8	120	2.2	—	1.0	—	0.6	—	0.7	10	1.6	—	1.5	—	1.4	2.3	7
140	3.9	170	3.6	180	3.0	180	3.9	150	1.6	—	1.4	10	2.0	350	2.3	330	1.8	330	2.6	340	2.4	340	3.3	2.8	8
330	9.6	340	9.5	330	9.0	330	8.5	330	8.4	330	7.4	320	7.4	320	7.0	320	7.2	320	8.5	320	9.2	330	8.4	7.2	9
40	8.5	40	8.9	40	8.4	40	7.5	40	5.6	30	4.6	30	3.8	10	4.5	10	4.6	360	4.4	10	4.0	20	4.5	7.2	10
70	4.8	70	4.7	60	4.6	60	4.8	50	5.9	40	5.8	20	5.4	30	5.2	30	5.4	20	3.9	10	4.1	40	4.7	4.4	11
60	5.0	60	5.4	70	5.3	70	5.2	70	5.1	80	4.9	70	3.9	60	4.2	60	4.2	70	3.7	70	3.6	60	3.2	4.7	12
70	5.3	80	4.6	50	4.1	50	4.5	50	4.3	50	3.9	60	3.4	60	2.4	20	2.3	350	2.4	330	2.1	310	2.1	3.6	13
70	5.6	60	4.6	70	4.5	70	4.4	70	4.1	70	3.6	60	3.6	60	3.5	40	2.8	30	2.6	350	2.6	350	2.8	3.7	14
120	4.5	120	4.7	130	5.5	120	5.8	120	4.8	120	5.4	140	5.6	140	5.7	140	5.6	150	4.4	150	5.1	160	3.7	4.0	15
160	6.6	160	6.8	160	7.0	160	7.2	160	6.7	160	6.2	170	5.6	170	4.7	180	4.9	180	5.3	180	5.4	190	4.6	5.5	16
190	5.6	180	5.9	180	5.0	180	3.8	200	5.5	210	4.5	200	4.7	200	4.6	150	2.8	130	1.8	250	2.4	220	3.4	4.4	17
220	3.0	240	5.5	220	5.7	220	6.1	240	6.4	250	8.6	260	7.1	330	4.6	310	2.5	—	1.2	180	2.0	130	1.6	4.1	18
320	7.9	310	8.5	310	8.5	310	8.7	310	9.3	310	9.2	310	9.5	300	7.2	310	7.6	310	7.2	320	7.2	320	7.0	6.3	19
330	8.7	330	8.3	320	8.4	310	7.2	310	7.6	310	7.8	310	5.6	280	3.1	260	2.7	270	4.2	280	6.2	290	6.2	7.3	20
330	6.5	340	6.3	340	5.6	360	5.4	350	4.5	360	4.5	350	2.3	—	1.4	—	1.4	—	1.5	250	1.6	260	2.3	4.3	21
320	7.8	330	8.1	340	9.4	330	7.6	330	7.6	320	7.2	320	5.8	320	4.6	330	4.5	320	5.1	310	4.4	300	4.0	5.6	22
330	6.6	320	6.																						

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

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

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
Day.																								
1	290	3.0	270	2.1	250	1.6	270	1.8	270	1.8	—	1.4	280	3.5	270	4.9	290	4.6	310	4.4	320	3.9	70	2.6
2	40	3.5	360	2.5	350	2.5	340	2.0	320	1.7	350	2.0	40	3.2	50	3.7	60	4.6	80	4.6	90	4.7	80	5.4
3	290	1.8	290	1.7	—	1.5	—	1.5	—	1.3	—	1.3	190	2.6	180	4.6	170	5.1	180	6.2	180	6.7	180	7.1
4	160	6.3	170	7.1	180	6.6	170	7.4	170	7.8	160	7.5	150	9.5	160	9.0	160	8.4	170	8.0	170	6.9	170	7.2
5	180	2.0	—	1.5	—	0.0	—	0.3	—	0.7	—	0.3	—	—	110	1.8	250	2.4	180	4.0	160	3.6	170	3.6
6	290	3.5	290	3.5	290	3.5	290	4.3	280	1.7	—	1.4	—	1.3	40	3.6	40	4.8	50	4.5	60	5.3	60	6.2
7	220	4.8	220	4.9	240	4.6	230	4.4	220	4.5	220	5.7	230	5.9	230	6.3	230	6.5	230	7.0	210	7.1	230	6.6
8	—	0.5	—	0.3	—	0.3	—	0.7	—	1.2	160	2.8	170	4.4	170	4.2	160	4.0	140	4.3	140	4.4	120	5.0
9	310	5.4	310	5.3	300	2.9	270	2.5	280	2.3	270	2.2	250	3.4	230	2.6	240	2.6	160	5.2	160	6.7	170	7.5
10	200	3.4	190	5.4	190	5.8	190	4.7	190	6.3	200	5.9	190	5.6	200	6.6	200	6.9	210	6.9	210	6.9	200	6.2
11	220	7.1	210	5.2	200	5.4	270	4.4	280	3.8	260	5.1	250	6.0	250	6.5	250	6.5	240	7.2	240	5.7	240	7.0
12	210	1.9	130	1.7	—	1.5	230	2.1	—	1.1	—	1.1	250	2.0	250	1.6	190	2.2	130	4.8	150	4.4	160	4.4
13	280	1.9	270	1.8	260	1.8	250	1.6	—	0.7	—	0.1	—	1.3	160	2.5	150	4.1	160	5.6	160	5.9	170	7.0
14	170	4.9	170	4.1	190	3.6	220	2.0	160	4.5	150	6.1	150	5.5	150	6.4	160	5.9	160	6.8	150	8.6	140	9.1
15	290	4.3	290	3.2	290	3.7	280	3.8	280	3.5	280	3.7	290	4.2	290	5.8	290	6.0	310	7.0	320	6.5	320	6.4
16	290	2.5	290	2.8	290	1.9	300	4.0	290	3.3	300	4.4	310	6.1	310	5.8	320	6.1	320	5.8	320	4.9	330	4.7
17	—	1.4	—	1.4	110	1.6	90	2.7	100	2.0	100	2.3	120	2.2	120	2.4	120	2.3	130	2.3	120	3.5	120	3.8
18	150	3.4	190	2.4	190	2.8	190	2.4	190	2.7	180	3.0	200	3.1	210	2.5	150	2.9	120	4.5	110	3.3	110	3.6
19	200	2.5	220	1.8	150	2.4	—	1.3	140	1.6	—	1.3	—	1.3	110	2.9	120	4.2	130	3.6	120	5.1	140	4.6
20	—	0.5	—	1.3	—	1.1	—	0.8	300	2.1	290	2.1	320	2.6	330	4.5	350	5.3	20	4.3	50	5.2	60	5.4
21	220	1.7	240	1.8	220	1.9	140	3.3	160	2.9	170	2.5	160	2.8	160	3.0	150	2.9	130	3.2	130	3.8	130	4.2
22	190	2.1	170	4.5	160	4.6	180	4.6	170	4.6	190	4.1	190	4.9	190	5.3	180	5.4	180	5.8	180	6.4	170	6.7
23	180	4.6	180	3.8	200	4.5	200	4.3	170	5.5	170	4.2	170	4.0	180	5.1	170	4.2	170	4.0	170	3.8	180	3.5
24	—	1.2	140	3.0	—	0.8	—	1.4	—	0.6	140	2.2	130	3.0	130	3.9	140	4.6	160	4.7	140	4.8	120	4.5
25	—	0.5	—	1.2	—	0.3	—	0.4	—	0.4	—	1.2	—	1.5	180	3.2	150	3.9	150	5.5	170	6.3	160	6.8
26	180	2.8	170	2.7	180	3.3	200	4.0	200	2.4	200	3.5	190	4.1	180	4.3	170	5.5	170	5.7	170	5.6	160	5.7
27	—	0.1	—	0.4	—	0.6	—	0.6	—	0.5	—	0.4	—	1.1	70	2.1	70	2.8	80	3.2	80	3.1	80	2.7
28	300	3.6	330	4.1	320	3.7	310	3.8	320	4.7	340	5.4	10	6.2	360	6.2	10	5.9	360	6.3	10	7.5	10	7.4
29	350	7.4	340	6.0	330	5.2	350	6.7	340	7.2	350	7.9	360	8.3	350	7.6	350	7.7	350	7.5	360	8.0	360	7.8
30	330	2.0	330	2.4	340	2.5	340	2.2	340	2.8	350	3.2	40	2.5	80	3.1	100	3.8	110	4.2	120	4.4	110	4.7
31	320	2.9	290	3.0	300	4.6	310	4.5	360	3.6	30	3.4	30	2.4	40	4.3	50	5.1	50	5.0	50	5.8	50	5.3
Mean	—	3.0	—	3.0	—	2.8	—	2.9	—	2.9	—	3.2	—	3.7	—	4.4	—	4.7	—	5.2	—	5.4	—	5.6

144. Aberdeen : H_a = 8 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	160	2.9	170	2.6	190	2.4	190	3.3	190	4.1	180	4.6	190	4.6	190	4.6	160	5.9	160	6.2	170	6.6	160	6.4
2	360	1.8	350	2.1	10	2.4	10	2.8	30	2.9	30	3.0	30	3.1	30	3.6	40	4.0	80	2.0	70	1.7	—	1.1
3	—	0.6	170	1.9	170	2.4	—	1.5	220	3.9	220	4.4	220	5.0	220	6.0	220	4.3	250	4.1	260	4.0	290	8.0
4	300	3.1	290	3.3	300	2.9	300	3.5	300	4.3	310	3.5	310	4.6	300	6.0	310	6.3	330	6.2	330	5.9	320	6.1
5	250	2.0	270	1.7	280	2.2	290	2.6	290	3.4	290	4.0	310	4.1	310	4.3	300	3.8	320	3.0	320	3.0	90	3.6
6	210	1.6	—	1.2	—	1.4	160	3.0	160	3.7	170	4.1	160	4.7	150	5.0	140	5.4	160	5.2	140	4.2	130	5.0
7	340	4.0	340	4.1	330	3.9	320	3.9	310	3.9	320	4.2	320	5.0	320	5.0	340	6.0	340	5.5	350	5.0	340	4.7
8	240	1.6	290	1.6	270	1.6	280	1.8	—	0.9	—	0.0	—	0.8	90	1.6	110	3.4	140	3.8	120	3.5	150	4.1
9	190	1.8	230	1.8	250	1.9	—	0.9	—	0.2	280	1.9	290	3.3	290	3.6	290	2.8	300	2.9	160	4.1	240	3.3
10	—	0.8	—	1.3	230	2.4	240	2.9	230	3.1	220	3.7	240	4.3	240	4.0	220	3.4	270	4.3	360	3.8	90	2.6
11	210	2.5	250	2.0	—	0.8	180	1.9	190	3.0	140	3.2	190	3.3	200	6.1	190	6.4	190	7.0	190	6.0	200	5.8
12	200	2.5	200	2.9	200	4.0	200	4.6	190	5.1	190	4.2	190	3.0	180	2.7	170	3.6	120	4.5	160	5.1	170	5.0
13	—	1.0	30	2.8	30	3.6	40	4.6	50	5.0	60	1.9	110	1.6	130	2.6	130	4.0	140	4.0	180	3.7	190	3.0
14	200	3.2	190	3.6	180	5.0	180	5.0	200	3.7	180	4.6	170	4.9	180	6.3	180	6.3	190	6.3	180	6.3	170	6.0
15	290	2.1	—	0.8	—	0.7	—	0.2	—	0.3	290	2.0	310	3.0	20	2.1	110	3.8	130	4.6	150	5.3	150	5.4
16	170	7.1	180	5.6	180	4.6	230	3.4	220	5.6	210	5.5	190	5.3	190	6.8	190	6.3	200	5.7	210	7.4	210	7.5
17	250	4.6	280	6.5	270	5.5	240	3.4	250	3.4	270	3.8	270	5.2	280	4.6	270	5.4	290	4.3	290	4.2	280	3.6
18	190	3.3	180	4.6	180	6.0	180	3.2	200	4.9	210	4.9	210	8.0	210	6.6	210	7.0	200	5.5	210	5.6	200	5.7
19	190	3.4	190	4.6	190	4.7	190	3.5	200	4.1	200	4.4	200	4.3	190	5.6	200	5.6	200	5.8	180	4.0	180	5.1
20	290	3.9	300	4.7	290	3.1	270	3.2	230	3.6	200	2.8	240	4.0	260	7.1	280	8.2	280	8.5	280	8.5	280	7.9
21	260	2.0	270	2.3	290	2.5	280	2.1	270	3.4	290	5.4	290	5.5	290	6.6	290	5.8	310	5.5	330	5.8	310	4.9
22	190	1.8	190	1.6	200	2.4	210	2.4	230	2.3	240	1.8	230	1.6	290	3.5	290	7.2	290	7.7	300	8.7	300	8.6
23	290	5.0	290	5.2	300	7.4	290	8.6	300	10.7	300	12.4	310	12.2	320	11.0	340	9.2	340	8.8	330	8.4	330	8.2
24	300	5.4	300	4.6	300	5.4	310	5.5	310	4.8	310	5.8	310	6.4	310	8.1	310	9.8	310	11.1	310	10.4	310	7.7
25	3																							

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

M.S.L. + h_a (height of anemograph above ground) = 8 metres + 13 metres.

May, 1929.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
110	3.0	120	3.5	160	3.0	140	2.7	120	1.8	40	5.5	30	3.2	10	1.8	10	2.1	340	1.7	340	1.6	340	1.7	2.8	1
80	6.8	90	6.0	80	5.2	80	4.9	80	4.4	80	3.8	90	3.7	100	3.0	110	2.7	130	2.7	250	1.6	290	1.7	3.6	2
170	7.3	170	6.9	180	6.8	190	7.6	190	6.6	190	5.8	190	4.7	190	5.5	190	5.8	180	6.6	170	4.8	170	5.8	4.7	3
180	6.9	170	7.2	180	5.8	180	6.0	180	5.6	190	5.4	200	4.9	180	4.9	170	3.6	180	4.0	190	4.0	200	3.1	6.4	4
170	4.4	150	2.2	210	4.8	190	4.9	230	2.8	210	1.8	220	2.3	240	1.8	250	1.8	280	1.8	270	1.7	290	2.5	2.2	5
70	6.4	70	6.2	20	6.1	30	6.8	40	5.6	20	4.6	30	2.5	110	1.6	150	2.1	180	1.8	190	2.3	210	2.9	3.8	6
220	7.8	190	7.4	190	7.0	190	6.5	210	7.2	200	4.7	180	3.7	180	3.6	200	3.6	250	3.0	—	1.5	—	0.7	5.3	7
130	4.8	140	4.5	230	4.7	290	4.6	280	2.8	310	6.0	320	6.6	320	5.7	320	4.2	310	3.7	310	3.4	310	5.0	3.6	8
170	7.1	180	6.0	190	6.0	190	5.1	190	5.7	200	5.5	190	5.0	190	4.7	200	4.4	200	4.5	200	4.6	200	4.0	4.7	9
210	7.6	240	6.9	210	6.4	200	5.8	180	5.7	210	5.4	210	4.8	210	5.1	210	4.1	210	5.6	210	5.1	210	7.4	5.8	10
240	6.9	230	6.8	250	6.4	220	5.7	230	6.4	210	4.7	210	4.4	220	4.4	220	3.4	230	2.8	220	2.4	220	2.8	5.4	11
140	4.0	160	4.3	180	4.0	340	4.9	350	2.8	—	1.5	—	1.4	—	0.3	—	1.2	—	1.5	290	2.4	290	2.0	2.5	12
160	6.8	150	5.7	150	6.6	140	6.2	140	5.6	140	7.0	140	7.9	150	7.0	160	7.3	160	6.5	150	5.6	160	5.6	4.6	13
140	7.6	150	8.1	150	7.9	140	7.0	140	5.6	130	4.8	120	4.9	120	3.8	70	2.0	330	2.1	310	3.4	310	4.1	5.4	14
310	6.6	310	6.7	320	6.2	320	5.6	310	4.7	310	4.9	310	4.1	290	2.5	280	2.6	290	3.0	300	3.4	290	2.2	4.6	15
330	5.2	340	4.8	20	5.1	60	4.5	40	3.1	30	2.4	40	4.0	30	2.6	—	1.1	—	0.7	—	1.4	—	0.8	3.7	16
130	3.4	130	4.2	120	4.1	120	3.8	130	3.7	140	3.4	160	2.6	190	2.3	190	2.0	200	1.8	180	1.8	150	2.6	2.6	17
110	2.5	100	1.8	90	2.1	80	2.4	90	2.1	100	1.6	130	2.0	160	2.4	170	2.8	200	2.4	170	2.2	180	3.1	2.7	18
160	4.5	180	4.0	170	4.3	180	4.6	190	4.3	200	4.2	210	4.1	210	4.4	220	4.2	260	2.5	—	—	—	0.8	3.2	19
80	4.7	70	3.5	80	2.3	80	1.6	—	0.7	—	0.2	—	0.5	—	0.5	—	0.5	—	0.2	—	0.6	—	1.0	2.1	20
130	4.6	140	4.6	150	4.3	160	4.5	150	3.6	180	4.5	180	4.1	190	3.7	190	4.4	170	4.1	190	4.2	190	3.4	3.5	21
170	6.4	170	5.6	180	5.2	180	4.7	190	3.4	200	4.4	200	4.1	180	3.0	190	2.6	180	3.0	190	3.3	180	2.8	4.5	22
160	4.3	150	4.1	130	5.2	120	4.0	90	3.0	130	3.3	130	2.4	120	2.1	130	2.6	140	1.8	—	1.0	—	0.9	3.6	23
120	4.1	120	3.5	120	3.7	130	4.5	150	4.0	120	3.4	130	3.7	160	3.0	160	2.1	—	1.3	—	1.5	—	1.0	2.9	24
170	7.0	180	7.9	180	6.8	160	5.7	140	6.0	190	5.5	210	3.7	170	2.6	200	3.0	210	2.1	200	1.8	200	2.3	3.5	25
150	5.6	130	5.5	130	5.4	140	4.6	160	4.1	180	3.7	180	3.2	150	2.5	—	1.3	—	0.5	—	0.2	—	0.1	3.6	26
80	2.8	70	3.3	70	2.5	70	2.8	50	3.1	40	2.8	20	2.5	10	2.2	—	1.1	330	2.0	320	1.8	290	3.1	1.9	27
30	7.0	30	6.7	40	5.8	40	5.6	20	6.7	360	7.0	360	6.0	350	6.6	350	6.0	350	5.4	350	6.6	350	7.2	5.8	28
360	7.6	10	7.1	20	6.5	30	6.7	40	7.1	40	6.5	20	5.8	20	5.1	360	3.1	360	3.2	350	2.1	350	2.1	6.4	29
120	4.8	120	4.9	140	4.3	150	3.8	150	3.6	150	3.6	190	2.4	—	0.9	—	1.0	—	—	10	2.4	360	1.8	3.1	30
60	4.5	70	3.4	70	3.9	70	5.1	80	4.7	100	3.8	100	3.3	90	2.2	100	2.1	130	2.0	140	2.5	150	3.0	3.7	31
—	5.6	—	5.3	—	5.1	—	4.9	—	4.4	—	4.2	—	3.8	—	3.3	—	2.9	—	2.8	—	2.6	—	2.8	3.9	

June, 1929.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
160	6.1	160	5.3	160	4.9	160	4.8	170	4.7	130	3.9	130	3.8	130	2.6	130	2.6	110	1.8	—	0.9	—	0.7	4.0	1
—	1.0	80	1.9	80	1.8	50	1.9	70	1.6	320	3.4	310	4.7	320	3.1	350	2.4	50	3.8	30	2.8	—	1.2	2.5	2
340	11.1	360	9.8	360	7.3	350	6.3	10	6.1	360	4.6	360	5.1	350	4.2	330	3.5	320	3.6	320	3.2	310	3.7	4.7	3
320	5.0	320	5.9	330	4.4	330	4.3	340	5.6	340	4.4	330	3.6	320	3.7	310	3.7	270	2.0	290	2.6	270	2.0	4.3	4
140	4.6	160	4.8	170	4.4	170	4.5	160	4.5	170	4.4	170	4.3	170	3.8	190	3.1	190	3.1	190	2.4	200	2.4	3.5	5
120	6.0	110	6.0	100	5.8	100	5.0	90	3.9	90	4.7	80	4.0	60	4.2	20	4.5	10	5.1	10	5.1	360	5.1	4.3	6
350	4.3	60	4.3	160	4.9	190	4.6	200	4.6	220	4.0	220	3.2	230	3.0	200	2.6	220	3.3	—	1.4	—	1.1	4.1	7
150	5.2	140	6.6	140	5.1	140	5.0	140	5.1	140	5.1	150	3.5	150	3.3	140	2.8	110	2.7	110	1.9	140	2.1	3.0	8
130	3.1	170	2.9	90	2.3	70	3.1	100	2.5	120	2.1	150	1.7	180	1.7	210	1.6	240	1.6	—	1.1	—	0.8	2.2	9
130	2.9	210	3.0	140	2.0	90	2.1	—	1.4	120	1.6	—	1.0	—	1.0	—	0.9	—	0.5	—	0.3	240	1.8	2.3	10
190	5.0	180	4.4	160	3.8	180	4.7	170	4.6	180	4.0	160	3.3	150	2.3	90	2.6	—	0.7	210	3.0	220	2.0	3.7	11
170	5.4	160	5.0	150	4.4	90	3.3	100	3.0	120	2.8	80	2.0	—	1.2	70	1.9	60	2.0	60	1.9	50	1.8	3.4	12
200	4.2	200	5.3	210	6.5	220	6.0	220	6.0	220	6.0	210	5.8	200	4.0	190	3.6	190	4.1	200	4.8	200	5.2	4.1	13
160	6.4	170	6.0	160	4.5	160	5.0	170	5.4	170	3.8	180	3.3	190	4.0	200	2.8	—	1.5	—	0.8	—	0.8	4.5	14
140	5.7	170	5.8	180	6.0	190	7.0	180	6.3	180	4.9	180	4.6	190	5.1	190	4.0	140	3.7	140	3.4	170	6.0	3.8	15
230	7.0	270	6.5	280	7.0	280	7.8	280	6.6	290	6.7	280	6.2	280	7.1	270	5.6	270	4.4	260	3.4	240	2.8	6.0	16
160	2.6	140	4.7	170	5.5	170	4.5	170	4.4	190	4.2	200	4.9	220	4.4	220	3.4	200	3.5	210	3.0	200	2.2	4.3	17
190	5.5	200	5.4	200	5.8	200	4.5	240	4.1	—	1.5	180	2.8	200	3.7	200	4.4	200	5.0	220	3.0	210	2.8	4.7	18
190	6.8	210	7.0	200	7.1	210	7.4	220	7.5	210	6.8	210	7.0	210	4.1	230	2.5	230	3.8	240	4.3	270	3.6	5.1	19
290	8.1	300	8.7	290	8.3	290	8.6	310	8.8	300	7.9	300	6.5	300	5.8	300	4.2	280	2.1	260	2.1	270	2.6	5.8	20
320	4.9	340	3.1	300	2.8	260	3.5	280	3.6	300	3.0	310	3.7	280	2.5	270	2.0	—	1.4	220	2.2	220	2.6	3.6	21
310	7.0	310	7.5	320	6.4	320	5.5	320	3.9	330	2.4	30	1.6	150	2.1	200	3.4	210	3.0	250					

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

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

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
Day.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	0.2	—	0.0	—	0.0	—	0.1	—	1.4	330	2.6	30	4.8	40	3.6	70	4.1	100	3.2	110	3.4	110	4.2
2	—	1.4	—	1.1	—	0.8	320	2.4	310	2.0	320	2.1	330	2.3	320	3.1	330	3.1	70	3.1	140	3.3	180	2.4
3	230	2.5	230	2.0	200	1.6	—	1.4	—	0.7	—	0.6	100	1.6	100	2.0	130	3.1	150	3.3	150	3.5	130	5.0
4	—	0.3	—	0.4	—	0.2	140	3.4	140	5.1	130	4.1	130	4.0	130	4.7	130	4.0	120	3.8	130	3.8	140	3.5
5	120	2.6	140	2.7	110	2.5	—	1.1	60	3.1	70	3.6	60	4.4	40	4.8	60	4.9	70	4.0	60	4.4	50	4.2
6	350	6.7	350	6.2	350	6.2	350	6.6	340	7.1	340	5.1	350	7.2	350	8.0	350	8.1	350	8.5	360	9.2	350	8.9
7	330	4.8	330	5.5	320	4.5	330	4.5	320	4.6	340	6.0	350	7.6	340	7.8	350	8.6	10	8.8	350	8.1	360	8.1
8	290	3.1	290	3.0	280	2.9	280	3.0	290	3.5	290	2.7	300	3.6	310	3.7	320	4.1	330	3.8	330	4.3	320	4.5
9	—	0.7	—	0.4	—	1.4	—	0.6	—	0.2	—	0.1	140	1.7	160	1.8	200	4.0	210	4.6	180	4.0	170	4.4
10	180	4.6	190	3.9	180	2.6	190	5.3	180	4.2	170	4.2	190	4.8	190	5.0	190	5.4	190	6.2	190	6.8	180	6.2
11	250	4.6	230	5.0	250	4.0	250	3.1	230	2.3	230	2.1	210	1.8	190	2.5	200	3.8	190	3.6	180	4.4	180	3.6
12	—	1.2	210	2.0	240	2.8	240	2.3	230	1.9	230	2.6	230	3.0	240	4.0	250	4.1	300	5.7	290	6.1	290	5.6
13	—	0.5	—	0.8	250	1.8	240	1.7	—	1.0	—	0.5	230	2.3	190	2.8	160	3.6	140	3.3	160	3.5	140	3.5
14	—	1.2	—	1.4	280	2.5	290	2.6	—	0.7	300	2.6	300	3.1	—	1.2	160	3.0	150	5.3	150	5.3	150	4.9
15	—	0.4	—	1.1	—	1.0	270	1.8	—	1.2	—	0.6	—	0.6	70	2.4	80	2.6	100	3.0	120	3.8	120	4.4
16	—	1.0	—	0.3	—	0.1	—	0.4	—	1.5	130	2.7	120	3.0	120	3.6	120	4.7	120	4.5	120	5.0	130	3.8
17	130	4.0	130	2.4	140	2.1	130	2.5	130	2.3	130	3.0	120	2.6	120	3.5	120	4.2	120	5.1	120	5.0	110	4.6
18	—	1.0	—	1.1	220	2.4	220	1.6	220	1.8	200	2.7	210	4.7	210	5.0	210	4.5	180	6.0	180	5.8	180	5.8
19	210	3.2	190	4.6	200	4.3	170	2.1	190	2.8	190	3.3	200	3.3	220	3.7	210	6.0	190	5.6	190	5.9	200	6.2
20	190	4.1	190	4.1	200	3.0	190	1.7	—	0.7	180	2.4	190	4.7	170	4.6	170	6.0	190	6.6	180	5.9	180	6.2
21	220	2.3	210	2.4	220	2.9	240	3.2	240	3.6	240	2.8	240	2.8	240	3.0	170	4.3	190	5.6	180	5.4	220	6.3
22	—	1.1	—	0.5	—	0.4	350	1.8	310	3.4	320	2.6	330	3.2	320	4.0	300	3.0	290	4.4	290	4.0	150	4.6
23	300	3.4	300	2.7	290	2.1	—	1.5	300	2.1	290	2.9	270	3.2	260	4.0	230	3.7	180	5.4	180	5.7	190	5.1
24	260	4.1	290	6.6	300	6.8	310	7.5	310	3.3	320	4.0	330	7.2	330	6.8	340	5.9	330	6.4	320	5.4	330	5.6
25	260	1.7	280	1.7	290	2.4	290	2.9	290	2.4	290	3.2	300	3.4	320	2.7	330	3.5	310	4.3	310	4.0	330	3.8
26	—	1.0	—	0.6	—	0.4	—	0.4	—	0.5	—	1.5	330	2.2	330	2.5	330	3.1	10	4.0	90	4.2	100	4.0
27	—	0.6	—	1.0	290	2.7	300	3.0	290	2.3	290	2.2	—	1.3	—	0.4	110	1.8	110	4.6	160	3.9	150	4.1
28	—	1.1	—	0.4	—	0.2	—	0.5	—	0.4	—	0.4	190	2.0	200	3.7	200	4.2	190	3.5	180	4.1	180	4.8
29	130	2.9	130	2.6	130	2.1	130	1.8	—	1.2	—	0.8	—	1.3	—	1.5	—	1.5	130	2.5	150	2.7	170	3.2
30	—	0.5	—	0.8	—	0.6	—	0.3	—	0.6	—	0.4	—	0.6	280	2.5	290	4.6	300	4.4	300	4.8	300	5.1
31	200	2.1	210	1.6	—	0.7	—	0.4	—	0.6	190	1.6	190	4.2	170	4.1	150	4.8	130	6.2	140	6.7	130	6.4
Mean	—	2.2	—	2.2	—	2.2	—	2.3	—	2.2	—	2.5	—	3.3	—	3.6	—	4.3	—	4.8	—	4.9	—	4.9

146. Aberdeen : H_a = 8 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	10	7.4	360	7.9	350	8.2	340	8.5	340	8.4	340	8.7	340	8.4	340	8.4	340	8.0	340	8.1	340	8.6	340	9.6
2	310	5.4	310	5.6	310	6.0	290	4.8	300	4.8	300	5.1	300	6.1	310	7.0	310	7.8	310	6.7	310	6.0	300	5.1
3	220	2.5	200	3.2	200	3.8	210	4.6	180	3.0	170	5.8	180	7.3	180	6.8	160	8.6	160	8.9	170	9.0	180	8.7
4	220	2.8	180	4.0	190	6.9	210	6.0	210	5.6	230	5.0	240	5.0	280	6.4	310	5.6	320	5.4	330	5.4	330	5.9
5	300	5.0	310	4.5	300	3.5	300	3.6	290	3.0	310	3.9	300	4.3	300	5.3	310	5.6	310	5.5	310	4.2	300	3.3
6	—	1.1	—	1.0	—	1.3	290	2.3	280	1.6	—	1.3	300	1.6	—	0.9	70	2.0	90	2.4	100	3.2	80	3.3
7	320	3.9	330	4.2	330	4.3	330	3.9	320	3.0	320	3.9	320	5.1	310	5.1	320	5.6	320	4.9	320	5.2	320	4.5
8	—	0.0	—	0.0	—	0.9	—	1.1	—	0.9	—	0.6	—	0.0	—	1.1	—	1.5	100	2.2	130	3.3	160	3.5
9	190	3.4	200	3.0	200	2.4	210	3.3	210	2.6	200	1.7	—	1.2	—	1.4	210	1.8	240	1.6	—	1.4	120	2.2
10	—	0.3	—	0.7	—	1.2	—	0.5	—	0.6	—	0.0	—	0.8	—	0.9	120	1.7	120	3.9	150	3.2	170	4.5
11	190	2.7	200	2.4	—	1.4	—	0.8	300	2.4	300	4.8	300	4.9	290	3.9	290	3.9	300	3.7	300	4.2	300	4.8
12	—	1.3	—	1.1	250	2.6	250	2.6	250	2.9	240	3.1	230	2.3	250	3.4	280	5.2	280	5.4	290	6.0	290	5.9
13	—	0.9	—	0.4	—	0.9	—	1.4	250	1.9	—	1.1	—	0.8	150	2.0	110	3.4	120	3.7	140	4.7	160	5.1
14	—	0.8	—	1.1	—	1.3	—	1.4	300	1.6	290	3.0	290	4.2	290	5.7	300	5.6	300	6.0	290	4.4	280	3.5
15	—	1.1	—	0.8	—	0.7	—	0.6	—	0.5	250	2.4	250	4.9	240	4.6	230	4.5	220	5.5	210	5.5	200	5.5
16	250	2.5	250	1.6	—	1.2	280	2.0	—	1.0	—	0.9	—	0.7	190	1.6	190	2.9	170	3.4	170	4.1	160	3.4
17	110	4.5	140	4.1	160	3.5	160	3.0	160	3.6	160	2.5	160	2.0	160	2.0	120	1.8	130	3.1	130	3.5	110	3.0
18	330	5.3	330	4.7	330	5.3	340	5.8	330	5.4	320	5.0	320	6.0	310	5.8	320	6.8	320	7.4	330	7.5	320	7.4
19	240	2.0	230	2.1	—	0.8	—	1.3	—	1.5	—	1.4	230	1.9	220	2.9	240	3.3	240	3.5	250	3.6	270	3.4
20	—	0.6	—	0.9	—	0.7	—	0.5	—	0.8	—	0.6	—	1.3	200	2.8	200	4.6	200	5.4	180	5.5	180	6.0
21	210	3.1	220	1.8	—	1.1	230	2.8	230	2.8	200	3.0	220	3.5	210	4.5	210	4.5	210	5.0	210	5.6	200	5.4
22	220	2.6	250	2.2	240	2.7	—	1.5	250	2.4	270	4.1	260	3.7	270	3.0	250	3.6	250	3.4	250	4.3	160	6.3
23	190	5.5	190	6.2	190	6.4	190	6.3	200	5.6	220	4.5	230	4.0	270	3.2	290	2.6	250	5.9	240	4.7	230	4.2
24	250	2.3	240	2.5	—	1.0	220	2.3	230	3.7	230	3.6	230	4.1	230	4.5	240	5.5	230	5.2	230	5.9	280	5.0
25	220	2.6	230	2.4	240	3.1	250	3.6	250															

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

M.S.L. + h_a (height of anemograph above ground) = 8 metres + 13 metres.

July, 1929.

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.	
120	4.1	130	3.4	120	3.7	130	3.0	120	2.4	110	2.3	110	1.8	—	1.0	—	1.0	—	1.5	—	0.5	110	1.8	2.2	1
150	3.0	180	3.2	140	3.7	150	3.6	190	3.6	210	3.8	210	4.1	220	4.0	190	2.8	190	2.3	200	2.6	220	3.1	2.8	2
160	4.4	180	4.0	170	4.5	170	4.6	170	4.3	190	4.4	190	3.9	180	3.3	—	1.3	130	2.6	100	1.8	—	0.4	2.8	3
120	3.5	120	3.2	100	3.3	70	3.6	80	4.0	90	4.0	90	4.4	90	4.6	90	3.1	80	3.2	90	2.7	100	2.5	3.3	4
40	3.8	30	3.8	30	5.4	40	6.0	20	7.0	10	6.2	10	6.4	10	5.8	360	5.7	360	5.5	360	5.6	360	6.4	4.5	5
360	8.9	350	8.0	350	8.0	350	8.2	350	7.8	360	7.9	350	7.0	350	5.8	340	5.3	340	5.1	340	4.9	330	5.0	7.1	6
350	7.8	340	7.0	350	7.6	350	7.1	350	7.2	350	6.2	340	5.6	330	2.7	320	2.4	310	2.2	300	2.6	280	2.5	5.9	7
330	4.1	140	3.6	120	4.5	130	4.8	140	5.0	150	4.5	160	3.6	180	3.6	190	3.1	200	3.0	190	1.7	—	1.5	3.6	8
190	3.7	200	5.0	190	5.1	190	4.9	170	4.1	180	4.4	180	4.7	180	3.3	180	3.7	190	6.3	150	4.9	190	4.6	3.2	9
180	6.0	180	6.6	190	6.4	190	8.0	190	9.0	200	8.0	190	7.0	190	4.6	200	4.1	220	5.0	250	4.0	250	4.2	5.5	10
150	3.9	140	3.6	170	3.5	150	3.4	200	5.2	210	5.0	210	4.1	280	4.4	310	6.7	310	6.0	300	4.4	280	2.9	3.9	11
290	4.2	30	3.6	130	3.5	100	2.0	40	2.7	40	2.4	—	1.1	—	0.2	—	0.6	—	0.7	—	0.8	—	1.3	2.7	12
110	4.8	90	3.4	40	3.2	50	3.3	60	2.9	40	2.8	40	1.7	—	0.9	—	0.4	—	1.5	290	2.3	290	2.2	2.3	13
130	5.5	120	4.9	110	4.2	110	3.8	150	3.6	140	2.9	80	2.0	—	1.1	—	0.2	—	0.1	—	0.1	—	0.1	2.6	14
120	4.4	120	4.8	130	5.5	140	5.6	140	5.0	130	3.9	130	3.3	150	3.3	160	3.0	180	2.4	170	2.2	160	1.8	2.8	15
110	3.6	110	5.4	140	7.4	140	6.7	130	4.6	120	3.5	160	4.5	140	3.6	120	3.3	120	2.5	120	3.6	140	4.3	3.4	16
110	4.5	120	4.4	130	5.0	140	4.8	130	3.8	130	3.9	140	2.9	120	2.3	140	2.6	160	2.8	180	1.9	210	2.3	3.5	17
180	5.9	170	6.1	170	5.0	190	6.2	200	4.6	210	5.1	210	5.0	190	4.6	200	4.8	210	4.5	200	4.1	230	2.3	4.2	18
200	5.6	190	4.6	180	4.4	180	4.1	190	4.7	180	4.7	180	5.0	170	2.8	190	4.6	200	3.5	220	2.5	210	2.1	4.2	19
180	5.4	190	4.5	200	3.4	210	4.5	180	4.1	180	4.6	190	3.3	210	3.5	210	3.1	220	4.2	240	3.4	250	2.3	4.0	20
230	6.1	220	3.9	250	4.3	240	4.6	230	3.5	220	4.5	210	4.1	220	4.6	220	3.2	230	3.5	270	2.4	290	1.8	3.8	21
150	4.5	150	4.1	170	3.7	120	2.6	110	1.8	140	2.2	—	1.4	—	0.8	300	1.6	310	2.7	310	2.7	310	3.0	2.6	22
280	5.6	290	6.3	280	6.4	260	5.7	280	5.8	290	5.4	290	3.7	290	7.0	280	6.6	270	4.9	270	6.1	240	4.2	4.5	23
340	6.1	330	6.3	330	6.0	340	5.1	340	5.4	350	4.8	20	2.1	—	1.5	—	1.2	290	1.8	—	1.4	—	0.8	4.7	24
80	4.1	110	4.5	90	5.3	110	4.6	130	3.6	130	3.0	160	2.0	—	1.0	—	0.9	—	0.2	—	1.0	—	0.9	2.8	25
90	4.1	120	3.6	120	4.0	120	3.9	150	3.1	150	2.8	150	2.7	170	2.1	180	2.5	190	2.9	200	3.4	240	2.5	2.5	26
160	4.5	150	5.4	150	4.8	170	3.8	170	4.0	190	4.0	200	4.0	200	3.7	210	3.0	220	2.3	220	1.8	—	1.5	3.0	27
190	4.1	170	4.5	170	4.4	170	4.2	160	3.7	150	3.6	150	3.4	140	3.8	140	2.8	140	2.8	140	2.6	130	2.6	2.8	28
180	2.8	60	2.5	—	0.9	—	1.4	—	1.1	—	0.5	—	0.7	—	1.3	230	1.7	—	0.2	—	0.3	230	1.8	1.7	29
40	3.4	160	4.1	200	2.1	—	0.5	300	1.8	—	1.0	240	1.7	270	3.1	240	1.6	280	2.9	270	2.3	—	0.7	2.1	30
110	6.9	100	7.7	80	8.5	80	9.3	70	9.2	70	8.5	60	9.1	50	8.2	40	8.1	30	7.8	20	7.7	20	7.6	5.6	31
—	4.8	—	4.7	—	4.8	—	4.6	—	4.5	—	4.2	—	3.8	—	3.3	—	3.1	—	3.1	—	2.8	—	2.6	3.6	

August, 1929.

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.	
340	10.0	340	9.9	340	9.4	330	7.9	330	7.8	330	8.6	320	7.7	330	6.1	320	6.6	320	6.6	320	6.0	320	6.4	8.1	1
290	4.0	300	3.8	270	2.6	190	4.6	190	3.6	200	3.3	210	2.2	250	2.2	240	3.5	230	3.8	220	2.8	210	2.6	4.6	2
180	9.1	160	8.2	170	5.6	170	4.9	180	4.8	200	5.1	220	6.7	210	5.9	200	5.0	170	4.4	190	3.6	190	5.1	5.8	3
330	5.5	340	5.6	340	5.0	330	4.6	330	4.8	340	5.0	330	3.9	330	4.2	320	4.4	320	3.9	310	3.9	300	4.2	5.0	4
240	3.2	160	5.2	170	4.4	170	4.6	190	3.1	—	0.9	300	2.8	290	1.8	—	1.1	—	0.9	—	0.9	—	1.0	3.5	5
80	3.6	70	3.9	80	4.0	40	3.8	30	4.0	30	4.2	20	3.3	360	2.8	360	2.8	330	2.1	330	2.9	320	3.3	2.6	6
330	3.8	320	3.6	330	2.4	180	2.5	190	3.0	200	2.6	—	0.5	180	1.7	200	3.0	210	2.2	200	1.9	—	0.7	3.5	7
170	3.7	160	3.6	160	4.0	170	3.8	180	3.0	190	1.9	230	2.8	230	2.8	240	2.7	240	2.9	210	2.0	190	2.8	2.1	8
100	2.1	280	3.6	280	3.4	310	2.4	—	1.4	80	1.6	—	0.9	—	0.9	—	0.4	—	0.2	—	0.8	—	0.8	1.9	9
210	5.4	220	5.8	210	5.7	210	5.1	220	4.6	200	3.4	230	3.0	240	3.3	210	2.5	210	2.4	210	1.8	190	2.2	2.6	10
310	4.6	310	2.3	290	2.5	150	3.4	160	3.8	190	3.5	200	3.8	240	2.8	260	2.8	240	1.6	240	2.4	250	2.3	3.2	11
290	6.6	300	6.6	300	6.8	310	5.1	300	4.8	300	4.5	300	3.2	290	3.4	270	2.3	260	2.8	280	3.6	290	3.1	3.9	12
170	5.1	170	5.4	180	5.3	190	5.3	190	4.6	170	3.6	160	4.0	160	4.0	160	3.7	160	2.4	180	2.0	180	1.7	3.1	13
270	4.5	260	4.0	260	3.4	330	1.6	310	3.9	290	3.0	—	0.7	—	1.4	—	0.4	—	0.7	—	1.5	—	0.9	2.7	14
220	7.1	220	7.6	220	7.2	240	4.6	270	4.0	240	3.4	250	2.7	250	3.1	230	3.3	—	1.5	250	2.4	240	2.7	3.6	15
160	2.6	160	4.0	160	4.6	170	3.8	170	2.4	140	1.8	—	1.5	—	1.3	70	2.3	40	2.0	50	2.4	70	3.7	2.4	16
90	3.5	70	4.2	50	5.1	40	5.3	30	4.7	360	4.0	340	3.5	330	3.4	320	3.9	320	3.4	330	3.9	340	4.9	3.6	17
310	7.5	320	6.3	310	6.2	320	5.7	330	4.4	330	2.5	—	0.6	—	1.3	—	0.8	—	1.4	—	1.5	260	1.6	4.7	18
250	2.6	260	4.6	290	3.1	250	1.7	—	0.9	70	1.6	—	1.4	—	1.0	—	0.4	—	0.8	—	1.1	—	0.8	2.0	19
180	6.4	180	6.4	180	5.6	180	4.3	170	3.6	180	2.8	180	3.2	170	2.4	200	2.3	200	2.5	200	2.5	—	1.5	3.0	20
200	4.6	210	4.7	210	5.4	200	5.2	210	4.8	220	5.5	210	4.4	190	3.0	200	4.0	200	3.6	200	3.6	220	3.5	3.9	21
150	5.1	160	5.6	190	5.6	180	5.6	180	5.0	180	4.5	180	4.6	180	4.4	200	3.5	200	4.0	190	4.1	190	5.7</		

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

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

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	190	3.6	190	4.0	190	4.5	190	4.6	180	4.4	200	4.7	180	4.9	190	5.1	190	7.6	190	6.8	210	7.8	210	9.1
2	210	5.4	210	5.1	220	5.5	220	3.5	210	4.1	230	6.0	260	8.0	280	11.8	280	10.1	270	6.8	280	7.0	280	8.2
3	—	1.4	—	0.8	—	0.5	—	0.4	—	0.4	—	0.4	—	0.5	—	1.0	110	2.7	120	3.5	130	4.9	160	4.2
4	—	1.1	—	1.1	—	1.1	—	0.8	310	1.6	300	2.4	—	1.4	—	1.2	340	2.1	20	2.5	100	3.2	80	2.4
5	—	1.2	—	1.4	—	1.0	—	1.4	—	1.5	190	1.7	—	0.8	—	0.6	—	0.7	110	2.1	110	2.5	110	3.7
6	340	3.0	330	2.4	330	2.5	340	2.4	330	2.0	320	2.0	—	1.4	330	2.0	330	2.0	40	1.7	—	1.4	220	2.0
7	170	4.0	170	4.1	180	3.7	180	4.0	170	3.0	160	1.6	—	0.7	—	0.4	—	0.6	—	1.0	—	1.5	40	2.0
8	—	0.8	—	0.7	—	0.2	—	0.4	—	0.8	—	1.4	—	0.7	240	2.1	230	2.0	230	3.6	210	2.6	250	2.8
9	—	1.0	10	1.6	340	1.8	320	2.4	310	3.2	300	2.6	310	3.9	320	4.1	320	4.4	310	5.4	310	5.0	310	5.4
10	—	1.0	—	1.0	—	1.2	—	0.8	—	1.3	—	1.0	—	0.6	—	0.6	—	0.8	—	1.0	110	1.7	110	3.2
11	—	1.5	—	1.2	—	1.0	—	0.8	—	0.8	—	1.1	—	1.0	—	1.0	140	2.2	140	3.6	170	4.0	180	5.6
12	180	2.9	170	2.8	180	4.0	190	4.0	170	4.4	170	3.2	170	3.1	180	3.6	190	3.3	190	6.0	180	6.1	190	5.3
13	—	1.4	—	1.5	280	1.8	—	1.1	280	2.4	280	1.6	—	1.0	190	1.9	180	3.4	190	4.3	180	4.9	170	5.4
14	—	1.1	180	2.6	180	2.9	180	2.1	200	2.8	210	2.5	—	1.5	200	3.7	190	3.4	190	4.6	200	5.1	210	5.0
15	—	1.0	—	1.4	260	1.8	280	2.5	280	2.6	260	1.8	—	1.2	210	2.0	190	2.7	200	2.3	180	3.1	170	3.2
16	300	3.0	300	3.1	300	3.4	300	3.4	290	2.0	290	2.7	290	3.0	300	2.6	320	1.8	90	2.5	140	4.4	130	4.3
17	210	2.3	220	2.5	220	1.8	220	2.5	230	3.4	220	2.4	210	2.0	190	3.0	200	3.6	190	5.6	190	5.3	210	6.1
18	210	4.1	210	3.5	230	3.2	200	4.4	230	2.7	200	2.2	200	3.6	210	3.2	190	3.4	220	4.3	210	3.5	210	3.2
19	220	2.9	230	3.4	230	3.4	230	2.7	230	3.1	220	2.8	230	3.0	220	2.7	220	3.3	200	3.7	200	4.0	200	4.7
20	280	4.2	270	5.4	270	6.9	270	5.2	270	5.4	280	5.6	330	8.3	340	7.6	340	8.6	330	9.8	320	9.0	320	9.0
21	200	2.4	200	2.5	200	2.6	210	3.9	200	3.6	200	4.3	200	4.2	210	3.1	240	3.6	290	8.3	290	11.8	290	13.6
22	280	5.5	280	6.3	280	6.2	280	5.6	250	2.6	240	2.5	260	2.8	260	3.5	260	4.1	280	3.9	290	3.7	270	2.5
23	230	2.7	260	3.6	240	2.8	180	2.8	220	3.6	220	2.8	240	2.4	220	2.0	240	3.7	240	3.7	240	5.4	240	5.0
24	230	2.4	220	4.0	220	4.0	230	3.4	260	1.6	—	1.5	250	2.7	240	4.1	230	3.8	230	4.0	220	3.1	190	3.8
25	210	4.1	210	3.8	220	3.1	220	3.4	220	3.3	220	3.2	210	4.1	210	4.1	210	4.5	200	5.4	200	6.0	210	6.2
26	190	2.1	180	3.4	170	3.2	170	3.2	200	2.6	200	2.5	220	2.5	200	3.5	200	5.7	180	5.9	190	2.8	190	3.4
27	190	5.1	180	3.6	180	2.1	190	2.8	190	3.5	190	3.4	210	2.5	200	2.8	—	1.1	330	1.8	350	4.3	20	3.3
28	200	3.2	190	5.5	190	4.6	190	4.6	190	3.6	190	3.9	220	2.0	190	5.4	210	3.5	190	4.8	190	6.2	200	4.6
29	200	2.3	220	2.8	220	2.6	220	2.5	230	1.8	—	1.5	250	1.8	270	1.7	290	2.0	260	2.9	260	4.0	260	3.8
30	210	4.5	220	4.4	200	6.1	210	8.0	210	6.6	200	4.9	230	3.4	230	2.9	230	2.2	250	3.8	280	3.3	290	3.6
Mean	—	2.7	—	3.0	—	3.0	—	3.0	—	2.8	—	2.7	—	2.6	—	3.1	—	3.4	—	4.2	—	4.6	—	4.8

148. Aberdeen : H_a = 8 metres + 13 metres.

Hour.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	1.5	190	1.8	250	1.6	240	1.7	230	1.8	230	3.1	—	1.5	230	2.7	230	4.0	230	4.4	250	5.5	250	5.0
2	210	6.1	220	3.0	220	3.5	230	5.0	220	5.5	220	5.2	220	5.7	230	7.2	230	8.1	240	9.7	240	8.7	240	9.3
3	220	5.7	210	5.2	220	6.2	230	6.7	220	6.7	220	7.2	220	7.8	220	7.7	220	7.8	230	7.6	220	7.2	230	7.8
4	290	6.3	280	4.4	290	4.9	300	6.0	300	5.9	290	5.9	290	6.0	300	8.1	310	9.4	310	8.8	310	7.4	320	7.3
5	290	2.5	280	2.0	300	2.6	300	2.9	310	2.0	250	2.3	80	4.8	60	4.6	310	3.2	290	3.2	260	2.6	250	2.9
6	100	3.8	120	3.3	140	6.6	130	8.0	130	11.0	140	12.5	140	12.2	140	10.1	140	9.5	140	8.6	150	6.2	180	3.4
7	230	2.8	250	4.6	280	5.3	290	4.9	260	3.4	260	7.5	260	8.3	260	8.6	280	11.1	270	8.7	270	8.4	250	5.6
8	210	2.6	220	2.5	200	2.1	190	2.6	250	1.7	260	1.7	280	2.0	300	3.0	300	3.3	320	3.4	320	4.6	330	4.4
9	300	6.6	310	6.7	320	6.1	320	7.0	310	7.3	310	6.6	300	6.7	310	7.6	310	8.4	310	8.8	300	9.3	310	9.4
10	200	3.1	200	2.7	200	2.6	240	2.8	250	3.7	230	3.1	210	3.1	210	2.4	210	3.2	230	4.4	220	4.1	220	4.5
11	270	8.0	270	8.2	270	8.8	270	8.2	270	7.6	270	7.6	270	7.5	270	8.1	270	8.9	270	9.5	280	10.5	280	11.4
12	260	2.3	280	2.8	220	1.7	250	2.4	220	2.1	230	2.0	230	2.7	210	3.5	210	4.5	220	5.3	210	4.6	240	5.0
13	260	4.6	220	2.2	240	2.8	170	2.2	180	2.0	200	2.7	—	1.2	200	2.0	200	2.2	200	1.7	230	2.4	220	3.5
14	220	5.4	220	6.0	230	3.5	210	4.9	210	6.4	200	5.6	210	6.2	220	7.1	220	6.6	220	7.4	220	6.1	250	4.5
15	270	3.0	270	2.5	290	2.7	270	2.8	270	2.2	280	1.8	290	2.2	290	1.8	—	0.5	—	0.5	160	2.0	160	4.1
16	160	2.8	170	4.3	170	4.0	170	4.2	180	4.6	190	3.8	170	3.8	170	4.7	170	5.5	170	6.5	160	6.1	160	7.1
17	250	5.2	250	5.8	260	5.5	250	4.4	240	3.0	270	6.3	270	6.6	270	7.5	270	7.3	270	7.4	280	9.1	270	7.0
18	—	1.4	240	1.6	270	3.8	280	2.7	280	1.9	260	2.6	270	3.0	270	2.6	280	5.2	280	6.3	280	6.3	290	5.9
19	270	3.8	290	4.4	280	5.0	290	3.6	290	4.4	300	5.6	300	6.2	300	4.6	310	4.6	320	5.0	320	4.8	310	5.0
20	210	4.1	190	5.2	190	5.6	210	6.6	210	6.8	210	7.3	220	4.5	250	3.4	290	2.4	300	3.5	300	3.8	320	3.7
21	350	3.2	350	2.4	330	1.9	300	2.6	300	2.8	290	3.2	290	2.6	—	1.5	—	1.3	280	1.7	—	1.4	250	1.7
22	260	3.7	240	3.4	240	3.1	250	3.6	240	3.0	210	2.2	—	1.2	—	1.5	210	2.8	200	3.5	220	3.8	200	3.2
23	210	6.0	200	6.4	190	6.1	180	5.2	180	5.0	180	3.5	180	3.2	190	3.8	200	4.4	200	5.3	190	4.5	200	5.8
24	200	2.4	200	2.8	210	3.2	210	2.9	200	3.5	200	3.7	210	3.6	210	3.1	220	2.6	240	2.6	220	2.5	220	2.7
25	—	1.5	—	0.7	—	1.3	—	1.2	240	1.6	240	2.0	230	2.0	230	1.8	210	3.6	210	2.6	220	3.5	220	4.1
26	240	2.8	—	1.4	—	1.2	—	1.1	—	1.5	—	1.4	290											

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

M.S.L. + h_a (height of anemograph above ground) = 8 metres + 13 metres.

September, 1929.

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.	
220	8.2	230	8.1	240	8.6	240	7.6	230	7.6	250	6.5	250	5.8	240	6.2	230	4.4	240	6.7	230	5.4	220	5.5	6.1	1
290	8.1	300	7.4	310	6.1	320	6.2	320	4.3	310	3.2	320	2.8	320	2.9	300	3.0	300	2.5	—	1.4	—	1.2	5.5	2
170	3.5	160	3.4	160	2.6	170	3.1	190	2.2	190	1.8	180	2.2	190	1.8	—	1.5	—	0.6	—	0.5	—	1.0	1.9	3
80	2.5	60	2.7	60	2.6	40	2.6	40	2.4	50	2.4	—	1.0	—	0.6	—	0.6	—	0.8	—	0.6	—	0.6	1.7	4
60	2.1	—	1.1	60	2.0	30	2.1	—	0.6	—	1.3	360	2.3	330	4.4	340	4.3	350	3.7	340	3.0	340	3.0	2.0	5
210	3.1	190	2.5	200	2.1	190	1.6	—	1.5	200	2.1	210	1.8	—	1.3	—	0.5	160	1.7	160	2.9	170	3.4	2.0	6
20	1.7	360	2.6	300	3.1	60	2.0	20	2.0	20	1.8	—	0.4	—	0.1	—	0.2	—	1.2	220	1.8	260	1.6	1.9	7
270	3.2	260	3.5	240	3.6	250	4.6	260	4.5	260	5.6	280	4.6	—	1.3	—	1.4	—	1.3	—	1.1	—	0.8	2.3	8
320	5.8	320	5.9	320	5.0	320	5.0	310	4.2	320	4.0	320	2.7	—	1.2	300	2.5	260	1.6	—	1.4	—	1.5	3.4	9
130	4.8	150	4.0	160	4.2	160	4.7	170	4.7	180	3.3	200	3.2	200	3.0	220	2.0	210	2.0	—	1.7	—	0.7	2.2	10
170	6.3	180	7.0	170	8.0	180	5.8	180	4.6	190	5.0	190	2.7	200	2.5	200	1.6	170	2.6	180	3.8	170	2.0	3.1	11
190	4.7	230	5.2	220	5.0	220	3.7	250	5.0	320	5.9	340	4.3	320	4.0	320	3.2	310	2.6	310	3.0	290	2.6	4.1	12
170	5.8	180	5.5	180	5.6	180	6.1	190	4.2	190	4.3	200	4.8	190	4.1	190	3.7	210	3.7	230	3.7	210	1.8	3.5	13
210	5.2	220	4.0	200	2.8	190	2.7	210	1.8	300	3.7	290	3.6	—	0.8	—	1.4	—	0.6	—	0.8	—	1.4	2.8	14
200	4.0	220	3.9	220	3.4	220	3.4	320	1.9	—	1.4	—	1.3	310	1.7	340	3.4	320	2.5	310	2.4	300	2.6	2.4	15
150	4.7	150	5.6	160	5.1	160	4.6	170	3.8	180	3.7	180	3.6	190	2.8	200	2.7	200	2.2	220	2.0	210	2.4	3.3	16
210	7.0	210	7.1	210	6.1	210	6.0	200	6.8	210	5.7	210	6.1	210	6.7	210	5.4	170	3.6	170	2.4	190	3.4	4.4	17
220	2.9	210	2.7	200	2.2	240	2.5	330	2.4	320	2.4	—	0.8	—	1.1	—	1.0	—	1.4	—	1.2	220	3.0	2.7	18
190	4.6	210	4.7	220	4.5	240	5.1	220	5.6	220	4.6	240	3.5	270	4.7	250	3.1	200	2.0	160	1.9	240	3.8	3.6	19
320	8.2	310	8.6	320	7.1	310	7.5	300	5.9	300	4.4	290	4.1	300	4.2	290	5.0	290	4.0	280	2.8	300	2.4	6.2	20
300	14.2	300	14.0	300	13.3	300	12.8	300	12.8	300	10.7	300	8.8	300	6.9	300	8.0	300	8.6	300	7.6	290	5.8	7.7	21
—	1.3	—	1.4	230	1.7	—	1.1	—	0.8	—	1.2	—	0.9	—	0.4	—	0.7	230	1.8	250	2.4	240	3.2	2.8	22
230	4.3	230	2.8	200	3.6	210	3.6	220	4.0	220	3.8	240	3.3	200	3.4	200	4.6	210	4.0	200	4.6	210	2.8	3.6	23
190	4.6	190	4.5	200	6.0	200	5.9	210	5.8	210	4.5	210	3.4	230	4.0	210	3.5	210	2.9	200	2.6	210	3.6	3.7	24
210	6.7	220	6.8	210	6.6	210	5.3	220	4.2	200	3.0	220	4.1	220	2.8	220	2.5	210	3.2	220	2.4	210	1.6	4.2	25
200	4.2	190	3.7	200	3.5	200	4.0	180	3.8	200	2.8	240	2.5	180	3.6	190	4.4	200	4.0	200	6.0	190	5.2	3.6	26
30	2.0	60	2.1	70	3.6	80	4.0	100	4.8	100	4.7	110	4.7	130	4.2	130	2.9	130	2.7	160	3.6	190	3.6	3.3	27
230	7.5	230	9.2	230	8.4	230	7.9	230	6.6	230	6.9	230	6.1	200	1.8	240	2.6	210	2.9	200	2.9	160	2.0	4.9	28
230	3.6	240	4.5	230	3.8	300	2.2	250	3.5	240	2.7	250	3.6	230	2.1	210	2.4	230	2.6	230	3.6	220	3.6	2.8	29
280	2.5	30	2.6	220	2.3	290	1.9	290	2.6	290	1.8	—	1.5	300	2.0	300	2.5	—	1.5	300	2.0	270	1.7	3.3	30
—	4.9	—	4.9	—	4.7	—	4.5	—	4.2	—	3.8	—	3.3	—	2.9	—	2.8	—	2.7	—	2.7	—	2.6	3.5	

October, 1929.

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.	
230	3.5	240	3.5	200	4.4	190	3.7	180	3.3	170	4.6	190	4.8	180	6.4	160	8.2	160	9.1	160	9.5	190	7.5	4.2	1
240	8.4	240	9.5	240	9.2	240	8.4	230	7.7	220	6.6	220	6.4	210	4.8	220	5.4	220	6.0	220	5.2	230	4.5	6.7	2
220	8.5	220	9.1	230	8.1	230	5.4	230	4.9	250	6.1	270	5.1	270	3.3	280	6.5	280	7.0	280	7.6	280	6.2	6.7	3
320	5.6	310	6.1	320	5.3	310	4.1	290	2.5	290	1.6	300	2.4	270	2.3	270	2.0	280	1.8	290	2.1	270	1.9	5.0	4
230	2.5	—	1.5	190	2.8	190	2.6	—	1.0	—	1.4	20	1.7	110	5.5	130	6.9	140	6.4	120	7.0	80	4.9	3.3	5
200	2.5	—	1.2	—	1.4	—	0.8	350	2.0	230	3.0	230	2.4	220	2.2	230	2.5	220	2.1	210	2.5	220	2.9	5.1	6
250	5.5	250	5.0	260	6.1	240	4.1	230	3.7	220	3.8	210	4.0	210	3.5	220	4.1	210	5.2	210	5.3	220	4.8	5.6	7
330	5.5	330	5.5	330	5.6	320	5.0	320	5.2	310	4.2	310	3.2	300	4.7	300	4.5	280	1.7	290	2.4	290	3.4	3.6	8
310	7.8	310	7.6	310	7.6	310	5.9	300	4.0	300	3.4	300	4.1	270	1.7	—	1.4	270	2.1	230	2.3	210	2.8	5.9	9
220	5.5	210	5.8	210	7.1	210	7.0	210	6.3	210	7.1	210	5.5	240	7.0	270	8.4	280	8.0	270	7.7	270	7.2	5.0	10
290	10.8	290	13.8	290	12.5	280	10.5	290	8.4	290	7.9	270	5.8	280	4.6	260	4.4	270	3.6	260	2.6	280	3.5	8.1	11
250	4.5	240	3.6	250	3.9	250	3.1	220	3.6	230	3.8	190	4.1	200	3.7	200	3.8	250	4.5	260	4.0	260	4.0	3.6	12
220	5.4	220	5.3	210	5.3	210	5.6	210	5.7	190	5.1	200	6.1	190	5.7	190	4.9	220	5.8	230	7.9	220	6.0	4.1	13
300	6.1	300	7.2	310	7.6	310	5.9	310	6.8	300	2.7	280	2.6	240	3.0	280	3.6	250	2.7	250	2.4	260	2.5	5.2	14
160	4.0	140	4.7	140	4.8	140	4.7	140	4.4	130	5.6	130	4.9	140	3.6	170	2.7	180	1.8	160	2.5	160	3.1	3.0	15
160	6.0	170	5.8	170	6.4	200	3.9	250	4.5	270	4.4	270	4.6	230	3.7	250	4.2	260	6.1	260	6.5	260	6.2	4.9	16
280	6.6	280	7.8	270	5.6	270	5.1	250	3.0	230	2.6	230	2.1	—	0.7	—	1.0	260	2.6	250	2.0	—	0.8	4.9	17
300	5.3	300	3.8	290	4.0	280	2.4	290	1.6	270	2.5	270	3.5	260	3.0	260	2.9	260	3.5	260	3.5	270	4.1	3.4	18
310	5.7	300	4.2	310	3.4	320	2.9	—	1.4	—	0.9	—	1.0	—	1.0	180	1.6	190	2.5	210	3.0	210	3.5	3.7	19
350	4.4	360	5.7	340	5.0	340	5.2	340	6.2	350	6.7	350	5.4	40	4.8	50	5.6	40	4.9	20	4.1	20	3.6	4.9	20
220	1.6	210	2.2	200	2.8	210	2.7	220	2.8	220	2.8	220	2.2	220	2.4	220	1.9	240	2.8	220	2.0	260	3.3	2.3	21
230	3.8	240	3.6	210	2.6	200	3.4	210	3.9	210	3.5	210	3.8	200	2.9	210	5.0	200	3.6	180	2.8	220	5.6	3.3	22
200	5.9	200	6.0	200	5.4	220	5.5	220	6.1	230	7.5	230	8.2	220											

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

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

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	200	6.0	200	5.2	200	5.5	200	5.7	210	5.5	210	5.6	200	4.1	200	4.2	210	3.3	200	4.5	190	4.4	190	4.7
2	—	1.0	—	0.5	190	2.3	190	2.4	200	3.6	190	4.0	190	4.0	200	4.7	190	4.6	200	4.3	210	4.4	220	2.6
3	250	3.5	—	1.2	—	1.4	—	1.0	—	1.2	—	1.4	250	1.7	260	4.5	260	4.7	260	6.0	270	6.2	280	7.0
4	240	4.6	240	3.8	260	3.4	240	2.0	200	1.9	210	2.4	220	3.0	220	4.6	220	4.6	200	3.9	210	6.1	210	6.3
5	210	3.8	240	4.8	220	5.5	220	6.3	210	5.9	200	6.0	210	6.4	210	7.2	190	6.1	200	7.7	190	8.2	200	10.0
6	180	2.1	190	2.3	190	1.9	210	2.0	210	2.4	220	2.5	210	2.9	220	2.6	210	2.8	210	2.9	220	3.0	230	2.8
7	220	2.0	220	2.7	220	2.7	220	2.0	—	0.8	—	1.1	—	1.1	—	1.2	—	1.4	230	2.6	220	2.8	210	3.1
8	200	7.9	210	7.0	210	3.5	250	5.2	300	7.6	290	7.9	290	6.0	290	4.6	270	3.8	280	4.8	280	5.7	290	6.2
9	190	3.4	190	4.4	190	4.6	210	5.1	220	5.0	240	5.6	240	4.8	190	2.1	230	3.7	230	5.8	230	7.6	240	8.0
10	210	3.0	230	2.0	—	1.5	280	2.7	270	3.5	—	1.5	—	0.8	180	1.7	200	3.1	200	2.3	220	2.7	230	4.5
11	230	1.6	170	2.2	210	3.1	210	4.4	210	6.3	210	6.4	200	6.5	200	5.7	200	7.1	200	7.6	190	7.6	180	8.5
12	250	3.4	270	4.5	280	4.8	280	3.6	270	3.5	280	4.3	250	4.4	240	3.8	230	4.0	240	4.2	240	4.1	250	4.4
13	250	2.9	260	3.5	240	2.8	280	3.0	290	4.1	300	2.8	270	2.1	250	3.5	250	4.4	250	4.2	240	4.0	240	3.0
14	260	2.1	250	2.8	270	2.3	—	1.4	—	1.4	—	1.4	270	2.1	250	2.0	250	1.9	260	1.9	270	2.2	260	2.3
15	280	1.6	250	1.7	270	2.0	260	1.7	290	2.7	250	1.8	280	3.6	280	3.2	290	3.2	280	2.6	290	3.2	290	3.2
16	270	3.2	290	4.8	290	4.8	290	4.9	290	5.1	290	4.1	290	4.8	290	4.8	290	4.6	290	4.5	300	4.7	300	4.8
17	290	4.1	290	3.7	290	4.1	290	3.8	320	4.0	360	5.6	350	3.1	300	3.4	320	3.9	320	4.5	340	4.5	340	4.6
18	310	3.6	300	3.3	300	3.5	300	3.6	300	3.3	300	3.5	300	3.5	290	3.4	290	3.2	290	3.0	290	2.7	280	2.2
19	140	13.2	150	13.5	150	11.0	160	9.3	150	9.1	160	7.1	190	5.0	200	3.4	230	2.5	—	1.5	—	1.2	190	2.8
20	160	5.2	200	4.1	190	6.2	200	5.4	200	5.2	210	6.7	210	5.8	210	6.4	210	7.4	210	7.4	210	6.7	200	7.3
21	190	2.8	220	2.1	—	1.0	—	1.1	—	0.5	—	0.6	—	1.3	—	0.6	150	2.6	150	4.7	160	4.0	160	5.0
22	160	3.4	170	4.0	160	4.0	170	3.6	170	4.0	160	4.1	140	4.9	150	5.1	160	5.0	160	5.4	160	6.1	160	6.4
23	140	9.1	140	9.1	140	9.7	140	10.0	140	9.6	150	9.4	140	9.0	150	9.0	150	8.9	140	8.2	150	7.5	160	7.8
24	190	5.7	190	6.1	180	6.8	180	5.5	180	5.5	180	6.0	170	6.1	170	6.3	170	5.5	170	6.1	170	6.5	170	7.4
25	140	9.1	140	9.1	140	13.0	150	13.2	140	13.6	150	12.2	160	9.6	170	5.8	170	5.7	170	6.2	190	6.2	170	5.6
26	220	3.4	210	5.0	210	6.4	210	6.5	210	6.8	210	7.6	280	3.0	—	1.3	200	3.3	220	5.0	210	5.0	210	4.6
27	230	2.1	230	1.9	230	2.8	240	2.3	220	2.7	230	2.6	220	1.8	—	0.8	—	1.5	—	1.5	200	2.8	210	3.7
28	210	3.6	—	1.5	160	3.4	160	4.7	150	5.2	150	6.0	140	7.2	130	8.8	140	8.0	150	5.8	160	4.4	170	3.7
29	110	3.6	120	3.6	120	3.3	120	3.0	120	1.8	110	2.5	120	3.0	110	4.0	110	3.7	110	4.4	110	4.3	120	3.2
30	130	6.3	120	6.0	120	6.7	120	7.2	120	7.0	120	7.4	120	7.6	120	7.4	110	7.8	110	7.8	100	7.4	100	7.7
Mean	—	4.2	—	4.2	—	4.5	—	4.4	—	4.6	—	4.7	—	4.3	—	4.2	—	4.4	—	4.7	—	4.9	—	5.1

150. Aberdeen : H_a = 8 metres + 13 metres.

Hour.	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	5.3	360	3.7	340	3.8	330	3.6	320	3.7	320	4.0	300	3.6	300	3.8	300	4.0	300	4.1	310	3.8	310	3.5
2	190	3.9	190	5.4	180	6.6	170	8.2	160	10.4	170	10.8	170	10.4	160	10.7	160	11.2	170	11.8	170	13.3	160	12.8
3	220	5.0	220	5.7	220	5.0	210	5.3	210	5.4	200	5.5	230	4.5	240	3.3	270	2.2	220	3.4	190	4.1	170	3.8
4	170	9.2	170	12.0	170	12.2	160	12.6	160	13.6	160	13.0	160	12.2	160	10.6	160	9.5	170	7.8	200	4.5	200	3.2
5	160	7.0	150	8.9	150	11.0	150	11.7	140	13.6	150	15.0	140	15.5	140	16.1	140	15.4	150	13.0	160	12.2	160	11.0
6	190	10.6	210	10.8	220	10.2	220	8.0	210	7.3	210	7.6	220	7.3	210	8.0	210	6.2	230	8.8	220	7.6	230	7.5
7	130	12.7	140	7.9	170	4.8	180	4.1	180	1.7	280	1.6	310	2.4	310	3.1	310	3.9	310	5.5	300	5.8	290	6.6
8	230	4.2	210	2.8	210	3.7	200	3.3	190	2.0	170	4.6	170	6.6	170	7.4	170	6.7	170	5.8	190	5.9	200	6.6
9	250	3.6	200	2.5	200	3.4	200	5.8	210	6.8	240	6.4	250	7.2	250	6.5	260	6.7	240	3.6	240	3.4	240	3.5
10	270	3.2	260	3.5	240	2.2	240	3.0	230	3.9	230	3.3	250	5.0	270	6.5	270	6.8	270	7.8	280	9.7	280	8.6
11	200	2.0	180	2.9	160	5.3	140	6.4	130	8.4	120	8.7	120	8.1	120	5.6	120	4.0	120	3.8	100	2.5	60	4.0
12	250	5.8	250	5.4	260	7.8	260	8.4	270	10.6	280	12.1	290	11.1	290	10.7	300	10.4	300	9.5	300	9.6	290	9.4
13	220	2.4	220	2.5	220	2.8	210	4.0	210	5.0	190	3.4	200	3.5	200	5.0	200	3.7	200	4.6	200	4.8	200	4.7
14	270	5.4	270	6.7	250	6.8	250	6.0	240	4.2	220	4.0	220	3.6	230	4.0	240	3.8	240	5.4	250	5.4	250	7.0
15	290	6.2	300	3.7	—	1.2	180	1.8	—	1.5	—	0.8	250	2.5	270	3.3	270	2.0	—	1.0	—	1.5	—	1.5
16	250	1.8	260	2.3	250	3.3	240	2.4	250	2.6	250	3.6	220	3.1	210	3.5	200	3.1	240	2.7	270	3.3	270	4.8
17	300	4.1	290	3.8	300	3.9	270	2.7	290	3.3	280	3.4	290	3.2	280	2.1	290	2.8	290	3.2	270	1.7	260	2.0
18	220	3.6	220	3.5	220	3.4	230	2.5	220	2.4	220	2.6	220	2.5	—	1.4	—	1.0	—	1.5	—	1.5	190	1.7
19	220	7.8	220	7.5	240	4.4	200	5.0	190	5.6	210	4.6	210	9.5	210	6.6	200	8.2	200	8.8	190	8.5	180	8.0
20	190	6.5	200	5.7	200	5.7	200	5.5	210	6.5	200	6.9	210	5.5	220	4.6	200	5.0	200	5.0	200	6.5	190	5.4
21	170	11.9	160	12.6	160	12.1	170	13.0	160	12.5	170	12.5	170	12.0	170	11.5	180	10.4	180	9.8	180	8.7	190	6.9
22	290	2.3	290	2.5	290	3.4	290	3.4	280	2.3	190	3.2	160	5.1	150	6.4	150	7.1	140	9.4	150	8.0	150	7.7
23	150	10.1	160	8.3	170	5.2	180	5.5	160	8.0	170	7.9	160	7.8	170	8.8	170	8.1	150	10.1	150	10.5	150	9.6
24	130	14.7	130	16.0	130	16.1	130	16.0	130	15.3	130	14.4	130	16.2	130	14.8	130	14.8	130	15.4	130	15.5	130	14.6
25	130	17.8	130	19.2	130	19.6	120	20.5	120	21.2	120	20.8	120	20.6	120	20.5	120	19.5</						

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

1929.

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

* Defective Record.

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

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

1929.

Month.	DISTRIBUTION OF WIND SPEED.								EXTREME VELOCITIES.							
	More than 17.1 m/s.		10.8 to 17.1 m/s.		5.5 to 10.7 m/s.	1.6 to 5.4 m/s.	Less than 1.6 m/s.	No Record.	Highest Hourly Wind.			Highest Gust.				
	Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Date.			
Jan. ...	—	hr. 0	1	hr. 1	hr. 188	hr. 472	hr. 83	hr. 0	° 110	m/s. 11	day. 6	hr. 17	m/s. 19	day. 15	h. 2	m. 5
Feb. ...	—	0	9	74	283	256	59	0	150	15	11	9	24	11	9	5
Mar. ...	—	0	2	6	103	464	171	0	300	13	31	11	23	31	11	45
April ...	—	0	1	1	283	397	39	0	320	11	24	1	21	24	11	25
May ...	—	0	0	0	186	474	84	0	150	9	4	7	16	4	6	50
June ...	—	0	3	5	202	454	59	0	300	12	23	6	22	23	6	45
July ...	—	0	0	0	117	504	123	0	80	9	31	16	16	10	16	25
Aug. ...	—	0	0	0	124	478	142	0	340	10	1	13	17	1	14	25
Sept. ...	—	0	2	8	100	491	121	0	300	14	21	13	25	21	12	25
Oct. ...	—	0	3	8	216	468	52	0	290	14	11	14	23	11	13	50
Nov. ...	—	0	5	15	191	451	63	0	140	14	25	5	22	25	5	55
Dec. ...	25th	10	14	103	270	330	31	0	120	21	25	5	31	25	6	45
Year ...	1 day	10	40	221	2,263	5,239	1,027	0	120	21	Dec. 25	5	31	Dec. 25	6	45

153. Aberdeen.

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

1929.

Month.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	78.6	77.3	77.2	78.4	79.3	81.7	83.2	84.7	85.0	84.6	82.3	80.4
2	78.5	77.3	77.1	78.5	79.3	81.7	83.3	84.8	85.0	84.5	82.2	80.4
3	78.4	77.3	77.1	78.6	79.2	81.8	83.3	84.8	85.0	84.4	82.2	80.4
4	78.4	77.4	77.0	78.7	79.1	81.8	83.3	84.8	85.0	84.4	82.1	80.4
5	78.3	77.6	77.0	78.8	79.2	81.9	83.3	84.8	85.0	84.4	82.0	80.4
6	78.3	77.6	77.1	78.8	79.2	82.0	83.4	84.7	85.0	84.3	81.9	80.4
7	78.2	77.7	77.1	78.8	79.2	81.9	83.4	84.7	85.0	84.1	81.8	80.4
8	78.2	77.7	77.2	78.8	79.3	81.9	83.5	84.6	85.0	84.0	81.8	80.4
9	78.0	77.8	77.2	78.8	79.3	81.9	83.5	84.6	85.0	83.9	81.7	80.4
10	77.9	77.8	77.2	78.9	79.4	81.9	83.4	84.6	85.1	83.8	81.7	80.4
11	77.9	77.8	77.2	78.9	79.5	82.0	83.4	84.7	85.1	83.7	81.7	80.3
12	77.8	77.8	77.2	78.9	79.5	82.1	83.4	84.7	85.2	83.5	81.6	80.2
13	77.8	77.8	77.3	79.0	79.6	82.1	83.4	84.8	85.2	83.4	81.6	80.1
14	77.8	77.8	77.3	79.1	79.7	82.1	83.5	84.8	85.2	83.3	81.4	80.1
15	77.8	77.8	77.3	79.2	79.8	82.2	83.6	84.9	85.2	83.3	81.2	80.0
16	77.8	77.8	77.4	79.2	79.9	82.2	83.6	84.9	85.2	83.3	81.1	80.0
17	77.8	77.7	77.4	79.2	80.0	82.3	83.7	84.9	85.1	83.3	80.9	80.0
18	77.8	77.6	77.5	79.3	80.1	82.4	83.8	84.9	85.1	83.3	80.7	79.9
19	77.7	77.5	77.6	79.3	80.1	82.5	83.9	85.0	85.1	83.3	80.6	79.8
20	77.7	77.4	77.6	79.4	80.2	82.7	84.0	85.0	85.0	83.3	80.3	79.7
21	77.6	77.3	77.6	79.5	80.3	82.8	84.1	85.0	85.0	83.2	80.2	79.6
22	77.6	77.3	77.7	79.5	80.5	82.9	84.2	85.0	84.9	83.1	80.1	79.4
23	77.6	77.2	77.7	79.5	80.6	82.9	84.3	85.0	84.9	83.1	80.1	79.2
24	77.6	77.2	77.8	79.5	80.7	82.9	84.4	85.0	84.8	83.0	80.1	79.1
25	77.6	77.2	77.8	79.5	80.8	83.0	84.5	85.0	84.7	82.9	80.2	79.1
26	77.6	77.2	77.9	79.5	80.9	83.1	84.5	85.0	84.6	82.9	80.2	79.0
27	77.5	77.2	78.1	79.5	81.1	83.1	84.6	85.0	84.6	82.8	80.3	79.0
28	77.4	77.2	78.2	79.4	81.2	83.1	84.6	85.0	84.6	82.8	80.3	79.0
29	77.4	—	78.3	79.4	81.3	83.1	84.6	85.0	84.6	82.7	80.4	79.0
30	77.4	—	78.3	79.3	81.4	83.2	84.6	85.0	84.6	82.5	80.4	79.0
31	77.3	—	78.4	—	81.6	—	84.6	85.0	—	82.3	—	79.0
Mean ...	77.8	77.5	77.5	79.1	80.0	82.4	83.8	84.9	85.0	83.5	81.1	79.8

Annual Mean at 124 cm. 281.1

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

154. Aberdeen.

Readings, in degrees absolute.

1929.

Month.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	70.8	77.8	67.9	72.6	67.4	79.3	81.8	84.6	84.7	69.0	75.2	78.9
2	69.0	77.0	73.0	72.0	75.3	81.4	83.0	78.1	81.9	78.7	79.6	72.6
3	67.4	78.0	72.4	72.6	70.0	80.8	82.3	79.6	80.2	76.3	69.2	74.4
4	65.4	76.3	74.5	71.6	75.8	72.9	75.3	81.7	83.6	76.1	72.3	79.1
5	65.2	76.3	74.1	72.4	77.8	69.7	82.7	77.9	84.5	70.2	80.2	73.1
6	74.2	71.4	75.1	68.4	72.1	71.2	81.1	75.8	80.2	79.9	73.0	79.3
7	74.2	75.1	67.9	71.0	77.4	77.4	78.6	81.9	83.6	76.2	69.3	76.9
8	67.6	73.4	67.6	78.0	70.9	73.0	73.1	81.9	79.1	75.8	76.3	70.0
9	71.3	71.8	68.0	75.2	71.8	76.4	73.7	83.0	83.0	72.3	70.9	70.3
10	75.1	67.9	68.0	75.7	78.7	75.8	84.8	80.8	76.9	76.0	69.1	70.7
11	74.9	73.0	68.1	72.5	79.9	77.1	85.9	84.8	76.6	79.7	69.6	69.6
12	71.7	70.8	72.7	75.7	74.1	75.8	80.3	77.3	80.6	76.7	70.4	76.5
13	70.6	65.3	68.6	74.8	73.0	82.4	78.4	76.9	71.8	81.2	68.8	69.8
14	72.7	57.0	69.0	72.1	75.7	80.8	79.2	82.9	77.2	84.2	65.6	75.7
15	72.6	69.8	69.8	76.2	78.6	76.4	78.8	76.4	75.8	73.3	66.9	70.6
16	65.7	68.0	75.7	74.9	72.4	81.0	77.7	78.1	77.4	82.1	68.6	68.4
17	69.1	61.7	71.7	73.7	73.6	79.7	81.9	84.2	75.2	79.9	69.3	69.3
18	60.3	72.4	74.1	80.3	74.3	81.6	79.5	81.0	78.8	72.4	68.1	71.2
19	72.0	74.0	74.7	80.2	80.3	84.6	85.1	76.1	77.2	77.9	75.4	76.0
20	71.7	73.3	74.7	72.2	79.1	77.4	84.4	79.5	78.1	77.8	77.0	75.2
21	69.7	74.6	76.5	70.3	74.7	77.4	81.8	83.5	75.5	81.0	77.9	75.3
22	75.7	71.3	72.0	67.6	77.9	82.6	83.0	76.9	75.4	72.7	79.7	67.7
23	72.7	71.0	69.3	71.9	77.9	79.6	76.2	85.6	79.2	79.3	81.3	76.3
24	70.9	74.3	80.5	73.6	74.7	76.4	82.5	74.2	77.9	80.1	78.4	77.2
25	71.9	71.2	77.6	69.6	78.6	80.1	72.0	79.8	79.9	66.3	75.1	74.7
26	70.1	69.7	70.4	68.6	79.9	80.2	78.0	79.3	79.2	67.0	76.5	76.3
27	66.5	69.8	71.3	65.4	75.7	80.7	76.6	79.6	81.9	73.3	72.7	76.1
28	65.8	63.6	71.3	69.1	79.9	80.9	77.1	85.3	82.4	69.7	72.5	69.3
29	65.9	—	71.5	74.2	79.7	81.4	85.3	79.0	73.2	77.6	80.3	76.8
30	76.2	—	72.8	71.7	78.3	77.6	80.2	75.9	72.4	76.3	80.7	73.2
31	78.2	—	76.0	—	77.7	—	79.0	85.0	—	72.4	—	68.6
Mean ...	70.5	71.3	72.2	72.8	75.9	78.4	80.0	80.2	78.8	75.9	73.7	73.5

Annual Mean 275.3

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.

155. Aberdeen.

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.						Remarks on the Weather of the Day.
	7 ^h	13 ^h	18 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	
1	Ci-St: St-Cu.	Ci-St:St-Cu:Fr-Cu.	St-Cu.	7	8	4	5	1	1	k	l	k	k	j	j	..	..	0	..	..	..	bc \square , cp \bullet a: bc p: b \square n: \square 1 ^h
2	A-Cu.	Ci-Cu: St-Cu.	St-Cuf.	1	1	2	8	1	8	j	H	E	F	F	F	..	..	..	..	..	..	b \square a: b to cz to bm p: cp \bullet m \square n.
3	St-Cu.	St-Cu.	St-Cu.	8	8	9	9	9	7	j	G	F	i	i	H	..	..	..	..	..	..	\square, c f a: c p: bc, b \square n.
4	St-Cu.	Ci: St-Cu.	Ci.	1	2	2	2	1	4	i	j	i	i	H	H	..	..	..	..	..	..	b \square a: b p: b and c n.
5	St.	Fog: St.	St-Cu.	9	9	10	9	9	10	H	D	E	E	i	i	..	0	..	..	..	..	c \bullet m, \bullet f a: c f p: bc and c n.
6	St-Cu.	Cu.	St-Cu: Nb-Cuf.	7	2	10	10	10	10	j	k	j	H	j	j	..	..	0	0	..	..	b to c p \bullet a: c \bullet Δ p: c, o \bullet n.
7	Nb.	St-Cu: Cu.	St-Cu.	10	10	8	4	1	0	H	H	E	G	D	E	0	0	..	..	..	..	o \bullet \bullet , c a: c to b \square p: b \square m f n.
8	St-Cu.	St-Cu: Fr-St.	St-Cu.	10	10	9	10	8	10	G	H	E	G	E	F	..	..	..	..	..	..	b to c \square m f a: c f p: c f, z n.
9	St-Cu.	St.	Nb.	10	10	10	10	10	10	H	H	G	F	G	G	..	..	..	..	..	..	c to o a: o \bullet , \bullet p: o \bullet to \bullet n.
10	Nb.	Nb-Cuf.	Nb.	10	10	10	9	10	10	H	H	H	H	H	i	0	0	0	0	0	0	c and o, \bullet and \bullet a and p: c n.
11	Nb.	St-Cu.	St-Cu.	10	10	9	9	9	10	j	j	k	j	j	H	0	..	..	..	..	..	o \bullet \bullet , c a: c p and n.
12	St-Cu: Nb-Cuf.	St-Cu.	St-Cu.	9	9	9	9	9	8	j	j	j	H	j	i	0	..	..	..	..	..	cp \bullet a: c p and n.
13	St-Cu.	Nb.	St-Cu: Fr-Nb.	9	6	10	10	8	10	j	j	j	j	j	j	0	..	..	..	..	..	bc and c a: o \bullet p: c \bullet n.
14	St-Cu: Fr-Nb.	Ci-Cu:St-Cu:Fr-Nb.	A-Cu:St-Cu:Fr-Nb.	9	8	8	8	7	6	j	j	j	j	j	j	0	..	..	..	..	..	c \bullet a: c p \bullet , \bullet Δ p and n.
15	Cu-Nb.	Cu-Nb.	St-Cu: Cu-Nb.	5	3	8	8	7	5	j	j	j	j	j	k	..	..	..	..	..	..	bc p \bullet , p \bullet a: c p \bullet p: bc p \bullet n.
16	Cu-Nb.	Cu-Nb.	Cu-Nb.	2	8	9	9	5	3	i	i	E	i	k	j	..	*	*	0	..	..	bc and c p \bullet a, p and n: \square 5 cm.
17	A-St: St-Cu.	A-Cu: Cu-Nb.	..	8	7	1	1	0	0	i	i	H	j	i	H	..	..	..	..	..	..	c to b a: b p: b z a: \square 10 cm.
18	St-Cu.	St-Cu.	A-Cu: St-Cu.	7	9	9	8	5	8	i	i	j	i	H	E	..	..	..	..	..	..	cp \bullet a: c to bc f p: f, cm n: \square 8 cm.
19	A-St: St-Cu.	Ci-Cu: A-Cu: St-Cu.	A-Cu.	8	7	7	5	4	5	G	j	j	i	H	G	..	..	..	..	..	..	c to bc a: bc p and n: \square 4 cm.
20	A-St: St-Cu.	A-St: Fr-St.	A-St: A-Cu.	5	8	9	10	10	9	j	j	j	H	H	H	..	..	..	..	..	..	Mainly cloudy.
21	A-Cu.	A-Cu.	St-Cu.	5	3	1	7	9	9	i	E	G	E	H	H	..	..	..	..	..	..	bc f \square , b a: bc f, c z p: c n.
22	St.	St.	St.	10	10	10	10	10	10	j	D	G	i	H	F	..	..	..	..	..	..	o to o f, z a: o p and n.
23	St-Cu.	St-Cu: Cu-Nb.	St-Cu: Cu.	8	8	7	2	4	1	k	k	j	j	j	j	..	..	..	..	..	..	c a: b and bc p \bullet p: c p \bullet , bc n.
24	Cu-Nb.	St-Cu: Cu-Nb.	St-Cu: Cu-Nb.	1	5	2	7	8	8	k	k	j	k	k	k	..	..	..	..	..	..	bc p \bullet a and p: bc, c \bullet n.
25	A-Cu: St-Cu.	Cu-Nb.	Cu-Nb.	7	8	9	1	1	1	k	k	k	k	k	k	..	*	*	0	..	..	\bullet, \sim, c p \bullet a: bc p \bullet Δ p: b [and bc n.]
26	St-Cu: Cu-Nb.	Ci: St-Cu: Cu-Nb.	Ci-Cu: St-Cu.	8	9	4	9	7	3	j	i	j	j	i	i	*0	*	..	..	..	..	cp \bullet a: bc and c p: bc n.
27	Ci-St: St-Cu.	A-St.	A-St.	8	9	10	10	10	3	j	H	H	H	E	E	..	..	0	0	..	..	c \square to o \bullet a and p: bc, b \square n: \square 21 ^h
28	St-Cu.	Ci-St.	Ci-St.	1	1	1	5	6	1	i	H	j	H	E	F	..	..	..	..	..	..	b \square , b a: bc, f p: b f to c f n: \square 15 ^h
29	Nb.	A-St: Nb-Cuf.	St.	10	10	10	10	10	10	i	H	G	H	G	H	..	..	..	..	..	..	o \bullet , \bullet a: c to o p: o \bullet m n.
30	Nb.	A-St: St-Cu: Fr-St.	St-Cu lent.	10	10	9	9	9	2	G	F	j	i	G	H	..	..	..	..	..	..	o \bullet m to c a: c p: c to b n.
31	A-St: St-Cu.	A-St: A-Cu: St-Cu.	St.	9	10	9	10	10	10	F	F	G	F	F	F	..	..	..	..	..	..	c m a: o m p: o m, f e n.
Mean Cloud Am'nt.				7.2	7.4	7.3	7.5	6.7	6.2													

156. Aberdeen.

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.						Remarks on the Weather of the Day.
	7 ^h	13 ^h	18 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	
1	Nb.	Nb.	Nb.	10	10	10	10	10	10	H	G	G	F	H	H	0	0	0	0	0	0	Dull and rainy.
2	A-St: Nb.	St.	Nb-St.	8	9	10	10	10	10	G	G	H	H	H	H	..	..	..	..	..	..	c to o a: o to \bullet p: \bullet to \bullet n.
3	Nb.	Nb-St.	St.	10	10	10	10	10	10	H	F	H	G	G	G	0	..	..	..	..	..	o \bullet \bullet , o a: o p: \bullet , o n.
4	A-Cu: Fr-St.	A-Cu: Fr-Cu.	St-Cu.	4	1	2	2	1	4	G	j	j	j	j	H	..	..	..	..	..	..	o to b m f a: bc p \bullet p: bc, c n.
5	St-Cu.	St-Cu: Fr-Nb.	St-Cu.	8	9	9	8	1	0	j	i	j	j	j	j	..	..	..	..	..	..	cp \bullet a and p: b n.
6	A-Cu: St-Cu.	St-Cu.	Nb.	7	9	10	10	10	10	i	H	G	G	G	G	..	..	..	..	..	..	b \square to c a: c to o \bullet p: o \bullet n.
7	A-Cu: St-Cu.	St-Cu: St.	A-St: St.	5	9	10	10	9	5	H	H	G	H	H	G	..	..	..	..	..	..	\bullet early, c a: c to o p: c and bc n.
8	St.	A-Cu: Fr-St.	A-St: Nb.	10	10	10	10	10	10	H	F	G	H	G	i	..	..	..	..	..	..	o m, \bullet , c a: c \bullet p and n.
9	A-St.	Ci: Fr-Cu.	Ci: A-Cu lent.	8	8	1	3	2	4	H	G	k	j	k	j	..	..	..	..	..	..	c to b a: bc, b p: bc n.
10	A-Cu: Cu.	A-Cu: Fr-Cu.	Nb.	3	2	1	3	10	10	j	j	j	j	j	j	..	..	..	..	..	..	\bullet early, b a: bc to o \bullet Δ p: c \bullet n.
11	A-St: Nb-Cuf.	A-St: Nb-Cuf.	A-St: Nb-Cuf.	10	10	10	10	10	10	j	i	i	j	j	j	*0	*0	..	..	..	..	c \bullet a: c q, p \bullet p and n.
12	A-Cu: St-Cu: Nb.	Nb-Cuf.	Nb-Cuf.	9	9	9	6	10	9	k	H	H	i	H	H	..	*	*	0	..	..	c \bullet a: bc \bullet Δ p: c \bullet , c n.
13	Cu: Nb-Cuf.	Nb-Cuf.	Cu-Nb: Nb-Cuf.	9	9	7	8	8	8	j	i	i	H	H	H	..	*	*	0	..	..	bc and c \bullet a, p and n: \square 1 cm.
14	St-Cu: Cu-Nb.	Cu-Nb.	St-Cu: Cu-Nb.	8	4	9	8	9	8	j	i	H	H	G	G	*0	*0	*	*	0	..	bc and c p \bullet Δ a, p and n: \square 2 cm.
15	Cu-Nb: Nb.	Nb.	Nb.	9	10	10	10	10	10	i	i	H	H	G	G	*0	*0	*	*	0	..	c and o \bullet a, p and n: \square 4 cm.
16	St-Cu: Nb-Cuf.	Fr-Cu.	St-Cu: Fr-Cu.	10	9	4	9	8	7	H	G	G	G	G	G	*0	*0	*0	..	..	..	bc and c \bullet a and p: bc p: \square 6 cm.
17	St-Cu: Nb.	A-Cu: Cu-Nb.	St-Cu: Cu.	10	10	9	8	6	10	F	F	G	G	H	H	*0	*0	*0	..	..	..	c \bullet , f a and p: bc to o \bullet n: \square 6 cm.
18	Nb.	Nb.	St-Cu: Fr-Nb.	10	10	10	10	10	10	i	H	H	H	H	H	..	..	..	..	..	..	c and o \bullet a and p: c n: \square 8 cm.
19	St-Cu: Fr-Nb.	St.	St-Cu: St.	10	10	10	10	10	10	H	H	H	H	H	F	..	..	..	..	..	..	c to o a: c p and n: \square 3 cm.
20	Ci: St-Cuf.	A-Cu: St.	A-Cu: St-Cu.	9	9	10	10	8	10	H	H	G	G	F	G	..	..	..	..	..	..	c a: c \bullet , \bullet p: c \bullet n.
21	Ci-St: A-Cu lent.	A-St: A-Cu.	A-Cu.	8	8	9	9	8	9	G	H	G	H	G	F	..	..	..	..	..	..	c, c \bullet a: \bullet , c f p: c f n.
22	St-Cu.	A-Cu: St-Cu.	St-Cu.	9	1	2	8	5	1	G	F	j	j	j	H	..	..	..	..	..	..	c to b a: bc p: b z to c n.
23	St-Cu: Nb.	St-Cu: Nb.	A-St: Nb-Cuf.	9	9	10	10	10	10	H	G	F	j	j	j	..	..	..	..	..	..	cm, \bullet a: c \bullet p: o \bullet to \bullet n.
24	Nb.	Nb-Cuf.	Nb-Cuf.	10	10	10	10	10	10	i	i	i	k	k	k	*0	*0	*0	*0	*0	*0	o to \bullet a: \bullet to \bullet p: o \bullet \bullet n.
25	A-St: Nb-Cuf.	A-Cu: Cu-Nb.	Cu: Cu-Nb.	10	10	3	3	3	8	i	H	k	k	k	j	*0	*0	*0	*0	*0	*0	c and o \bullet , Δ a: bc p: cp \bullet n: \square

157. Aberdeen.

March, 1929.

Table for March 1929 in Aberdeen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

158. Aberdeen.

April, 1929.

Table for April 1929 in Aberdeen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

159. Aberdeen.

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.					Remarks on the Weather of the Day.	
	7 ^h	13 ^h	18 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h		21 ^h
1	A-Cu.	A-Cu : Cu.	St-Cu : Cu.	1	1	8	9	3	10	k	l	l	k	k	j	..	..	..	..	..	..	b, bc p Δ a : c, bc p : c n.
2	A-Cu : Cu.	A-Cu : Cu.	A-Cu : Cu.	7	6	6	5	2	1	k	k	k	k	k	j	..	..	..	..	..	..	bc a : bc, b p : b n.
3	A-Cu : Cu.	A-Cu : Cu.	A-Cu : Fr-Cu.	3	7	6	9	3	1	k	k	j	j	j	j	..	..	..	..	..	..	bc a : bc and c p : b to c n.
4	Nb.	A-Cu : Nb-Cuf.	A-St : Nb-Cuf.	10	10	7	8	9	10	H	H	H	H	H	i	●	● ⁰	..	● ⁰	..	● ⁰	● to bc a : c p ● ⁰ T p : c p ● ⁰ to o ● ⁰ n.
5	St-Cu : Nb-Cuf.	Ci-St : St-Cu.	Cu-Nb.	9	9	8	7	9	1	j	k	j	j	i	j	..	..	..	..	..	..	●⁰ early, c a : c p ● ² p : b n.
6	A-Cu.	A-St:St-Cu:Fr-Nb.	Nb : Fog.	10	9	10	10	10	10	j	j	j	i	E	F	..	..	●	●	●	●⁰	b to c a : o ●, ● ² fe p : ● fe, ● ⁰ n : ⊕ 9 ^h
7	A-St : Nb.	Ci : Cu.	A-Cu : Cu-Nb.	9	9	6	2	5	3	k	k	k	j	j	j	..	..	..	..	..	..	c ● ⁰ , bc a : b and bc p : bc p ● ⁰ , < n.
8	Ci : Fr-St.	Cu : St-Cuf.	A-St : Nb.	6	1	1	8	10	3	G	k	j	j	j	j	..	..	..	..	..	..	b and bc a : c T, ● ² p : c p ● ⁰ to b n.
9	Ci.	Ci : A-Cu : St-Cu.	A-St : Nb.	1	1	9	10	10	10	k	l	k	j	j	j	..	..	..	..	..	..	b to c a : c, c ● ⁰ p : c to o n.
10	A-St : Nb.	A-St : Fr-Cu.	A-St : A-Cu : Fr-St.	10	10	9	9	9	9	j	j	k	j	k	j	..	..	..	..	..	..	● early, c a : c, ● ⁰ p : c n.
11	Ci.	A-St : Cu.	Ci-St : A-Cu : Cu.	1	2	9	9	9	9	k	l	k	k	j	j	..	..	..	..	..	..	● early, b to c a : c p : c n : ⊕ 14 ^h -15 ^h
12	A-Cu.	A-Cu : Cu-Nb.	Nb.	2	3	9	8	9	5	F	k	i	i	i	k	..	..	..	..	..	..	b to c ● ² Δ a : c ● p : c ● to b n.
13	Ci.	A-Cu : Cu.	A-Cu : St-Cu.	1	2	7	9	10	8	k	j	j	j	j	i	..	..	..	..	..	..	b z to bc a : c p : c to ● n.
14	A-Cu : Fr-St.	A-Cu : Fr-St.	A-St : St-Cu : Nb.	7	10	7	6	10	10	i	H	H	i	i	j	..	..	..	..	..	..	c p ● ⁰ a : bc, c ● p : c ● n.
15	A-Cu : Nb-Cuf.	A-Cu : Cu.	A-Cu : Cu.	8	9	7	9	6	4	j	j	k	j	k	j	..	..	..	..	..	..	bc and c a, p and n.
16	St-Cu : Cu.	St-Cu : Cu.	A-Cu : Cu.	2	8	9	9	2	1	k	k	k	k	k	i	..	..	..	..	..	..	b to c a : c to b p : b to c n.
17	St.	St-Cu.	..	10	10	9	4	0	0	H	j	j	j	j	j	..	..	..	..	..	..	o to c a : c to b p : b n.
18	St.	A-Cu : St-Cu.	A-Cu : Fr-St.	10	7	8	9	9	9	i	j	j	k	k	j	..	..	..	..	..	..	b to o, bc and c a : c p and n.
19	A-Cu.	A-Cu : Fr-Cu.	A-Cu : St-Cu.	9	6	7	7	9	9	j	j	j	k	k	j	..	..	..	..	..	..	bc and c a and p : c n.
20	A-Cu : St-Cu.	A-Cu.	Nb.	8	9	2	10	10	10	j	j	i	G	G	G	..	..	..	●⁰	● ⁰	● ⁰	c to b a : b, o ● p : c to o ● n.
21	Fog.	Fr-St.	..	10	10	7	2	0	9	E	F	H	H	H	H	..	..	..	..	..	..	f e, o m to bc a : b p : b to c n.
22	A-Cu.	A-St : St-Cu.	A-St : Nb.	8	10	9	10	10	9	j	i	H	H	H	H	..	..	..	..	..	..	c a : c, c ● ⁰ p : c ● ⁰ n.
23	A-Cu : Fr-Nb.	A-Cu.	Ci-St : A-St.	8	9	9	9	7	3	H	H	H	H	H	H	..	..	..	..	..	..	●⁰ early, c a : c, bc p : bc n : ⊕ 14 ^h -16 ^h
24	St.	Fr-St.	St.	8	9	4	7	10	10	j	i	i	i	i	F	..	..	..	..	..	..	bc and c a : bc to o p : ● ² and ● ⁰ , m n.
25	St.	Ci-Cu lent : Cu.	Ci : Ci-Cu lent.	5	1	2	5	1	4	j	j	j	j	k	j	..	..	..	..	..	..	o m to b y a : bc y p : bc n.
26	Ci-Cu : St-Cu.	Cu-Nb.	Cu.	1	1	1	1	1	1	k	k	k	k	k	j	..	..	..	..	..	..	Fine throughout.
27	St : Fog.	St-Cuf.	Ci.	4	0	8	3	1	1	E	j	j	j	j	j	..	..	..	..	..	..	f ₂ early, b and c a : c to b p : b n.
28	St.	St-Cu : St-Cuf.	St-Cu : Fr-St.	10	9	9	7	9	9	i	k	k	k	k	k	..	..	..	..	..	..	b early, o to c a : bc p : c n.
29	St-Cu.	St-Cu.	St-Cu.	9	5	1	1	1	7	k	k	k	k	k	k	..	..	..	..	..	..	c to b a : b p : b to c n.
30	St-Cu.	St-Cu.	..	7	1	1	0	0	0	k	k	k	k	k	j	..	..	..	..	..	..	c to b a : b p : b n.
31	Nb.	St-Cu.	St-Cu : Cu.	10	10	9	9	9	9	i	i	k	l	k	k	● ⁰	● ⁰	..	..	..	..	o ● to c a : c p and n.
Mean Cloud Am'nt.				6.6	6.3	6.6	6.8	6.2	6.0													

160. Aberdeen.

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

161. Aberdeen.

July, 1929.

Table for July 1929 in Aberdeen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day. Rows are numbered 1 to 31, plus a Mean Cloud Am't. row.

162. Aberdeen.

August, 1929.

Table for August 1929 in Aberdeen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day. Rows are numbered 1 to 31, plus a Mean Cloud Am't. row.

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.					Remarks on the Weather of the Day.	
	7 ^h	13 ^h	18 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h		21 ^h
1	A-Cu : Nb.	St-Cu : Cu.	St-Cu : Cu.	9	7	4	5	1	1	j	k	k	k	k	k	..	..	..	..	..	..	c, bc a : bc p : b n.
2	Ci-Cu : St-Cu.	Cu.	Ci-Cu : St-Cu : Cu.	5	2	6	8	7	8	k	l	l	l	l	G	..	..	..	..	..	..	b and bc q, y a : bc and c p : c n.
3	A-St : A-Cu : Nb.	A-St : Fr-Nb.	A-St : Nb.	10	10	10	10	10	10	j	j	j	H	G	K	..	..	..	..	..	..	c ● ⁰ , o ● ⁰ a : c ● ⁰ , ● ⁰ p : o ● ⁰ n.
4	A-Cu.	A-St : St.	A-St : St.	6	8	10	10	10	10	j	j	j	j	j	j	..	..	..	..	..	..	●⁰ early, bc, c a : c p and n.
5	St-Cu : Nb-Cuf.	A-Cu : Cu-Nb.	A-Cu : Cu-Nb : Fr-Cu.	8	9	9	9	8	10	H	H	i	i	H	i	..	..	..	..	..	..	●² early, bc and c a : c p ● ⁰ p : c n.
6	St-Cu.	St-Cu : Cu.	Nb.	9	9	10	10	10	10	k	k	k	j	G	G	..	..	..	..	..	..	c a : c ● ⁰ p : o ● ⁰ n.
7	A-St : St-Cu : Nb.	A-Cu : Cu.	A-Cu lent : St-Cu.	10	9	5	3	3	1	H	G	k	l	l	j	..	..	..	..	..	..	o ●, c ● ⁰ , bc a : bc p : b n.
8	Ci-St : A-Cu.	Ci-Cu : Cu.	Ci-Cu lent : St-Cu.	1	2	3	3	1	1	k	k	l	l	k	k	..	..	..	..	..	..	b n, bc y a : bc y p : b n.
9	A-Cu : Cu.	Cu.	Ci : St-Cu.	9	8	5	3	5	1	k	l	l	l	k	k	..	..	..	..	..	..	p ● ² early, c a : bc p : b n.
10	St-Cu : Cu.	A-Cu : St-Cu : Cu.	Ci-Cu : A-Cu : St-Cu.	9	9	5	3	4	3	j	k	j	k	j	j	..	..	..	..	..	..	c n, bc a : bc p and n.
11	Ci.	Ci.	A-Cu lent	3	3	1	1	1	1	H	H	j	k	i	H	..	..	..	..	..	..	bc n, b a : b p : b n.
12	A-Cu.	Cu.	A-St : Fr-Nb.	6	0	8	6	9	5	G	H	H	i	k	k	..	..	..	..	..	..	bc, b, c a : c, KQ 17.15, ● ⁰ p : bc n.
13	Ci-Cu : A-Cu.	Ci-St : A-Cu.	Ci : A-Cu lent.	3	6	5	6	8	3	j	j	k	j	j	j	..	..	..	..	..	..	bc a and p : bc, b n : ⊕ 9 ^h .
14	A-Cu : A-St.	A-St : Nb.	A-Cu : St-Cu : Nb-Cuf.	9	9	10	9	9	7	j	k	j	j	k	k	..	..	..	..	..	..	c, ● ⁰ a and p : b n, bc to b n.
15	..	Ci : St-Cu : Cu.	Ci-Cu : St-Cu : Cu.	0	1	7	8	6	9	k	k	k	k	k	k	..	..	..	..	..	..	b a : bc and c p : c n.
16	St-Cu : Fr-Cu.	Ci : St-Cu : Cu.	Ci-St : A-Cu : Fr-St.	8	6	3	1	8	1	j	j	k	k	j	j	..	..	..	..	..	..	c to bc a : bc, b to c p : b n.
17	Ci.	Ci-St : A-Cu lent.	Ci : A-Cu lent.	1	2	2	3	3	4	k	k	k	j	j	j	..	..	..	..	..	..	b a : b, bc p : bc n.
18	A-Cu : St-Cu.	A-Cu : Fr-Nb.	A-St : Fr-Nb.	4	8	9	9	9	8	j	j	j	j	H	k	..	..	..	..	..	..	bc to c ● ⁰ a : c ● ⁰ p : ● ⁰ , bc n.
19	A-Cu : St-Cu.	A-St : Nb.	A-Cu : Cu.	8	10	9	8	7	4	j	j	j	j	k	k	..	..	..	..	..	..	c ● ⁰ a : c ● ⁰ , bc p : b and bc n.
20	St-Cu : Nb-Cuf.	Cu-Nb.	A-Cu : Cu-Nb.	9	4	4	8	3	4	j	i	l	l	k	k	..	..	..	..	..	..	c p ● ⁰ q a and p : p ● ⁰ , bc n : ⊔ 23 ^h .
21	St-Cu : Fr-Nb.	Cu.	Cu-Nb.	3	6	3	3	1	1	k	l	l	l	k	k	..	..	..	..	..	..	●⁰ , bc y q a : bc, b q p : b q, b n.
22	St-Cu.	A-St : Nb.	Nb.	1	2	10	10	10	10	k	k	j	i	G	H	..	..	..	..	..	..	b to c ● ⁰ a : c, o ● ⁰ p : o ● ⁰ , c n.
23	Ci : A-Cu.	Ci-St : A-Cu.	Ci : A-Cu : Fr-St.	3	8	7	7	4	8	l	l	l	k	k	k	..	..	..	..	..	..	bc and c a, p and n.
24	Ci-Cu : St-Cu.	Ci-Cu : A-Cu : Cu.	Ci-Cu : St-Cu.	1	2	3	3	2	1	k	k	k	k	k	k	..	..	..	..	..	..	b a : bc p : b n.
25	Ci : A-Cu.	Ci-St : Ci-Cu : Fr-Cu.	Ci-St : Ci-Cu.	3	6	7	2	3	4	i	j	k	j	j	i	..	..	..	..	..	..	bc a : b and bc p : bc n : ⊕ 11 ^h -13 ^h .
26	A-St.	A-St.	Ci-Cu : A-St.	9	10	10	10	8	9	H	i	i	H	H	H	..	..	..	..	..	..	c a and p : bc and c n.
27	Ci-St : A-Cu.	A-St : A-Cu : St-Cuf.	A-St : A-Cu : Nb-Cuf.	9	9	10	10	10	10	H	G	k	j	k	k	..	..	..	..	..	..	c ● ⁰ , K ₀ Q ₀ 10.20 a : c ● ⁰ to ● ⁰ p and n.
28	A-St : Fr-Nb.	A-St : A-Cu : Cu.	Ci-Cu : A-Cu : Cu.	9	9	7	6	3	5	j	j	k	k	k	j	..	..	..	..	..	..	●⁰ early, c, bc a : bc p and n.
29	Ci-Cu : A-Cu.	A-Cu : Cu.	Ci : A-Cu : St-Cu.	7	4	5	6	3	0	k	k	k	k	k	j	..	..	..	..	..	..	bc a and p : b n.
30	A-St : A-Cu : Nb.	Ci : Cu.	Ci : A-Cu : St-Cu.	10	9	6	8	8	0	j	k	l	k	j	j	..	..	..	..	..	..	c ● to bc y a : bc and c p : b n.
Mean Cloud Am't.				6.1	6.2	6.4	6.3	5.8	5.0													

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.					Remarks on the Weather of the Day.	
	7 ^h	13 ^h	18 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h		21 ^h
1	A-Cu.	Ci-St : Cu.	A-St : Nb-Cuf.	1	1	3	9	10	10	k	k	k	k	G	H	..	..	..	..	..	..	b n, bc y a : bc, c ● ⁰ p : o ● ⁰ n.
2	A-Cu : Fr-Cu.	Cu.	Fr-Cu.	1	1	3	1	1	0	k	l	l	l	k	k	..	..	..	..	..	..	c to b, bc y a : b y p : b to c n.
3	A-Cu : St-Cu : Nb-Cuf.	A-Cu : Cu.	A-Cu : St-Cu.	9	2	8	9	7	5	k	l	k	l	k	k	..	..	..	..	..	..	b and c a : c p : bc n.
4	A-Cu : Fr-Cu.	Ci : Ci-Cu : Cu-Nb.	False Ci : Cu.	5	3	6	6	2	1	k	k	k	l	i	H	..	..	..	..	..	..	bc a and p : b n.
5	Nb.	A-Cu : St-Cu : Cu.	A-St : Cu-Nb.	10	10	6	9	10	10	H	i	j	H	H	H	..	..	..	..	..	..	b o ● ² , T, c ● ⁰ a : bc, c ● ² p : c n.
6	Nb.	Nb.	Nb.	10	10	10	10	10	0	i	i	G	G	H	j	..	..	..	..	..	..	o ● and ● ² a : o ● ⁰ p : o ● ⁰ to b n.
7	A-St : A-Cu : Nb.	A-St : A-Cu : Cu.	Ci : St-Cu.	9	9	9	2	1	1	l	k	k	k	j	j	..	..	..	..	..	..	c ● ⁰ , c y a : bc, b y p : b n : ⊔ 19 ^h -23 ^h .
8	A-St : St-Cu.	A-St : Cu.	St-Cu : Cu.	9	9	9	9	1	0	i	k	l	l	k	k	..	..	..	..	..	..	bc, c ● ⁰ a : c to b p : b n : ⊔ 20 ^h -21 ^h .
9	Nb-Cuf.	A-Cu : Cu-Nb.	A-Cu : Cu-Nb.	4	6	5	6	2	2	l	k	k	k	k	j	..	..	..	..	..	..	bc p ● ⁰ a and p : b, b to c n.
10	A-Cu : St-Cu.	A-Cu : Fr-Cu.	St-Cu : Fr-Cu.	8	9	7	9	2	0	k	i	k	k	j	j	..	..	..	..	..	..	c a : bc, c, b p : b q n : ⊔ 19 ^h .
11	St-Cu : Cu.	A-Cu : Cu.	A-Cu : Fr-Cu.	1	1	1	1	1	0	l	l	l	k	j	j	..	..	..	..	..	..	b q, bc p ● ⁰ a : b q p : b n.
12	A-St.	Ci-Cu : Cu.	A-Cu : Cu.	9	7	7	7	8	9	k	j	k	k	j	j	..	..	..	..	..	..	bc a : bc, c p : c n.
13	A-St : St-Cu.	A-Cu : Cu.	A-Cu : Fr-Cu.	9	9	3	4	7	7	k	i	l	k	k	k	..	..	..	..	..	..	c ● ⁰ , bc a : bc p : bc, c n.
14	A-Cu : St-Cu : Fr-Cu.	A-Cu : St-Cu : Cu.	A-Cu : St-Cu.	8	7	7	3	2	1	k	j	l	k	k	j	..	..	..	..	..	..	c, c p ● ⁰ a : bc p : b n.
15	A-St : Fr-Nb.	A-St : Nb.	Nb.	9	10	10	10	10	10	H	E	i	F	G	G	..	..	..	..	..	..	b, o ● f a : o ● p : ● ⁰ , o n.
16	Nb.	A-St : Nb.	A-St : St-Cu : Cu.	10	9	10	10	8	8	F	F	H	G	k	j	..	..	..	..	..	..	●⁰ , o m to c ● a : o ● ⁰ p : c ● ⁰ n.
17	St-Cu : Cu.	A-Cu : Cu.	A-St.	4	4	4	2	2	1	l	l	k	k	G	G	..	..	..	..	..	..	bc a : b y p : b, bc n.
18	Ci-Cu : St-Cu.	Ci-St : A-Cu : Cu.	Ci-St : St-Cu.	3	2	6	8	7	8	k	k	k	k	k	j	..	..	..	..	..	..	b and bc a : bc and c p : c n. ⊕ 15 ^h .
19	A-Cu : Fr-Nb.	Ci-St : A-Cu : Cu.	St-Cu.	9	3	7	9	9	9	j	k	k	k	H	H	..	..	..	..	..	..	c ●, bc p ● ⁰ a : bc, c p : c n : ⊕ 13 ^h .
20	A-St : Nb.	St-Cu : Cu.	St-Cu : Nb-Cuf.	10	8	9	9	9	10	k	k	l	k	l	k	..	..	..	..	..	..	c ● ⁰ a, p and n.
21	A-Cu : Fr-Nb.	St-Cu : Cu.	A-Cu : St-Cu.	9	10	10	10	9	10	k	H	i	H	H	H	..	..	..	..	..	..	c a and p : c ● ⁰ to b n.
22	Ci : St-Cu.	Ci-Cu : Cu.	A-St : St-Cu.	2	2	6	9	10	10	i	j	j	j	j	i	..	..	..	..	..	..	bc, a : bc, c p : c n.
23	Ci-St : St-Cu : Fr-St.	A-St : Fr-Nb.	A-St : Nb-Cuf.	7	9	10	10	10	10	k	j	j	j	j	j	..	..	..	..	..	..	bc, c, ● ⁰ a : c p and n.
24	A-St : St-Cu : St-Cuf.	A-St : Fr-Cu.	A-St.	10	9	9	9	9	2	j	k	k	k	k	k	..	..	..	..	..	..	c a and p : b n.
25	A-Cu : Cu-Nb.	A-Cu : Cu-Nb.	A-Cu : Cu-Nb.	4	4	6	1	3	0	l	j	l	j	i	i	..	..	..	..	..	..	b n, bc a : b and bc p : b n.
26	St-Cu : Cu-Nb.	Cu : Cu-Nb.	Cu-Nb.	1	1	2	1	3	6	H	G	k	k	k	k	..	..	..	..	..	..	b n, b a : b and bc p : c p ★ Δ n.
27	Cu-Nb.	A-Cu : Cu-Nb.	A-Cu.	1	2	2	3	4	1	k	k	k	k	k	j	..	..			

165. Aberdeen.

November, 1929.

Table for Aberdeen, November 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Rows 1-30 show daily data, and a Mean Cloud Am't row is at the bottom.

166. Aberdeen.

December, 1929.

Table for Aberdeen, December 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Rows 1-31 show daily data, and Mean Cloud Am't and Mean Annual Cloud Am't rows are at the bottom.

M.O. 330
(Eskdalemuir)

Air Ministry

METEOROLOGICAL OFFICE

THE
OBSERVATORIES' YEAR BOOK
1929

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.

ESKDALEMUIR

Published by the authority of the
METEOROLOGICAL COMMITTEE



LONDON
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

1931

ESKDALEMUIR OBSERVATORY.

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

Heights in metres above Sea-Level.

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

Heights in metres above ground.

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

INTRODUCTION.

HISTORICAL.

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

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

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

SITE.

Eskdalemuir Observatory, some $3\frac{1}{2}$ miles ($5\frac{1}{2}$ kilometres) north-north-west of Eskdalemuir Parish Church in the county of Dumfries-shire, is situated on a rising shoulder of moorland which is bounded on the east by the road 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 Hart Manor, 4 miles ($6\frac{1}{2}$ km.) distant, and beyond that the upper slope of Cauldkine Hill, about 10 miles (16 km.) distant, is visible. The surrounding country is bare and wild and there are but few trees to relieve the monotony of the grass-covered hills and moorland.

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

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

METEOROLOGY.

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

Notes on Instruments.

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

From 1st January, 1929, the former standard Kew pattern mercury barometer was superseded by a Fortin barometer, by C. F. Casella & Co., London. From 1st January to 20th August the instrument was situated in a ground-floor room having a small daily range in temperature, the cistern of the instrument being at the same level as that of the old standard. From 20th August to 31st December it was in the ground-floor laboratory on the same level as before. When the Fortin barometer was first set up it read 0.4 mb. higher than the Kew pattern barometer on the average, but by improving the illumination and method of observation, the average difference was reduced to 0.1 mb., which is the error of observation. At present the average difference is 0.05 mb. The vernier setting edge over the mercury column of the Fortin barometer is not quite horizontal but is inclined at an angle of

7 minutes of arc to the horizontal. The maximum error introduced by variations in the point of apparent contact between the mercury and the edge is less than 0.01 mb. The smallest division on the vernier scale is 0.05 mb.

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

As in former years, records of pressure were also obtained from (a) a Dines float barograph¹, 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 Standard Wet Bulb Thermometer was accidentally broken on 30th October. An auxiliary thermometer was fitted immediately after its corrections had been determined at the Observatory by comparison with a standard thermometer.

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

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

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

As is stated in the General Introduction, the records from this instrument are utilised when the wet bulb reading does not exceed 273a. On the records obtained in 1929 a change of 10 per cent. in relative humidity is represented by about 0.8 centimetre, the time scale being 1 hour = 3 millimetres.

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

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

¹ Q.J.R. Meteor. Soc., Vol. LV, pp. 37-53, 1929.

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. A new rain-gauge measuring glass was introduced on August 30—when the old measure was broken.

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

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

The recorder is fixed on a stone pillar and has a reasonably free exposure, the chief obstacles being hills to east and west. The elevation of hills between 70° 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 pyrliometer.¹ 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.

The anemograph vane in use throughout 1929 is that which was introduced in August, 1925. It differs from that formerly in use in that the greatest dimension of the fin is vertical instead of horizontal, and that the cross-section of the fin is of aerofoil shape. A twin-lever direction recorder has been in use since June, 1925.

¹ 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. The pyrliometer was under repair until June, 1929.

In this instrument a pen is carried by each of two pivoted arms, upper and lower. A projection from each arm engages with a flange of a dual helical device cut in a short cylinder (of vertical axis) which rotates with the vane, being connected thereto by a vertical "rod" consisting of steel tubing 1.5 cm. external diameter.

On August 18 the top coupling on the direction rod became loose. It was impossible to remove the reducing socket on the mast without damaging it, and pending the receipt of a new one on September 13, velocity only was recorded between the two dates mentioned. A new clock drum was fitted on November 29. During alteration to the buildings the anemometer recorder was enclosed in a dust-proof cupboard, but frequent loss of record occurred through grit and moisture collecting on the rod.

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

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

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

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

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

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

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

Attached Thermometer, No. 5592. January 1st, 1929.

at 273 278 283 288 293 298a.

0.0 -0.1 -0.2 -0.3 -0.3 -0.2

Dry Bulb Thermometer, M.O. 19123. January 27, 1919.

at 263 268 273 278 283 288 293 298 303a.

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

Wet Bulb Thermometer, M.O. 1695. November 1, 1915.

at 260 265 270 275 280 285 290 295 300 305a.

+0.20 +0.15 +0.15 0.00 -0.10 -0.15 -0.15 -0.10 -0.10 -0.10

Wet Bulb Thermometer, M.O. 127748. 30th October, 1929.

at 30° 35° 40° 45° 50° 55° 60° 65° 70° F.

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

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

-0.1 -0.2 0.0 0.0 -0.1 -0.2

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

" " 4 Ft. M.O. 18337/27, " " " " Nil.

NOTE ON THE REDUCTION OF BAROMETER READINGS.

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

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

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

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

where λ = latitude

z = height of the station.

E = earth's radius

are as follow:—

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

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

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

NOTES ON THE METEOROLOGICAL SUMMARIES.

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

Pressure.—As was the case generally in the British Isles the mean pressure for the year was above normal, the increase at Eskdalemuir being 1.5 mb. Only in October, November and December were the monthly means below normal, and then they were conspicuously below normal. The extreme instantaneous values recorded were 1013.7 mb. on January 12, and 931.1 mb. on December 7. The greatest and least mean daily values are 1013.0 mb. on January 12 and 943.3 mb. on December 5. The largest value of the range during a calendar day is 30.1 mb. on December 7. The mean value of the absolute daily range of pressure varies between 13.4 mb. in December, and 4.5 mb. in July. The annual mean value of the daily range is a little above normal.

Pressure (Diurnal Variation).—In the mean diurnal inequality for each month there are two maxima, in the late forenoon and usually an hour or two before midnight, and two minima, in the early forenoon and afternoon. In all months, excepting January, March and November, of 1929, the night maximum is the larger and except for January, February and November this is true of the representative inequalities for the years 1911–20. The principal minimum in the latter inequalities is in the afternoon except in February, March, August and November, but in 1929 the principal minimum falls in the early forenoon in January, June, August, September, October, November and December. Compared with the mean diurnal inequality for 1911–20⁽¹⁾ the values of the mean inequality for the year 1929 are algebraically less from 2h to 13h and greater from 14h to 24h. In other words, relatively speaking, in 1929 the early morning trough and the night crest are enhanced, while the afternoon trough and the forenoon crest are diminished.

The results of the harmonic analysis of the monthly and seasonal mean diurnal inequalities for 1929 are given in the accompanying table. For purposes of comparison the corresponding data ⁽¹⁾ derived from the mean inequalities for the period 1911–20 are also given. In computing the Fourier co-efficients for 1929 the unit employed was .001 mb. Although for 1929, as for recent years, the phase angles are given to the nearest 1°, this course is scarcely justified, at least for the third and fourth components, by the character of the data from which the harmonic co-efficients for the months and seasons of a single year are computed. The phase angles α_1 etc. given in the table below refer to Local Mean Time, whereas in the corresponding tables for 1922 and 1923 the phase angles refer to Greenwich Mean Time.

As is usually the case the amplitude and phase of the 24-hour term fluctuate irregularly from month to month. The ratio of the mean of the twelve monthly values of c_1 to the value of c_1 for the year as a whole considerably exceeds unity. c_1 is noticeably high for September and for December, low for November. The values of c_2 for the year, equinox, winter and summer, are nearly equal to the corresponding normals. The variation in the 8-hour term from month to month is fairly normal, the amplitude being largest in winter months and least at the time of equinoctial phase transition. The values of c_3 for the year, winter, equinox and summer are slightly above normal. For the 6-hour term also, the amplitude for the year, winter and summer, is above normal.

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

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

Values of c_n , α_n in the series $\sum c_n \sin(15nt^0 + \alpha_n)$, t being Local Mean Time reckoned in hours from midnight.

Month and Season.	c_1		α_1		c_2		α_2		c_3		α_3		c_4		α_4	
	1929.	1911-20.	1929.	1911-20.	1929.	1911-20.	1929.	1911-20.	1929.	1911-20.	1929.	1911-20.	1929.	1911-20.	1929.	1911-20.
Jan.	mb. .17	.094	° 177	346.4	.27	.235	° 151	151.6	.13	.125	° 346	345.3	mb. .08	.046	224	213.9
Feb. .. ..	.18	.118	91	215.1	.26	.273	146	138.1	.09	.083	348	341.2	.04	.042	86	67.7
Mar. .. ..	.14	.128	347	185.3	.36	.304	157	145.3	.05	.053	354	335.0	.06	.051	349	24.5
Apr. .. ..	.38	.205	85	92.3	.34	.299	135	154.8	.06	.022	247	156.3	.07	.045	348	355.7
May .. ..	.24	.225	56	52.7	.28	.270	155	147.4	.08	.075	171	160.1	.03	.035	310	330.1
June .. ..	.22	.152	138	53.9	.23	.234	158	146.1	.09	.084	152	160.6	.03	.018	301	325.7
July .. ..	.29	.171	56	69.4	.21	.211	126	141.2	.09	.077	150	155.8	.04	.023	305	300.0
Aug. .. ..	.16	.114	187	114.6	.25	.239	163	147.7	.06	.057	146	157.2	.06	.047	325	330.8
Sept. .. ..	.48	.121	143	87.7	.32	.313	142	151.6	.03	.012	332	110.7	.05	.050	13	344.7
Oct. .. ..	.28	.110	175	76.0	.22	.315	175	159.5	.07	.060	13	8.2	.02	.041	4	32.9
Nov. .. ..	.10	.125	282	183.5	.42	.242	177	168.1	.11	.101	35	9.2	.03	.015	130	146.2
Dec. .. ..	.84	.137	184	97.1	.19	.213	121	146.9	.16	.124	44	4.2	.07	.067	225	212.8
Arithmetic mean	.29	.142	...	...	.28	.262	...	...	.09	.073	...	...	.05	.040	...	...
Year .. ..	.164	.085	141	90.8	.267	.260	152	150.1	.027	.020	39	41.7	.020	.016	315	341.9
Winter .. ..	.257	.038	179	165.4	.268	.236	154	150.9	.109	.106	17	355.5	.035	.023	200	180.1
Equinox .. ..	.204	.108	127	103.9	.298	.306	150	152.8	.033	.021	335	4.4	.049	.044	356	8.9
Summer .. ..	.141	.153	93	67.2	.235	.238	152	145.8	.077	.074	155	158.5	.037	.030	313	324.3

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

Temperature.—The mean temperature, 279.57a. (43°.9 F.) for the year 1929 is slightly less than the normal value. Monthly mean values depart from the corresponding normals by amounts varying between +1.5a. (2°.7 F.) in September to -3.4a. (6°.1 F.) in February. February was the coldest month of the name since records commenced at Eskdalemuir, having been slightly colder even than February 1917. The extreme temperatures recorded during the year were 298.6a. (78° .1 F.) on July 15 and 259.9 (8° .4F.) on February 28. February 13 with mean daily temperature, of 264.6a. (16° .9F.) was the coldest day of the year. According to mean daily temperature July 16 with 291.3a. (64° .9F.) was the hottest day of the year. The values of the absolute range of temperature within a calendar month vary between 27.8a. (50° .0F.) in March and 16.3a. (29° .3F.), in December. Values not in excess of 273.0a. (32° .0F.) are:—mean daily temperature on 36 days (16 in January, 13 in February), minimum temperature on 121 days (25 in January, 26 in March), and maximum temperature on 13 days (10 in February).

The mean absolute daily range of temperature varied from 12.9a. (23° .2F.) in March to 4.9a. (8° .8F.) in December, the mean value for the year being 7.9a. (14° .2F.). In six months, and for the year as a whole, the mean value is greater than the corresponding normal. The greatest daily range was 21.7a. (39° .0F.) on March 28, while the least range was 0.9a. (1° .6F.) on November 30.

In June, August, October, November and December, the range of the mean diurnal inequality is more than 5 per cent. below, and in January, February, March, May and September, more than 5 per cent. above the range of the mean diurnal inequality for the years 1911-26, the greatest positive departure from the normal being 143 per cent. in March and the greatest negative departure 23 per cent. in December.

Humidity.—As is mentioned in the General Introduction, owing to a change in the hygrometric tables used the results from 1926 onward are not strictly comparable with those of earlier years. Compared with the mean values for 1911–25 the chief departures of the values of mean relative humidity in 1929 are +3 in November, –4 in May and –3 in February. The mean relative humidity, 82·8 per cent., for the year is less than that for the other years since 1922; whilst the mean vapour pressure, 8·1 mb., is again smaller than in any of the years 1923–8. The extreme daily mean values of relative humidity and vapour pressure were 98·7 per cent. on December 18, 57·3 per cent. on April 20, 16·5 mb. on September 4, 2·2 mb. on February 13. The lowest hourly readings of relative humidity, one of 19 and others below 30 per cent. occurred on March 9.

Precipitation.—1929 was not so wet as the previous three years, the total amount of rainfall, 1611·5 mm. (63·44 in.), being only 6 per cent. over the mean for the period 1911–27. The most outstanding month was December with 327·6 mm. (12·90 in.) or 187 per cent. of normal. The driest month was March with 27·9 mm. (1·10 in.) or 26 per cent. of normal. Precipitation fell, at the rate of not less than 0·1 mm. per hour, for a total period of 1248·9 hours, *i.e.*, in the aggregate for one-seventh of the whole year. The monthly duration was greatest, 194·2 hr., in December, and least 30·2 hr., in March. For the year as a whole the average rate of fall per hour is 1·29 mm.; the rate of fall during individual months ranges between 1·72 in July and 0·66 in February. The greatest amount recorded during a calendar day was 46·6 mm. (1·83 in.) on November 11. There were 158 days (25 in March) on which either no precipitation was recorded or in amounts too small to be measured. Precipitation amounting to 0·2 mm. or more was recorded on 207 days; to 1·0 mm. or more on 166 days; to 20·0 mm. or more on 20 days.

Snow or sleet fell on 46 days, but on no day from May 1 to October 8 inclusive. Observations of “snow lying” at 7h. number 35, 20 of which were in January. There were no large falls of snow.

Sunshine.—The year's total duration of bright sunshine, 1329·1 hr., represents 28 per cent. of the theoretically “possible” duration; whereas the average percentage of “possible” for the years 1911–26 is 27·1. As regards the percentage of “possible” May was the sunniest, and December the least sunny (as also the wettest) month of 1929. In all, there were 88 days without sunshine, 16 of these being in November, 16 in December and 13 in January, and 95 days with 50 per cent. or more of the “possible” sunshine. The days with most sunshine were June 26 with 14·8 hr. (85·3 per cent.) and July 14 with 14·7 hr. (87·7 per cent.) February 10 with 8·2 hr. (88·8 per cent.) represents the highest value of the percentage of “possible” sunshine.

Wind.—The mean speed for the year, 4·8 m/s (10·7 mi/hr) was less than that for the preceding three years. In comparison with the normal values for individual months the mean speeds for August, October and December exhibit the most considerable excess, and those for January, February and March the greatest relative deficiency. There were only 4 hours of gale force (mean speed greater than 17·1 m/s), the smallest number since records commenced. The highest gust of the year, 29 m/s (64 mi/hr) occurred on September 21, the highest hourly speed, 18 m/s (40 mi/hr) on December 5, and the highest mean daily speed, 12·2 m/s (27·3 mi/hr) on July 10. The quietest days were January 8 and November 14, with mean speeds of 0·5 and 0·6 m/s.

There was a remarkable dearth of westerly winds (between south-south-west and north-north-west) in January and February, and marked scarcity of easterly winds (between north-north-east and south-south-east) from August to October. The predominance of winds from between south and west was greatest in October and December, and the predominance of north-easterly winds was very marked in April.

Grass Minimum Temperature.—There were 129 occasions of ground frost (*i.e.*, grass minimum temperature not greater than $272\cdot1a$. or $30^{\circ}\cdot4$ F.), but none of these occurred between June 19 and September 15. The lowest grass minimum temperature was $256\cdot8a$. ($2^{\circ}\cdot8$ F.) on February 16; other low readings were $257\cdot9a$. ($4^{\circ}\cdot8$ F.) on January 28, $258\cdot1a$. ($5^{\circ}\cdot2$ F.) on February 14, and $258\cdot3a$. ($5^{\circ}\cdot5$ F.) on February 28. The mean grass minimum temperature for each of the months January, February, March, April, November and December is less than $273\cdot0a$. ($32^{\circ}\cdot0$ F.). The mean values for the first four months of the year are about $3a$. (6° F.) lower than corresponding values in the previous years.

Cloud and Weather.—(A) The mean amount of cloud observed at the six hours of observation is $7\cdot2$ which is the lowest since 1915. August has the largest mean amount, $8\cdot1$, and March has the smallest, $4\cdot6$, a record since observations commenced. The largest mean amount for an observational hour is $8\cdot8$ at 7h in September; the least is $3\cdot0$ at 21h in March. For the year as a whole there was most cloud at 15h and least at 21h. In nine months the mean cloud amount was least at 21h, but there was no consistent hour of maximum cloud amount. March 29 is the only day of the year on which no cloud was seen at the normal hours of observation. On 33 days the amount 10 was recorded at every hour of observation.

(B) Thunder was heard on only 7 days, one day more than in 1928. There were observations of solar halo on 8 days, of lunar halo on 13 days, and of aurora or auroral glow on 12 days.

(C) The numbers of occasions on which the range of visibility was estimated to be (1) not greater than 500 metres (550 yards), corresponding with the entries X to E, and (2) at least 20 kilometres ($12\frac{1}{2}$ miles), corresponding with the entries k, l, m, are summarized below. The limitations to which the estimates of visibility are subject are mentioned on p. 152. It is to be noted that the group (1) above consists of the occasions which are held to merit the description as "fog, moderate, thick, or dense," while the entries k, l, m, denote "very good or excellent visibility."

There were more occasions of fog and more of estimates k, l, and m together than in 1928. Fog was most frequent in January and March, but entirely absent (at the standard hours of observation) in June. Excepting September, occasions of very good and excellent visibility were most frequent from May to October. There were only 11 estimates of m, visibility 50 km, (31 mi.) or more, distributed among 7 days. 7 of the 11 occasions were at 18h, 8 were associated with increasing barometric pressure, and 9 with winds from west-south-west through north to north-east.

		NUMBER OF OCCASIONS OF—													
		VISIBILITY X TO E.							VISIBILITY k, l, m.						
		7h	9h	13h	15h	18h	21h	Total.	7h	9h	13h	15h	18h	21h	Total.
1929.															
Jan.	2	3	—	2	1	2	10	7	12	12	14	6	5	56	
Feb.	3	2	—	—	—	1	6	7	8	6	8	5	4	38	
Mar.	3	3	1	1	2	2	12	10	10	10	8	6	5	49	
April	3	2	1	—	1	1	8	18	18	20	18	21	17	112	
May	—	—	—	—	1	—	1	12	15	18	21	19	17	102	
June	—	—	—	—	—	—	—	18	20	23	24	25	22	132	
July	1	1	—	—	1	—	3	14	14	20	20	20	16	104	
August	1	1	—	—	—	—	2	12	17	22	21	18	11	101	
Sept.	4	2	—	—	—	—	6	4	7	11	15	16	13	66	
Oct.	1	—	—	—	—	—	1	16	15	23	19	18	18	109	
Nov.	3	2	—	2	—	1	8	5	7	9	11	7	4	43	
Dec.	—	—	—	—	2	—	2	6	12	13	12	9	8	60	
Year	21	16	2	5	8	7	59	129	155	187	191	170	140	972	

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*, 1928, pp. 160-161.

The scale value of the photographic record obtained by means of the Dolezalek electrometer remained at about 3·1 volts per mm. during 1929. One of the levelling screws of the electrometer was adjusted at the beginning of July, and the scale value is slightly increased from July onwards. The number of determinations of the reduction factor (*i.e.*, the ratio of the potential at one metre above the ground in the open to the potential at the water-jet) varied from three in December to twenty-one in March, each determination being based on about fifteen or more readings (at intervals of half a minute) of the potential in the open. At the end of July a scaffolding was erected round the western half of the building in the course of the reconditioning work. This projected some three or four feet beyond the walls and may have affected the equipotential surfaces at the site where absolute observations of potential gradient are made. Subsequently another scaffolding was built round the tower. A small wooden hut erected at the north-west corner of the building may have introduced further complications. The scaffolding was taken down in December but the hut was not removed. The values of the monthly reduction factor finally adopted for 1929 were obtained by a smoothing process, the adopted value for a given month being $\frac{a + 2b + c}{4}$, where a, b, c are the unsmoothed monthly mean factors for the three

successive months centred in the given month. To avoid smoothing across the discontinuity, the values for July and August were obtained from the formula $\frac{a + 2b}{3}$, where b is the unsmoothed monthly mean factor for the given month, and

a is the unsmoothed factor for June in the case of the July factor, and September in the case of the August factor. The final values, which are given in Table 265, range from 6·37 in April to 6·00 in October. The mean of the seven monthly reduction factors from January to July is 6·32, while the mean for the remaining five months of the year is 6·05. The mean for the year is 6·21, as compared with 6·20 for 1928.

All determinations of scale value and reduction factor were obtained with a particular Wulf quartz-thread electrometer. This instrument was calibrated on a number of occasions during the year. Until July the calibrations were in close agreement with that used in 1927 and 1928, and the use of this calibration was continued until July 20. On this day it was discovered that the screw threads on the draw tube of the microscope had been incorrectly engaged in the support, and a readjustment was necessary. A calibration made on July 31 showed a reduction in the sensitivity of about 2·5%. This calibration was used for the determination of scale values of the electrograph and reduction factors from July 22 until December 2. After this date moisture in the instrument impaired the insulation, and the amber insulators were reburnished. A reliable calibration was made on March 14, 1930, and showed an increase of about 4·5% in the sensitivity. This calibration was used from December 3 until the end of the year.

IDENTIFICATION NUMBER OF INSTRUMENT USED IN 1929.

Wulf bifilar electrometer 3040

Notes on the Tables and Results.

As far as possible an electrical character figure is assigned to each day and values of potential gradient are assigned for 3h, 9h, 15h and 21h G.M.T. of all days, while

values for all hours are assigned on days classified as *oa*, *1a* or *2a*. The character figures are given in Table 268, the significance of these symbols being as follows:—

- o, denotes a day during which from midnight to midnight no negative potential was recorded.
- 1, denotes the existence of negative potential at one or more times during the same period, but with a total duration of less than three hours.
- 2, denotes negative potential extending in the aggregate over three hours or more during the same period.
- a, denotes that within the 25 periods of 60 minutes for which an estimate of the mean potential gradient has to be made in the process of tabulation there was in no case a range of potential gradient in the open exceeding 1,000 volts per metre.
- b, denotes that, during the same period, a range of 1,000 volts or more per metre was reached in one hour at least but in fewer than six hours.
- c, denotes that, during the same period, a range of 1,000 volts or more per metre was reached in at least six hours.

Table 265 contains the values of electrical potential gradient at 3h, 9h, 15h and 21h G.M.T. daily, the value for a given hour representing the mean for the period of 60 minutes centring at that hour. Blanks indicate that the trace was in some way defective. If it is possible to assign an approximate value of the potential gradient on such days, this value is given in brackets. The reduction factors used in converting the potential at the water-jet to potential gradient in volts per metre, in the open, are also given.

In Table 266 are given, for *oa* days, (1) the mean diurnal inequalities for the months, seasons and year, (2) particulars of the number of days and of the non-cyclic changes and (3) the corresponding mean values of potential gradient. The inequalities or the mean values for the year and seasons are the means of the inequalities or means, respectively, for the appropriate months.

Corresponding data for *1a* and *2a* days combined appear in Table 267.

It should be noted that, in these tables, *Winter* denotes the four months January, February, November, December; *Equinox* the four months March, April, September, October; and *Summer* the four months May to August.

In addition to the electrical character for each day, Table 268 contains the daily, monthly and annual values of duration (in hours and tenths) of negative potential gradient. 4 days of defective record when negative potential may have occurred are left blank; the sign of the gradient has been assumed positive during periods of defective records in which no precipitation was observed. If precipitation was recorded for less than an hour during such defective periods an approximate value of the duration of negative potential for that hour has been assigned, and the total for the day given in brackets. When, during highly oscillatory gradients, there was uncertainty as to the times of changes of sign, half of the total duration of doubtful sign was accounted negative. The total duration of negative potential gradient in each month and the average daily duration are entered in the lower part of the table. For the 361 days of assignable duration of negative potential gradient the total number of hours was 697.4 as compared with 1006.0 in 1928; an average of 1.93 hours per day, as against 2.89 hours per day in 1928.

Following the practice adopted in 1923 the mean values of potential gradient given in Table 265 are of two kinds, viz., (a) the mean of all the positive values of potential in the column and (b) the algebraic mean derived from all days on which all four hours were represented. The mean values for the month, as derived from the

(*a*) and (*b*) values respectively, are shown in the last line, and the means for the year are given at the foot of the December table. It is to be expected that the mean derived from the values at 3h, 9h, 15h and 21h, on a sufficiently large number of days, will approximate closely to the mean value derived from all hourly values of all the days.

The (*a*) mean exceeds the (*b*) mean, and is exceeded by the mean value on *oa* days, in all months of the year. The general tendency is for the 1929 values to exceed those of 1928, this being the case in eight months for the (*a*) mean, and eleven months for the (*b*) mean.

Annual mean values for recent years, derived by giving equal weight to the twelve monthly means, of the (*a*) and the (*b*) means and of the means for *oa* days are as follow :—

				<i>oa</i>	(<i>a</i>)	(<i>b</i>)
				v/m.	v/m.	v/m.
1922	..	..	..	257	225	182
1923	..	..	..	278	235	159
1924	..	..	..	236	214	157
1925	..	..	..	284	243	209
1926	..	..	..	249	201	177
1927	..	..	..	259	223	193
1928	..	..	..	237	219	150
1929	..	..	..	276	240	216

Each of the three mean values for 1929 is greater than the corresponding value for 1928 and is close to the corresponding value for 1925. The highest values of all three means occurred in March, a month of fine, dry weather associated with an anti-cyclone which extended over the British Isles for a prolonged period.

Noteworthy occasions of high potential gradient were as follow :—

- (i) January 18d 10h 20m to 20h 40m. The mean potential gradient during this interval was 800 v/m., and was associated with wet fog or slight drizzle.
- (ii) January 22d 12h 20m to 19h. High potential gradient during fog or mist. The mean for this period was about 1100 v/m.
- (iii) February 8d 23h to 9d 8h 20m. High potential gradient during wet fog. The mean value for the whole interval was about 900 v/m.
- (iv) March 2d 17h 20m to 3d 6h 30m. During this period the mean potential gradient was about 750 v/m. This was a cold, fair night with little or no wind.
- (v) March 7d 17h 20m to 22h 10m. A mean potential gradient of about 1000 v/m. was attained on a clear frosty night.
- (vi) March 18d 17h 30m to 19h 5m. The mean potential gradient during this period was about 900 v/m., and was associated with a clear frosty night.

The following were the noteworthy occasions of continuous negative potential gradient :—

- (i) May 4d 16h 30m to 23h. This was a period of heavy rain followed by moderate rain. Precipitation was continuous at first but intermittent in the last hour. Values below -1400 v/m. were reached, but not for prolonged spells.

- (ii) October 23d 17h 40m to 24d 1h 30m. In this interval during which continuous rain fell, the mean potential gradient was about -800 v/m. Occasionally the limits of registration (-1300 v/m) were exceeded, but not for more than five minutes at a time.
- (iii) November 11d 3h 40m to 15h. More than eleven hours of continuous negative potential gradient during which continuous rain fell. The limit of registration was exceeded, for four periods, each lasting from thirty to forty minutes.
- (iv) December 2d 6h 40m to 14h. During this period continuous rain fell and the negative potential gradient was about -1000 v/m. Occasionally values below -1300 v/m were reached, but only for a few minutes at a time.
- (v) December 20d 19h to 21d 3h 50m. This was a period of continuous snow preceded by sleet. For six and a half hours the potential gradient was less than -1300 v/m, except for one excursion, lasting about five minutes, to -1000 v/m.
- (vi) December 24d 2h 20m to 5h 40m. The potential gradient was continuously less than -1200 v/m for three and a half hours. Continuous rain fell during this period. Later when this became drizzle the sign of the potential gradient reverted to positive.

On the following occasions long periods of negative potential gradient were broken by short excursions to the positive side:—

- (i) July 31d 2h 45m to August 1d 12h. During continuous rain, heavy at times, the potential gradient was negative and highly oscillatory, except for excursions to the positive side associated with large oscillations during heavy rain. Following this interval was a succession of three excursions to the negative side of varying amplitude, corresponding to showers, and a single large oscillation to the positive side to $+1400$ v/m.
- (ii) December 7d 0h 30m to 7d 40m. During light rain the potential gradient consisted of long period oscillations on the negative side with ranges exceeding 1300 v/m. During one of the oscillations there was an excursion to the positive side when a value of $+150$ v/m was reached.
- (iii) December 25d 13h 30m to 26d 3h. During continuous rain the potential gradient consisted mainly of short period oscillations on the negative side. Towards the close of this interval the limit of registration was exceeded for about an hour. The continuity of negative gradient was broken by a short spell of positive for four minutes in the middle of the period, and a spell of fifteen minutes near the end of the period during which a double oscillation on each side of the zero occurred, the values of the maxima in each oscillation being $+200$ v/m. and $+600$ v/m.
- (iv) December 28d 14h 20m to 25d 2h 30m. During this interval slight sleet fell followed by continuous heavy rain. In the first part of the period the potential gradient was lower than -1300 v/m for two hours and a half except for about twenty-two minutes, when in a double oscillation maxima of -530 v/m and -780 v/m occurred. During the latter part of the period the gradient consisted of short period oscillations of small amplitude, values less than -1300 v/m being attained occasionally.

About 23h the potential gradient rose in a series of small oscillations about an ever increasing mean to $+100$ v/m. This was immediately followed by a more rapid decrease to -1300 v/m after which the potential gradient resumed its earlier character of short period oscillations with occasional excursions below -1300 v/m.

Although there are considerable irregularities in the mean diurnal inequalities of potential gradient on *oa* days for individual months, the mean inequalities for the seasons resemble fairly closely the normals for 1913-23. As is usual, the principal minimum in winter occurs in the early morning, and the principal maximum at 19h. The tendency towards a small secondary maximum before noon, and a small secondary minimum after noon, is not so clearly shown as in most years. In the mean diurnal inequality for the four equinoctial months the chief features are a minimum at noon and a maximum at 20h. In the summer inequality the minimum occurs about noon, though there is little difference between the values from 11h to 13h, and the chief maximum at about the normal time, viz., 21h. The secondary maximum at 7h is largely due to the occurrence of the principal maximum for May and August in the early morning, but the feature is present in the inequalities for each of the other two months. The secondary minimum at 3h is more clearly defined than usual.

TERRESTRIAL MAGNETISM.

Notes on the Instruments.

The standard magnetographs,¹ which have been in regular use since 1909, are situated in the east chamber of the underground magnet house and are arranged so as to record changes of the three geographical components of terrestrial magnetic force, viz., the north component, N (or $+X$), west component, W (or $-Y$), and the vertically downward component, V (or $+Z$).

The instruments for the north and west components are of the Adie bifilar type, in which torsion of the bifilar suspension, of fine tungsten or steel wire, is utilised to bring the magnets into an azimuth approximately perpendicular to the directions of the components whose changes they respectively record. In each of these instruments the magnet is about 13.8 cm. in length and is suspended within a copper shell, or frame, of suitable dimensions to ensure that the movements of the magnet are sufficiently damped. To the magnet is rigidly attached a semi-circular plane mirror, immediately beneath which is a fixed mirror of similar form and dimensions. Each magnet and mirror system is contained within a brass cylindrical case, cemented on to a pier and surmounted by a tall bell-jar shaped cover of glass. Light from a brightly illuminated slit passes through a collimator, is incident upon the two mirrors and after reflection passes along a wooden channel and thence, through a horizontal hemi-cylindrical lens, to photographic paper wound on a clock-driven cylinder. The hemi-cylindrical lens is set in the side of the case containing the recording drums, and matters are so arranged that the beams of light reflected from the two mirrors are brought to a focus by the lens which condenses the two vertical images to two sharply focussed dots on the paper. Hence the record obtained consists of two traces, the one straight and known as the base line, the other curved and representing the angular movements of the suspended magnet, and, therefore the changes in the component of terrestrial magnetic force.

The standard instrument for the vertical component is a Watson multiple-magnet balance.² In this instrument the magnet system consists of eight magnetised steel rods, each 10 cm. long and 0.2 cm. in diameter, carried by an aluminium frame to the centre of which are attached the moving mirror and also the knife-edge, which

¹ For a general description of magnetograph arrangements see "A Dictionary of Applied Physics," Vol. II, Macmillan, London.

² Terrestrial Magnetism, Vol. VI.

bears upon an agate plane and about which the system balances. Copper damping plates and a temperature-compensating device are provided. The recording arrangements are similar to those described above, save that the hemi-cylindrical condensing lens and the recording drum are vertical.

One clock serves to operate the three drums and also makes the time marks at two-hourly intervals.

To the containing case of each instrument is fitted a suitably designed drying tube containing calcium chloride.

Determinations of the azimuth of the magnets of the north and west component magnetographs are carried out, at intervals of a year or two, by comparing the deflections produced by an auxiliary magnet with its axis (*a*) true north-south, or east-west and (*b*) inclined at a known small angle to those azimuths. Drift of the magnet system of the Watson balance has been compensated from time to time by adjusting the position of a small control magnet which is fixed vertically to the lower part of the pier on which the balance stands. The Watson balance was cleaned on June 11 and the drying material renewed. The scale value was thereby decreased from 4.20 to 3.91 γ /mm.

The azimuth lines in use in the east chamber are those which were determined in 1914 and of which particulars are given on p. 70 of *Hourly Values from Autographic Records, Geophysical Section, 1913*.

The diurnal range of temperature in the east chamber of the magnet house is normally negligible. Temperature is ascertained daily at 9h 30m by the thermometers within the instrument cases. The daily values appear in Tables 272, 276, etc.; the monthly means of the readings so obtained during 1929, together with the mean values for the years 1911-1928, were as follow:—

EXCESS OF MEAN TEMPERATURE ABOVE 280a.

Month.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Mean 1929 ..	3.5	2.6	2.0	2.2	2.5	3.4	4.9	5.2	5.6	5.4	4.8	3.9
Mean 1911-28 ..	3.6	3.0	2.7	2.5	2.8	3.7	4.7	5.8	6.4	6.3	5.6	4.6

The annual range of temperature during 1929 was 3°·8 C., the mean range for the previous seventeen years being 4°·2 C.

The constants of the standard magnetographs were as follow:—

	North.	West.	Vertical.
Time scale 1 hour =	15.5 mm.	15.5 mm.	15.5 mm.
Time marks	Every two hours, beginning at exact hour.		
Error of time mark	Not more than \pm 1 min.		
Period of vibration, seconds	13.9	9.9	7.4
Logarithmic decrement ¹ .. .. .	.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 γ	—2 γ	+26 γ
Direction of marked pole	West.	North.	—
Azimuth of magnet	270°	0°	346°

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

Determinations of scale value of the standard magnetographs are carried out at intervals of two weeks. The method adopted consists essentially in measuring the photographically recorded deflection of the suspended or pivoted magnet produced by an auxiliary or test magnet of known magnetic moment situated at a known distance from the deflected magnet. Two sets of relative positions of the deflecting and deflected magnets are used; for the north and west instruments they may be termed the "end on" and "broadside on" positions, the magnet axes being in one plane: while in the case of the vertical instrument the deflecting magnet is vertical; in one position the line joining its centre to that of the deflected magnet is collinear with the axis of the latter, but in the other position it is perpendicular thereto. On a given occasion deflections are produced with the test magnet first on one side of the deflected magnet and then, at the same distance, on the other side, two deflections being produced at each side by reversal of the test magnet. Thus four deflection dots are obtained on the record. The two sets of relative positions of the magnets are employed on alternate occasions. The distance between the deflected and deflecting magnets is about 90 cm., and approximate values of the double deflections produced are 44 and 87 mm. for the north instrument, 33 and 65 mm. for the west, and 51 mm. for the vertical. In deducing the scale values allowance is made for the distribution of magnetism in the magnets by assuming that the latter consists of point poles separated by four-fifths of the length of the steel¹ and thence computing values of P, the distribution coefficient, for the different relative positions of the magnets. The moment of the auxiliary or test magnet is determined at intervals of about one month by deflections at two distances on the Kew magnetometer, the value of the horizontal component of the earth's field being obtained from the result of an absolute observation made on the same day.

In the following table are given the scale values, obtained by overlapping means, which were employed in reducing the curve readings for 1929.

SCALE VALUES OF THE MAGNETOGRAPHS (γ per mm. on the paper).

Month.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
North Instrument ..	5.06	5.06	5.07	5.05	5.06	5.04	5.04	5.04	5.05	5.07	5.07	5.07
West Instrument ..	6.67	6.67	6.68	6.70	6.69	6.67	6.65	6.67	6.69	6.71	6.73	6.71
Vertical Instrument ..	4.23* 4.33	4.33	4.29	4.28	4.23	4.20 3.91†	3.92	3.95	3.97	3.97	3.96	3.96

* 4.23 γ /mm. to 28d 9h 30m., 4.33 γ /mm. from 28d 9h 30m.

† 4.20 γ /mm. to 11d 9h., 3.91 γ /mm., from 11d 10h.

In addition to the standard magnetographs there are in the west chamber of the underground magnet house auxiliary instruments of the Adie pattern (formerly the standard instruments at Kew Observatory) which record changes in declination, D, horizontal force, H, and also vertically downward force, V. Declination records have been obtained since August, 1927, while the vertical force (Adie) and horizontal force records commenced in March and December, 1928. The general arrangements of these instruments are similar to those of the instruments in the east chamber. The declination magnet is suspended by a bundle of silk fibres (the torsion effect of which is negligible) and the scale value of the record is 1.17 to 1 mm. The vertical force balance consists of a single magnet, of which the dimensions are approximately 13.5 cm. \times 2 cm. \times 0.2 cm. With the object of reducing loss of record during magnetic storms the scale values of the auxiliary H and V records are arranged to

¹Chree, Phil. Mag. 1904.

be considerably greater than those of the standard N and V records. Thus, in the earlier part of 1929 the scale values of the Adie H and V records were approximately 10γ and 9γ per mm. respectively. Determinations of scale value are made by the method due to Broun. To facilitate the necessary adjustment, from time to time, of the azimuth of the horizontal force magnet, magnetic meridian lines (and lines perpendicular thereto) representing a sufficient range of values of declination were laid down in the west chamber in December, 1928 on the basis of simultaneous observations of declination in the chamber and in the east magnetic hut.

The routine absolute observations of the magnetic elements are made in the east magnetic hut; as a rule two complete sets of observations are made every week, but in 1929 a determination of declination was made on nearly every week-day. Declination and horizontal force were determined by means of the Kew pattern unifilar magnetometer (which was employed by Rücker and Thorpe in their magnetic surveys of the British Isles, 1886-1892) placed on Pier No. 5. Determinations of inclination (dip) are made by means of the Schulze inductor placed on pier No. 6.

For a detailed description of the method of observation with the Kew pattern magnetometer reference should be made elsewhere.¹

In determining declination four readings are taken, two with the magnet erect, two with the magnet inverted. A correction is applied to the mean of the observations for the observed torsion in the silk suspending fibre. The fixed mark is about one half-mile (0.8 km.) distant from Pier No. 5, and its bearing is taken as $8^{\circ} 12' 30''$ west of south.

Determination of the horizontal intensity comprises observations of (a) the time of vibration of the collimator magnet, and (b) the deflection of a mirror magnet by the collimator magnet. Deflection observations are made for three distances of the collimator magnet, the order of the position of the latter being: on east arm at 35 cm., 30 cm., 25 cm.; on west arm at 25 cm., 30 cm., 35 cm. Thus the mean times for the deflections at the three distances are very nearly, if not exactly, identical and the observations are concentrated at the 25 cm. distance. The time interval between the mean times of the vibration and deflection experiments is usually about half an hour. The horizontal intensity, H, is calculated from $H = \sqrt{mH_v \times H_R/m}$ where mH_v is obtained from the vibration experiment and H_R/m from the deflections made at the 25 cm. distance, m being the moment of the collimator magnet. H_R/m is corrected for the distribution of magnetism in the magnets. From the latter part of 1913 until the end of 1923 the value of this correction, viz., $\log_{10} (1 + P/25^2 + Q/25^4)$, applied to the observations of a given month was a mean value derived from the observations obtained during the seven months including the given month as fourth of the seven. The monthly values so derived show considerable fluctuations, and it is improbable that P and Q actually varied to the extent implied. Commencing in 1924 the value of the correction used in reducing the horizontal intensity observations has been the mean of the mean values for each of the years 1917-24, 1917-25, etc. The value employed for 1929 is .00541. The mean value of the logarithm for the years 1917-29 is .00543. Had this value, instead of .00541, been used in reducing the observations for 1929 the published values of H, N, W and V would be increased by 0.4, 0.3, 0.1 and 1.0γ , respectively. A variation of .00020 in the value of $\log_{10} (1 + P/25^2 + Q/25^4)$ corresponds with a variation of about 4γ in the derived value of H.

¹ Dict. of Applied Physics, Vol. II, p. 532 or Stewart and Gee's "Practical Physics."

The values of P , Q , and $\log_{10}(1+P/25^2+Q/25^4)$ for individual years are as follow:—

Year.		P.		Q.		$\log_{10}(1+P/25^2+Q/25^4)$.
1917	....	+ 6.862	....	+ 418.9	....	.00520
1918	....	+ 7.604	....	+ 68.6	....	.00533
1919	....	+ 9.126	....	- 603.5	....	.00563
1920	....	+ 8.224	....	- 216.6	....	.00544
1921	....	+ 7.978	....	+ 25.3	....	.00554
1922	....	+ 6.607	....	+ 513.1	....	.00513
1923	....	+ 6.371	....	+ 614.3	....	.00508
1924	....	+ 7.899	....	- 128.6	....	.00531
1925	....	+ 8.214	....	- 261.7	....	.00538
1926	....	+ 9.675	....	- 938.4	....	.00564
1927	....	+ 10.422	....	- 1265.0	....	.00580
1928	....	+ 8.713	....	- 547.2	....	.00541
1929	....	+ 9.741	....	- 917.4	....	.00571

The Schulze inductor¹ consists essentially of a coil of insulated wire which can be rotated continuously and rapidly about an axis which coincides with a diameter of the coil. This axis is capable of rotation about a horizontal and vertical axis. The inclination and azimuth of the coil axis are read off on a vertical and a horizontal scale respectively. The windings of the coil are led off from a commutator to a Broca galvanometer. To effect a determination of magnetic inclination, the coil is set so that its axis of rotation lies in the plane of the magnetic meridian. The coil is then rotated steadily at the rate of about 360 revolutions per minute and the inclination of the axis of rotation is adjusted until the galvanometer deflection is the same in magnitude and sign whether the sense of rotation is positive or negative. In this position the rotation axis of the coil coincides with the direction of the earth's field and the inclination to the horizontal may be read off from the vertical circle. Two series of settings are made, one with the vertical circle facing east, the other with the circle facing west.

The base line values of the magnetograph records are deduced from the results of the absolute observations, any of the latter obtained during times of considerable disturbance being excluded. For a set of absolute observations on a given day the mean ordinates of the north and west component curves are determined for the periods of time corresponding to the declination, the vibration, and the 25 cm. deflection observations.

From these values, and from the value of H obtained as described above, the value of H corresponding to the mean ordinates during the declination observation is derived, and thence the base line values of N and W are computed. Similarly, by the combined use of the curve ordinates at the times of the inclination and horizontal force observations the value of H corresponding to the inclination observation is obtained and thence the base value for V . The base line values finally adopted are obtained from a curve drawn smoothly through points given by the deduced values, due allowance being made for discontinuities in the records.

The results of the absolute determinations of D , I and H are summarized in the subjoined table, and the values of m , the moment of collimator magnet 60a, are also given. For each set of absolute observations are shown the deduced base line values of N , W , and V and, in brackets, the adopted base line values. Thus, the entry 15823 (18) signifies:—deduced base line value 15823, adopted base line value 15818. The adopted values were obtained as described in the foregoing, and therefore the base line values corresponding to dates between those given in the table may be obtained by interpolation.

¹ For descriptions of, and discussion of method of observation with, earth inductors see papers by—
H. Wild. *Met. Zeit.*, 1895, p. 41.
O. Venske. *Ber. über die Tät. des Preuss. Met. Inst. in 1924*, p. 91 (and references given therein).
N. E. Dorsey. *Terr. Mag.*, Vol. 18, p. 1, 1913.

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

Eskdalemuir.

1929.

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. 1	14 17	15	6	28	—	—	—	11 31	16612	906.1	760 (63)	63 (64)	—
2	—	—	—	—	11 57	69	41.9	—	—	—	—	—	861 (64)
4	14 15	15	7	53	12 31	69	42.2	—	16604	—	757 (62)	63 (64)	853 (66)
7	14 15	15	7	0	11 10	69	42.7	11 50	16591	906.0	757 (61)	65 (65)	859 (70)
11	14 17	15	6	17	11 11	69	43.1	11 56	16600	905.9	758 (60)	63 (65)	870 (74)
14	12 33	15	10	57	—	—	—	11 47	16601	906.1	759 (59)	62 (65)	—
15	—	—	—	—	11 29	69	43.5	—	—	—	—	—	881 (79)
15	—	—	—	—	15 37	69	42.2	—	—	—	—	—	886 (79)
18	12 33	15	8	10	10 59	69	42.6	11 45	16597	906.0	758 (58)	63 (65)	879 (83)
21	12 33	15	10	48	—	—	—	11 45	16618	905.8	760 (58)	64 (65)	—
22	—	—	—	—	12 41	69	42.8	—	—	—	—	—	895 (88)
25	9 23	15	1	7	10 41	69	42.3	11 31	16599	906.0	755 (57)	63 (65)	860 (91)
28	14 33	15	6	30	11 5	69	42.7	11 45	16621	906.2	759 (57)	65 (65)	741 (35)
Feb. 1	14 9	15	8	23	11 25	69	43.1	12 1	16605	905.8	750 (56)	64 (65)	722 (35)
5	12 3	15	7	10	10 41	69	42.8	11 18	16581	906.1	759 (56)	66 (65)	743 (35)
8	11 51	15	5	45	10 31	69	42.2	11 9	16592	905.9	754 (56)	67 (65)	724 (35)
11	14 35	15	5	50	11 31	69	44.5	12 8	16606	906.3	758 (56)	66 (65)	745 (35)
15	14 41	15	5	45	11 28	69	42.3	12 6	16599	906.0	756 (55)	62 (65)	731 (35)
19	14 53	15	12	15	11 13	69	45.8	11 50	16596	906.4	764 (55)	67 (65)	757 (35)
19	16 7	15	10	18	—	—	—	—	16548	—	764 (55)	71 (65)	—
22	12 27	15	6	5	11 15	69	44.4	11 52	16589	905.9	758 (55)	67 (65)	745 (35)
Mar. 1	15 1	15	8	59	11 24	69	45.0	12 1	16600	906.0	758 (53)	65 (65)	751 (35)
5	15 1	15	7	50	11 18	69	42.5	11 55	16626	906.0	756 (52)	65 (65)	741 (36)
8	14 33	15	12	57	11 17	69	43.5	11 57	16608	905.9	746 (52)	62 (65)	718 (36)
11	14 37	15	14	5	11 28	69	44.4	12 5	16617	905.8	748 (51)	66 (65)	733 (36)
15	11 39	15	8	7	10 23	69	43.2	10 59	16592	906.0	751 (50)	65 (65)	733 (36)
18	14 59	15	7	47	11 19	69	45.1	11 56	16593	906.0	748 (50)	64 (65)	732 (37)
22	14 57	15	5	53	11 20	69	44.0	12 2	16585	906.1	747 (49)	65 (65)	742 (37)
25	14 41	15	7	30	11 15	69	44.3	11 53	16595	906.0	752 (49)	65 (65)	743 (37)
29	11 49	15	7	53	10 17	69	43.6	11 3	16600	906.1	763 (49)	67 (65)	777 (37)
Apr. 2	14 21	15	10	25	11 17	69	44.0	12 1	16608	905.5	747 (49)	64 (64)	726 (37)
5	12 43	15	5	22	11 25	69	44.2	12 2	16574	905.9	747 (49)	60 (64)	734 (36)
9	12 31	15	5	27	11 13	69	44.1	11 52	16582	906.2	750 (49)	62 (64)	737 (36)
12	11 43	15	3	17	10 27	69	44.3	11 4	16572	906.2	753 (49)	62 (63)	731 (35)
16	14 41	15	8	46	11 39	69	45.4	12 18	16627	906.0	750 (49)	63 (63)	732 (33)
19	14 43	15	6	30	11 33	69	43.1	12 12	16609	906.2	758 (49)	62 (63)	740 (31)
23	14 15	15	6	19	9 1	69	42.9	11 4	16603	905.6	752 (49)	65 (63)	726 (28)
26	9 23	14	54	37	9 1	69	42.5	11 2	16575	905.4	740 (48)	58 (62)	685 (725)
29	13 45	15	10	3	8 39	69	42.4	10 51	16588	905.8	743 (48)	61 (62)	693 (720)

ABSOLUTE DETERMINATIONS—*continued.*

Date.	Declination.			Inclination.			Horizontal Force.			Base Line Values (deduced and adopted).			
	Mean Time.	D.			Mean Time.	I.		Mean Time.	H.	m.	North.	West.	Vertical.
	h. m.	°	'	"	h. m.	°	'	h. m.	γ		15,000 γ +	4,000 γ +	44,000 γ +
May 1	—	—	—	—	14 51	69	41·0	—	—	—	—	—	727 (23)
3	14 21	15	3	25	10 29	69	42·5	11 13	16616	905·6	747 (48)	62 (62)	712 (21)
6	13 57	15	7	44	8 43	69	42·8	11 6	16591	905·7	747 (48)	62 (62)	715 (20)
10	8 47	14	54	30	8 27	69	42·1	10 51	16589	905·4	743 (49)	61 (62)	702 (17)
13	13 41	15	11	13	8 51	69	41·0	10 40	16573	905·9	751 (49)	63 (62)	685 (715)
17	14 13	15	4	17	8 47	69	40·9	10 58	16585	905·1	748 (50)	62 (62)	678 (712)
20	13 23	15	7	31	8 43	69	41·3	11 18	16595	905·3	751 (51)	62 (62)	663 (710)
24	9 7	14	55	30	8 47	69	41·6	10 27	16584	905·5	756 (53)	64 (63)	669 (707)
27	13 51	15	5	41	8 27	69	41·2	11 3	16614	905·8	758 (54)	73 (63)	710 (04)
31	14 13	15	3	50	8 21	69	42·1	11 3	16608	905·3	740 (56)	61 (63)	625 (700)
June 3	13 29	15	5	7	10 27	69	41·6	11 3	16619	905·9	763 (57)	66 (63)	707 (698)
7	8 51	14	57	17	8 29	69	41·3	10 37	16597	905·7	762 (59)	66 (64)	696 (94)
11	—	—	—	—	8 31	69	41·5	—	—	—	—	—	648 (92)
12	9 5	14	54	21	8 43	69	43·0	11 19	16581	905·8	765 (61)	65 (65)	795 (802)
14	9 19	14	55	30	8 57	69	42·0	11 13	16593	905·3	756 (61)	65 (66)	815 (02)
17	11 49	15	3	15	9 1	69	42·0	11 13	16588	905·7	756 (63)	61 (66)	797 (802)
21	8 47	14	54	47	8 25	69	42·0	10 27	16594	905·7	760 (64)	70 (67)	809 (03)
25	8 41	14	56	31	8 20	69	42·3	11 5	16596	905·4	757 (64)	65 (68)	805 (04)
28	8 45	14	52	58	8 20	69	42·1	10 59	16582	905·3	763 (65)	66 (68)	796 (804)
July 5	8 53	14	53	53	8 33	69	41·9	11 21	16602	905·7	772 (67)	69 (68)	830 (06)
9	11 53	15	4	7	10 48	69	44·0	11 20	16580	905·7	772 (68)	70 (68)	837 (06)
12	11 31	15	0	49	10 25	69	45·5	10 59	16569	905·7	772 (68)	68 (68)	825 (06)
16	11 39	15	3	48	10 29	69	45·1	11 3	16538	904·9	757 (69)	65 (68)	785 (805)
19	8 57	14	51	23	8 37	69	43·8	10 39	16576	905·7	767 (70)	68 (68)	843 (05)
24	11 25	15	0	43	10 17	69	43·3	10 49	16579	905·3	768 (71)	65 (68)	800 (04)
26	11 29	14	58	20	10 17	69	44·0	10 49	16585	905·5	762 (71)	66 (67)	798 (804)
29	9 13	14	53	26	8 55	69	42·8	11 17	16589	905·2	768 (71)	67 (67)	815 (04)
Aug. 6	8 43	14	55	2	8 22	69	43·5	11 22	16570	905·2	762 (72)	64 (67)	786 (804)
9	8 43	14	53	43	8 23	69	43·1	11 20	16586	905·6	777 (72)	70 (67)	807 (04)
14	8 57	14	53	0	8 36	69	42·8	11 22	16586	905·2	768 (73)	67 (67)	808 (06)
16	11 49	15	2	20	10 37	69	43·9	11 11	16577	905·8	779 (73)	70 (67)	821 (07)
23	13 55	15	4	53	10 38	69	43·3	11 11	16607	905·1	768 (73)	64 (67)	789 (810)
26	—	—	—	—	15 24	69	40·5	—	—	—	—	—	851 (11)
28	14 24	15	1	45	8 37	69	42·8	11 28	16610	905·0	788 (74)	72 (67)	849 (13)
30	14 47	14	59	26	16 33	69	39·8	12 12	16614	905·6	769 (74)	64 (67)	755 (815)
Sept. 6	14 4	15	2	27	—	—	—	14 53	16617	905·4	778 (74)	69 (68)	—
10	13 29	15	2	0	9 57	69	47·7	—	16574	—	772 (75)	59 (68)	821 (24)
13	11 27	15	0	52	14 15	69	42·9	10 54	16523	905·3	770 (75)	68 (68)	814 (26)
23	8 33	14	51	46	8 13	69	44·2	10 55	16567	905·6	776 (75)	69 (68)	836 (31)
27	11 33	15	5	7	10 21	69	45·0	10 57	16544	905·2	768 (75)	66 (68)	819 (31)
30	13 39	15	2	15	14 21	69	42·5	11 29	16571	905·8	775 (75)	70 (68)	842 (32)

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.	γ		15,000 γ +	4,000 γ +	44,000 γ +
Oct. 4	—	—	—	11 53	69 42.8	—	—	—	—	—	765 (54)
11	12 11	15 0 0		10 53	69 44.5	11 33	16570	905.7	781 (74)	68 (69)	767 (54)
15	12 15	15 0 47		10 55	69 44.8	11 35	16552	905.0	765 (74)	67 (69)	735 (54)
18	14 47	15 3 40		11 8	69 45.3	11 17	16616	905.7	781 (74)	77 (69)	786 (54)
21	15 21	14 57 50		10 51	69 44.1	11 29	16567	905.5	749 (74)	63 (69)	735 (54)
25	12 11	14 59 20		14 23	69 43.7	11 39	16594	905.4	787 (74)	70 (69)	814 (754)
30	12 17	15 5 57		11 4	69 41.7	11 40	16637	906.2	791 (74)	57 (69)	823 (754)
Nov. 4	14 40	14 57 40		15 29	69 45.3	12 7	16550	906.1	749 (73)	58 (69)	705 (54)
7	11 5	15 0 7		11 25	69 45.7	12 2	16570	906.0	773 (73)	68 (69)	744 (22)
13	12 25	14 59 32		11 8	69 43.3	11 45	16579	905.5	769 (72)	66 (68)	727 (23)
15	14 7	14 58 23		11 3	69 43.2	11 40	16587	905.7	775 (72)	70 (68)	745 (24)
19	12 25	14 57 57		11 9	69 42.9	11 47	16598	906.1	776 (71)	70 (68)	765 (25)
22	12 41	14 56 40		11 27	69 43.0	12 3	16579	905.3	750 (70)	60 (68)	687 (726)
26	12 33	14 56 40		10 53	69 41.8	11 32	16607	905.8	772 (69)	68 (68)	760 (27)
28	—	—		12 17	69 42.9	—	—	—	—	—	755 (28)
Dec. 6	12 57	14 58 37		11 49	69 46.1	12 24	16553	905.5	758 (66)	75 (67)	730 (31)
11	12 15	14 58 45		10 57	69 44.4	11 34	16580	905.7	761 (63)	64 (66)	728 (33)
13	12 23	14 57 46		11 6	69 43.2	11 42	16584	905.6	758 (63)	65 (66)	724 (34)
18	12 37	14 56 36		11 24	69 43.9	12 0	16579	906.0	762 (61)	65 (65)	736 (35)
20	12 39	14 56 38		11 23	69 43.5	11 59	16589	906.1	769 (60)	66 (65)	749 (36)
24	12 33	14 56 29		11 17	69 43.0	11 53	16583	905.7	755 (60)	66 (65)	723 (37)
27	12 43	14 55 30		11 30	69 43.2	12 6	16579	905.4	752 (59)	62 (65)	720 (38)

The hourly readings are obtained from the magnetograms, standardized as described in the foregoing, by means of a ruled glass scale. The reading for any given hour G.M.T. is that ordinate estimated to be the mean reading for 60-minutes centring at the given hour. The product of this ordinate and the scale value is added to the adopted base line value, and the sum so obtained is the hourly value printed in the tables.

IDENTIFICATION NUMBERS OF INSTRUMENTS IN USE IN 1929.

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 ΣR^2 for each day. ΣR^2 is written for $R_N^2 + R_W^2 + R_V^2$ where R_N, R_W, R_V denote the absolute ranges for a calendar day of the north, west and vertical components.
- (c) the daily magnetic character figures, assigned according to the international scheme wherein "0," "1," "2," respectively, denote quiet, moderately disturbed, and highly disturbed conditions.
- (d) the daily values of temperature in the underground magnetograph chamber.

In *The Observatories' Year Book* for the years 1922–6 the fourth table for each month contains the values of the "characteristic ratio," ρ , which is the ratio of the value of ΣR^2 for a given day to the mean monthly value of ΣR^2 . To some extent this ratio serves as an index of the degree of disturbance on a given day relatively to other days of the same month. It enables the most highly disturbed days to be identified with fair certainty, but is of less use in distinguishing between the quieter days of a month, especially in summer months, when even the quiet day range is large, and in months in which very large disturbance occurs. Another defect is the great difference in the significance, in different months, of one and the same value of the ratio. Further, as long as record is liable to be lost during the larger disturbances the exact value of the ratio cannot be computed in some cases. Some of the drawbacks mentioned could be diminished by relating the ratio of the daily value of ΣR^2 not to the mean value of ΣR^2 for the month but to a quantity which approximates to the mean value of ΣR^2 for a long period, e.g., for 11 years. It is considered that, on the whole, the applications of ΣR^2 as a criterion of disturbance or activity is not materially increased by the publication of the values of " ρ ," and it was decided as from 1927 to discontinue the publication of this ratio.

Hourly values of declination are not given in this volume. They have been published weekly, primarily for the use of mine surveyors, in "The Colliery Guardian" and "The Iron and Coal Trades Review."

Mean diurnal inequalities of the components N, W, V, H, D, and I on "all" days and on international quiet and disturbed days are given, for the months, seasons and year, in Tables 317 to 334. In calculating diurnal inequalities the non-cyclic change has been eliminated on the assumption that its time-rate is linear. Inequality values are first calculated to 0.01 γ and then rounded off to 0.1 γ . The inequalities of H, D, and I have been computed from those of N, W, and V, by means of the formulæ :

$$\begin{aligned} \delta D &= \frac{180 \times 60}{\pi} \left(\frac{\delta W \cos D - \delta N \sin D}{H} \right) \\ \delta H &= \delta N \cos D + \delta W \sin D \\ \delta I &= \frac{180 \times 60}{\pi} \cos I \left(\frac{\delta V \cos I - \delta H \sin I}{H} \right) \end{aligned}$$

in which δD and δI are expressed in minutes of arc, and where H, D, and I for any given month are the respective mean values for that month as published in Table 338. The values of the range of the mean diurnal inequalities of the several elements on the three different types of day are brought together in Table 335, and the values of the non-cyclic change of N, W, and V are given in Table 336.

The results of harmonic analysis of the mean diurnal inequalities of N, W, and V for the months, seasons¹ and year are to be found in Tables 339 and 340, in which are given the values of a_n , b_n , c_n , and α_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 α_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 γ .

The mean values of the squares of the absolute daily ranges are summarized in Table 337.

In Table 338 appear for the months and year the mean values of N, W, V, D, I, H and Total Force, T. The means of the four latter elements are derived from the corresponding mean values of N, W and V, which are the means of hourly values on "all" days in the month or year. Tables 341 and 342 contain mean values of the magnetic elements for 1929 and recent years at a number of observatories.

Review of Results of Magnetic Observations.

Mean and Extreme Values of the Magnetic Elements, 1929.—The mean values² are given below in Table I along with the corresponding values for the previous year. The values of N, W, and V have been computed from the hourly values derived from the autographic records of "all" days, standardized by means of the absolute observations; those of H, D, I, and T have been deduced from the values of N, W, and V.

TABLE I.

Year.	H.	D. (West).	I.	N.	W.	V.	T.
	γ	'	'	γ	γ	γ	γ
1928	16619	15 10.5	69 41.2	16039	4350	44894	47871
1929	16603	14 58.9	69 41.9	16038	4292	44878	47851

Westerly declination was on the average 11'.6 less in 1929 than in 1928. The rate of decrease is slightly less than the average rate, 12'.4, during the years 1920–27. Between 1913 and 1920 the average rate of decrease was 9'.3. As compared with the 1928 value horizontal force shows a fall of 16 γ , which is greater than the average annual rate of decrease between 1912 and 1927. Practically no change in the average value of the north component has occurred since 1925, but as in recent years the west component decreased by some 60 γ . Inclination has increased by 0'.7. The values of vertical and total force obtained for 1929 are slightly less than those for 1928.

Mean values derived from (a) international quiet days and (b) international disturbed days are as follow: (a) N, 16042 γ ; W, 4293 γ ; V, 44878 γ ; (b) N, 16031 γ ; W, 4291 γ ; V, 44877 γ .

¹ The seasons are defined for this purpose as follows:—*Winter*, January, February, November, December; *Equinox*, March, April, September, October; *Summer*, May, June, July, August.

² See remarks on p. 168.

The differences between the mean annual values of N, W, and V, derived from "all," international quiet, and international disturbed days in 1926, 1927, 1928 and 1929, are given below, together with the mean differences for the years 1915-1925. In every year of the series quoted the mean value of N and of W on quiet days exceeded the mean value on "all" and on disturbed days. The only years in the period 1915-25, for which either the "all" or the disturbed day mean value of V exceeded the quiet day value were 1917, 1919, 1921.

	Quiet day mean—"All" day mean.			Quiet day mean—Disturbed day mean.		
	N	W	V	N	W	V
	γ	γ	γ	γ	γ	γ
1929 ..	+3.8	+1.4	+0.2	+11.1	+2.8	+1.9
1928 ..	+4.5	+1.4	-1.6	+ 7.7	+2.6	-3.4
1927 ..	+2.9	+1.1	-0.3	+ 9.1	+2.4	-2.7
1926 ..	+4.8	+2.0	-0.7	+16.1	+5.7	-1.4
1915-1925	+2.7	+1.2	+0.7	+ 8.5	+3.3	+1.5

The resultant vector representing the average excess of the mean values on "all" days over the mean values on quiet days, for the years 1915-1925, has a magnitude of 3γ ; its azimuth is 156° , measured from true north through east, and it is inclined at about 77° to the upwardly directed vertical. The vertical plane which contains this vector approximates very closely in azimuth to the vertical plane passing through Eskdalemuir and the pole (taken as 78°N , 68°W) of the axis of magnetization of the earth. (cf. S. Chapman, *On certain average characteristics of world-wide magnetic disturbance*. Lond. Proc. Roy. Soc. Series A. Vol. 115, p. 242).

The extreme values of N, W, and V recorded during 1929 are given in Table II.

TABLE II.

Component.	Maximum.			Minimum.			Absolute Annual Range.
	Value.	Date, 1929.			Value.	Date, 1929.	
North	γ 16334	July	d h m 10 16 41	γ 15292	Feb.	d h m 27 21 57	γ 1042
West	4533	Feb.	27 18 43	3870	Feb.	28 0 42	663
Vertical ..	45168	Feb.	27 19 29	44475	Feb.	27 21 56	693

Magnetic Character of the Year.—General agreement not having been reached yet as to the most suitable method of obtaining a numerical measure of magnetic activity, the Eskdalemuir practice of tabulating for each day the value of $\Sigma R^{2(1)}$, i.e., the sum of the squares of the absolute daily ranges of N, W and V, has been continued. The evaluation of the mean daily values of Σr^2 , the sum of the squares of the hourly ranges of N, W, and V, has not been carried out since 1925, but the values of hourly ranges have been tabulated and are available for the purposes of investigation. The magnetic character figures which were assigned in accordance with the international scheme are summarized in Table III. These character figures were assigned quite independently of knowledge of the values of ΣR^2 . Table III contains also the monthly mean value of the international character figures, which for 1929 are based on the estimates made at 41 observatories, and the mean monthly values of ΣR^2 for "all," "0," "1," "2," international quiet (Q), and international disturbed (D) days.

(1) See p. 169.

The Eskdalemuir mean character figure for the year is slightly less than for 1928, though the international mean character figure is greater; in fact it is the highest during the present sunspot cycle. The mean sunspot numbers for the years 1923-29 are, in order, 5.8, 16.7, 44.3, 63.9, 69.0, 76.8 and 64.2. Both the Eskdalemuir and the international mean character figures increased concurrently with the sunspot numbers up to 1926, but the concurrence since then has not been maintained.

The Eskdalemuir character figures suggest that March was the most disturbed month, but on the basis of mean values of ΣR^2 it will be seen that February stands higher, higher even than the very disturbed months of October, 1926, and July, 1928. According to either criterion January was the quietest month.

In Table III the annual mean values are the means of the monthly values entered in the corresponding columns. If equal weight be allowed to individual "2" days, the mean annual value of $\Sigma R^2/100$ on these days is 2215. The mean value of ΣR^2 for all days is considerably less than in 1926; it exceeds the value for any of the other years since 1919. In the months February, July, August, November and December the value of ΣR^2 on all or D days is greater than in 1926.

TABLE III.

Month.	Magnetic Character Figures.			Mean Character Figure.		Mean Value of $\Sigma R^2/100\gamma^2$.					
	Number of			Eskdalemuir.	International.	"All" days.	Q days.	"0" days.	"1" days.	"2" days.	D days.
"0" days.	"1" days.	"2" days.									
1929.						γ^2	γ^2	γ^2	γ^2	γ^2	γ^2
January ..	12	19	0	0.61	0.47	103	18	21	160	—	395
February ..	7	18	3	0.86	0.82	1320	39	41	251	10720	6658
March ..	5	23	3	0.94	0.85	618	78	80	257	4283	1181
April ..	12	15	3	0.70	0.54	160	69	101	167	416	369
May ..	14	14	3	0.65	0.61	185	80	117	187	493	396
June ..	11	16	3	0.73	0.56	192	84	102	199	482	419
July ..	6	22	3	0.90	0.66	337	100	105	219	1670	1172
August ..	13	14	4	0.71	0.55	246	83	83	173	958	986
September ..	8	20	2	0.80	0.75	265	74	76	177	901	725
October ..	9	18	4	0.84	0.85	417	57	66	312	1680	1447
November ..	12	16	2	0.67	0.71	268	27	44	357	1697	1048
December ..	9	18	4	0.84	0.71	304	23	28	211	1342	1146
Year, 1929 ..	118	213	34	0.75	0.67	368	61	72	223	2240	1329
Year, 1928 ..	96	246	24	0.80	0.63	337	70	76	209	4393	763
Year, 1927 ..	95	231	39	0.85	0.63	258	66	68	164	1244	908
Year, 1926 ..	90	227	48	0.89	0.65	465	63	65	180	2167	2048
Year, 1925 ..	145	191	29	0.69	0.56	172	48	56	154	767	541
Year, 1924 ..	191	153	22	0.54	0.55	121	39	43	113	715	424
Year, 1923 ..	235	111	19	0.41	0.48	115	32	42	129	776	408
Year, 1922 ..	174	145	46	0.65	0.65	205	47	64	221	720	601

Diurnal Inequalities.—The mean diurnal inequalities for "all" days, international quiet and disturbed days, for the months, seasons and the year, are given in Tables 317-334, and the corresponding inequality ranges in Table 335. The inequalities of N, W, and V for international quiet and disturbed days are shown graphically in Plates III and IV, the representation in the latter plate being in the form of vector diagrams.

The ranges of the mean diurnal inequalities of N, W and V on all days in 1929 are in the main smaller than in 1928 and about equal to those of 1927; but in February, March and December the V ranges are much larger than those of the two previous years and equal or exceed those of 1926. The same may be said of disturbed days. On quiet days there is not so much variation from year to year and in 1929 the ranges are, as usual, greatest in summer and least in winter.

DIURNAL VARIATION OF MAGNETIC FORCE.
ESKDALEMUIR 1929.

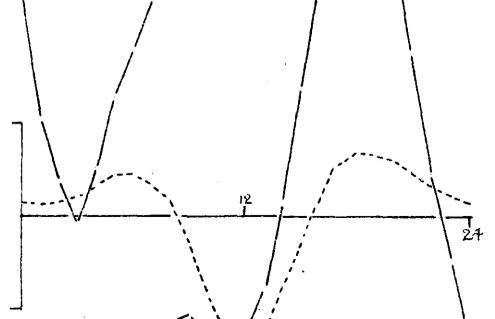
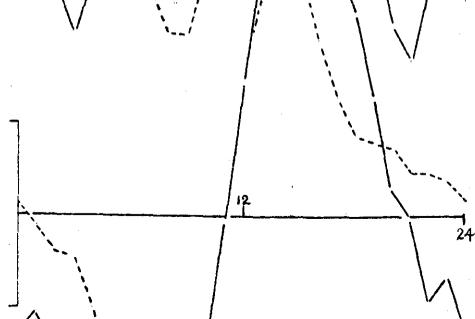
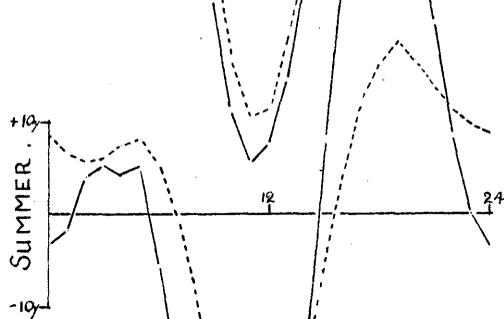
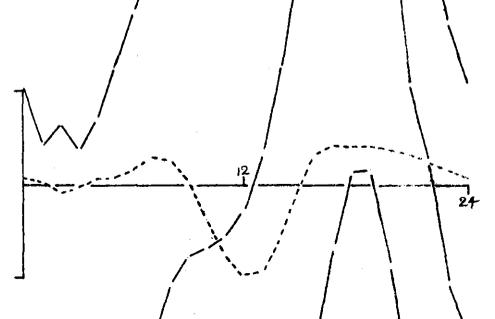
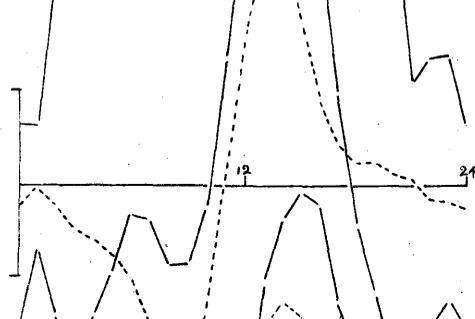
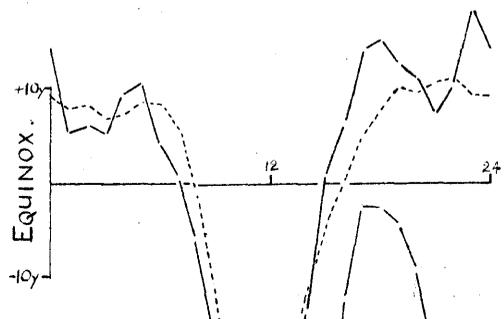
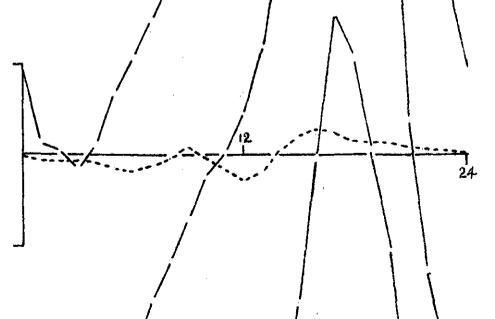
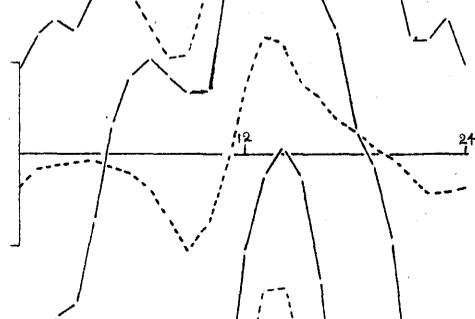
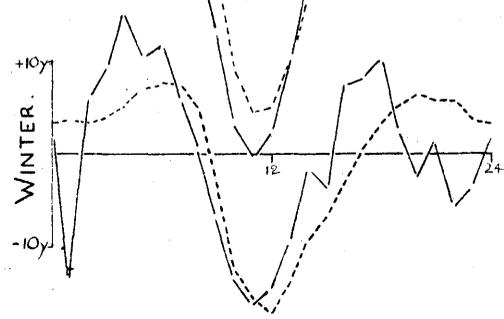
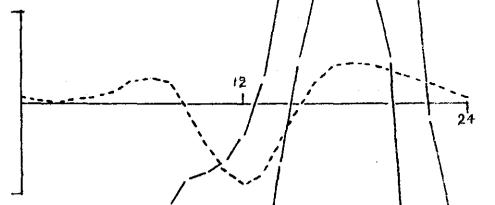
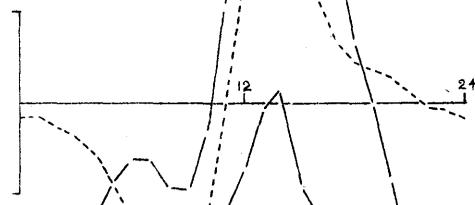
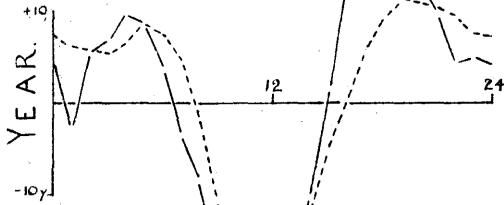
North Component.

West Component.

Vertical Component.

Quiet Days -----

Disturbed Days —



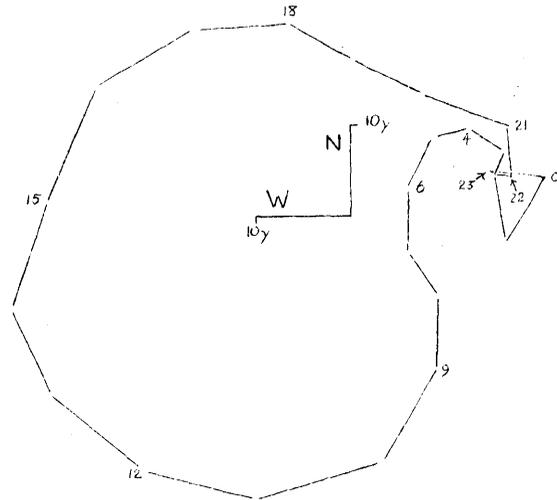
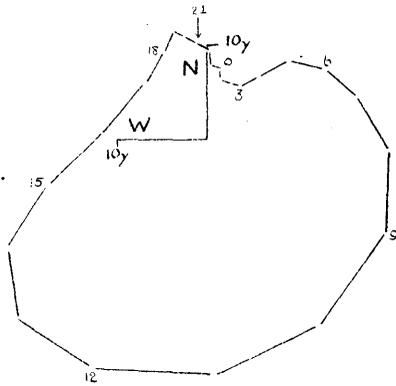
VECTOR DIAGRAMS ILLUSTRATING DIURNAL VARIATION OF MAGNETIC FORCE.

ESKDALEMUIR 1929.

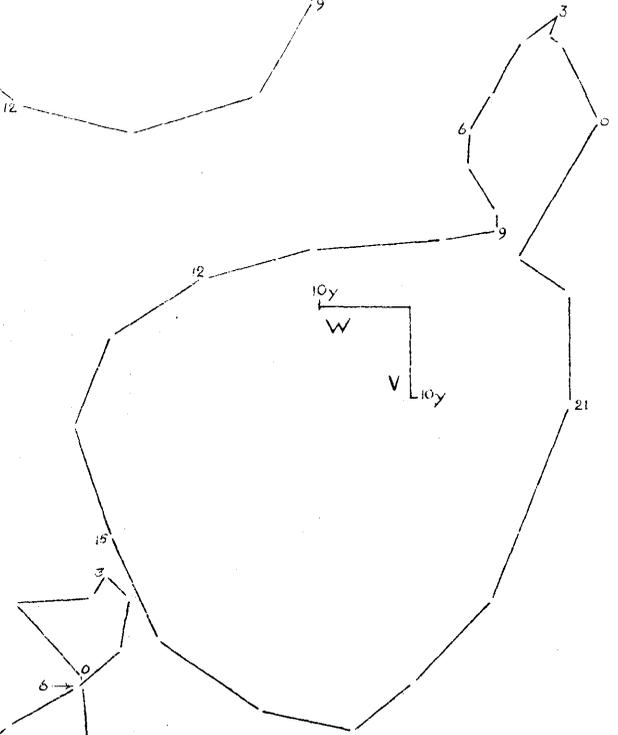
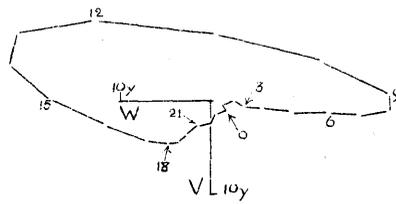
Quiet Days

Disturbed Days

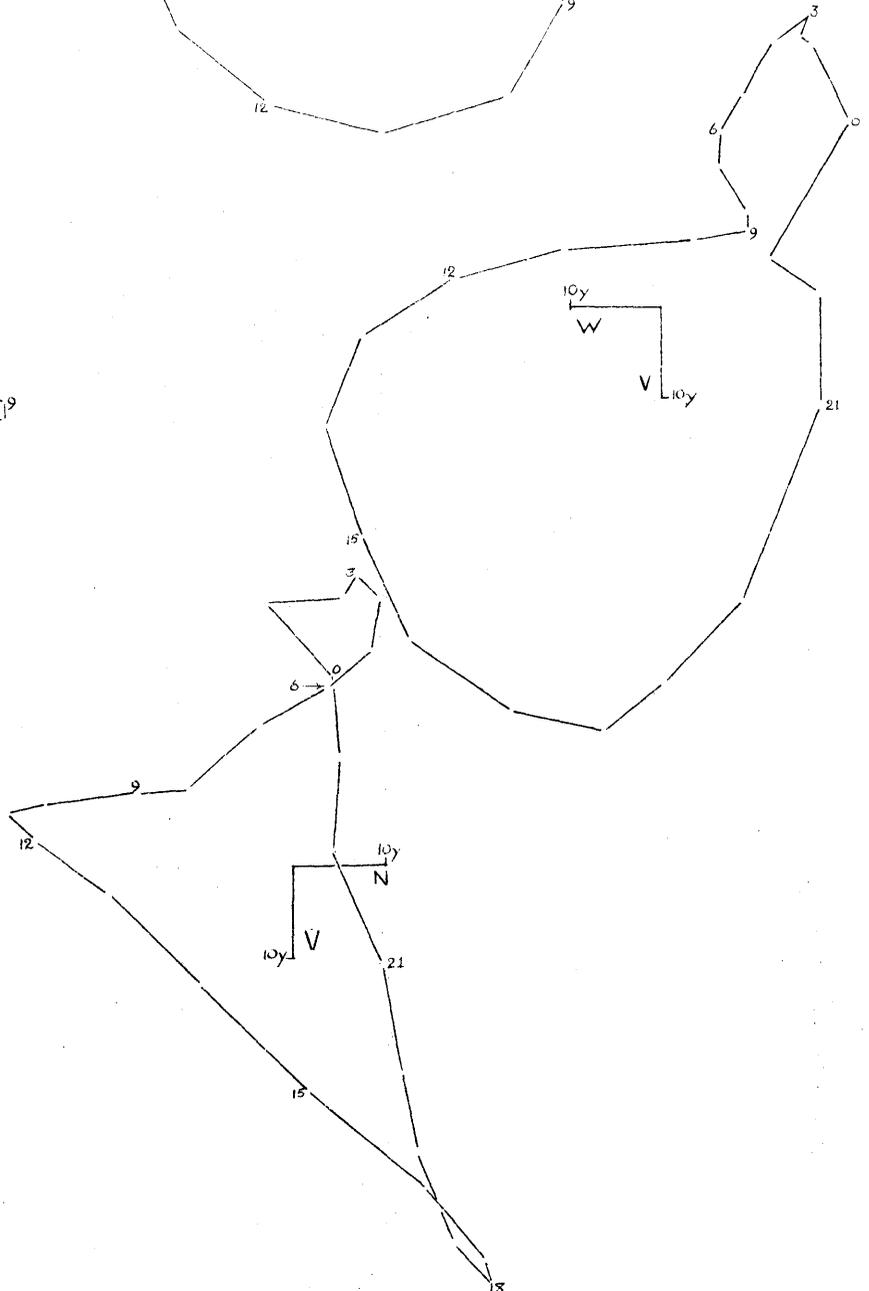
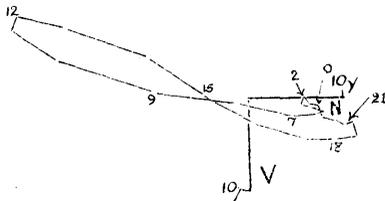
Horizontal
Components.



Prime
Vertical
Components.



Meridian
Components.



The average values of the diurnal inequality ranges for the year and seasons for the period 1916-26 (not the values of the range of the representative mean diurnal inequalities for this period) are given below, along with the 1929 values expressed as a percentage of the average values. The units employed are γ for force and γ' for declination. The mean sun-spot number for 1916-26 is 46.7; that for 1927 is 69.0, for 1928 76.8, and for 1929 64.2. The 1929 values are nearly all above the average, the excess being greatest in winter. The most conspicuous deficiency is H for disturbed days in equinox.

	" All " days.					International quiet days.					International disturbed days.				
	N.	W.	V.	H.	D.	N.	W.	V.	H.	D.	N.	W.	V.	H.	D.
Year, 1916-26 ..	36.6	38.7	21.9	35.6	8.26	32.7	37.0	12.1	32.4	8.00	48.3	53.7	65.6	49.7	11.14
1929 % ..	105	112	118	106	110	112	111	111	113	112	107	106	118	102	109
Winter, 1916-26 ..	22.1	27.7	15.9	18.3	6.31	19.0	19.4	5.2	15.9	4.42	30.1	49.5	53.8	27.5	10.50
1929 % ..	111	123	155	117	119	133	120	108	144	118	105	132	152	129	126
Equinox, 1916-26 ..	41.5	44.2	27.2	39.0	9.57	37.8	42.0	13.1	37.2	9.04	56.0	65.3	82.0	55.4	13.76
1929 % ..	105	110	122	101	108	107	109	106	114	112	96	98	117	85	102
Summer, 1916-26 ..	54.0	55.6	26.5	56.1	11.33	45.6	53.4	19.8	46.7	11.12	78.3	67.9	70.2	85.5	12.80
1929 % ..	104	107	112	103	106	107	109	106	106	108	99	90	89	97	99

Daily Range.—The values of mean absolute daily range for the months and seasons of the year, together with the corresponding means for 1916-26 are given in Table IV; the ranges are also expressed as percentages of the mean absolute daily range for the year.

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

Month.	Mean Absolute Daily Range.						Mean Daily Range expressed as Percentage of Yearly Mean.					
	1929.			Mean 1916-26.			1929.			Mean 1916-26.		
	N.	W.	V.	N.	W.	V.	N.	W.	V.	N.	W.	V.
January	γ	γ	γ	γ	γ	γ	%	%	%	%	%	%
February	51	61	25	69	73	39	53	68	45	80	88	81
March	143	117	99	69	76	38	149	130	180	80	92	80
April	115	109	86	95	94	57	120	121	156	110	113	119
May	79	82	40	98	88	54	82	91	73	114	106	113
June	94	77	42	102	88	59	98	86	76	119	106	123
July	90	86	40	92	85	46	94	96	73	107	102	96
August	113	97	54	86	82	43	118	108	98	100	99	90
September	90	81	42	98	88	55	94	90	76	114	106	115
October	100	89	56	100	92	63	104	99	102	116	111	131
November	112	103	69	94	93	57	117	114	125	109	112	119
December	80	88	49	62	66	34	83	98	89	72	80	71
Year	80	91	58	60	64	33	83	101	105	70	77	69
Winter	89	89	58	65	70	36	93	99	105	76	84	75
Equinox	101	96	63	97	92	58	105	107	115	113	111	121
Summer	97	85	45	95	86	51	101	94	82	110	104	106
Year	96	90	55	86	83	48	—	—	—	—	—	—

The values of the mean daily range for the year are slightly greater than for 1928 and 1927 but less than the corresponding values for 1926. The mean ranges for the winter season are greater in all components than for many years past, but the ranges for the summer are less than those of recent summers.

The frequency distribution of absolute daily ranges recorded in 1929 is shown in Table V, which also contains the percentage distribution for the period 1916-1926.

TABLE V.—FREQUENCY DISTRIBUTION OF ABSOLUTE DAILY RANGE.

Range.	Number of Cases 1929.			Percentage Distribution.					
				N.		W.		V.	
	γ	N.	W.	V.	1929.	1916-26.	1929.	1916-26.	1929.	1916-26.
0-9	0	0	15	0.0	0.0	0.0	0.0	4.2	6.3
10-19	1	0	49	0.3	1.7	0.0	0.9	13.6	20.2
20-29	8	14	97	2.2	4.9	3.9	4.5	26.9	24.8
30-39	29	13	69	8.0	7.8	3.6	7.5	19.1	14.3
40-49	25	22	28	6.9	9.9	6.1	10.6	7.8	8.1
50-59	27	41	25	7.4	12.2	11.3	12.0	6.9	4.8
60-69	46	60	10	12.7	12.9	16.5	13.1	2.8	4.2
70-79	56	50	9	15.4	10.3	13.8	12.4	2.5	3.1
80-89	39	52	8	10.7	8.1	14.3	8.6	2.2	2.3
90-99	28	19	7	7.7	6.5	5.2	7.5	1.9	2.1
100-109	15	13	10	4.1	5.3	3.6	4.7	2.8	1.1
110-119	16	16	2	4.4	4.0	4.4	3.5	0.6	1.2
120-129	13	6	4	3.6	3.5	1.7	2.7	1.1	0.8
130-139	7	13	0	1.9	2.6	3.6	2.2	0.0	0.8
140-149	9	7	3	2.5	1.7	1.9	2.2	0.8	0.5
150-159	7	4	2	1.9	1.3	1.1	1.2	0.6	0.7
160-169	11	5	1	3.0	1.2	1.4	0.9	0.3	0.5
170-179	5	3	6	1.4	0.8	0.8	1.0	1.7	0.4
180-189	2	7	1	0.6	0.6	1.9	0.7	0.3	0.5
190-199	6	2	3	1.7	0.5	0.6	0.6	0.8	0.3
200+	13	16	12	3.6	4.4	4.4	3.1	3.3	3.1
Days omitted	2	2	4	..	..	..	..	..	..

TABLE VI.—PRINCIPAL MAGNETIC DISTURBANCES RECORDED AT ESKDALEMUIR, 1929.

Where the beginning of a disturbance has been marked by a "sudden commencement," the serial number is followed by an asterisk (*), and the time entered in the second column is that of the sudden commencement, estimated to the nearest minute. In other cases, the exact hour nearest the time at which disturbance may be regarded as having begun is entered in the second column. To the tabulated values of maximum and minimum the following have to be added:—N, 15000γ; W, 4000γ; V, 44000γ.

No.	From			To			North Component.					West Component.					Vertical Component.				
	Max.	Time.	Min.	Time.	Range	Max.	Time.	Min.	Time.	Range	Max.	Time.	Min.	Time.	Range	Max.	Time.	Min.	Time.	Range	
1*	Jan. 5 3 7	Jan. 6 20	1076	5 19 40	959	5 18 52	117	365	5 18 3	231	5 19 33	134	962	5 19 31	876	6 2 41	86				
2	Jan. 8 21	Jan. 11 10	1096	11 0 55	927	9 1 3	169	352	9 13 23	159	9 0 46	193	943	9 17 58	792	9 0 50	151				
3	Feb. 6 13	Feb. 10 22	1085	6 23 4	966	10 11 49	119	373	6 16 9	187	6 22 55	186	973	8 20 52	874	7 1 53	99				
4*	Feb. 16 15 7	Feb. 20 4	1156	16 23 46	842	17 22 31	314	407	17 16 19	148	18 1 8	259	1109	17 16 43	702	17 22 46	407				
5	Feb. 21 14	Feb. 23 8	1114	22 20 40	980	22 11 32	134	338	21 14 48	224	22 21 5	114	951	22 16 42	869	23 2 57	82				
6*	Feb. 26 19 22	Feb. 28 19	1300	27 20 33	292	27 21 57	1008	533	27 18 43	130	28 0 42	663	1168	27 19 29	475	27 21 56	693				
7*	Mar. 11 13 53	Mar. 13 24	1312	12 15 26	661	12 5 37	651	531	12 15 25	132	12 20 8	399	1145	12 13 59	590	12 6 35	555				
8	Mar. 15 8	Mar. 18 22	1125	15 17 1	861	16 3 4	264	413	15 15 0	179	16 0 32	234	1166	15 17 8	607	16 3 7	559				
9	Mar. 20 14	Mar. 22 23	1123	21 17 41	931	21 6 28	192	366	20 15 36	205	21 2 43	161	951	21 17 25	784	21 3 25	167				
10	Apr. 15 16	Apr. 17 24	1113	16 0 51	961	16 12 19	152	355	16 14 20	217	16 7 7	138	957	16 17 19	775	16 4 9	182				
11*	May 11 23 10	May 13 22	1118	13 14 41	971	12 11 21	147	364	13 13 9	211	13 5 0	153	929	13 17 37	783	13 4 39	146				
12	May 14 12	May 17 20	1130	14 21 20	972	15 10 18	158	365	14 15 6	221	14 21 13	144	899	16 17 11	809	16 3 51	90				
13	June 8 2	June 12 4	1154	11 16 23	958	11 11 41	196	361	9 13 34	238	8 23 0	123	910	10 17 39	800	11 0 35	110				
14	June 21 12	June 24 20	1152	22 20 3	991	23 10 41	161	361	23 15 28	232	22 5 48	129	903	23 15 52	838	22 8 13	65				
15*	July 5 9 5	July 7 22	1197	5 16 31	975	7 10 41	222	415	5 16 30	244	7 8 22	171	904	5 17 3	835	6 6 40	69				
16	July 10 5	July 12 2	1334	10 16 41	954	10 23 4	380	454	10 16 35	226	11 8 15	228	973	10 18 35	794	10 23 10	179				
17*	July 14 16 31	July 17 16	1177	15 0 40	905	15 0 40	272	400	16 15 9	174	15 2 19	226	1016	16 16 19	707	15 23 22	309				
18*	July 31 21 6	Aug. 2 24	—	16 15 6	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
19	Aug. 4 10	Aug. 5 24	1090	4 17 29	988	5 1 20	102	334	4 13 15 and 5 13 2	228	5 1 2	106	880	5 17 3	—	—	—	—			
20*	Aug. 14 12 27	Aug. 16 24	1288	14 16 23	899	14 21 41	389	412	14 15 55	214	14 21 46	198	1059	14 18 33	786	14 21 42	273				
21	Aug. 17 20	Aug. 19 20	1100	19 15 2	919	18 10 38	181	336	19 14 38	240	18 9 10	96	919	19 16 1	830	18 2 19	89				
22*	Sept. 6 23 30	Sept. 7 24	1102	6 23 43 and 7 2 39	941	7 10 5	161	330	7 14 28	174	7 3 25	156	925	7 18 5	803	7 3 23	122				
23*	Sept. 9 21 30	Sept. 15 4	1140	10 17 58	941	10 9 45	199	354	10 6 12	176	10 20 0	178	942	14 16 20	793	11 1 30	149				
24	Sept. 21 14	Sept. 22 22	1098	21 21 33	900	22 10 50	198	369	22 0 47	154	21 21 44	215	937	22 17 32	745	22 4 21	192				
25	Oct. 7 12	Oct. 9 24	1160	8 23 0	907	8 11 53	253	360	7 15 57	158	7 20 16	202	937	7 18 17	764	7 22 21	173				
26*	Oct. 16 11 13	Oct. 18 2	1127	16 18 7	762	16 20 57	365	389	17 2 30	58	16 18 21	331	1066	16 18 7	683	16 20 56	383				
27	Oct. 30 12	Oct. 31 11	1119	30 19 50	950	30 13 40	169	358	30 12 24	222	30 21 39	136	911	30 15 45	805	31 1 30	106				
28	Nov. 2 13	Nov. 4 5	1214	3 19 22	872	3 10 21	342	350	3 6 48	99	3 17 6	251	968	3 15 8	762	3 0 6	206				
29	Nov. 16 4	Nov. 16 24	1076	16 20 13	878	16 20 6	198	375	16 20 3	161	16 19 30	214	1013	16 19 29	834	16 5 47	179				
30	Dec. 3 11	Dec. 7 3	1085	6 20 25	924	5 8 48	161	348	4 4 5	234	3 20 48	114	987	4 15 21	786	5 2 12	201				
31	Dec. 9 18	Dec. 12 14	1097	9 22 53	987	12 8 59	110	301	11 5 27 and 12 4 19	160	11 21 27	141	927	11 19 22	813	12 4 43	114				
32*	Dec. 16 11 34	Dec. 18 6	1185	16 18 10	803	16 18 34	382	447	16 18 9	117	16 18 42	330	1108	16 18 3	859	18 4 38	249				
33	Dec. 21 22	Dec. 23 24	1130	22 20 40	978	22 14 23	152	341	22 14 12	160	22 21 12	181	952	22 18 0	843	22 23 47	109				

The intervals of maximum frequency in 1929 are 70–79 γ for N, 60–69 γ for W, and 20–29 γ for V. These are the same as in 1926 and 1927, but in 1928 the maximum frequency for W was about one interval higher. In 1923, the year of the last sunspot minimum, the intervals were 40–49 γ for N and W, 10–19 γ for V.

On 50 days in 1929 the absolute range in either N or W was 160 γ or more. The numbers of such days in the years 1915 to 1928 were, in order, 30, 47, 35, 56, 58, 36, 27, 32, 11, 10, 24, 46, 41, 48. The frequency of occurrence in 1929 of ranges in excess of 199 γ is about one-half that in 1926 and much the same as in 1927 and 1928. There were nine days on which the range in each of N, W, and V was 200 γ or more, as compared with 18 such days in 1926, seven in 1927, and five in 1928.

Irregular changes in Declination.—In connexion with the supply of declination data to mine surveyors it has been the practice to classify the hourly periods between the exact hours G.M.T. into four groups according to the range in declination within each period. The range limits, which were adopted in consultation with representative mine surveyors, are :—less than 5', between 5' and 15' between 15' and 30' and greater than 30'. This method of classification has been applied to the declination records obtained in the year 1929 and the actual frequencies of occurrence of hourly ranges in the last three of the four divisions mentioned are set out below. Owing to defects in the record ranges could not be assigned in the intervals January 3d 10h–3d 12h, February 16d 6h–16d 9h, June 10d 10h–10d 16h, July 6d 4h–6d 9h, August 1d 10h–1d 16h, 1d 19h–1d 21h, 2d 5h–2d 10h, 3d 2h–3d 9h, September 5d 2h–5d 6h, September 28d 18h–28d 20h. A range of 30' is equivalent to a change of 145 γ in the component of horizontal force perpendicular to the magnetic meridian.

Number of cases per month.

Range Interval.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
5' to 15'	37	81	124	55	49	47	60	52	91	124	96	109	925
15' to 30'	4	22	6	1	4	1	6	7	17	20	12	13	113
>30'	0	9	21	0	0	0	1	0	3	2	7	3	46

Hourly Distribution. 1929.
Hour ending at (G.M.T.).

Range Interval	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
5' to 15'	56	55	43	44	35	31	25	32	21	23	27	33	22	19	26	35	38	35	51	51	54	62	50	57
15' to 30'	7	7	6	6	5	4	0	1	0	0	0	0	0	0	5	8	5	9	11	11	10	10	8	
>30'	1	3	2	1	1	1	1	1	1	1	0	0	1	1	1	1	1	6	3	5	6	4	3	1

On the average quiet day the most conspicuous change in declination is that from the most easterly value at about 8h or 9h to the most westerly value at about 13h or 14h; the rate of change being greatest between 10h and 12h. The hourly range due to the regular diurnal variation at this time of day is less than 5', but doubtless it happens at times that the occurrence of slight disturbance will result in the hourly range exceeding 5', whereas the occurrence of the same degree of irregularity at another hour of the day would not cause the hourly range to exceed 5'. Thus the figures given above for the range interval 5'–15' tend to exaggerate somewhat the incidence of irregular changes between 9h and 13h. The hourly distributions of the frequency of occurrence of ranges between 5' and 15' and between 15' and 30' exhibit the well known tendency for irregular changes to occur predominantly during the "night" hours—at least in Europe. Ranges in the first interval were nearly twice as frequent and in the second interval six times as frequent, between 16h and 4h as between 4h and 16h.

Principal Magnetic Disturbances during 1929.—Particulars of the principal magnetic disturbances recorded during the year are given in Table VI. Corresponding information for the same disturbances is given in the Lerwick Section. The magnetograms for the most highly disturbed days are not reproduced in this volume, but photographic copies may be obtained on application to the Director, Meteorological Office, Air Ministry, Kingsway, London, W.C. 2.

Remarks on Magnetic and Allied Phenomena, 1929.

January.—(Average Character Figure 0.61). One or two minor disturbances took place in the first half of the month. The first was ushered in by a "sudden commencement" at 5d 3h 7m and during the evening of the same day there were irregular oscillations in N and W, accompanied by a hump of about 55γ in V, with a maximum soon after 19h. At 8d 21h 28m a small rise in N and W marked the beginning of another disturbance which did not completely die away until the 11th. The first movements consisted of irregular dips in all components, with minima at about 9d 1h; during the rest of the 9th the movements were small and irregular, with temporary increases of activity about 18h and 22h. Slight agitation continued during the 10th and the early hours of the 11th.

Apart from minor activity on the 14th the rest of the month was quiet and on no day during the month was a range of 200γ attained in any component.

The large group of sunspots in solar latitude 7°N which passed the central meridian of the sun on Jan. 17.4d¹ was not apparently associated with any magnetic disturbance, nor was the spot in latitude 11°S which passed the meridian on Jan. 21.8d.¹

February.—(Average Character Figure 0.86). Quiet conditions persisted until the 6th; the 6th—10th inclusive were rather more disturbed, but were followed by another quiet period until the end of the 16th. Small but well-marked movements took place in all components at about 9d 18h and were repeated in very similar shapes and amplitudes shortly after 10d 16h, *i.e.*, at an interval of about 22h.

Following a "sudden commencement" at 16d 15h 7m a considerable disturbance took place on the 17th. Very small and rapid oscillations occurred from 16d 14—18h; after a quiet period these were renewed at 23h 10m, and irregular fluctuations took place in all components during the early hours of the 17th. The disturbance increased in intensity during the afternoon; in the horizontal components the fluctuations were irregular and the long-period oscillations not much in evidence, but in V the curve shows a large hump between 12h and 21h, and a dip from 22h till 18d 6h; these are separated by a rapid fall of 180γ in 13 mins., beginning at 17d 20h 27m. The ranges during this part of the disturbance were:—N, 306γ ; W, 253γ ; V, 407γ .

At Lerwick the disturbance in H attained four times as great a range as at Eskdalemuir, and the Lerwick H trace resembles the Eskdalemuir V trace.

The succeeding days were marked by continuous minor disturbance until 24d 20h, when conditions became quiet for 48 hours, with a temporary interruption from 25d 18h to 26d 2h.

At first only a small disturbance followed a "sudden commencement" at 26d 19h 22m. A curious feature of this disturbance was its abrupt ending in a rapid fall of 45γ in N and 55γ in W, beginning at 27d 7h 35m. After an interval of about 6 hours disturbance was renewed and developed during the night of the 27th—28th into the greatest storm of the year, all components undergoing large and rapid fluctuations. Superposed on these fluctuations there is a well-marked oscillation of long period with maximum about 18h and minimum about midnight, and amplitude roughly 140γ in N, 120γ in W, and 190γ in V. Among the features of the disturbance may be noticed several very abrupt and sharp dips and peaks in N between 18 and 22h, accompanied by rapid changes in V which carried the trace beyond the limits of registration in both directions. The ranges recorded in the period under discussion were:—N, 1008γ ; W, 663γ ; V, 693γ . The N range is about half the H range recorded at the same time at Lerwick and about double that recorded at Stoneyhurst.¹ The disturbance died down at 28d 4h, after a rapid but irregular rise in all components, though there was minor activity until 19h.

¹ Nature, 123 (1929) p. 450.

No noticeable solar disturbance appears to have occurred during the month, but the first of the two considerable magnetic storms mentioned above occurred approximately one solar rotation period after one of the January sunspots.

March.—(Average Character Figure 0·94). During the first 10 days of the month there was continuous minor activity. A large "sudden commencement" at 11d 13h 53m marked the beginning of a considerable disturbance which lasted until the evening of the 13th and was presumably associated with a naked-eye sunspot in lat. 10°S, time of central meridian passage March 11·0d.¹ The fluctuations in the horizontal components were small but rapid until 12d 1h, when they increased in range, becoming very large during the next 6 hours; during this period there was a dip of some 450 γ in V. From 7h till 14h V increased, reaching its maximum value for the storm at 13h 59m, after which it fell irregularly until about 13d 3h; N and W also increased until 12d 15h, afterwards falling until about midnight. The ranges recorded were:—N, 651 γ ; W, 399 γ ; V, 555 γ .

Small movements in all components at 13d 22h were repeated very nearly 24 hours later. On the 15th–16th occurred a disturbance of which the most noticeable feature is the large oscillation of V, with maximum at 15d 17h and minimum at 16d 3h; the absolute maximum occurred in a sharp peak at 17h 8m, which is reproduced at Lerwick as a dip, although the general outline of the curve is of the same shape as at Eskdalemuir.

During the rest of the month there was no large disturbance, though no day was free from some slight agitation, the most considerable being from 20th to 22nd.

April.—(Average Character Figure 0·70). No large disturbance took place in April, though the three days 16th–18th were allotted character figure 2. A "sudden commencement" at 4d 9h 27m was followed by slight agitation until 19h, but no disturbance worthy of note developed. The period 9d 16h to 10d 11h was very quiet, but the usual minor activity was then renewed and continued till the end of the 13th. Another quiet period followed, but was broken at 15d 16h by the beginning of a moderate disturbance which lasted until the early hours of the 19th. The fluctuations of the horizontal components were irregular and present no very clear features for description. W was below its undisturbed value from 15d 21h to 16d 8h, except for two humps at about midnight and 4h. A rapid rise of 60 γ in N, beginning at 0h 32m, was superposed on very small and rapid oscillations; N then fell irregularly to a minimum at 3h 40m which was followed by a rapid recovery. Very similar movements took place 22 hours later, beginning at 16d 22h 32m. During the night of the 15th–16th V rose gradually till 22h, afterwards falling slowly; a dip of 90 γ occurred around 4h and was followed by a gradual rise until 18h, after which V fell slowly for about 4 hours. At 22h 32m, simultaneously with an abrupt rise in N and W, the fall in V became more rapid, resulting in a dip of some 70 γ , with minimum at 17d 2h. During the 17th there was considerable agitation, which was continued in a smaller degree on the 18th. Conditions were very quiet from 19d 18h to 20d 23h and again from 22d 10h to 23d 12h. During the last three days of the month there was continued minor activity.

May.—(Average Character Figure 0·65). Continued agitation marked the first four days of the month until 4d 12h; conditions were then quiet for about 40 hours. Following a "sudden commencement" at 11d 23h 10m a small disturbance began about 13d 2h with irregular fluctuations in N and W and a dip in V; V rose during the morning and afternoon to a hump with rounded peaks at 15 and 18h, which were associated with jagged and irregular peaks in N. Disturbance was less during the next 24 hours. At 14d 21h an increased rate of fall of V synchronized with a sharp dip in W and a peak in N; the movements of N and W were superposed on the oscillations of very short period which are frequently found at about this time. There was slight disturbance throughout the 15th and 16th and until 17d 20h.

¹ Nature, 123 (1929), p. 425.

During the rest of the month there was continual minor activity. A small movement beginning at 23d 5h 30m consisted of a drop in N which reached a depth of 90γ at 6h 29m, and was followed by a partial recovery. The beginning of a small hump in W and a dip in V coincided approximately with the minimum in N. In the early hours of the 25th there were oscillations in N and W and a dip of about 60γ in V. A small disturbance took place on the 28th, beginning at 4h with small and rapid oscillations in N and W. N fell irregularly to a minimum at 13h, afterwards rising to a maximum shortly before 17h; there followed small fluctuations until 20h, when the disturbance died away. The movements of W were small; V fell gradually to a minimum at 14h and rose to a rounded maximum at 19h. The ranges were:—N, 156γ ; W, 110γ ; V, 55γ .

June.—(Average Character Figure 0.73). Minor activity marked the first nine days of the month, except for a quiet interval from 3d 22h to 6d 14h.

A moderate disturbance is regarded as beginning about 8d 2h, but little happened until the early hours of the 10th. Two small dips occurred in V at about 0h 30m and 2h, corresponding to small humps in W; after a gradual rise, another shallow dip occurred in V at 7h, slightly preceded by a dip of about 75γ in N, after which V continued to rise gradually to a rounded maximum at 18h. N rose slowly during the afternoon with many irregular fluctuations, reaching a maximum at about the same time as V; thereafter there were further fluctuations of the order of 60γ in range until 22h, when there was a temporary decrease of activity. At 11d 0h 35m N began to rise rapidly, reached a peak of 70γ at 0h 54m, and fell again somewhat less rapidly; this peak coincided with the lowest part of a dip in V.

During the next 24 hours the movements were of a similar character, but the afternoon maximum of N occurred about an hour earlier, while that of V took place shortly before 20h, simultaneously with a small dip in W and a peak in N. Disturbance was practically at an end at 12d 2h. The ranges were:—N, 196γ ; W, 123γ ; V, 110γ .

The next disturbance to be noted began about 21d 12h. The disturbance during this day and the next was small; the maximum of N occurred at 22d 20h 3m, after a rapid rise of 33γ , and was followed by a fall of 80γ in 25 minutes; simultaneously there was a very small hump in W and a dip in V. The 23rd was more disturbed, though the fluctuations were of small range. V rose during the afternoon in an irregular hump, falling again after 18h. The oscillations in N were small and rapid during the morning and afternoon; the interval from about 19 to 21h was rather less disturbed, but shortly after 21h very small and rapid oscillations in N and W were superposed on one or two larger oscillations; these ceased soon after 22h. V remained nearly constant from 23h to 3h of the 24th, when it began to fall, making a shallow dip and beginning to rise again at 5h. During the 24th there was continued agitation until 20h.

The ranges during the period just discussed were:—N, 161γ ; W, 129γ ; V, 65γ . About this time there were two naked eye-spots on the sun, in 9°S and 13°N lat. respectively, times of central meridian passage June 24.0d and June 24.5d.¹

Conditions were very quiet from 25d 20h to 27d 8h, and again from 28d 21h to 29d 21h. During the afternoon of the 28th there was a slight increase of activity, during which V rose in a rather large hump of some 65γ . Somewhat similar conditions recurred on the 30th and were prolonged into the morning of July 1st.

¹ Nature, 124 (1929), p. 69.

July.—(Average Character Figure 0.90). There was a certain amount of activity during the first eight days of the month. A very small "sudden commencement" at 5d 9h 5m was followed by a minor disturbance during the next two days. The greatest activity occurred at about 5d 16h; N and W rose to practically simultaneous maxima at 16h 30m, and immediately fell rapidly; V rose to a rounded maximum soon after 17h and fell gradually until about 7h the next morning.

The 9th was quiet, but a large disturbance began in the early hours of the 10th. The oscillations were at first small and rapid and there were no large movements except a gradual fall in N from 6h to 10h; but at 11h 35m there was a large "sudden commencement," after which the disturbance was much greater. Large peaks occurred in N at 12h 10m, 14h 34m, 16h 41m (the maximum for the storm), 18h 40m and 21h 29m. V rose to a maximum at 18h 35m, and fell irregularly to a minimum at 23h 10m. The minimum of N occurred 6 minutes earlier in a dip of very similar shape. Some agitation continued throughout the 11th, but conditions had become quiet by the early hours of the 12th. The ranges were:—N, 380 γ ; W, 228 γ ; V, 179 γ . A large spot passed the sun's central meridian at July 10.7d in Lat. 6°S.¹

Conditions remained quiet until the 14th. At 14d 16h 31m a "sudden commencement" marked the beginning of a disturbance which, though not particularly great, continued with about the same intensity until the end of the 16th, and in a smaller degree for a further two days. The most noteworthy movements were those of V, which were larger than usual in comparison with those of the horizontal components. The "sudden commencement" occurred during the normal afternoon rise of V; the maximum was reached shortly before 20h and was followed by a fall which was slow for four hours but became very rapid at midnight. Between midnight and 15d 0h 40m V fell by 95 γ , and it remained at a low value until about 4h 40m, when a gradual rise began, which lasted until 18h. N also fell rapidly during the 40 minutes following midnight, but recovered immediately and oscillated rapidly but irregularly until 7h. W was slightly below its undisturbed value from 14d 20h till 15d 3h. During the 15th V rose slowly to a maximum at 18h 14m and thereafter fell, slowly at first, but with increasing rapidity; the fall became very rapid at 23h and the minimum value for the storm was reached at 23h 22m, and was followed by a rapid recovery. Between 23h and midnight there was a dip in N, with rapid oscillations, and a sharp rise and dip in W. During the morning of the 16th conditions were quiet, apart from small rapid oscillations. During the afternoon V rose in a large rounded hump, the maximum for the storm occurring at 16h 19m; it then fell, irregularly at first, then very slowly until 17d 2h. N and W rose to maxima soon after 15h and continued to oscillate irregularly until nearly 23h. During the rest of the 17th minor fluctuations occurred continually, and these gradually died away during the 18th. The ranges during the period July 14–17, were:—N, 272 γ ; W, 226 γ ; V, 309 γ . A sunspot passed the central meridian at July 17.1d.

The 19th was quiet, but there was some activity on the 21st, 22nd and 23rd, and also on the afternoon of the 24th, and in a minor degree on most days till the end of the month; the period 27d 20h to 29d 14h was comparatively quiet.

August.—(Average Character Figure 0.71). A "sudden commencement" at July 31d 21h 6m was followed by a small dip in V between midnight and August 1d 4h, and small and rapid oscillations in N and W during the night and early morning. The records for the next two days are defective and no account can be given of the storm; judging, however, from Lerwick, it was of moderate intensity.

¹ Nature, 124 (1929), p. 631.

There was activity of a minor character on the 4th-5th and the 12th. On the 14th a "sudden commencement" at 12h 27m marked the beginning of a considerable disturbance. The oscillations in W, though rapid, were smaller than usual in comparison with the other components. In N and V the main features are normal, consisting of maxima during the afternoon, followed by rapid but very irregular falls; sharp dips took place in both shortly before 22h and between midnight and 15d 1h. After this the oscillations were small and very rapid for nearly 24 hours, and then more or less died away.

A small storm occurred at Abinger beginning at 14d 16h, and the following night aurora was seen from Sidmouth.

Activity was renewed on the 16th and the 18th and 19th. On the 18th V was below its undisturbed value from 0h to 8h, while continuous minor fluctuations took place in N and W; shortly after 10h there was a dip about 75γ in N.

During the rest of the month conditions were quiet.

September.—(Average Character Figure 0.80). There was no very large storm this month, but a number of minor disturbances.

A small disturbance occurred on the 7th, after a "sudden commencement" at 6d 23h 30m. The movements in N and W consisted of small rapid oscillations superposed on irregular fluctuations of longer period. V was below its undisturbed value from the "sudden commencement" till 7d 8h, and rose during the afternoon in a rounded hump with maximum about 18h.

There was a "sudden commencement" at 9d 21h 30m. The initial movements were less sudden than usual, and in addition oscillations of very small amplitude and period occurred simultaneously, and for some 20 minutes both before and after. This seems to be another example of the very small oscillations which are frequently found for about half an hour between 20h and midnight. In this case other groups of oscillations occurred at about 14h and 18h and the 4-hour period seems to be something real, as there was increased activity again around 2h and 6h on the 10th. The maximum of N occurred in a small peak shortly before 18h, and there was another peak two hours later; these coincided with small peaks in V and dips in W.

Great activity continued during the 11th and for the next five days. This was particularly marked on the evening of the 14th, when oscillations with a range of about 120γ took place in N between 16 and 17h and between 19h 30m and 20h 30m.

A small disturbance began soon after noon on the 21st and continued till the end of the 22nd. At 21d 21h 5m a rapid drop of 75γ took place in W, and soon afterwards a small hump in N; a series of very small and rapid oscillations occurred simultaneously in both components. About half an hour after midnight similar movements, but of the opposite signs, began, and these were associated with a rapid drop of some 80γ in V. V remained at a low value for the next 6 or 7 hours. N dipped at 22d 11h, and continued to fluctuate irregularly until 22h. At 16h 26m a drop took place in W similar to the one on the previous evening.

Activity continued during the succeeding days until the end of the 27th. Shortly before 27d 20h there was a rapid rise of 105γ in N, accompanied by very rapid oscillations; there was also a small oscillation in W and a drop in V. The remainder of the month was quiet.

October.—(Average Character Figure 0·84). During the first six days there was almost continuous activity of a low order. A sunspot in lat. 11°N passed the central meridian at 4·7d¹ but there was no particular disturbance around this time, although between 14h and 24h on this day there were several groups of small and rapid oscillations in N and W.

The first disturbance to be noted began on the 7th, with a drop of 70γ in N between 9h 40m and 10h 20m. Fluctuations in all components were rapid but not very large during the next 48 hours or more. Perhaps the most noticeable feature is the gradual drop in W from 16h to 23h on the 7th, followed by a rise of 125γ between 21h 50m and 22h 10m; simultaneous with the latter was a drop of 78γ in V. On the 8th there was a slight dip in N between 11 and 13h, the minimum for the storm occurring in a sharp dip at 11h 53m. Abrupt peaks occurred in N at 17h 40m, 20h 34m and 23h 0m; each of these coincided with a small drop in V and an oscillation in W. The disturbance continued on the 9th, but the only movements worthy of note were sharp rises of about 70γ in N at 14h 24m, 18h 57m and 21h 40m, associated with small movements in W and V. The ranges during the 7th–9th were:—N, 253γ ; W, 202γ ; V, 173γ .

Sunspots were visible in lat. 19°S from October 6th to 17th (central meridian passage 10·8d) and in lat. 10°S from the 7th to 19th (central meridian passage 13·4d).²

None of the succeeding days was free from minor activity, and on the 16th a considerable disturbance began with a “sudden commencement” at 11h 13m. Many large and rapid fluctuations took place in all components between 16d 15h and 17d 3h. V increased rapidly after 16d 15h. From 17h to 21h was a period of great activity. The maximum for the storm of N and V, and a sharp though small peak in W, occurred at 18h 7m, and all three components fell abruptly shortly afterwards. At 20h 36m N and V began to fall abruptly; V had fallen by 220γ to a sharp minimum at 20h 56m; and N by 260γ a minute or two later, recovering immediately. Thereafter the fluctuations were less rapid but still irregular till 17d 3h. There was a small outbreak of activity from about 7–8h, but apart from that oscillations were small on the 17th until at 16h 17m an abrupt movement, similar in all components to the “sudden commencement” of the day before, marked a renewal of disturbance, in which the sequence of events also was somewhat similar. The disturbance died away during the early hours of the 18th. The ranges were:—N, 365γ ; W, 331γ ; V, 383γ .

It is perhaps worth mentioning that there is a close similarity between the curves for 17d 22h to 18d 8h and those for 18d 22h to 19d 8h, especially in the case of N. A tall peak in N soon after 17d 22h, and dips at 18d 1h 30m and 5h, were reproduced very closely 24 hours later.

From the end of the 25th till noon of the 28th conditions were quiet. During the next 48 hours small oscillations, with period of the order of 100 secs. and amplitude 1 or 2γ in N, are particularly noticeable. During the 30th a disturbance of moderate intensity developed, beginning with a small dip in N between 15 and 17h. Outbursts of activity between 19 and 20h, about 22h and between 31d 1 and 2h, resulted in considerable oscillations in all components.

A sunspot, visible from October 24th till November 6th in lat. 10°N , passed the central meridian at October 31·0d.³

November.—(Average Character Figure 0·67). Conditions were disturbed during the first seven days of the month, particularly from 2d 20h to the morning of the 4th, during which period ranges of 342, 251 and 206γ were recorded in N, W and V.

¹ Nature, Vol. 124, p. 631. ² Nature, Vol. 124, p. 631. ³ Nature, Vol. 124, p. 737.

N was below its undisturbed value from 5 to 13h on the 3rd. During the afternoon three peaks occurred in N and V, and three dips in W; in each case the maximum in V occurred first, followed after a minute or two by the minimum in W, with the maximum in N a few minutes later still; the maxima in N occurred at 15h 25m, 17h 14m and 19h 22m.

A sunspot in lat. 14°N passed the central meridian at 3.7d. Another in lat. 10°S passed the central meridian at 9.6d,¹ but there was little disturbance at this time, the 8th to 14th inclusive being quiet. This sunspot had a metallic prominence, and was a return of that which passed the central meridian at October 10.8d.

A small disturbance began in the early morning of the 16th, and continued during the day, dying away rapidly after 22h. The periods of greatest activity were from 14h 30m to 16h, and from 18h to 21h. In each case there was a peak in V and irregular oscillations in N and W.

Conditions were then quiet, with the exception of the afternoon of the 20th, until the 26th. During the remainder of the month there was continued activity of a low order.

A sunspot, which was a new outbreak in the place of that of October 31.0d, passed the central meridian at November 27.9d in lat. 13°N , and a conspicuous naked-eye spot, a return of that of November 3.7d, at November 30.3d in lat. 16°N .²

December.—(Average Character Figure 0.84). A disturbance began shortly before noon on the 3rd and lasted until the morning of the 7th, during which time the ranges were 161γ in N, 114γ in W and 201γ in V. The movements in the horizontal components were irregular and without any remarkable features. V was below its normal value during the early hours of the 4th, 5th and 6th, rising to irregular humps during the afternoons. After a few irregular oscillations in N and W between 20 and 21h on the 6th, the disturbance died away.

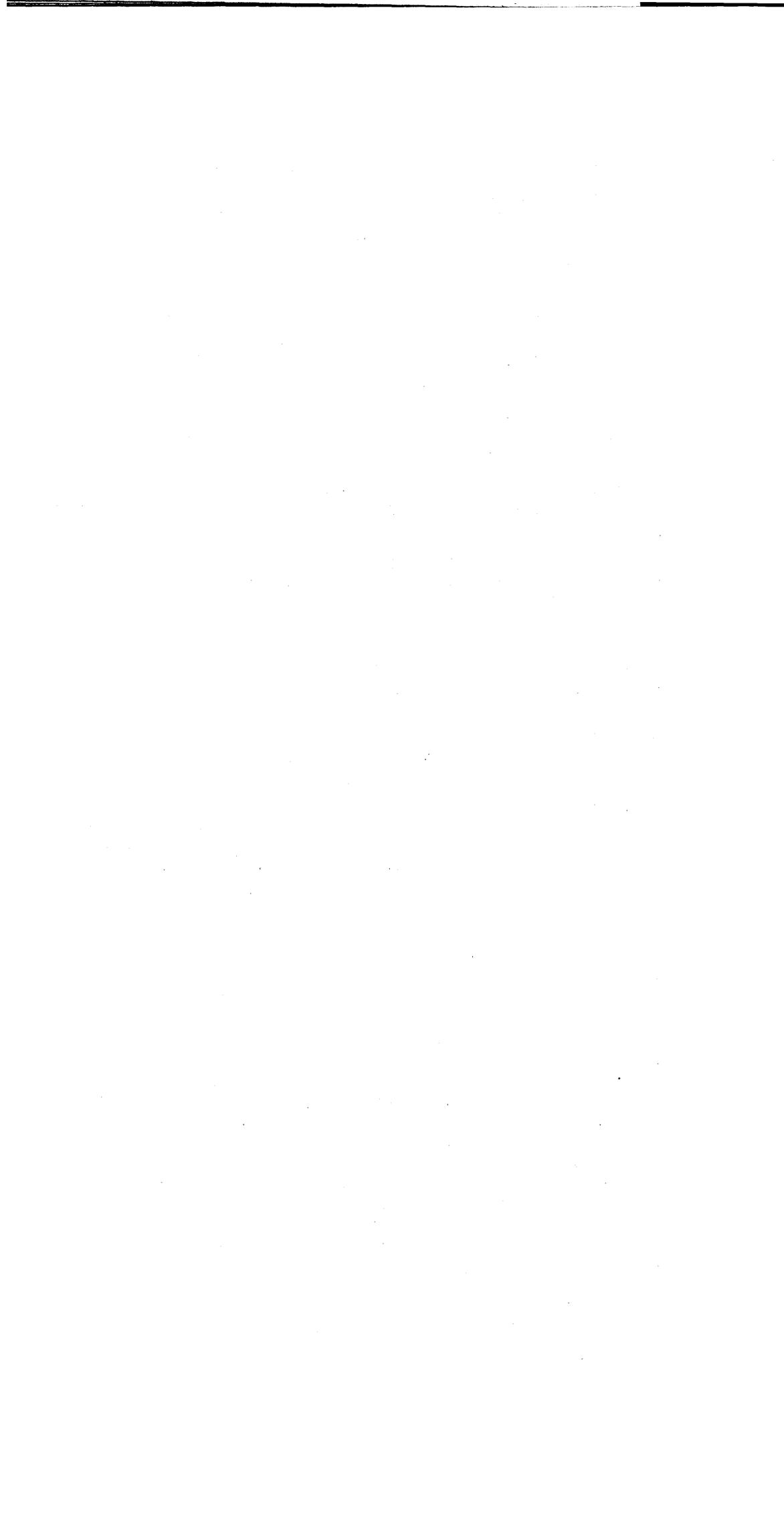
A small disturbance, with ranges of 110γ in N, 141γ in W and 114γ in V, occurred between the 9th and 12th. For the most part this took the form of activity of a small order, but there were considerable movements in W and V during the afternoon of the 11th and the morning of the 12th; a dip occurred in W between 21 and 23h on the 11th and in V between 0 and 2h and between 4 and 6h on the 12th, the two last having appeared on a smaller scale 23 hours earlier.

Conditions were quiet from 12d 16h to 16d 10h. At 16d 11h 34m a very small "sudden commencement" marked the beginning of a disturbance which, judged by the ranges, was among the half-dozen largest of the year. The main period of activity was, however, the three hours from 17 to 20h on the 16th, and it seems significant that one of the largest sunspots of the year passed the central meridian in lat. 6°N at 16.5d, and a smaller one in lat. 3°S at 16.7d. Between 18h and 18h 45m the maximum and minimum of both N and W, and the maximum of V, for the storm, occurred; but although before 17h and after 20h the oscillations in N and W were mostly small, V was rising rapidly from 12h onwards, and continued to fall until midnight. There was a renewal of disturbance, but on a smaller scale, the following night.

A moderate disturbance began at the end of the 21st and continued for about 48 hours. V rose in an irregular hump on the afternoon of the 22nd, and fell from 20h till midnight, during which period there were considerable oscillations in N and W. Activity continued till the end of the 23rd, and in fact for several days afterwards, no day during the rest of the year being free from some small disturbance.

A very large naked-eye sunspot crossed the central meridian in lat. 16°N at 27.5d. This spot occupied the place of that of November 30.3d.

¹ Nature, Vol. 124, p. 737. ² Nature, Vol. 124, p. 888.



Readings in millibars at exact hours, Greenwich Mean Time.

167. Eskdalemuir : H_b (height of barometer cistern above M.S.L.) = 237.3 metres.

January, 1929.

Table for January 1929 at Eskdalemuir. Columns: Hour G.M.T., Station Level (1-31), Mean (Station level), Mean (Sea level). Rows: 1-31 hours.

168. Eskdalemuir : H_b = 237.3 metres.

February, 1929.

Table for February 1929 at Eskdalemuir. Columns: Hour G.M.T., Station Level (1-31), Mean (Station level), Mean (Sea level). Rows: 1-31 hours.

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

Readings in millibars at exact hours, Greenwich Mean Time.

169. Eskdalemuir : H_b (height of barometer cistern above M.S.L.) = 237.3 metres.

March, 1929.

Table for March 1929 showing hourly barometric pressure readings at Eskdalemuir. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level). Rows show hourly data for each day from 1 to 31.

170. Eskdalemuir : H_b = 237.3 metres.

April, 1929.

Table for April 1929 showing hourly barometric pressure readings at Eskdalemuir. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level). Rows show hourly data for each day from 1 to 30.

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.

171. Eskdalemuir : H_b (height of barometer cistern above M.S.L.) = 237.3 metres.

May, 1929.

Table with 25 columns (1-24) and 25 rows (1-25). Columns 1-12 are labeled 'Station Level' with an upward arrow. Columns 13-24 are labeled 'Hour G.M.T.' with a downward arrow. The table contains numerical data for station level and mean (sea level) pressure.

172. Eskdalemuir : H_b = 237.3 metres.

June, 1929.

Table with 25 columns (1-24) and 25 rows (1-25). Columns 1-12 are labeled 'Station Level' with an upward arrow. Columns 13-24 are labeled 'Hour G.M.T.' with a downward arrow. The table contains numerical data for station level and mean (sea level) pressure.

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.

173. Eskdalemuir : H_b (height of barometer cistern above M.S.L.) = 237.3 metres.

July, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Station Level 1-31). Includes 'Hour. G.M.T.', 'Day.', 'Station Level', and 'Mean (Station level)'.

174. Eskdalemuir : H_b = 237.3 metres.

August, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Station Level 1-31). Includes 'Hour. G.M.T.', 'Day.', 'Station Level', and 'Mean (Station 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.

175. Eskdalemuir : H_b (height of barometer cistern above M.S.L.) = 237.3 metres.

September, 1929.

Table for September 1929 showing pressure readings at Eskdalemuir. Columns include Hour G.M.T., Station Level (1-30), and Mean (Station level). Rows show hourly pressure values in millibars.

176. Eskdalemuir : H_b = 237.3 metres.

October, 1929.

Table for October 1929 showing pressure readings at Eskdalemuir. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level). Rows show hourly pressure 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.

177. Eskdalemuir : H_b (height of barometer cistern above M.S.L.) = 237.3 metres.

November, 1929.

Table for station 177, Eskdalemuir, November 1929. Columns include Hour G.M.T., Station Level (1-30), Mean (Station level), and Mean (Sea level). Rows show hourly pressure readings in millibars.

178. Eskdalemuir : H_b = 237.3 metres.

December, 1929.

Table for station 178, Eskdalemuir, December 1929. Columns include Hour G.M.T., Station Level (1-31), 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., 1005.6 mb. is written 005.6. This rule does not, however, apply to monthly means.

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

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

179. Eskdalemuir : $H_b = 237.3$ metres.

1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Station Level.	985.15	984.99	984.81	984.70	984.67	984.73	984.85	984.99	985.15	985.16	985.11	985.03	984.93	984.87	984.83	984.82	984.85	985.01	985.15	985.30	985.39	985.40	985.36	985.28	985.02
Sea Level.	1014.18	1014.03	1013.85	1013.75	1013.71	1013.75	1013.81	1013.87	1013.94	1013.86	1013.74	1013.61	1013.47	1013.39	1013.36	1013.39	1013.47	1013.72	1013.94	1014.16	1014.31	1014.37	1014.35	1014.30	1013.84

PRESSURE AT STATION LEVEL: MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

180. Eskdalemuir : $H_b = 237.3$ metres.

1929.

Month.	Mean.	Hour. GMT. 1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	996.56	-0.06	-0.11	-0.14	-0.29	-0.42	-0.49	-0.41	-0.11	+0.17	+0.33	+0.38	+0.15	-0.09	-0.20	-0.17	-0.10	0.00	+0.08	+0.19	+0.31	+0.33	+0.30	+0.26	+0.09
Feb.	988.82	+0.25	+0.13	+0.01	-0.17	-0.21	-0.21	-0.17	-0.02	+0.11	+0.12	+0.16	+0.09	-0.15	-0.34	-0.43	-0.42	-0.30	+0.02	+0.11	+0.18	+0.24	+0.32	+0.35	+0.39
Mar.	997.58	+0.06	-0.05	-0.21	-0.26	-0.28	-0.12	+0.12	+0.36	+0.49	+0.49	+0.37	+0.22	-0.01	-0.21	-0.39	-0.50	-0.50	-0.29	-0.03	-0.11	+0.18	+0.19	+0.13	+0.13
April	987.91	+0.51	+0.26	+0.12	-0.05	-0.21	-0.16	-0.13	-0.15	-0.04	+0.02	-0.06	-0.16	-0.18	-0.27	-0.46	-0.55	-0.79	-0.30	0.00	+0.35	+0.52	+0.53	+0.59	+0.61
May	985.17	+0.20	+0.03	-0.06	-0.09	-0.03	+0.07	+0.14	+0.20	+0.20	+0.12	-0.01	-0.07	-0.23	-0.25	-0.36	-0.49	-0.47	-0.39	-0.21	+0.15	+0.35	+0.42	+0.41	+0.37
June	985.76	+0.09	-0.09	-0.28	-0.34	-0.29	-0.23	-0.11	-0.03	+0.01	-0.05	-0.14	-0.11	-0.11	-0.08	-0.12	-0.09	-0.12	-0.05	+0.11	+0.28	+0.47	+0.53	+0.44	+0.30
July	986.90	+0.37	+0.26	+0.10	+0.04	-0.02	+0.03	+0.06	+0.13	+0.09	+0.02	-0.12	-0.09	-0.13	-0.23	-0.27	-0.38	-0.46	-0.46	-0.32	-0.07	+0.21	+0.38	+0.43	+0.43
Aug.	983.84	-0.09	-0.17	-0.38	-0.46	-0.41	-0.21	-0.03	+0.06	+0.18	+0.13	+0.07	+0.04	-0.02	+0.05	0.00	-0.08	-0.09	-0.05	+0.14	+0.31	+0.35	+0.36	+0.22	+0.08
Sept.	989.53	+0.34	+0.13	-0.29	-0.51	-0.62	-0.56	-0.49	-0.46	-0.18	-0.15	-0.14	-0.10	-0.08	-0.11	-0.23	-0.23	-0.06	+0.18	+0.39	+0.66	+0.69	+0.69	+0.63	+0.50
Oct.	976.65	-0.03	-0.21	-0.33	-0.43	-0.43	-0.45	-0.27	-0.07	+0.12	+0.03	+0.03	+0.03	-0.09	-0.09	-0.09	-0.02	+0.12	+0.38	+0.42	+0.40	+0.39	+0.29	+0.23	+0.07
Nov.	972.94	-0.18	-0.31	-0.46	-0.52	-0.30	-0.17	+0.17	+0.39	+0.55	+0.63	+0.45	+0.07	-0.11	-0.39	-0.40	-0.32	-0.19	+0.11	+0.15	+0.16	+0.21	+0.20	+0.15	+0.10
Dec.	968.87	-0.01	-0.32	-0.67	-0.88	-1.12	-1.13	-1.04	-0.72	-0.28	-0.04	+0.09	-0.02	+0.11	+0.32	+0.56	+0.74	+0.76	+0.79	+0.69	+0.55	+0.55	+0.49	+0.40	+0.18
Year	985.02	+0.12	-0.04	-0.22	-0.33	-0.36	-0.30	-0.18	-0.04	+0.12	+0.14	+0.09	+0.01	-0.09	-0.15	-0.19	-0.20	-0.17	0.00	+0.13	+0.28	+0.37	+0.39	+0.35	+0.27

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY.

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

181. Eskdalemuir : $H_b = 237.3$ metres.

1929.

Month.	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	mb. 002.0	mb. 996.6	mb. 978.7	972.8	mb. 011.8	mb. 009.0	mb. 986.7	mb. 975.5	mb. 982.6	mb. 980.1	mb. 995.9	mb. 986.9	mb. 984.6	mb. 981.8	mb. 980.9	958.5	mb. 987.9	mb. 974.0	mb. 983.8	mb. 961.0	001.2	mb. 996.9	mb. 969.1	mb. 960.1
2	006.5	001.9	979.8	975.1	009.0	002.5	991.9	984.1	987.7	981.5	986.9	977.8	982.3	978.5	986.5	980.9	993.7	987.9	964.8	960.8	996.9	986.6	965.4	945.7
3	007.9	005.8	987.3	978.6	002.5	997.4	991.6	988.7	988.7	982.7	977.8	972.5	979.0	977.4	984.0	971.3	993.2	985.4	970.3	960.7	999.3	989.4	968.4	960.8
4	007.5	003.4	994.5	987.3	998.7	992.5	989.7	979.1	982.7	968.2	979.5	975.1	978.6	977.5	977.6	970.0	986.9	984.6	976.1	970.3	999.0	984.3	965.9	961.1
5	003.4	996.6	995.9	994.0	994.1	990.6	992.9	980.0	969.3	965.6	979.1	969.8	980.4	976.8	981.3	977.6	992.3	986.2	973.8	958.0	984.3	971.0	961.1	935.1
6	996.6	991.1	997.6	993.0	999.5	993.5	995.7	992.9	969.2	957.0	969.8	961.6	988.6	980.4	979.4	972.9	999.1	992.0	958.0	952.7	977.8	971.2	955.7	934.5
7	008.1	006.2	998.0	992.5	001.7	999.3	995.5	992.1	972.6	964.9	980.0	963.9	994.2	989.0	986.6	974.6	999.9	998.0	974.5	955.6	979.1	964.8	961.2	931.1
8	013.0	008.1	992.5	987.1	999.3	996.1	992.1	987.3	985.9	971.3	981.9	979.7	994.2	992.2	988.1	984.6	998.0	989.3	976.9	966.5	979.1	963.8	960.9	947.4
9	012.1	001.6	988.3	980.2	998.1	995.6	991.9	987.2	991.7	985.9	991.1	981.8	992.2	986.6	987.1	983.1	992.5	986.8	991.8	976.9	977.9	968.9	961.8	954.3
10	008.2	000.5	986.6	980.4	996.4	993.1	999.4	991.2	990.0	980.0	995.3	990.4	987.3	982.4	988.0	983.2	994.7	992.4	990.9	980.6	978.3	967.9	970.3	958.8
11	013.4	008.2	987.6	981.5	000.2	994.0	002.0	999.0	985.1	978.3	995.2	992.0	994.2	987.3	988.9	981.0	994.3	987.4	995.6	983.0	978.2	947.8	962.2	951.3
12	013.7	012.3	993.2	987.4	007.2	000.2	000.7	995.0	985.3	982.6	992.2	978.7	000.4	994.2	993.7	988.7	991.3	986.0	996.0	994.2	963.3	953.9	987.2	961.8
13	012.5	005.2	991.4	987.1	007.2	004.2	995.3	988.2	985.2	973.3	979.2	972.9	001.8	000.4	993.7	983.6	992.0	987.6	995.6	992.3	970.5	963.3	987.2	980.9
14	005.2	994.8	988.5	983.7	004.3	000.9	989.8	984.4	973.3	964.5	978.8	976.5	001.7	000.2	990.7	984.7	990.5	985.7	999.5	990.6	974.4	970.0	991.3	980.0
15	994.8	984.9	983.7	976.0	003.5	001.4	989.7	983.3	987.0	971.2	981.1	973.6	000.6	993.7	990.6	986.3	997.9	990.4	999.8	988.9	975.3	966.1	003.7	991.4
16	990.7	985.5	988.9	976.4	001.6	997.1	995.1	989.5	997.1	987.0	989.5	973.0	993.7	986.8	986.4	977.4	000.0	997.1	988.9	974.6	975.5	965.8	008.9	003.7
17	985.5	983.7	994.3	988.9	997.1	995.1	995.0	991.3	997.8	995.6	995.7	989.5	987.6	986.6	979.9	974.7	997.1	988.1	982.2	979.3	988.8	975.5	009.9	005.9
18	989.0	983.9	997.3	993.9	997.2	995.2	991.8	986.4	997.8	994.7	994.0	992.4	990.9	987.4	993.6	979.9	988.1	981.7	979.1	977.9	989.4	970.3	005.9	000.6
19	992.2	988.8	998.8	996.8	996.1	991.2	990.2	982.7	996.6	993.7	992.5	989.6	991.7	989.9	994.3	993.0	982.4	970.7	978.3	974.8	970.3	960.4	006.0	983.5
20	992.9	991.4	999.9	998.1	991.2	985.1	996.4	990.2	993.7	989.3	000.0	991.2	990.1	987.8	993.0	988.9	984.6	966.9	974.8	958.9	975.0	961.1	983.5	959.6
21	993.2	991.1	999.3	994.6	985.1	981.4	995.7	993.6	989.3	981.1	000.8	995.3	988.5	985.7	989.1	984.4	986.6	973.0	983.0	972.2	974.8	971.5	963.1	952.0
22	998.0	993.1	994.6	982.0	986.6	983.7	994.6	985.1	981.1	978.3	995.3	983.9	985.7	982.5	986.7	980.4	992.4	986.2	978.3	973.5	972.1	961.8	963.1	962.0
23	001.7	997.8	982.0	975.6	993.5	986.5	987.7	985.6	983.5	978.4	985.7	982.2	987.9	984.3	982.8	977.2	996.1	992.3	973.5	956.8	961.8	954.0	962.0	956.1
24	001.7	998.1	981.																					

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

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

January, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	a.																									
1	67.0	67.0	64.8	64.5	63.4	62.9	62.9	63.5	63.3	64.9	66.4	67.2	67.9	68.2	70.3	73.8	73.2	74.1	73.1	72.9	74.7	74.4	74.0	73.3	73.0	68.5
2	72.8	72.1	70.3	71.0	70.5	70.3	71.5	71.6	72.7	72.9	73.7	75.0	75.0	74.9	74.6	74.1	73.4	73.2	73.6	73.9	74.0	73.6	73.2	72.8	72.2	73.0
3	72.4	71.9	71.2	71.1	70.6	70.6	70.5	71.0	71.3	72.0	72.9	73.5	73.9	73.9	73.5	73.0	72.8	72.4	72.5	72.3	72.2	72.1	72.3	72.6	72.2	72.2
4	72.7	72.3	72.0	70.5	70.2	71.3	70.4	70.8	71.7	72.5	73.1	73.6	73.4	73.0	73.4	73.2	72.9	72.3	72.4	72.6	72.9	72.8	72.8	73.0	72.3	72.3
5	73.0	73.5	73.4	73.0	73.1	73.5	73.1	73.1	73.4	73.7	74.0	74.0	74.0	73.6	73.7	73.4	73.3	73.3	73.4	73.6	73.8	73.2	72.7	72.7	73.4	73.4
6	72.5	72.8	73.0	73.1	73.1	73.1	73.2	73.9	74.0	73.6	74.0	74.1	74.3	74.2	73.7	74.0	73.6	73.6	73.5	73.2	73.2	73.1	73.0	72.6	73.4	73.4
7	72.3	72.4	72.0	72.1	72.1	72.2	72.6	72.8	72.9	73.1	73.3	73.5	73.9	73.7	73.5	73.2	73.1	72.9	72.8	72.5	72.5	72.9	72.3	72.5	72.4	72.8
8	73.0	73.2	73.2	73.5	73.0	72.8	72.2	72.2	72.2	72.6	73.0	73.5	73.9	73.9	73.2	72.7	71.7	71.7	71.1	71.1	70.7	70.4	70.3	70.3	70.3	72.4
9	70.8	71.0	71.5	71.6	71.8	71.4	71.9	71.9	72.1	72.5	72.8	73.1	73.1	73.1	72.5	72.6	72.6	72.7	72.9	72.9	73.1	73.1	73.1	73.2	73.2	73.3
10	73.3	73.4	73.3	73.2	73.5	73.6	73.7	73.6	73.9	74.1	73.9	73.9	73.9	73.9	74.0	74.1	74.5	74.5	74.1	74.2	74.2	74.2	74.1	74.3	74.3	73.9
11	74.1	74.0	74.0	73.9	73.9	74.0	74.0	73.9	73.9	73.9	74.0	74.0	74.0	74.1	74.2	74.1	74.0	73.9	74.1	74.1	74.2	74.2	74.6	74.7	74.1	74.1
12	74.5	74.7	74.6	74.9	74.5	74.0	74.4	73.1	73.7	75.0	75.0	74.8	75.1	75.0	74.5	73.1	72.4	71.9	72.4	72.9	73.9	74.0	73.9	73.8	74.0	74.0
13	73.7	73.5	73.3	73.6	73.1	70.0	69.5	69.7	69.8	70.7	71.7	72.4	74.0	75.2	75.8	75.6	75.4	75.3	75.3	75.0	74.7	74.7	74.7	74.4	73.2	73.2
14	74.1	73.5	72.8	72.9	72.7	72.8	72.9	73.1	72.9	73.6	73.9	74.1	74.1	74.1	73.9	73.6	73.2	72.9	72.3	71.6	71.1	72.6	72.9	73.7	73.2	73.2
15	73.8	74.6	75.0	75.4	75.7	75.6	75.7	76.0	75.3	75.2	75.3	74.6	74.8	74.4	74.0	73.5	73.2	73.3	73.3	72.9	72.0	71.6	71.2	71.3	74.1	74.1
16	71.2	71.0	71.0	70.7	70.8	70.5	70.1	70.0	69.1	70.4	71.6	72.5	72.5	72.6	71.7	70.8	71.0	70.3	70.1	70.0	71.2	70.8	70.1	70.5	70.9	70.9
17	70.2	71.0	70.1	70.9	71.0	69.9	69.7	69.0	68.3	69.0	70.0	70.6	71.4	72.0	72.0	71.2	70.0	68.7	69.3	70.1	70.9	72.3	73.0	73.2	70.5	70.5
18	73.3	73.3	73.5	73.7	74.0	74.0	74.0	74.0	74.0	74.7	74.8	75.0	75.2	75.2	75.3	75.7	76.0	75.9	75.9	75.9	75.9	76.7	76.0	76.6	74.8	74.8
19	76.7	76.8	77.3	77.2	76.9	77.0	77.0	77.3	77.3	77.1	77.9	78.0	78.4	78.5	78.3	78.2	78.8	79.0	79.1	78.8	78.5	78.6	78.4	77.9	77.9	77.9
20	78.2	78.0	77.9	77.7	77.6	77.2	77.2	76.7	75.7	75.4	76.4	77.4	79.1	78.9	77.5	76.5	74.7	73.9	73.0	72.1	72.4	72.0	71.2	71.0	75.9	75.9
21	70.0	70.0	70.9	70.0	70.9	70.7	71.2	70.3	69.8	71.8	74.0	75.4	76.5	76.3	75.5	73.9	71.0	70.3	69.0	68.5	68.5	68.8	68.3	68.3	71.3	71.3
22	68.4	68.2	68.6	69.4	69.5	69.4	69.5	69.0	69.7	69.6	71.3	72.7	72.3	72.1	70.3	69.6	69.6	70.2	71.1	72.2	72.9	72.9	73.2	72.9	70.5	70.5
23	72.9	73.2	73.5	73.6	74.0	74.1	74.1	74.0	74.1	74.3	74.7	75.6	76.0	75.7	76.0	75.3	74.8	74.4	74.2	74.1	73.9	71.9	72.0	72.0	73.0	73.0
24	72.0	71.7	71.6	71.4	71.7	72.0	71.8	72.4	73.2	74.6	75.1	75.9	75.5	75.1	75.0	74.7	73.5	71.9	71.7	71.5	70.9	71.8	72.7	72.7	73.0	73.0
25	72.2	72.1	72.5	71.9	71.0	70.0	70.5	70.7	69.5	71.5	73.2	75.2	76.0	76.0	75.1	74.6	73.8	73.8	73.6	72.7	72.0	73.1	72.7	72.0	72.7	72.7
26	72.7	72.3	72.3	72.4	72.6	72.9	71.0	70.0	70.2	72.0	71.4	73.7	75.4	76.1	75.1	73.8	72.8	71.1	70.7	69.8	69.7	69.0	67.6	67.0	71.9	71.9
27	66.7	67.4	68.3	68.8	69.6	69.8	70.1	70.9	71.2	71.7	72.3	72.8	73.1	73.3	73.3	72.9	72.7	72.4	73.0	72.7	72.9	71.2	69.3	69.4	68.3	68.3
28	69.1	67.9	68.0	66.6	65.4	64.6	64.2	63.6	64.6	65.0	66.8	66.8	68.3	68.5	69.7	69.9	69.4	70.2	70.6	71.6	72.5	72.5	72.9	73.0	74.2	74.2
29	73.3	73.7	73.8	73.3	73.4	73.6	73.4	73.5	73.8	74.1	74.2	74.5	74.6	74.4	74.6	74.4	74.2	74.5	74.5	75.1	74.8	75.5	75.9	75.2	74.2	74.2
30	78.0	79.0	79.6	80.0	80.4	80.2	80.1	80.5	80.5	80.4	80.6	80.8	81.1	82.0	82.5	82.6	81.2	79.0	78.6	79.9	80.9	79.5	78.2	77.9	80.1	80.1
31	78.7	80.1	79.7	80.0	80.0	80.1	80.3	80.1	80.1	80.7	81.2	81.7	81.9	82.0	81.9	81.5	81.1	81.1	80.6	80.6	80.9	80.7	80.9	80.6	80.6	80.6
Mean ...	72.7	72.8	72.7	72.6	72.6	72.4	72.4	72.3	72.4	72.9	73.6	74.2	74.5	74.6	74.4	74.2	73.7	73.4	73.3	73.3	73.5	73.4	73.1	73.1	73.2	73.2

183. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

February, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
1	80.7	80.4	79.5	79.4	79.1	78.4	78.3	78.4	78.4	78.4	78.3	78.4	78.4	78.2	78.4	78.2	78.0	77.8	78.0	78.8	78.5	78.4	78.5	78.5	78.7	78.7
2	78.6	78.6	78.2	78.3	78.3	78.2	78.3	78.2	78.0	79.0	79.7	79.9	79.7	79.8	79.7	79.6	79.1	79.0	78.8	78.8	78.9	79.0	79.1	79.4	78.9	78.9
3	79.8	79.9	80.0	80.1	79.9	79.8	79.5	79.2	79.2	79.3	79.4	79.4	79.3	79.6	79.7	79.5	79.1	78.7	78.1	77.9	77.8	77.8	77.8	77.8	79.1	79.1
4	77.8	77.3	77.2	77.0	76.6	76.6	76.5	76.7	76.6	76.7	77.0	77.8	78.7	79.9	79.5	78.0	78.4	78.1	77.8	77.1	76.4	75.9	75.3	74.9	77.3	77.3
5	75.4	73.9	74.7	74.4	74.0	73.3	73.1	73.5	73.4	74.2	75.0	77.1	77.9	78.3	77.9	77.5	76.4	76.1	75.9	75.3	75.2	75.0	75.1	74.9	75.3	75.3
6	75.0	75.4	75.3	75.5	75.6	75.8	75.8	75.9	76.0	76.4	76.9	77.0	77.4	77.7	77.6	77.2	77.0	76.3	75.8	75.8	76.3	76.5	76.2	76.3	76.3	76.3
7	75.9	75.6	75.2	74.8	74.6	74.2	73.1	72.0	72.0	73.0	73.1	74.0	74.3	74.1	73.9	73.5	73.7	73.0	73.0	72.7	72.9	73.4	73.3	73.3	73.7	73.7
8	73.4	73.8	74.2	74.6	74.7	74.7	74.5	74.7	74.9	75.3	75.9	76.1	76.3	76.7	76.5	76.2	76.1	76.7	76.8	76.7	76.7	75.7	75.2	75.1	75.5	75.5
9	74.8	74.9	75.0	75.0	75.3	75.4	75.2	75.0	75.6	76.0	76.6	77.0	77.3	77.0	77.5	76.6	74.9	74.2	75.7	75.7	75.8	75.7	74.0	73.9	75.6	75.6
10	73.7	74.3	73.8	73.9	73.3	73.1	71.8	71.9	73.9																	

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

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

March, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	64.1	64.9	64.9	64.8	65.9	66.7	68.3	68.8	70.3	71.9	72.3	72.9	73.1	73.7	74.0	73.1	72.8	71.2	70.1	70.0	71.3	71.2	71.3	71.1	69.8
2	70.0	70.8	71.0	70.8	71.0	70.0	71.0	71.5	72.4	72.6	74.0	73.9	74.9	75.1	74.8	74.7	74.5	73.9	73.8	73.9	73.7	73.4	72.7	72.0	72.7
3	71.0	70.2	70.4	69.9	69.1	69.4	71.1	73.4	75.2	79.0	81.7	82.1	83.3	83.2	83.8	83.9	82.8	79.3	76.2	75.3	75.1	74.0	75.1	76.8	76.2
4	76.9	76.1	76.5	76.0	75.0	74.9	74.7	74.7	76.1	75.1	75.2	75.8	76.4	76.5	76.1	76.1	75.6	72.6	70.7	71.0	69.6	68.6	67.9	67.5	74.2
5	67.0	67.9	67.3	67.0	66.9	67.6	68.6	68.9	70.7	72.6	75.4	79.0	80.4	80.9	81.0	80.3	78.0	77.0	75.5	74.0	73.7	72.1	72.0	71.0	73.0
6	69.7	69.8	69.2	68.6	68.2	68.1	67.9	70.0	72.3	78.9	81.0	82.7	82.3	82.6	80.7	77.0	75.7	75.4	74.9	74.0	73.7	73.1	72.4	71.6	74.1
7	71.3	70.2	69.5	69.3	69.8	69.6	69.8	69.8	70.0	71.0	73.2	74.7	77.3	80.2	80.5	80.6	79.0	77.1	74.8	74.1	72.6	71.5	70.9	70.1	73.2
8	69.2	68.6	68.5	68.0	68.1	67.6	67.9	69.3	71.8	76.1	80.1	84.6	86.4	87.1	87.6	87.2	84.5	78.0	76.2	74.2	72.4	71.8	71.2	71.3	75.3
9	71.0	71.0	71.0	70.4	70.4	70.3	70.0	71.5	74.3	79.6	84.2	88.4	90.1	90.6	90.1	90.0	87.9	80.5	77.7	77.0	75.9	74.2	73.5	72.9	78.0
10	71.7	71.5	71.1	70.7	70.6	69.7	69.8	71.8	74.2	78.2	83.5	86.6	87.7	88.0	87.8	87.2	85.0	80.0	77.2	75.9	74.5	72.0	71.7	71.4	77.0
11	70.8	70.8	70.8	70.0	69.6	69.7	69.2	71.3	74.0	78.6	82.5	85.8	86.8	87.1	87.0	85.8	83.8	80.0	79.6	76.5	74.7	73.5	73.7	72.9	76.8
12	72.5	72.6	73.3	75.7	77.2	77.0	77.9	78.1	79.7	82.0	83.1	82.6	82.0	82.4	82.0	81.3	81.0	80.2	79.1	78.9	76.9	76.0	76.2	76.0	78.4
13	76.7	76.5	76.0	76.0	75.5	76.0	75.5	78.8	81.5	82.5	83.8	84.0	84.5	84.6	84.4	84.0	82.9	80.0	78.5	77.4	75.9	74.1	73.6	73.0	78.7
14	72.8	73.0	72.7	71.2	71.1	71.4	71.1	73.2	76.5	80.5	83.0	83.8	84.1	83.7	83.0	81.0	79.9	78.3	76.9	75.5	74.4	73.7	73.5	73.6	76.6
15	73.4	73.4	73.0	73.0	72.9	72.3	72.1	73.8	74.9	76.1	76.2	76.7	77.9	78.0	77.7	77.1	76.4	75.7	75.0	74.3	73.6	73.1	73.1	73.1	74.7
16	72.9	72.8	72.2	71.8	71.5	70.1	69.1	69.2	71.7	75.5	76.5	76.9	77.8	78.7	79.5	78.5	78.0	76.3	74.2	73.0	71.9	70.9	70.7	70.2	73.8
17	70.4	71.8	73.6	72.1	71.2	71.1	71.5	72.1	72.9	75.1	76.8	78.7	80.1	81.0	81.6	81.5	80.6	77.5	74.1	72.5	70.8	71.2	70.1	70.0	74.5
18	70.1	70.1	70.1	69.9	70.1	70.4	69.9	72.4	75.5	80.0	82.6	84.4	85.6	86.1	86.2	86.1	82.1	77.5	74.4	73.3	72.9	72.2	71.3	71.6	76.0
19	71.4	71.2	70.7	70.4	70.3	70.3	70.3	71.4	72.7	73.7	74.9	75.7	77.5	78.0	79.2	78.6	78.0	76.7	75.3	74.2	72.6	72.6	72.3	71.2	73.7
20	70.6	69.9	70.1	69.4	69.1	69.8	70.2	71.7	75.6	78.9	81.5	83.4	83.7	84.6	84.6	83.3	83.1	81.2	79.5	79.5	78.5	78.3	78.5	78.4	77.1
21	78.3	78.9	79.8	79.6	79.7	80.8	81.1	80.8	81.6	81.3	81.2	80.9	80.8	80.7	80.6	80.4	80.0	79.6	79.1	78.9	78.5	78.4	78.3	78.5	79.9
22	78.6	78.9	78.8	78.9	79.0	78.8	78.2	78.0	78.0	78.5	78.7	79.2	79.5	79.7	80.4	80.2	79.8	79.0	78.6	78.5	78.5	78.4	78.1	77.9	78.9
23	77.7	77.7	77.6	76.6	78.0	78.2	78.0	78.9	79.6	81.4	82.7	81.9	81.5	81.9	81.6	81.3	80.8	80.3	79.0	79.1	79.0	78.3	78.0	78.0	79.5
24	78.0	77.9	77.8	77.5	77.7	77.8	78.1	78.6	78.9	79.1	79.5	79.8	79.0	79.4	79.3	79.0	79.2	79.6	79.6	79.2	79.4	79.2	79.0	79.0	78.8
25	79.1	79.2	80.1	79.6	80.0	80.0	80.1	80.6	80.0	81.8	83.1	83.4	83.1	83.6	84.5	83.0	81.7	79.9	76.3	76.9	76.3	74.5	73.6	72.4	79.8
26	72.5	72.2	72.0	72.0	74.0	74.1	75.0	78.0	78.5	81.9	82.9	84.0	85.2	84.1	83.5	83.8	82.5	81.1	79.9	78.0	75.9	74.6	73.9	72.7	78.0
27	73.6	72.2	71.0	70.3	70.4	70.0	70.7	74.4	79.1	84.4	87.2	88.2	88.6	89.0	89.4	89.3	88.2	85.9	82.0	79.5	77.5	75.7	74.3	73.6	79.3
28	73.6	72.7	72.0	71.7	70.8	70.2	71.1	75.0	80.0	85.0	88.0	89.6	90.5	91.3	91.5	91.2	89.0	85.0	81.6	80.0	77.4	76.5	75.4	74.6	80.1
29	73.3	73.1	72.9	72.1	71.7	71.7	73.4	76.9	82.5	87.4	89.0	90.2	91.0	91.0	90.9	90.2	88.6	85.6	81.9	80.9	78.8	77.3	75.2	74.1	80.8
30	73.6	73.4	72.5	72.0	71.8	71.0	72.6	76.0	81.0	86.1	89.7	89.6	89.9	89.7	90.1	88.0	86.6	83.3	81.1	80.0	78.3	80.5	80.8	81.0	80.6
31	80.8	79.4	79.0	79.0	78.5	78.0	77.7	78.2	78.9	80.0	81.5	81.0	81.8	81.7	82.0	80.2	79.6	78.7	78.2	77.0	76.6	76.0	76.7	76.4	79.1
Mean ...	73.0	72.9	72.8	72.4	72.4	72.3	72.6	74.0	76.1	78.8	80.8	81.9	82.7	83.0	83.1	82.4	81.2	78.9	77.1	76.2	75.2	74.4	74.0	73.7	76.7

185. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

April, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	76.6	76.8	76.8	76.5	76.7	77.0	77.5	78.7	79.8	80.0	80.1	80.2	81.3	81.0	80.9	80.6	79.5	79.8	77.5	76.4	75.6	74.1	73.8	73.8	78.0
2	73.4	73.5	73.1	73.2	73.1	73.4	74.9	75.1	77.3	79.9	79.6	77.7	80.1	80.0	80.0	80.6	79.5	78.2	76.6	75.7	73.3	72.5	72.6	72.7	75.9
3	72.9	73.2	72.8	73.3	75.6	75.6	76.1	77.0	78.3	78.5	79.0	78.8	79.1	79.5	80.5	80.1	79.8	79.1	77.9	77.6	77.1	76.6	75.5	75.1	77.0
4	73.3	73.3	72.4	72.8	72.7	72.9	73.2	74.8	78.1	77.6	77.2	77.1	76.1	77.2	78.2	79.5	80.0	80.2	79.4	78.9	78.7	78.0	77.1	76.7	76.4
5	77.4	78.0	78.6	77.3	76.9	75.9	75.8	76.6	77.7	77.9	78.3	78.9	78.9	79.7	78.9	78.6	78.5	77.0	74.6	73.7	72.0	71.3	70.4	69.6	76.5
6	69.0	68.6	68.0	67.6	67.4	67.5	68.8	72.4	75.8	78.0	79.0	80.5	81.6	81.9	82.6	82.1	80.7	79.5	77.7	75.7	76.5	77.1	77.1	76.9	75.3
7	77.0	77.0	77.5	77.5	77.2	77.4	77.8	78.7	79.0	79.3	79.7	79.7	79.7	79.9	80.9	81.1	80.9	79.2	79.0	79.0	79.0	78.9	79.3	79.5	78.8
8	79.5	79.2	79.1	79.0	78.5	77.3	78.0	79.6	78.3	78.2	78.5	78.5	80.1	81.1	81.0	80.0	80.0	79.6	79.0	78.6	78.3	78.0	76.4	75.7	78.9
9	73.7	72.7	72.0	75.0	76.8	77.0	77.9	79.6	81.2	83.0	82.7	83.8	83.6	85.3	85.2	85.7	84.0	81.0	78.0	76.7	74.0	73.3	72.2	74.1	78.7
10	73.8	75.0	75.9	76.0	75.7	76.4	77.4	78.2	78.9	80.0	80.4	80.5	80.2	80.9	80.0	79.6	79.1	78.4	77.0	76.6	76.6	76.2	75.1	75.3	77.7
11	75.0	74.8	75.0	75.0	74.5	75.0	75.6	76.7	79.0	78.0	79.6	79.4	79.4	80.2	80.6	79.2	77.8	77.2	76.0	73.7	72.0	72.3	74.9	75.	

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

186. Eskdalemuir : Louvred Hut : h_1 (height of thermometer bulb above ground) = 0.9 metres.

May, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	a.																									
1	69.0	68.3	67.6	67.4	67.4	70.3	73.6	77.6	79.3	80.3	81.9	82.0	81.7	82.8	80.5	81.4	81.7	81.2	78.9	77.1	76.5	73.5	73.0	72.7	76.0	
2	73.4	73.3	73.3	72.8	73.6	73.8	75.3	78.2	80.1	81.0	82.3	81.5	79.1	77.7	76.2	77.0	75.6	76.7	76.4	76.0	75.0	74.6	73.9	73.6	76.2	
3	72.8	72.6	72.3	72.0	71.5	72.0	74.2	76.0	77.3	79.1	80.4	81.9	82.1	83.6	84.0	84.0	83.7	82.6	80.6	79.5	79.3	78.3	78.4	78.0	78.1	
4	78.4	78.0	76.9	77.0	76.8	76.6	76.9	76.9	80.0	80.0	79.8	82.0	81.7	82.1	80.3	80.3	79.7	79.2	79.4	78.6	78.2	77.9	78.0	78.0	78.9	
5	77.9	77.9	77.7	78.3	78.2	78.0	78.8	79.7	81.1	81.0	79.7	81.0	80.3	80.7	81.2	81.2	81.2	81.0	80.7	80.0	79.0	77.0	76.2	75.5	79.4	
6	74.0	72.7	72.6	72.7	72.9	74.6	76.2	77.3	77.4	78.0	77.9	77.9	78.5	78.3	78.9	79.7	79.5	80.3	77.6	77.2	77.3	77.5	77.6	77.6	76.8	
7	77.6	77.3	76.9	76.6	77.0	77.6	78.7	78.9	79.7	79.6	80.0	81.0	82.6	83.5	84.1	83.9	82.1	81.7	80.5	80.0	79.4	79.5	78.7	78.0	79.8	
8	78.0	78.0	78.0	77.9	77.4	77.9	78.5	79.7	79.7	80.7	81.2	80.0	82.3	80.4	80.6	81.0	82.2	82.3	81.2	80.0	77.4	76.8	77.0	76.9	79.4	
9	76.9	75.4	74.7	74.0	74.0	76.0	78.9	80.9	81.3	83.1	83.0	83.4	85.0	84.0	84.3	83.6	83.3	82.3	80.7	79.0	78.8	76.7	76.6	76.8	79.7	
10	77.7	78.4	79.0	79.4	79.5	79.7	80.1	80.2	80.1	80.5	80.7	81.2	81.4	81.1	81.2	81.0	80.9	80.9	81.0	81.0	81.0	81.0	81.0	81.0	81.0	80.3
11	81.1	81.7	83.3	81.6	81.3	81.5	81.8	82.2	83.5	83.4	83.9	83.9	86.0	85.5	84.2	83.4	83.3	82.8	81.8	80.6	79.4	79.5	79.2	79.2	82.3	
12	79.4	79.5	79.2	79.0	79.2	79.9	80.6	80.9	81.5	83.2	85.0	81.6	83.1	83.0	84.9	84.0	84.9	84.1	82.3	79.5	78.3	76.5	76.1	75.9	81.0	
13	74.1	73.5	72.6	72.1	73.3	75.0	77.4	80.5	82.4	82.7	83.3	84.0	84.4	85.6	83.6	83.4	83.2	81.8	81.8	81.0	80.1	79.7	79.3	78.9	79.7	
14	78.9	78.8	78.4	78.4	78.7	79.0	79.5	80.6	80.3	80.0	79.9	79.5	80.2	80.0	80.5	81.0	80.5	80.3	80.4	79.9	80.0	79.5	79.3	79.2	79.7	
15	79.2	79.0	78.1	78.7	78.6	79.4	80.0	81.2	82.4	84.2	85.7	83.6	85.7	85.7	85.1	86.2	84.3	84.1	83.0	81.1	80.6	79.9	79.5	79.2	81.7	
16	79.3	78.1	76.5	74.0	74.5	76.7	79.6	82.6	85.0	85.2	87.1	87.6	87.8	88.0	89.1	88.1	87.6	86.1	85.1	84.1	81.9	80.2	79.1	78.4	82.6	
17	76.1	77.3	75.8	77.0	77.6	78.6	79.0	80.0	82.0	82.4	83.7	85.0	86.2	86.9	87.2	87.3	86.6	85.3	83.5	80.9	79.5	78.5	78.0	77.4	81.3	
18	77.0	76.7	76.6	76.5	76.4	76.5	77.1	78.2	80.8	83.0	85.9	87.2	89.2	89.5	90.3	89.2	88.1	87.4	85.5	83.7	82.2	80.1	80.0	81.0	82.3	
19	81.0	80.8	81.1	81.0	81.5	81.5	82.6	83.2	84.6	86.7	87.4	88.7	89.1	89.9	90.1	89.2	88.1	87.5	85.6	84.4	83.9	82.6	81.0	79.3	84.7	
20	77.6	76.9	76.7	76.9	76.6	79.1	83.2	86.1	88.2	88.6	89.0	90.2	90.9	90.7	91.0	91.3	89.3	89.0	87.7	86.6	85.7	83.3	81.8	81.0	84.9	
21	80.8	79.7	79.3	79.0	78.7	80.5	83.4	86.0	87.2	88.5	89.0	89.9	90.6	90.7	90.3	89.9	89.0	87.7	85.1	84.1	82.0	82.3	80.9	81.1	84.8	
22	81.4	81.9	82.9	82.5	82.1	81.9	81.9	82.4	82.9	83.3	83.6	83.6	84.3	84.2	85.1	84.4	84.5	84.7	84.4	84.1	84.0	84.0	84.0	84.0	83.9	83.3
23	84.3	84.6	84.5	84.4	83.3	84.0	86.6	87.3	86.7	85.8	85.9	86.7	87.7	89.1	90.5	90.5	91.0	90.5	89.8	88.0	87.0	86.4	87.5	86.1	87.0	
24	84.7	84.7	82.7	83.6	84.5	85.4	87.9	89.0	89.4	89.2	88.9	87.1	87.1	86.6	87.9	88.8	88.7	87.9	87.0	85.9	85.0	84.4	84.1	83.1	86.5	
25	80.9	79.7	77.5	76.6	76.4	78.1	81.6	82.8	84.5	86.2	86.3	86.5	86.5	86.6	86.9	85.0	85.0	84.7	84.2	83.9	83.8	83.8	83.8	83.8	83.7	
26	83.5	83.4	83.7	83.5	83.6	83.9	84.1	84.8	85.9	87.8	88.6	90.0	91.9	91.6	92.1	91.6	90.9	90.7	89.9	88.3	86.8	86.6	85.6	85.3	87.2	
27	84.3	83.1	82.2	81.8	82.1	84.0	86.6	89.0	90.0	90.7	91.7	92.9	93.5	93.8	93.8	93.6	93.0	91.3	89.5	87.4	84.5	83.0	82.6	83.0	87.9	
28	83.6	83.6	84.1	84.7	84.9	85.6	86.2	88.0	88.6	89.0	88.0	88.2	88.5	87.6	88.0	87.3	85.4	84.5	83.4	81.5	80.8	80.7	80.9	80.7	85.2	
29	80.4	80.2	80.0	79.7	79.5	79.2	80.1	81.0	82.9	83.6	84.9	85.5	86.3	87.0	87.1	86.5	85.5	84.7	83.3	80.9	79.7	79.2	79.0	78.6	82.3	
30	78.6	78.2	78.6	78.5	78.8	79.2	79.7	81.3	83.1	84.7	86.5	87.7	88.6	89.2	89.7	89.6	89.0	87.8	85.9	83.7	81.6	79.7	78.0	77.3	83.2	
31	77.3	76.3	76.5	77.5	80.7	82.3	83.7	86.9	87.5	88.0	88.0	87.6	88.8	87.9	86.4	85.3	84.8	83.8	82.9	82.0	81.6	81.2	80.9	80.7	83.2	
Mean ...	78.7	78.4	78.0	77.9	78.1	79.0	80.4	81.9	83.1	83.8	84.4	84.8	85.5	85.6	85.7	85.4	85.0	84.4	83.2	81.9	81.0	80.1	79.7	79.4	81.9	

187. Eskdalemuir : Louvred Hut : h_1 = 0.9 metres.

June, 1929.

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	80.3	80.1	79.8	79.7	79.8	79.9	80.7	82.2	85.0	85.6	86.9	87.0	86.4	84.6	84.1	84.3	84.6	84.2	83.3	83.3	83.3	83.1	83.6	83.6	83.1
2	83.6	83.6	83.7	83.7	83.8	83.9	83.9	84.0	84.5	85.1	86.0	86.9	87.2	87.7	88.3	89.1	89.0	89.2	87.4	86.1	85.5	84.9	84.6	84.1	85.7
3	83.6	83.6	83.1	82.6	82.6	82.7	83.0	83.7	84.6	85.0	85.3	84.6	86.2	87.9	86.7	87.0	85.4	85.0	84.2	82.0	80.5	79.5	79.3	79.0	83.7
4	79.1	79.0	78.8	78.5	78.4	78.6	78.8	79.1	79.8	80.6	81.6	82.6	82.9	83.9	83.5	84.0	82.7	82.5	82.1	81.5	79.4	77.7	77.0	74.9	80.4
5	73.6	72.0	71.7	72.5	76.0	79.0	80.9	80.6	80.7	81.3	83.4	83.6	83.5	84.0	84.4	84.9	83.2	83.2	81.4	80.6	79.7	79.1	78.9	78.8	79.8
6	79.0	78.8	78.5	78.7	78.9	79.1	79.5	79.9	80.4	83.5	85.1	80.6	81.9	83.9	83.1	81.3	83.7	84.8	83.0	81.5	80.8	81.0	80.9	81.0	81.2
7	81.0	80.8	80.9	80.6	80.7	80.7	80.2	82.0	82.0	82.6	83.3	85.2	85.4	85.9	86.4	86.7	84.2	81.5	82.1	82.6	80.3	77.6	77.4	76.4	82.0
8	75.5	75.5	74.4	74.0	74.6	76.2	79.7	82.8	85.3	86.4	86.0	87.1	87.3	87.3	87.9	86.7	86.1	86.7	85.8	82.9	82.1	81.8	81.8	81.8	82.2
9	81.6	81.5	81.4	79.7	80.0	82.5	83.8	82.9	84.5	85.0	86.0	84.5	87.1	87.0	87.4	86.8	86.5	85.6	84.3	82.4	80.9	79.8	80.1	80.0	83.4
10	79.9	80.6	80.5	80.9	81.0	81.6	82.8	82.9	84.8	85.5	86.0	85.1	84.5	86.3	87.6	87.6	85.7	85.9	84.3	83.3	82.5	83.0	83.0	83.1	83.7
11	83.0	82.6	83.1	82.9	82.9	83.1	83.8	84.1	85.3	85.7	86.6	87.3	87.8	88.0	88.8	88.8	89.0	88.3	87.0	85.3	83.0	82.2			

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

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

July, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	83.3	83.0	82.9	82.9	83.0	83.6	84.1	85.7	86.4	87.0	87.0	87.0	88.2	88.3	87.6	89.0	89.0	87.9	87.0	85.0	83.1	82.6	83.6	83.0	85.4
2	80.6	81.0	82.7	82.5	82.6	82.9	83.5	83.8	85.3	85.7	86.0	85.2	85.6	86.7	85.9	87.0	87.0	87.1	85.1	83.6	81.9	80.3	79.7	78.8	83.9
3	79.3	79.7	80.2	80.4	80.9	81.7	82.8	84.0	86.7	87.0	87.0	87.2	86.6	87.5	89.2	89.8	88.1	88.0	88.0	86.5	85.0	83.0	83.9	83.8	84.7
4	83.7	82.5	82.7	83.3	83.4	83.8	84.0	84.9	86.7	87.6	85.8	86.3	85.9	85.5	85.5	85.4	85.3	85.1	85.2	83.9	83.5	83.0	82.0	82.3	84.5
5	82.4	82.3	81.9	81.9	81.9	82.7	83.5	83.7	84.1	84.3	86.5	87.5	88.1	86.3	82.7	84.1	84.4	84.0	84.1	83.2	83.1	83.0	82.7	82.6	83.8
6	82.5	82.0	81.9	81.6	81.4	81.3	82.9	83.0	83.1	83.0	85.6	84.9	84.5	84.8	85.2	86.2	85.9	84.2	84.3	83.1	80.7	80.2	80.4	79.9	83.1
7	80.0	78.5	78.0	77.7	78.6	80.6	82.1	82.7	84.3	83.7	81.8	83.3	84.8	86.1	85.0	84.0	85.4	84.8	84.0	82.0	80.0	80.0	79.0	77.3	81.9
8	76.7	77.0	77.5	78.0	78.3	79.9	83.2	82.9	84.8	85.6	85.4	86.2	85.6	87.0	86.9	87.2	86.1	85.3	84.7	84.7	84.2	83.7	83.7	83.5	83.1
9	83.0	82.9	83.0	84.0	84.7	85.7	85.4	85.2	85.3	85.5	86.3	85.5	86.9	87.0	86.0	87.2	84.8	84.8	85.0	85.1	85.1	85.1	85.1	85.1	85.1
10	85.0	84.9	85.0	85.0	85.1	85.1	85.1	85.1	85.1	85.6	85.8	85.9	85.9	86.1	86.3	86.5	86.5	86.5	86.2	86.6	86.5	86.5	86.6	86.8	85.8
11	86.7	86.2	86.0	85.9	86.1	86.2	86.6	86.8	86.7	87.0	87.8	87.0	87.1	87.4	87.1	86.9	86.7	86.6	86.7	86.7	86.8	85.0	83.4	82.6	86.4
12	82.1	81.8	80.9	81.0	81.2	81.8	83.6	84.7	86.7	87.8	89.0	89.8	90.0	90.8	90.3	90.1	89.7	88.1	87.0	85.4	83.7	82.2	81.0	79.3	85.4
13	78.1	76.9	76.6	76.5	77.9	80.1	83.3	86.0	87.1	87.5	89.2	89.2	89.8	90.3	90.6	91.0	90.3	89.6	88.6	85.9	83.1	81.3	80.2	79.0	84.5
14	77.9	77.9	77.0	76.4	77.9	80.8	84.9	87.7	88.5	89.9	90.8	92.0	92.7	93.2	93.4	93.6	93.7	93.2	92.2	90.0	86.0	83.2	82.6	82.6	86.6
15	81.6	80.7	80.2	79.9	80.7	84.0	87.1	91.2	93.8	95.0	96.0	96.7	97.5	97.8	98.2	98.1	96.6	95.2	93.5	91.5	89.7	88.1	88.0	86.9	90.2
16	86.3	85.2	84.5	85.6	85.0	87.0	89.1	92.0	93.6	94.6	94.8	96.1	96.9	97.4	97.3	96.1	95.8	94.4	93.0	91.6	90.0	88.6	88.0	87.3	91.3
17	86.6	86.0	85.7	85.0	85.1	86.5	88.0	89.5	90.5	89.6	90.1	91.7	91.7	91.8	92.2	92.0	90.6	89.7	89.7	87.9	86.5	85.6	87.0	85.6	88.6
18	85.0	85.6	85.8	85.4	85.6	85.6	86.5	87.3	88.2	88.0	89.0	89.7	88.9	88.6	88.7	87.6	87.0	86.7	86.6	86.6	86.4	86.2	86.2	86.2	87.0
19	86.1	86.1	86.1	86.2	86.2	86.6	86.9	87.1	87.4	87.9	88.6	89.7	91.0	91.1	90.5	90.6	89.6	90.1	89.4	87.7	87.1	87.3	86.8	86.6	88.0
20	86.9	87.0	86.5	86.0	86.5	87.0	86.9	86.7	87.2	87.4	87.9	88.1	87.6	87.7	87.5	87.7	89.1	88.7	88.7	87.3	86.7	85.8	85.9	86.2	87.2
21	86.0	86.2	85.7	85.2	84.0	86.3	87.4	88.8	88.9	90.7	90.1	91.3	90.3	90.8	91.6	91.6	89.7	89.1	88.2	87.1	86.7	86.3	86.1	86.0	88.1
22	86.1	86.2	86.3	86.0	86.0	85.9	85.9	86.6	87.0	87.6	89.0	89.5	90.1	89.0	88.2	87.6	88.0	87.7	87.0	86.3	86.2	85.4	85.0	84.7	87.0
23	84.5	84.3	84.3	83.8	82.3	83.1	85.3	86.6	87.2	87.0	88.6	89.2	89.2	89.5	89.6	88.4	87.7	87.9	86.9	85.2	84.6	84.0	83.7	83.2	86.1
24	83.6	84.0	83.1	83.7	83.9	84.4	84.5	85.1	85.0	86.1	86.2	87.1	87.9	89.2	90.2	90.2	90.0	88.4	87.0	86.0	84.6	83.3	83.3	83.3	85.8
25	81.6	80.0	78.6	78.3	79.8	80.4	82.3	84.0	86.6	87.7	88.6	89.8	89.3	90.0	90.2	90.2	89.5	88.3	87.0	86.7	85.7	83.6	81.5	80.3	85.1
26	80.3	80.2	79.3	79.1	80.4	81.2	83.9	86.1	87.0	87.8	88.7	89.2	89.0	88.7	88.2	87.4	87.0	86.5	86.2	85.4	82.6	80.6	79.0	78.9	84.3
27	77.9	77.7	77.0	76.9	78.1	79.6	82.3	86.0	87.3	88.6	89.8	89.3	90.9	88.9	91.0	89.6	89.6	88.9	88.0	86.6	86.2	85.1	85.0	84.9	85.1
28	84.9	85.0	84.8	84.7	84.6	84.1	84.3	84.6	85.7	86.0	86.2	86.6	86.7	86.7	86.6	86.3	86.6	86.5	86.6	86.4	86.4	86.3	86.3	86.2	85.8
29	86.0	86.0	86.0	86.0	86.0	86.3	87.1	87.6	88.1	88.5	88.7	89.6	91.1	91.1	90.9	90.0	88.3	88.2	87.1	85.7	85.8	85.8	85.7	85.3	87.6
30	85.1	85.1	85.1	85.0	85.0	85.6	85.5	86.0	86.5	88.0	88.1	87.1	87.6	87.7	88.7	86.0	86.0	84.3	84.3	84.0	83.7	83.3	83.3	83.9	85.7
31	84.1	84.3	84.2	84.1	84.3	84.4	84.8	84.5	85.1	86.1	86.0	84.9	86.3	88.1	86.9	87.0	86.3	86.6	85.2	85.0	84.2	81.9	81.7	80.9	84.9
Mean ...	83.0	82.7	82.6	82.5	82.8	83.7	84.9	86.0	87.0	87.5	88.1	88.5	88.8	89.0	89.0	88.8	88.4	87.8	87.2	86.1	85.0	84.1	83.8	83.3	85.9

189. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

August, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
1	81.6	83.7	83.9	84.0	84.3	84.6	85.0	86.5	86.5	88.8	89.0	89.4	89.9	85.9	86.1	86.5	86.8	86.4	86.8	85.2	84.8	83.6	82.6	82.1	81.5	85.3
2	80.4	78.6	78.9	77.0	76.0	77.9	81.7	84.2	83.3	84.3	85.7	87.0	88.2	86.6	86.5	86.8	87.5	87.1	85.5	83.6	82.5	80.5	80.7	82.3	83.0	
3	82.6	82.1	82.7	83.8	83.5	82.5	82.4	82.6	82.7	83.7	85.0	85.0	86.4	86.5	87.1	87.1	87.7	87.8	87.0	86.6	86.5	86.2	85.9	85.8	84.9	
4	85.8	85.7	86.0	86.0	86.0	86.1	85.9	85.9	85.5	85.2	85.1	85.0	85.0	85.2	84.0	84.0	83.0	82.6	82.3	81.9	80.0	80.0	80.3	84.3		
5	80.4	80.3	80.4	80.4	79.6	80.5	82.3	83.0	85.0	86.0	85.2	86.1	86.5	86.3	86.4	85.9	84.5	84.1	83.7	82.9	82.8	82.5	82.2	82.2	83.3	
6	82.2	82.0	82.1	81.6	81.6	81.9	82.1	82.4	82.9	83.1	83.7	84.0	84.6	84.5	84.7	84.9	85.1	85.2	84.6	84.0	83.8	83.8	83.7	83.4	83.4	
7	82.8	82.4	81.9	82.0	82.0	82.3	83.2	84.6	85.8	86.3	85.7	87.0	86.7	87.0	86.3	84.5	85.2	85.8	85.7	84.4	83.1	82.2	81.5	79.6	84.2	
8	77.9	76.6	76.3	75.2	75.0	75.6	78.1	81.5	85.2	85.6	85.9	85.0	85.6	86.4	86.9	85.7	86.0	85.4	84.2	83.7	83.5	83.1	83.1	83.5	82.2	
9	84.0	84.3	84.6	84.6	83.5	84.0	84.8	85.2	85.7	86.2	86.8	88.0	88.0	88.3	88.5	86.3	87.3	87.3	85.9	85.2	84.8	84.8	84.8	84.2	83.8	
10	84.0	83.7	83.6	84.0	84.0	84.2	84.6	85.3	85.7	86.4	87.6	87.4	87.8	88.2	87.8	87.2	86.7	86.4	86.1	86.0	85.9	86.2	86.5	86.7	85.9	
11	87.0	87.3	87.3	87.3	87.0	86.9	85.3	86.3	86.9	88.7	89.5	87.5	88.0	88.1	87.0	88.0	87.9	86.9	85.2	84.2	84.2	83.9	82.7	83.		

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

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

September, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	a.																									
1	87.2	86.8	86.5	86.6	86.6	86.5	86.6	86.7	86.9	87.1	86.9	86.7	86.7	86.9	87.3	86.9	87.3	85.9	84.4	83.6	82.7	82.8	82.7	81.7	81.1	86.0
2	79.8	80.6	81.0	80.7	79.8	79.7	82.0	82.8	84.9	86.0	86.4	85.7	87.3	86.0	86.0	87.0	86.0	85.0	84.0	83.4	83.0	83.0	82.2	82.2	81.1	83.5
3	81.6	82.0	81.8	81.3	82.0	81.0	83.0	84.0	84.1	85.2	86.6	87.7	89.0	89.7	89.7	90.1	90.0	89.1	87.3	87.1	86.6	85.9	85.7	85.5	85.5	85.6
4	85.5	85.5	85.7	85.7	85.8	86.1	86.5	88.0	89.9	91.1	92.4	93.0	93.0	91.8	91.4	91.6	91.0	91.0	89.9	89.1	88.9	88.7	88.7	88.2	88.2	89.0
5	88.0	87.6	87.4	87.4	87.5	87.5	87.7	87.7	87.9	88.0	88.5	89.1	90.8	90.8	90.4	89.8	89.3	88.6	87.5	86.4	86.0	86.0	86.9	86.4	86.4	88.1
6	86.6	85.1	85.3	83.8	82.0	82.3	84.5	85.5	86.7	86.5	86.8	87.5	89.0	90.0	92.1	91.0	90.2	88.9	88.3	87.4	86.4	86.4	85.7	85.9	85.7	86.8
7	85.7	85.8	85.9	86.1	86.7	87.1	87.3	88.0	88.9	89.5	90.4	90.7	90.4	90.5	91.2	91.6	91.0	90.7	89.6	90.4	89.7	89.7	89.3	88.7	88.1	88.8
8	88.0	87.7	87.1	87.1	86.7	86.5	86.7	87.1	87.5	88.3	89.3	91.3	91.9	93.1	92.7	91.8	90.5	89.6	88.0	87.3	87.2	87.0	86.0	85.4	88.5	88.5
9	86.0	86.0	85.7	86.6	86.8	86.8	86.8	86.9	87.3	89.5	88.7	90.2	90.6	90.2	90.2	89.7	89.1	86.5	84.0	81.9	80.3	79.5	78.9	78.0	86.2	86.2
10	77.5	78.7	79.6	80.0	80.2	80.1	80.9	81.6	83.0	85.8	86.0	86.1	86.3	86.8	86.9	86.9	85.9	85.9	84.8	82.9	80.7	79.0	78.2	78.2	78.0	82.4
11	77.0	76.1	76.0	76.0	76.0	75.9	77.7	81.0	85.0	86.9	87.9	89.5	89.8	90.4	91.2	90.7	89.7	89.0	86.0	87.5	86.0	85.7	85.3	85.5	86.3	84.1
12	86.4	86.0	84.9	84.9	84.8	85.6	87.0	87.5	87.7	88.1	89.0	88.3	88.3	89.0	89.0	88.7	86.9	86.0	85.0	85.3	83.6	83.6	81.1	81.2	80.8	86.2
13	80.3	79.5	79.6	79.5	78.3	78.3	78.3	80.0	85.2	86.1	86.5	86.6	87.2	87.5	88.1	88.0	86.5	84.7	82.3	80.9	80.8	80.8	79.4	78.0	82.7	82.7
14	78.9	79.9	81.5	83.0	83.3	83.6	83.7	85.4	85.8	86.0	86.3	86.0	86.3	86.5	86.9	86.8	86.8	86.0	86.8	84.8	82.5	82.8	82.5	81.9	82.8	84.2
15	83.0	83.0	82.9	82.9	83.0	83.0	83.4	83.9	84.5	86.1	86.9	87.0	87.7	89.0	88.9	88.5	86.9	86.9	85.1	82.8	80.8	78.8	77.3	76.9	84.1	
16	76.0	75.5	75.7	75.4	75.0	76.7	78.8	82.0	84.0	86.0	87.7	88.5	89.1	89.8	88.5	88.9	88.9	85.8	83.2	80.6	79.7	79.0	78.5	78.7	82.2	
17	78.5	77.9	77.1	76.7	75.6	75.6	77.1	80.0	82.3	86.0	87.5	88.1	88.3	89.0	89.0	88.9	87.8	85.6	82.7	80.7	78.8	77.8	76.9	76.0	81.9	
18	75.3	75.1	75.8	77.5	77.9	82.7	81.4	82.0	84.8	85.3	86.9	87.9	87.4	86.3	85.4	85.5	85.3	84.0	83.3	82.9	81.9	81.7	81.2	81.3	82.3	
19	81.9	81.0	81.7	82.0	82.1	82.0	82.4	83.0	84.0	84.1	84.0	84.8	84.5	84.7	84.9	84.9	85.0	85.0	85.5	85.2	85.1	85.1	85.1	85.1	83.7	
20	83.7	83.3	83.0	82.9	80.1	81.7	81.9	82.3	83.9	84.0	83.8	84.4	83.3	84.6	85.2	84.0	84.0	81.0	79.5	79.7	79.3	79.8	80.3	80.7	82.4	
21	80.7	80.1	80.5	80.9	80.7	81.0	82.8	85.0	84.8	85.1	85.8	86.3	86.2	86.3	86.1	84.9	84.2	83.2	82.0	80.6	79.7	79.0	78.5	78.7	83.1	
22	81.9	81.7	82.0	81.8	81.5	81.8	81.7	82.1	82.8	82.9	83.8	84.9	86.8	87.0	86.5	86.6	86.2	86.2	85.8	85.7	85.6	85.0	85.1	84.5	84.1	
23	83.3	83.9	83.7	83.8	84.0	84.0	84.3	85.0	85.2	86.0	86.4	86.5	86.7	86.6	85.8	85.6	85.3	85.0	84.9	85.0	85.0	84.7	84.9	85.0	85.0	
24	85.6	85.8	85.9	85.8	85.7	85.7	85.8	85.8	86.4	86.8	87.6	87.7	87.3	87.0	86.7	86.5	85.6	85.1	84.9	84.7	84.5	84.7	84.8	84.8	85.9	
25	84.9	84.9	84.7	84.3	83.9	84.0	84.5	85.3	86.0	86.7	86.6	86.6	86.7	86.8	88.0	87.0	86.8	84.1	82.0	80.9	79.1	79.0	78.7	78.3	84.3	
26	78.0	78.0	79.0	78.5	79.1	79.1	80.3	82.1	83.9	87.2	88.3	89.0	88.8	89.4	89.3	88.6	87.5	84.7	83.1	82.0	82.8	81.4	80.1	78.4	83.3	
27	78.4	80.6	83.8	83.9	84.8	85.0	85.3	85.6	86.5	86.5	86.0	86.0	86.0	86.0	86.1	86.0	85.6	85.6	85.7	85.7	85.2	84.0	83.2	82.8	84.6	
28	82.2	82.8	83.7	84.9	85.1	85.6	85.8	85.8	86.1	86.4	87.1	86.9	87.5	86.0	85.8	85.7	85.1	84.0	83.6	82.6	81.6	81.0	80.4	80.2	84.5	
29	80.1	80.2	80.0	80.1	80.0	80.0	80.0	80.6	83.7	83.8	85.0	84.8	85.2	86.3	86.0	85.3	84.6	81.5	81.3	81.3	80.5	79.0	79.2	79.8	82.0	
30	79.6	81.3	80.8	80.9	82.1	82.9	82.3	82.2	82.2	82.0	83.3	84.6	84.6	84.8	84.1	83.9	82.1	80.8	80.5	78.9	79.7	77.9	76.3	75.6	81.5	
Mean	...	82.1	82.1	82.3	82.4	82.2	82.6	83.2	84.2	85.4	86.3	86.9	87.4	87.8	88.0	88.0	87.8	87.0	85.7	84.6	83.9	83.2	82.6	82.2	81.8	84.6

191. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

October, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	75.0	75.5	75.6	75.7	74.8	75.0	76.6	78.6	80.9	81.7	83.6	82.9	83.3	83.1	82.9	82.3	81.6	81.0	80.6	80.9	81.0	81.3	82.7	84.7	79.9
2	84.3	82.4	82.1	81.7	81.2	81.0	80.9	81.4	81.9	82.4	82.6	82.5	83.3	83.5	82.2	81.9	80.6	79.2	79.9	79.8	79.7	80.6	80.2	79.9	81.6
3	79.4	78.9	79.1	79.0	78.7	78.9	78.1	79.6	81.0	81.7	82.0	82.7	82.7	82.8	82.4	80.6	81.7	79.9	80.3	80.1	80.0	80.1	80.0	79.0	80.4
4	79.6	79.3	78.3	78.6	78.4	77.5	77.7	77.7	80.9	81.6	82.5	82.7	83.0	83.7	83.7	82.0	80.9	78.0	80.8	80.8	78.2	77.7	77.5	78.0	79.7
5	78.0	78.4	78.9	78.8	78.9	77.8	75.6	77.7	79.7	80.0	79.7	78.7	79.3	80.3	81.2	80.7	80.8	81.5	81.5	81.6	81.5	81.5	81.5	81.5	82.1
6	82.0	82.3	82.1	81.5	81.0	80.4	80.1	80.1	80.3	82.0	82.7	82.8	83.1	84.0	83.2	81.3	80.3	80.0	79.9	79.0	78.6	78.9	78.8	79.4	81.0
7	79.6	79.9	79.7	79.7	79.7	79.7	79.8	80.2	81.8	82.0	82.5	82.0	82.0	82.0	82.3	81.5	80.4	78.7	77.5	75.0	73.9	73.8	75.7	76.7	
8	77.2	77.3	77.5	77.6	77.5	77.8	78.4	78.9	79.3	79.0	78.9	78.9	78.9	79.0	80.2	79.4	79.0	77.7	76.0	75.7	75.1	75.1	75.4	77.8	
9	75.7	76.5	77.5	78.1	78.7	78.0	77.6	78.8	80.5	81.1	81.3	81.7	82.3	82.3	81.9	81.3	80.3	80.0	79.3	79.7	80.2	80.2	80.6	80.7	
10	80.8	81.3	82.0	82.1	82.6	82.5	82.2	82.5	82.6	82.8	82.9	82.9	82.9	82.9	82.8	82.8	83.0	83.4	83.7	84.3	85.0	85.0	84.4	82.7	
11	81.7	81.5	81.5	81.0	81.0	80.9	81.7	81.7	82.8	84.0	84.9	85.3	85.0	84.0	84.7	83.5	82.3	81.7	81.7	81.5	82.0	81.3	81.0	81.3	
12	81.5	80.0	80.4	80.5	80.7	80.9	81.5	82.1	82.7	84.7	86.0	86.3	87.0	86.5											

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

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

November, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	a.																									
1	72.7	73.4	74.5	75.2	75.6	76.0	76.2	76.2	77.0	77.5	78.0	78.4	78.8	79.0	79.2	79.5	79.2	79.6	79.6	79.6	79.7	79.6	79.5	79.0	77.5	
2	79.1	79.1	79.2	79.8	79.7	79.3	79.7	79.3	80.7	81.1	81.3	82.7	83.0	83.9	82.5	82.4	81.7	81.2	80.8	79.4	77.5	76.9	78.6	77.6	80.3	
3	77.9	77.1	77.1	77.6	76.4	76.6	76.7	77.2	77.6	78.4	80.2	80.5	78.0	78.9	79.1	79.5	78.3	76.4	76.1	75.4	76.3	76.1	76.2	75.9	77.5	
4	75.1	75.6	75.8	76.7	77.0	77.0	78.4	78.9	79.1	79.0	79.4	79.6	79.6	79.7	80.5	81.1	81.6	82.1	82.4	82.8	82.8	82.8	82.9	82.8	79.5	
5	82.9	82.8	82.8	82.7	82.7	82.7	82.8	82.8	82.9	82.9	82.9	82.8	83.1	83.6	83.0	82.6	82.3	82.3	81.7	81.2	81.3	81.2	81.2	81.2	81.2	82.5
6	81.0	79.9	79.1	79.3	78.9	78.5	75.9	76.3	77.0	77.3	78.2	79.3	79.5	79.2	79.5	78.9	79.4	78.9	77.3	77.2	75.8	75.0	74.6	74.7	78.1	
7	74.9	76.1	75.2	74.8	73.9	74.0	74.8	75.7	77.2	78.1	79.7	79.8	81.0	81.0	80.9	80.6	80.7	81.0	81.9	82.9	82.7	82.1	83.5	83.8	78.8	
8	83.9	84.4	85.0	84.7	81.2	80.6	80.1	79.8	80.1	79.6	80.8	78.0	80.4	77.7	77.8	77.1	75.5	75.7	75.6	75.5	74.3	75.1	74.0	75.4	79.0	
9	75.2	77.0	77.0	77.0	77.5	76.5	76.6	76.8	77.8	78.3	78.3	79.6	79.8	79.8	79.8	78.8	75.6	76.8	77.3	77.4	76.9	76.1	74.1	73.8	73.9	
10	73.8	73.9	74.5	75.1	74.0	74.0	74.7	74.7	74.6	74.9	75.0	76.0	76.8	75.7	75.9	75.9	75.2	76.0	76.3	76.3	76.3	76.5	76.0	75.8	75.3	
11	75.4	75.5	76.0	76.8	77.0	78.3	78.8	79.5	80.0	80.1	80.1	80.0	81.2	82.7	83.8	83.0	81.6	79.9	78.8	78.0	77.2	76.8	76.4	75.9	78.9	
12	74.9	74.8	74.2	74.2	74.0	73.9	73.9	73.5	73.6	74.8	75.1	75.1	74.9	75.0	74.3	74.2	74.2	73.9	73.9	73.8	73.8	73.8	73.9	73.9	74.3	
13	73.9	73.8	73.7	73.7	73.6	73.3	73.2	73.7	73.5	74.7	74.8	75.6	75.7	75.6	74.9	73.6	73.9	72.0	71.8	71.9	71.7	71.0	71.8	70.2	73.5	
14	69.2	68.7	67.8	67.3	66.7	67.0	68.1	69.0	70.0	71.3	72.3	73.2	73.8	74.3	74.7	73.6	73.2	72.2	70.9	69.7	68.7	67.7	67.2	66.3	70.2	
15	65.7	65.6	65.9	67.1	67.1	66.8	66.4	65.8	66.0	66.8	69.4	71.6	72.6	72.5	71.9	71.3	69.9	70.8	70.7	70.5	70.3	69.1	70.0	70.8	68.8	
16	70.2	70.7	71.3	70.5	70.2	70.6	72.8	73.4	74.4	74.9	75.1	75.4	75.9	75.7	75.1	75.1	74.2	73.9	73.8	73.6	73.3	73.5	72.8	72.6	73.3	
17	73.0	71.6	72.5	72.1	71.3	70.5	70.4	70.0	71.7	74.0	74.8	74.9	74.8	75.6	74.7	74.7	74.2	73.9	74.0	74.0	74.0	74.0	74.0	73.7	73.2	
18	73.2	73.0	73.3	73.4	73.6	73.6	73.6	73.7	73.8	74.1	74.2	74.6	74.6	74.9	75.0	74.6	74.8	75.0	75.0	74.3	74.5	74.9	75.9	74.2	74.2	
19	76.3	76.7	77.3	78.0	78.9	81.0	81.4	81.7	81.7	81.7	81.7	81.8	82.0	82.0	82.3	81.9	83.0	83.3	84.0	84.5	84.5	84.5	84.0	83.8	81.4	
20	83.4	83.2	82.4	81.8	81.3	81.0	80.3	79.1	79.7	80.3	81.0	81.3	81.0	81.1	81.0	81.0	80.2	79.8	80.0	79.7	79.0	79.1	79.3	79.0	80.6	
21	79.1	79.3	79.0	78.8	78.9	79.8	80.5	80.8	80.8	81.1	81.3	81.3	81.7	81.7	81.7	81.7	81.6	81.5	81.2	81.3	81.2	81.1	81.4	81.3	80.7	
22	81.1	81.3	81.7	82.0	81.7	81.7	82.0	82.0	81.9	82.1	82.8	82.8	83.0	83.2	81.5	82.0	82.8	83.0	82.9	82.7	82.8	82.6	81.8	82.0	82.2	
23	81.7	81.7	81.5	81.4	81.0	80.3	80.0	80.0	79.5	80.1	80.7	80.5	80.9	80.9	80.6	79.0	78.8	78.8	79.0	79.0	79.0	78.0	78.3	77.6	80.0	
24	77.6	77.9	77.8	78.0	77.9	78.0	77.9	78.0	77.9	79.7	79.9	79.3	79.9	80.9	80.3	79.6	77.6	76.5	76.7	78.5	78.7	79.5	80.1	78.5	80.1	
25	79.7	80.1	80.0	81.3	81.1	82.0	81.5	81.1	80.7	81.0	81.3	81.7	81.1	81.0	80.8	80.1	80.1	78.8	78.2	78.8	78.9	76.7	76.9	77.4	80.1	
26	78.8	78.7	78.1	78.2	78.1	78.0	78.1	78.3	78.3	78.0	78.2	78.7	79.3	79.6	79.8	78.3	78.9	78.4	78.8	78.8	79.0	78.6	78.2	78.4	78.5	
27	78.5	77.7	76.8	75.6	74.3	75.1	75.2	74.8	76.0	76.9	78.1	78.5	79.3	79.1	79.0	78.4	77.2	77.2	76.5	76.3	75.9	75.8	76.8	77.3	76.9	
28	77.7	78.3	78.3	77.9	78.3	78.5	78.8	79.0	79.4	79.4	79.5	79.9	80.1	80.0	79.9	79.8	79.8	79.7	79.3	79.5	79.8	79.9	80.0	79.9	79.2	
29	79.8	78.3	78.6	78.7	78.7	78.8	79.0	79.0	79.2	79.8	80.0	80.0	80.2	80.3	80.4	80.1	79.9	79.9	79.7	79.8	79.1	79.0	79.4	79.5	79.5	
30	79.5	79.5	79.7	80.0	79.8	79.6	80.0	79.8	79.6	79.9	79.9	79.9	80.0	80.0	80.0	80.0	80.0	79.9	79.9	79.6	79.5	79.7	79.7	79.2	79.8	
Mean ...	76.8	76.9	76.9	77.0	76.7	76.8	76.9	77.0	77.4	77.9	78.5	78.8	79.1	79.1	79.0	78.5	78.2	78.0	77.8	77.7	77.4	77.1	77.2	77.2	77.6	

193. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

December, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	79.1	79.4	79.5	79.6	79.5	79.6	79.1	79.0	79.2	80.0	80.7	80.4	80.4	80.4	80.0	78.3	77.9	78.0	78.8	78.9	79.2	79.5	79.2	79.0	79.4
2	79.0	79.0	79.1	79.0	78.9	79.0	79.7	79.8	80.6	81.0	81.5	81.7	81.2	78.1	79.1	77.9	77.3	75.5	76.6	77.7	78.9	79.0	76.8	76.0	78.6
3	76.4	76.9	76.7	76.9	77.5	78.4	78.4	78.1	78.4	79.3	79.6	80.0	80.3	79.8	78.8	77.8	77.8	77.5	77.9	78.4	78.9	79.0	79.3	79.2	78.3
4	79.5	79.3	79.0	79.0	79.3	79.3	79.9	79.0	79.3	80.0	80.0	79.7	79.9	79.8	80.0	78.4	78.5	77.6	77.7	77.7	78.0	77.3	78.1	78.0	79.0
5	78.2	79.0	79.6	79.7	80.1	80.4	81.0	81.0	80.5	80.3	80.0	80.6	80.2	79.8	79.7	79.8	79.5	78.4	80.1	80.1	80.2	79.9	79.8	80.0	79.9
6	79.5	79.0	79.0	78.9	78.9	78.8	78.7	78.7	78.4	78.5	78.5	78.7	78.9	77.8	77.9	77.5	77.4	77.2	75.8	76.0	76.1	77.2	77.7	78.1	78.1
7	77.9	78.2	77.7	77.4	77.3	77.5	77.2	77.3	77.5	77.7	77.8	77.4	77.4	77.9	77.8	77.7	77.3	76.1	75.9	75.4	74.8	74.5	74.5	74.2	76.9
8	72.6	74.1	74.4	74.8	74.9	75.1	75.9	77.8	76.9	77.1	77.5	77.6	77.7	76.9	76.5	74.3	74.2	75.1	74.8	74.7	74.8	74.2	74.3	74.7	75.4
9	75.1	74.9	75.0	75.6	75.5	75.3	74.9	74.9	74.9	75.0	75.2	74.9	74.1	74.1	74.1	73.5	73.4	74.2	74.0	74.5	74.4	73.7	74.8	74.1	74.6
10	74.4	74.7	74.0	74.7	74.7	74.9	74.7	75.3	75.8	76.3	76.0	76.8	76.5	75.7	76.1	75.4	74.8	74.8	73.6	73.9	73.0	73.5	74.0	73.7	74.9
11	74.1	74.0	74.2	74.4	74.7	74.7	78.0	78.7	79.6	80.0	80.0	80.1	80.1	80.0	80.2	80.0	80.0	79.7	79.8	79.5	79.1	78.5	78.0	77.7	78.0
12	77.6	77.0	76.3	75.6	76.6	76.1	75.9	76.7	76.4	77.0	78.0	78.7	78.2	78.7	79.1	78.5	78.3	78.1	77.9	77.7	79.1	77.7	77.7</		

194. Eskdalemuir: Louvred Hut: h₁ = 0.9 metres.

Table with 26 columns (1-24, Mean) and 12 rows (1-12) showing hourly temperature means for 1929.

TEMPERATURE: MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

195. Eskdalemuir: Louvred Hut: h₁ = 0.9 metres.

Table with 26 columns (Month, Mean, Hour 1-24) and 12 rows (Jan-Dec, Year) showing monthly means and diurnal inequalities for 1929.

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

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

196. Eskdalemuir: Louvred Hut: h₁ = 0.9 metres.

Large table with 24 columns (Month, Day, Max, Min) and 31 rows (1-31) showing absolute temperature extremes for each day in 1929.

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

Percentages at exact hours, Greenwich Mean Time.

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

January, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	80	78	80	81	83	85	86	87	88	90	89	86	83	83	84	80	80	78	79	81	82	83	83	84	82.9	3.5
2	86	88	88	91	93	94	95	95	95	92	88	88	88	90	93	96	97	97	97	97	97	97	97	97	92.9	5.7
3	96	96	94	92	84	80	80	80	80	77	76	75	70	72	75	77	78	80	81	82	82	82	86	84	81.8	4.7
4	81	80	79	80	80	80	80	82	81	83	85	82	80	81	80	80	84	92	96	97	97	97	96	96	85.2	4.9
5	95	96	97	97	96	94	96	97	96	90	83	79	82	86	87	88	94	97	97	95	84	85	85	86	91.1	5.7
6	83	85	87	87	85	84	93	87	83	93	95	91	90	90	98	80	93	95	92	91	92	97	90	85	89.4	5.6
7	88	85	92	97	97	97	97	97	97	97	97	97	94	93	91	91	92	92	92	92	92	87	87	88	92.7	5.6
8	78	74	74	68	74	72	74	79	81	84	82	80	76	77	80	81	81	80	83	84	86	88	91	92	79.9	4.7
9	92	93	95	94	93	94	92	90	90	87	87	90	98	100	99	99	98	98	97	97	97	96	96	96	94.4	5.5
10	96	96	96	98	94	96	96	98	98	96	96	92	94	98	98	96	91	96	96	94	94	94	94	91	95.5	6.2
11	90	89	90	87	85	85	83	82	82	85	83	81	80	79	79	79	78	78	78	78	78	78	76	76	82.0	5.4
12	78	77	78	79	79	80	78	84	86	79	79	82	79	79	78	82	88	91	91	92	88	87	87	86	82.6	5.4
13	84	83	81	77	79	80	81	82	85	88	88	86	84	81	78	80	84	81	85	84	85	94	86	80	83.2	5.2
14	76	78	78	78	78	78	78	78	78	76	75	74	74	73	73	77	82	82	82	81	76	73	74	79	77.2	4.8
15	82	85	90	91	87	89	85	81	79	74	72	73	71	72	72	72	72	73	69	73	74	74	73	73	77.5	5.1
16	74	74	75	75	78	79	79	81	80	78	73	70	68	66	69	72	72	74	75	73	70	73	75	77	74.1	3.8
17	79	74	78	80	75	79	81	82	87	88	88	86	87	87	88	90	94	95	97	98	100	98	97	97	87.4	4.4
18	97	96	96	98	98	98	98	98	98	98	96	98	100	98	98	98	100	100	100	100	100	98	100	100	98.3	6.8
19	98	98	100	97	100	98	100	98	97	98	98	98	97	99	99	98	99	99	99	99	99	99	99	99	98.5	8.5
20	98	100	100	98	94	97	96	90	91	94	93	93	86	86	89	92	88	85	90	92	90	85	83	80	91.7	6.9
21	83	82	78	79	79	80	76	76	78	80	81	76	67	65	65	72	83	84	85	86	87	87	86	87	79.1	4.2
22	87	87	86	86	86	86	87	86	86	91	87	85	85	88	97	99	99	98	97	97	96	94	93	92	90.5	4.5
23	93	94	93	93	92	90	91	91	93	92	90	89	87	89	81	79	84	83	79	73	71	70	78	83	85.9	5.7
24	81	80	83	85	83	84	87	88	86	83	80	76	74	77	78	77	76	79	80	78	76	78	76	76	80.2	4.9
25	70	77	72	74	76	77	77	79	79	78	71	65	57	54	61	65	70	74	76	77	80	80	80	80	72.8	4.3
26	80	83	85	86	86	85	86	91	91	91	90	86	72	58	61	74	79	81	87	90	92	93	96	95	83.7	4.7
27	96	98	99	100	100	99	99	99	98	98	98	97	97	97	97	97	97	97	96	90	91	88	88	96.3	5.0	
28	91	93	91	91	90	86	97	91	88	90	88	85	86	84	85	85	86	85	86	86	90	95	97	97	88.7	3.7
29	97	96	94	96	96	96	97	97	97	98	100	100	100	98	100	96	98	98	96	98	100	96	98	100	97.5	6.5
30	100	100	100	100	100	99	99	99	99	99	100	100	98	92	86	87	85	94	93	96	88	91	97	92	95.7	9.7
31	93	96	96	98	99	98	98	99	98	93	96	92	91	92	88	92	91	88	91	90	88	89	88	91	93.1	9.7
Mean ...	87.2	87.5	87.9	88.2	87.7	87.7	88.1	88.5	88.5	88.4	87.2	85.5	83.7	83.3	84.1	84.8	86.7	88.0	88.4	88.4	87.7	88.1	88.3	88.0	87.2	†5.5
Vapour Pressure* ...	mb. 5.2	mb. 5.1	mb. 5.1	mb. 5.1	mb. 5.2	mb. 5.4	mb. 5.6	mb. 5.7	mb. 5.7	mb. 5.7	mb. 5.7	mb. 5.6	mb. 5.6	mb. 5.5	mb. 5.4	mb. 5.4	mb. 5.4									

198. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

February, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*
1	88	89	93	90	90	92	94	91	91	92	91	89	92	95	94	97	98	97	98	100	99	99	100	100	93.9	8.6
2	100	100	100	100	100	97	96	92	90	81	76	79	78	84	87	90	93	94	93	96	97	97	94	94	92.1	8.6
3	96	96	96	96	93	90	93	96	94	94	94	93	94	90	88	88	91	90	94	96	97	97	98	98	93.7	8.8
4	94	98	98	98	98	98	97	100	100	100	100	100	99	88	87	89	86	86	89	90	90	86	93	90	94.1	7.8
5	87	92	91	93	96	95	95	94	94	89	93	84	70	74	71	76	87	90	88	93	93	93	91	90	88.3	6.4
6	91	85	87	91	93	93	96	96	98	97	97	98	89	89	87	93	93	93	96	92	92	97	92	92	92.9	7.2
7	90	89	85	84	85	80	82	87	90	90	91	87	87	85	85	85	89	90	91	92	93	95	96	99	88.5	5.7
8	99	98	96	96	94	93	94	100	100	98	100	98	97	98	98	100	100	97	100	100	93	94	100	100	97.6	7.1
9	100	100	100	100	100	100	98	100	98	91	90	87	87	84	87	82	91	96	96	96	93	91	94	92	94.0	6.9
10	89	83	85	85	80	77	80	76	74	78	74	70	66	67	63	64	70	77	79	84	87	91	93	95	78.6	5.1
11	95	93	90	81	79	78	78	78	80	77	71	69	62	54	49	48	46	49	50	49	50	63	65	64	68.1	3.2
12	64	65	68	66	69	70	69	69	66	60	54	53	53	54	54	56	65	68	71	72	74	77	79	79	65.2	2.4
13	79	78	78	79	79	79	80	80	80	75	71	69	63	53	53	56	66	70	73	77	80	81	82	83	73.4	2.2
14	83	82	82	82	82	81	80	80	81	75	63	56	50	48	51	53	56	68	70	73	75	76	79	82	71.2	2.3
15	84	89	91	90	91	93	94	95	96	96	84	78	76	75	77	76	76	79	85	91	90	83	81	77	85.4	3.0
16	75	73	73	75	78	80	83	82	81	78	74	70	70	73	75	79	82	82	82	82	83	83	83	83	78.2	2.6
17	84	84	84	85	84	83	80	79	79	73	54	54	53	54	54	55	66	77	80	84	91	85	87	74	75.7	3.1
18	85	91	91	92	94	92	90	89	88	74	65	55	50	51	53	53	66	67	70	73	81	82	82	83	75.5	3.6
19	84	88	89	90	90	90	90	90	91	85	79	70	67	65	64	67	67	70	78	82	83	84	80	78	80.2	3.7
20	78	75	76	72	70	70	69	65	61	49	49	54	56	52	54	58	62	63	65	65	68	69	69	69	64.3	4.1
21	72	74	74	74	73	71	70	74	72	70	70	87	85	90	93	91	89	87	87	93	96	96	96	98	82.0	6.0
22	96	94	94	98	98	98	100	98	98	96	95	97	96	97	86	88	93	92	94	94	92	94	97	97	95.1	7.7

Percentages at exact hours, Greenwich Mean Time.

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

March, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	87	88	90	90	91	91	88	85	79	77	76	75	76	61	63	71	74	80	80	82	81	83	76	75	80.1	3.8	
2	80	80	77	79	80	80	83	82	79	79	78	78	78	73	73	76	79	80	82	84	86	85	88	90	80.1	4.8	
3	93	95	95	95	94	94	95	88	88	88	59	64	72	64	62	64	65	63	90	94	89	94	89	88	81.5	6.3	
4	93	98	88	83	85	91	91	88	79	89	84	72	71	72	68	68	72	84	89	88	89	91	94	94	84.1	5.6	
5	93	95	95	95	95	95	98	99	99	100	99	72	65	63	63	70	78	78	84	85	90	94	95	95	87.3	5.3	
6	95	95	94	94	95	96	97	99	95	83	59	57	60	66	72	92	96	98	98	100	98	95	95	95	88.5	5.9	
7	94	94	94	94	94	94	94	94	94	95	95	91	93	69	60	61	75	80	84	85	88	90	94	93	87.5	5.4	
8	94	94	96	96	96	97	96	96	94	94	73	46	28	27	30	29	41	55	54	62	64	68	71	75	70.4	5.1	
9	78	80	80	81	82	84	87	87	89	62	48	35	25	19	21	22	27	51	56	58	59	66	70	73	60.0	5.2	
10	76	80	80	82	86	88	90	93	94	80	59	41	35	31	32	35	39	51	57	63	69	77	79	82	66.5	5.4	
11	83	85	87	88	89	90	92	92	95	65	62	47	44	45	46	52	65	71	78	85	90	92	95	94	76.1	6.1	
12	95	97	96	87	87	93	90	98	90	87	74	76	73	74	71	74	72	79	84	86	87	91	92	90	85.2	7.6	
13	90	92	90	91	96	91	93	88	81	66	64	56	54	53	51	53	58	70	79	79	82	89	91	94	77.0	7.1	
14	95	95	95	94	93	94	94	94	95	83	73	68	63	67	61	62	72	78	84	85	91	96	94	94	84.2	6.7	
15	94	94	93	93	93	93	93	92	89	83	80	87	78	83	82	88	88	87	91	94	92	93	93	93	89.4	6.2	
16	93	93	93	93	93	93	92	92	92	89	80	80	73	74	68	72	76	83	89	85	89	90	90	91	86.0	5.6	
17	92	93	93	93	92	93	93	93	93	93	72	68	59	60	58	62	67	76	87	87	87	88	89	88	82.4	5.6	
18	89	90	91	91	90	89	88	92	92	65	52	37	33	30	22	20	56	74	80	89	91	92	94	94	72.4	5.5	
19	94	93	92	92	93	93	94	94	94	93	84	85	81	81	75	82	84	87	91	89	94	95	94	94	89.5	5.7	
20	93	92	91	91	92	93	93	93	93	79	66	58	49	52	49	58	56	65	77	78	89	89	89	92	78.3	6.4	
21	94	90	96	98	98	98	98	96	98	98	98	96	94	94	94	94	99	98	99	97	97	96	97	97	96.3	9.6	
22	100	96	100	100	94	96	97	98	98	94	99	99	99	98	93	89	88	94	93	94	96	96	98	98	96.1	8.9	
23	97	97	97	95	92	87	84	86	83	73	63	62	66	74	79	89	90	93	96	96	94	96	98	97	86.8	8.4	
24	97	96	96	96	97	97	98	97	99	99	100	99	99	99	99	100	100	99	99	99	99	99	100	100	98.4	9.1	
25	100	100	96	99	87	94	93	93	96	89	68	62	59	57	48	57	60	72	78	78	83	95	96	98	81.6	8.1	
26	98	98	98	98	98	98	98	97	79	63	64	68	65	68	73	71	75	79	79	84	86	93	99	98	84.5	7.4	
27	99	99	98	97	97	97	97	97	84	72	64	54	53	45	43	39	47	66	81	81	89	89	90	90	78.0	7.5	
28	98	98	99	99	99	99	99	99	77	65	45	37	38	34	34	37	56	70	78	81	85	85	85	85	74.1	7.5	
29	96	98	98	99	100	100	100	85	74	53	42	40	30	32	32	39	45	60	68	71	66	77	79	94	69.7	7.4	
30	96	96	96	97	97	97	98	96	64	54	45	46	48	52	51	58	60	69	78	71	82	79	81	78	74.9	7.8	
31	75	75	75	75	77	76	73	66	65	59	52	63	49	51	48	62	50	67	68	80	75	91	80	76	67.9	6.4	
Mean ...	92.0	92.5	92.2	92.1	92.0	92.6	92.8	91.9	87.9	78.7	70.4	65.4	61.3	60.2	58.7	62.8	68.1	76.0	81.7	83.5	85.7	88.6	89.5	90.2	81.1	† 6.6	
Vapour Pressure* ...	5.6	5.6	5.5	5.4	5.4	5.4	5.5	6.0	6.7	7.3	7.4	7.5	7.4	7.4	7.3	7.4	7.4	7.1	6.7	6.4	6.1	6.0	5.9	5.8	‡ 6.4		

200. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

April, 1929.

1	83	80	85	85	88	92	94	82	68	57	56	54	42	47	55	46	48	45	59	66	72	77	77	77	68.0	6.0
2	77	75	76	73	76	76	74	73	70	66	62	86	56	67	78	75	68	58	70	72	77	83	89	92	73.5	5.5
3	94	93	94	93	76	72	71	63	56	59	50	55	55	53	48	49	48	57	62	64	69	70	77	75	67.3	5.5
4	89	91	93	93	94	95	96	82	68	62	79	82	87	87	89	90	93	89	87	86	86	84	84	88	86.1	6.7
5	87	84	88	90	85	86	84	82	73	70	65	60	65	61	65	62	55	70	75	80	85	94	95	95	77.2	6.1
6	96	96	96	96	96	96	100	100	80	63	65	65	58	61	53	55	67	77	86	89	92	93	93	98	82.0	6.1
7	95	97	94	96	97	96	98	100	99	100	98	100	99	98	86	78	81	97	96	96	97	97	98	96	95.4	8.8
8	96	99	99	100	96	97	98	91	99	97	96	80	80	71	78	79	77	76	81	86	89	90	93	96	89.3	8.3
9	92	92	92	92	87	85	86	77	69	62	61	54	45	41	42	46	52	68	83	83	90	93	93	78	73.8	6.8
10	76	73	68	69	70	70	70	65	59	57	58	56	61	56	56	62	57	63	72	73	80	87	85	85	67.5	5.8
11	85	88	89	89	91	87	84	73	55	58	49	51	50	43	46	53	55	57	68	68	77	84	84	87	69.6	5.5
12	87	87	85	85	87	87	83	76	66	50	49	50	46	45	47	44	52	57	62	66	70	73	76	79	67.9	5.3
13	81	82	85	85	87	87	83	76	61	56	51	52	49	54	45	44	47	55	66	64	76	76	79	77	67.5	5.3
14	78	80	83	87	90	92	93	92	89	86	88	87	85	74	73	63	68	74	80	73	78	80	83	85	81.5	6.9
15	85	88	91	91	93	91	89	78	82	82	82	84	71	65	69	70	78	76	82	83	78	79	80	83	81.3	6.4
16	83	88	89	88	87	83	74	66	57	48	39	34	32	31	31	32	32	37	49	61	70	77	83	87	60.7	5.7
17	87	88	87	88	89	89	90	89	82	88	88	94	90	98	98	96	100	99	99	99	100	100	100	100	93.0	7.7
18	100	100	100	100	100	100	100	100	99	94	95	94	92	93	93	94	95	94	96	94						

Percentages at exact hours, Greenwich Mean Time.

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

May, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	86	88	89	89	90	90	85	64	42	41	39	36	20	35	44	38	39	41	57	66	70	78	83	84	62.1	4.7
2	84	88	89	91	90	91	86	66	58	59	45	51	71	82	92	85	91	88	87	90	89	89	90	91	80.8	6.2
3	93	93	92	92	92	92	94	86	77	66	57	49	45	43	39	41	42	48	57	64	66	72	69	72	68.7	6.0
4	68	76	88	85	88	88	92	97	88	85	84	76	74	66	71	83	91	90	91	93	94	92	95	94	84.9	7.9
5	96	96	96	94	92	86	87	77	78	73	90	86	90	89	87	88	83	81	79	81	85	85	93	91	86.9	8.4
6	92	97	96	96	95	94	90	85	96	89	89	90	93	96	96	93	94	89	89	89	89	90	90	89	92.0	7.4
7	89	89	85	90	90	90	86	87	84	80	75	72	66	57	58	61	68	72	88	88	93	86	90	90	80.6	8.0
8	89	87	86	86	90	87	91	83	78	76	70	87	70	83	79	79	71	71	88	87	87	85	85	80	81.6	7.8
9	84	91	88	85	87	83	71	60	52	44	41	46	34	50	49	48	59	51	58	78	70	77	85	87	65.7	6.5
10	84	87	96	94	93	91	90	90	94	93	93	96	94	94	96	94	98	98	98	98	99	98	99	99	94.2	9.6
11	99	98	95	86	87	78	74	71	59	58	54	55	47	49	67	69	66	69	74	82	88	88	93	93	75.1	8.8
12	91	93	96	97	97	96	94	94	89	70	65	83	75	79	75	70	60	57	62	78	78	80	83	82	81.3	8.7
13	89	91	91	93	95	93	93	83	71	70	65	63	54	56	62	70	73	89	91	88	90	88	84	86	80.3	7.9
14	87	88	94	92	93	94	93	86	85	91	88	94	90	94	90	88	89	90	86	86	84	90	87	90	89.5	8.8
15	91	91	90	91	93	93	84	79	70	62	68	68	57	67	72	60	64	66	67	72	76	81	81	82	76.2	8.6
16	81	86	87	90	85	87	81	70	58	65	51	48	48	49	44	59	63	66	75	74	74	74	77	77	69.5	8.3
17	81	79	82	87	90	88	87	79	73	75	72	65	59	57	54	56	60	67	75	83	88	91	94	96	76.2	8.3
18	95	97	97	93	93	92	90	81	73	68	62	60	36	41	44	50	56	58	68	71	80	87	88	88	73.8	8.6
19	93	93	91	90	89	88	79	75	63	50	44	48	40	44	35	38	35	39	58	59	62	66	72	65	63.7	8.8
20	71	72	73	73	75	71	68	60	43	49	50	42	42	47	44	46	55	47	57	71	70	78	80	85	60.8	8.5
21	86	87	87	87	88	83	78	62	55	54	50	46	40	44	35	35	41	48	56	59	70	70	69	71	62.9	8.7
22	74	76	75	83	89	89	93	95	95	95	94	94	96	94	88	93	88	88	89	90	87	84	87	89	88.2	11.1
23	80	80	82	82	83	85	74	72	77	78	81	81	77	72	66	67	62	66	72	78	77	80	66	72	75.8	12.1
24	74	69	77	77	76	76	69	69	64	71	72	83	84	89	83	74	72	84	87	87	89	93	92	95	78.9	12.1
25	78	91	89	90	87	86	93	89	81	64	63	59	61	67	66	75	76	76	79	83	87	90	90	92	79.7	9.8
26	94	95	93	94	93	90	90	88	83	73	73	66	59	60	56	62	63	50	53	61	77	71	70	73	74.9	12.2
27	76	79	81	84	83	75	62	49	41	44	43	44	43	48	45	44	42	46	52	59	63	69	74	84	59.4	10.1
28	81	84	86	87	76	70	66	63	61	69	72	72	65	73	58	68	72	72	75	79	82	79	81	75	73.7	10.5
29	76	73	74	74	74	74	70	72	62	62	60	65	52	54	54	51	59	56	66	76	83	82	79	82	67.7	7.9
30	80	81	79	80	78	76	74	69	63	54	53	56	56	55	53	52	55	60	63	71	78	80	80	80	67.8	8.4
31	79	82	82	78	72	63	61	56	59	63	67	68	65	69	73	75	78	82	84	87	86	87	88	90	74.5	9.3
Mean ...	84.5	86.3	87.3	87.4	87.2	85.1	82.1	76.0	70.1	67.5	65.5	66.1	61.4	64.6	63.7	64.9	66.6	67.9	73.0	78.0	81.0	82.7	83.6	84.8	75.7	†8.7
Vapour Pressure* ...	mb. 7.7	mb. 7.7	mb. 7.6	mb. 7.6	mb. 7.7	mb. 7.9	mb. 8.5	mb. 8.7	mb. 8.7	mb. 8.7	mb. 8.8	mb. 9.1	mb. 8.9	mb. 9.4	mb. 9.4	mb. 9.4	mb. 9.3	mb. 9.2	mb. 9.1	mb. 8.9	mb. 8.7	mb. 8.4	mb. 8.2	mb. 8.2	mb. †8.6	

202. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

June, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*
1	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	91	93	93	91	93	94	91	88	75	80	68	70	77	86	87	87	82	85	95	99	96	97	99	99	88.0	10.9
2	99	99	98	98	98	97	100	99	99	97	95	95	93	86	81	75	70	67	74	81	83	84	88	90	89.7	13.2
3	93	90	87	86	82	84	86	80	76	76	72	77	56	54	56	63	69	66	73	81	88	81	86	87	77.1	9.9
4	88	87	88	93	89	89	85	86	76	77	63	54	55	57	50	47	54	61	63	60	76	79	84	88	73.2	7.5
5	92	92	93	94	81	75	69	69	67	69	54	52	53	52	47	45	43	56	70	68	80	84	87	85	70.2	6.9
6	84	85	89	90	91	93	93	90	93	87	68	88	92	84	82	84	82	67	76	83	85	82	86	86	85.0	9.2
7	85	85	82	82	85	83	82	74	71	66	69	62	53	54	55	56	49	77	79	85	84	84	88	83.7	8.5	
8	87	87	93	90	89	90	98	76	60	52	54	48	48	40	42	56	62	57	66	82	89	89	89	72.2	8.4	
9	87	79	79	80	71	67	65	69	62	56	55	75	50	50	49	47	42	36	49	57	67	73	70	78	63.3	8.0
10	76	86	90	88	92	88	83	82	73	71	66	75	78	63	58	54	75	74	76	79	85	87	91	92	78.1	10.1
11	91	92	94	91	88	86	84	75	69	62	65	59	51	51	48	52	50	56	60	65	70	71	76	78	70.5	9.9
12	77	78	81	82	81	79	71	66	57	56	50	52	44	47	37	58	60	64	72	76	91	92	94	94	68.8	10.6
13	97	97	98	100	99	99	97	97	93	96	94	86	89	88	78	80	80	82	85	84	86	84	87	87	90.3	12.2
14	87	92	93	91	93	93	90	83	80	85	73	68	72	68	80	62	84	79	77	85	87	88	86	90	82.7	10.9
15	88	96	93	95	87	85	82	72	64	73	65	67	67	70	72	75	77	93	95	98	97	98	96	97	83.3	10.4
16	95	93	92	89	92	92	89	87	86	85	88	80	79	82	75	82	69	70	71	74	74	78	80	80	82.5	10.8
17	80	74	85	79	77	84	86	72	63	67	69	51	57	56	71	75	71	70	67	81	87	89	89	84	74.3	9.7
18	81	87	82	83	83	85	92	96	97	95	98	97	96	97	98	99	99	97	97	97	100	99	99	99	93.5	11.6
19	99	98	99	100	100	100	98	100	98	98	98	97	95	98	98	98	98	98	98	98	98	96	93	88	97.8	13.6
20	87	83	81	69	74	70	65	65	62	62	62	67	61	57	55	53	53	60	68	72	75	77	79	79	67.6	9.0
21	78	80	78	82	77	79	72	69	67	66	61	64	64	61	65	64	67	74	86	77	78	81	86	91	73.6	9.0
22	91	92	92	95	95	93	91	90																		

Percentages at exact hours, Greenwich Mean Time.

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

July, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	89	89	92	91	91	92	93	88	87	84	80	81	71	80	83	69	70	69	70	82	82	84	80	87	82.6	11.9	
2	88	86	83	87	79	79	79	82	73	69	63	72	72	70	74	64	66	71	88	80	84	89	91	90	78.3	10.2	
3	91	91	93	94	94	96	95	94	78	67	67	74	81	80	63	61	67	68	72	82	85	86	84	90	81.4	11.2	
4	91	88	88	88	89	90	93	95	91	83	94	93	91	91	94	95	96	96	97	90	93	96	97	96	92.2	12.5	
5	95	95	93	92	88	86	90	87	85	84	72	71	65	71	83	87	83	84	87	86	88	88	87	88	85.0	11.0	
6	83	87	87	88	86	82	75	74	71	70	62	64	60	58	63	55	56	61	60	68	75	76	77	81	71.7	8.9	
7	79	77	80	78	77	73	62	64	58	57	76	70	64	61	59	65	60	60	67	78	82	84	85	85	70.8	8.1	
8	87	88	90	92	91	81	70	73	65	53	60	53	59	47	59	57	63	65	75	79	81	89	91	92	73.2	9.1	
9	96	92	94	98	94	90	88	91	94	93	88	91	81	87	88	97	95	96	96	97	97	98	97	97	93.0	13.1	
10	98	99	97	97	97	97	97	97	97	98	93	94	97	97	97	96	96	97	99	96	97	98	99	100	96.9	14.3	
11	100	100	100	99	99	98	99	98	100	100	97	100	100	97	99	100	100	99	98	98	96	90	82	78	97.4	15.0	
12	84	88	92	94	94	92	91	84	77	80	64	62	60	57	59	62	62	65	69	74	83	84	85	87	76.9	11.1	
13	88	85	90	90	89	84	82	65	73	75	63	66	63	63	58	61	59	59	65	78	84	84	96	91	75.4	10.2	
14	87	89	88	90	86	86	85	78	67	73	72	66	63	62	62	60	62	62	70	67	73	72	72	79	74.0	11.5	
15	81	79	83	80	80	83	73	68	50	56	46	37	41	42	43	52	57	62	62	67	69	73	72	75	63.9	12.5	
16	74	78	82	75	79	76	70	59	58	60	62	56	54	52	56	59	58	65	71	74	79	82	81	83	68.3	14.3	
17	87	86	88	89	88	85	85	76	76	80	79	71	71	70	63	64	66	71	74	84	89	93	92	89	79.7	14.1	
18	91	93	94	93	93	91	89	83	82	83	80	72	79	79	80	85	88	89	93	90	93	91	93	94	87.3	13.9	
19	96	97	98	96	97	94	93	98	94	88	85	78	69	71	72	72	77	74	81	86	88	88	88	93	86.4	14.7	
20	91	91	95	95	95	91	95	99	97	97	94	94	97	97	99	98	92	90	89	96	96	98	96	97	94.9	15.4	
21	97	97	97	95	89	86	76	78	73	66	70	74	78	72	65	66	71	76	81	88	87	89	90	94	81.5	14.0	
22	93	94	94	95	94	96	93	92	88	77	69	69	67	83	85	91	88	87	90	89	90	95	95	96	88.9	14.2	
23	95	97	96	94	87	86	86	62	72	73	65	59	47	55	55	52	59	60	61	72	76	81	77	78	73.1	11.0	
24	74	75	75	77	81	78	78	82	76	75	73	73	69	63	56	58	57	69	80	83	88	87	88	88	75.1	11.1	
25	92	90	91	89	90	94	96	89	81	72	65	55	65	66	62	60	69	77	80	81	85	88	91	88	79.4	11.2	
26	94	93	94	93	91	93	89	77	75	71	68	64	70	72	77	82	80	81	87	89	91	91	94	97	83.7	11.2	
27	94	89	93	88	92	94	93	83	81	63	64	73	63	66	65	69	69	73	82	89	83	85	86	90	80.5	11.4	
28	90	89	93	94	97	98	97	98	98	97	98	96	97	98	96	98	96	97	96	96	96	97	96	97	95.9	14.2	
29	98	98	98	98	98	97	91	87	87	87	87	83	74	65	66	68	76	75	79	89	87	87	87	91	85.7	14.2	
30	95	94	93	93	94	90	94	90	89	78	80	79	74	71	63	74	85	88	84	87	91	95	95	93	86.2	12.7	
31	97	96	94	94	97	97	97	96	98	99	95	96	87	77	80	81	90	88	91	95	92	91	98	93	92.5	12.9	
Mean ...	90.2	90.0	91.1	90.8	90.2	88.8	87.0	83.4	80.7	77.9	75.5	73.7	71.9	71.6	71.7	72.8	74.6	76.6	80.4	84.2	86.3	87.9	88.3	86.7	82.3	†12.3	
Vapour Pressure* ...	mb. 11.1	mb. 10.9	mb. 10.9	mb. 10.8	mb. 10.9	mb. 11.4	mb. 12.1	mb. 12.5	mb. 12.9	mb. 12.9	mb. 12.9	mb. 13.0	mb. 12.9	mb. 13.1	mb. 13.0	mb. 13.1	mb. 12.9	mb. 13.0	mb. 12.7	mb. 12.1	mb. 11.6	mb. 11.4	mb. 11.2	mb. †12.2			

204. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

August, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
1	% 92	% 92	% 85	% 93	% 93	% 85	% 75	% 72	% 71	% 64	% 65	% 58	% 62	% 90	% 87	% 83	% 80	% 71	% 74	% 78	% 75	% 69	% 70	% 71	% 77.7	mb. 11.1	
2	73	75	69	73	83	78	70	66	61	65	47	54	53	60	56	59	55	50	59	77	83	91	90	93	97.6	8.3	
3	91	93	95	93	94	94	92	94	96	98	99	98	93	100	98	99	98	92	97	99	100	100	100	100	100	96.4	13.4
4	100	100	100	100	100	100	99	96	95	94	97	96	93	93	92	89	87	88	87	84	87	94	85	88	93.7	12.5	
5	89	93	94	93	94	80	78	74	64	59	63	60	58	53	59	56	70	68	72	83	84	89	91	92	75.6	9.5	
6	87	88	88	93	95	93	96	95	95	95	93	95	94	95	94	91	90	95	91	93	90	90	90	92	92.4	11.7	
7	91	92	88	88	88	86	84	76	70	62	69	62	74	67	73	86	86	80	85	82	89	91	93	93	81.4	10.8	
8	90	90	93	96	91	89	95	88	74	70	68	75	68	63	65	73	73	76	75	80	88	93	94	95	81.7	9.5	
9	97	98	97	95	94	90	86	86	81	75	69	71	76	68	68	83	74	77	77	86	90	90	93	90	83.9	12.2	
10	89	92	93	92	92	89	89	90	83	82	85	85	83	82	84	85	89	91	94	96	98	98	96	98	89.9	13.4	
11	99	99	98	97	98	96	95	85	75	70	69	74	72	67	69	68	59	66	82	85	88	89	91	94	82.8	12.9	
12	91	90	91	89	92	90	84	83	68	76	71	57	59	61	62	60	69	65	62	74	80	80	80	86	76.0	10.7	
13	89	96	89	94	90	89	91	82	80	73	85	85	94	91	91	95	98	97	96	96	97	95	91	86	90.4	11.4	
14	83	85	83	87	82	82	78	80	75	67	69	63	62	65	70	57	56	63	70	75	79	86	86	88	74.6	10.7	
15	90	88	91	93	88	91	92	89	78	75	80	66	75	77	91	88	87	93	94	94	91	91	95	92	87.0	11.5	
16	97	97	97	97	95	95	96	98	94	90	91	72	71	74	72	77	88	90	90	92	93	98	95	97	89.7	12.8	
17	97																										

Percentages at exact hours, Greenwich Mean Time.

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

September, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	91	90	94	94	94	94	95	92	82	86	86	86	89	87	76	69	69	70	77	80	82	76	77	87	87	84.4	12.6
2	93	91	92	93	91	91	86	76	71	63	60	61	58	63	64	61	66	73	79	82	87	87	88	92	92	77.7	9.9
3	88	88	89	92	88	89	86	84	85	82	73	82	78	80	81	82	85	89	94	96	94	96	96	96	96	87.1	12.7
4	96	97	95	94	97	98	95	99	89	79	77	78	79	83	85	84	89	90	94	94	96	92	92	97	97	90.4	16.5
5	99	99	99	99	100	97	100	99	99	98	93	88	82	78	86	88	70	82	92	98	89	94	95	97	92.5	15.9	
6	95	96	94	93	91	91	98	93	85	86	84	84	80	79	72	76	80	86	90	93	94	92	94	96	88.4	13.9	
7	95	95	94	96	92	88	92	89	89	90	86	86	91	93	88	90	90	88	94	88	92	95	92	97	91.2	16.4	
8	96	97	96	94	94	95	92	88	93	89	86	80	77	76	81	83	85	83	88	87	91	90	94	93	88.7	15.6	
9	89	97	94	95	96	96	91	88	88	81	79	65	57	63	63	65	68	76	80	86	88	93	94	100	82.9	12.6	
10	97	94	100	100	100	100	99	100	96	77	66	66	64	65	64	62	67	72	80	86	88	90	92	92	84.2	9.9	
11	93	96	98	95	96	91	97	92	80	69	69	69	70	73	75	77	80	82	90	91	90	89	93	89	85.3	11.6	
12	95	97	100	96	95	91	95	96	94	96	90	91	88	82	86	89	91	86	85	77	65	79	78	73	88.5	13.4	
13	77	78	77	86	85	82	89	90	78	65	69	55	57	63	59	66	71	74	80	83	88	89	91	98	76.5	9.2	
14	87	91	92	96	96	97	98	95	90	87	87	93	93	93	87	91	84	88	78	91	91	89	88	94	90.7	12.1	
15	94	96	92	92	94	94	96	95	97	98	93	93	89	81	74	72	78	83	88	86	88	91	93	92	89.6	11.8	
16	100	94	100	93	96	88	93	92	87	87	71	63	63	55	68	51	58	76	83	91	87	93	93	90	82.2	9.6	
17	93	90	100	95	100	87	95	98	99	86	62	58	61	66	63	63	62	70	77	77	90	87	88	88	88	81.5	9.3
18	94	85	86	87	90	92	96	93	94	89	78	68	72	82	87	94	95	90	88	76	76	74	83	84	85.6	10.0	
19	86	86	91	92	92	91	92	91	87	86	92	88	93	94	95	95	96	97	93	91	93	96	95	83	91.5	11.8	
20	77	72	70	71	88	77	74	82	71	67	63	70	60	58	54	52	57	63	68	72	78	78	82	80	70.3	8.3	
21	80	88	91	88	90	92	94	89	76	75	69	63	62	63	63	66	63	68	70	79	76	76	77	67	76.3	9.4	
22	74	77	71	74	77	74	87	93	88	100	100	100	91	91	93	94	89	85	89	88	85	89	88	85	86.4	11.4	
23	94	89	92	95	97	98	97	96	95	88	85	82	81	81	88	86	88	88	86	84	85	89	94	96	89.5	12.6	
24	93	93	91	93	92	94	93	94	90	87	83	82	85	88	83	81	75	88	87	81	88	93	93	93	88.4	13.1	
25	96	96	96	96	94	92	93	93	83	74	81	81	81	81	69	69	73	83	86	86	93	91	93	96	86.4	11.6	
26	98	97	96	94	99	97	98	96	97	87	79	67	64	55	59	59	69	75	83	86	88	94	84	94	83.9	10.5	
27	92	94	95	98	100	99	97	97	93	89	89	91	97	97	96	96	93	93	92	92	97	97	97	98	94.9	13.0	
28	95	91	92	93	94	93	93	94	94	95	90	93	87	88	81	81	74	67	71	75	81	88	90	90	87.3	11.8	
29	94	94	90	96	98	98	91	76	71	64	66	66	59	50	51	53	67	78	86	88	91	88	91	88	80.3	9.3	
30	90	88	90	90	84	86	82	87	88	88	82	69	68	63	62	64	71	73	67	74	63	69	78	79	77.5	8.6	
Mean ...	91.4	91.2	91.9	92.3	93.3	91.7	93.0	92.1	87.8	83.8	79.5	77.3	75.9	75.7	75.0	75.3	76.8	80.5	83.8	85.3	86.5	88.1	89.4	90.1	85.3	†11.8	
Vapour Pressure* ...	mb. 10.5	mb. 10.5	mb. 10.8	mb. 10.9	mb. 11.0	mb. 11.6	mb. 12.2	mb. 12.7	mb. 12.8	mb. 12.7	mb. 12.7	mb. 12.7	mb. 12.8	mb. 12.9	mb. 12.8	mb. 12.7	mb. 12.3	mb. 11.9	mb. 11.4	mb. 11.1	mb. 10.8	mb. 10.5	mb. 10.4	mb. 10.2	mb. †11.7		

206. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

October, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*
1	82	85	82	85	88	91	92	91	85	78	68	65	63	69	71	79	88	89	93	93	96	96	98	95	83.9	8.3
2	92	82	81	84	85	85	83	81	73	69	62	64	61	62	67	71	77	82	81	78	88	76	76	73	76.8	8.6
3	72	74	71	70	74	82	77	71	64	61	53	55	53	55	56	61	73	74	74	74	74	74	77	69.2	7.1	
4	81	81	82	86	89	92	89	89	81	76	67	78	62	68	65	66	79	87	90	92	92	90	90	89	81.5	8.0
5	89	92	90	91	96	96	97	91	93	85	77	90	93	91	85	91	90	84	88	88	89	89	89	88	89.7	8.9
6	91	93	95	93	93	94	96	96	89	78	69	66	61	59	56	70	77	82	81	87	86	83	84	86	81.9	8.8
7	84	77	78	76	76	73	70	69	62	65	64	65	61	61	65	74	80	85	87	98	92	94	85	88	76.2	7.4
8	97	96	97	96	96	97	94	91	85	84	86	86	88	85	79	73	75	74	83	85	85	80	80	84	86.9	7.5
9	82	75	87	85	83	84	89	78	68	61	56	52	56	57	63	69	68	69	71	73	81	82	80	86	73.1	7.1
10	89	92	83	86	83	89	93	91	89	88	87	88	89	88	88	89	91	92	92	93	93	78	79	77	88.0	10.7
11	77	76	67	78	72	73	73	74	68	63	59	51	63	56	56	62	70	76	77	83	80	88	90	88	71.4	8.4
12	84	100	94	93	93	94	94	99	96	88	66	63	57	62	65	74	75	79	81	85	88	88	90	89	83.2	10.5
13	88	90	91	91	88	89	87	87	85	80	79	79	79	83	80	84	90	94	95	93	97	94	95	97	88.0	11.4
14	94	97	94	93	91	93	93	91	89	91	88	86	90	94	95	89	93	89	91	87	64	82	92	80	89.8	12.2
15	85	82	79	78	91	96	96	94	98	100	99	100	99	99	99	100	100	99	98	99	98	99	96	98	94.7	10.8
16	95	96	99	96	96	94	95	97	93	94	95	95	87	86	95	90	89	84	88	84	80	80	80	77	90.7	11.3
17	78	86	87	84	78	75	86	86	77	75	71	68	72	72	62	68	72	79	82	89	86	83	86	86	78.5	8.8
18	90	91	90																							

Percentages at exact hours, Greenwich Mean Time.

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

November, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	99	97	95	82	89	91	92	97	85	82	89	87	90	93	96	93	97	93	98	99	98	96	98	100	93.1	7.8	
2	99	99	97	99	100	99	94	98	98	98	98	94	100	97	82	82	86	83	85	81	87	80	82	84	92.1	9.4	
3	84	85	95	87	85	82	87	76	81	78	70	69	89	79	79	75	78	85	81	85	90	85	91	82.4	6.9		
4	91	91	86	90	95	97	92	88	93	93	93	91	93	94	96	99	96	96	96	96	96	96	96	99	93.7	9.1	
5	96	99	96	98	98	95	95	95	95	95	92	94	96	91	89	92	95	95	92	96	94	96	96	94	94.9	11.3	
6	94	90	96	94	97	96	96	92	98	96	97	96	88	93	88	91	93	86	87	85	88	94	89	88	92.3	8.1	
7	88	88	96	85	96	94	95	89	96	97	90	93	90	96	94	93	94	98	100	91	95	98	94	97	93.4	8.6	
8	97	96	97	88	79	74	78	76	77	77	69	84	65	81	81	82	82	87	87	80	84	87	84	85	93	82.3	7.7
9	96	92	92	88	90	88	87	85	83	76	78	62	66	61	72	87	85	87	85	88	96	98	96	94	84.7	6.8	
10	94	96	87	93	91	83	89	88	87	88	93	88	83	85	82	85	80	83	80	80	87	85	83	86	86.7	6.3	
11	89	89	85	85	93	92	96	94	94	96	98	99	98	100	92	96	84	83	76	80	80	87	78	80	89.5	8.3	
12	82	82	91	91	96	87	89	92	90	85	91	85	88	89	92	92	96	94	94	94	96	94	90	94	92	90.3	6.1
13	94	89	92	90	92	93	90	90	92	82	85	77	77	79	78	89	84	81	86	84	86	87	87	87	87	86.4	5.5
14	88	89	89	91	95	98	99	99	97	96	95	95	94	94	80	88	89	86	86	86	88	86	87	89	91.0	4.5	
15	89	89	90	96	96	95	95	95	95	95	95	95	94	92	94	95	95	92	90	88	86	86	87	87	92.2	4.1	
16	87	87	86	87	86	86	88	90	89	84	85	91	80	84	84	85	89	85	82	83	86	84	80	79	85.5	5.3	
17	77	78	74	74	74	77	77	78	77	72	74	69	82	85	90	88	94	94	96	96	92	92	90	92	82.7	5.1	
18	89	88	87	87	88	92	94	96	94	98	96	89	91	88	85	87	84	82	78	82	94	93	95	94	89.6	6.0	
19	95	97	96	97	99	100	98	100	95	95	95	96	95	97	95	95	98	97	99	95	95	95	99	95	96.6	10.7	
20	95	95	93	88	93	83	83	91	87	94	90	87	88	86	88	94	90	85	90	97	93	93	94	97	90.5	9.4	
21	97	94	97	99	97	91	96	92	90	89	89	89	86	88	89	89	92	93	98	96	93	92	88	87	92.3	9.7	
22	88	87	83	86	86	83	81	78	83	84	80	79	78	71	83	81	76	74	75	76	76	78	86	81	80.7	9.4	
23	88	88	87	82	86	93	90	84	87	83	77	83	86	85	89	93	91	91	94	96	93	84	94	92	87.9	8.8	
24	89	92	90	92	94	95	94	100	93	87	91	94	90	86	87	90	90	95	92	82	88	86	80	78	90.1	8.1	
25	84	86	93	92	98	91	92	92	91	86	86	83	85	90	86	88	90	81	89	91	93	83	87	90	88.4	8.9	
26	88	90	95	95	97	92	90	91	89	84	86	90	88	87	83	87	87	92	90	90	94	89	89	91	89.7	8.1	
27	91	89	87	89	94	84	93	88	95	90	88	91	90	90	93	89	92	93	90	90	88	86	87	90	89.9	7.3	
28	89	87	92	92	94	94	93	100	96	96	98	98	96	96	94	94	93	94	96	96	94	94	96	94	94.3	8.9	
29	94	97	94	97	96	99	100	99	96	96	99	99	99	96	98	99	98	98	94	88	94	99	94	94	96.5	9.3	
30	93	93	91	87	91	93	97	91	93	93	93	94	98	98	96	93	96	93	90	90	91	90	96	91	92.7	9.2	
Mean ...	90.8	90.6	91.0	90.0	92.2	90.6	91.0	90.8	90.6	88.8	88.6	88.0	88.1	88.4	87.8	89.7	89.8	88.9	89.0	88.9	90.4	89.7	89.7	90.2	89.7	†7.8	
Vapour Pressure* ...	mb. 7.3	mb. 7.4	mb. 7.4	mb. 7.6	mb. 7.7	mb. 8.0	mb. 8.1	mb. 8.3	mb. 8.3	mb. 8.2	mb. 8.1	mb. 8.0	mb. 7.7	mb. 7.7	mb. 7.6	mb. 7.6	mb. 7.4	mb. 7.4	mb. 7.4	mb. 7.7							

208. Eskdalemuir : Louvred Hut : h_t = 0.9 metres.

December, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
1	93	93	91	91	93	90	90	90	90	84	80	76	82	79	82	87	92	92	93	96	96	93	96	96	89.3	8.6	
2	88	94	99	99	97	93	94	93	96	94	100	100	93	83	83	69	76	85	87	89	93	87	93	94	90.8	8.3	
3	92	85	97	93	90	92	92	98	96	94	90	85	82	78	81	84	84	82	86	80	87	90	86	76	87.9	7.8	
4	65	72	82	88	94	96	98	99	98	93	87	87	86	88	87	89	94	89	89	87	89	90	86	86	88.1	8.2	
5	87	85	87	88	86	91	88	86	82	80	84	72	73	73	72	73	75	92	91	91	90	90	88	84	83.7	8.3	
6	83	84	82	86	86	82	82	77	78	88	82	80	78	86	87	86	85	85	89	90	93	90	89	85	84.7	7.4	
7	87	84	89	93	96	92	87	89	84	79	79	89	82	76	73	74	74	81	76	75	77	76	72	84	82.0	6.6	
8	86	83	87	85	90	93	88	92	92	98	100	98	90	97	92	94	94	87	85	88	84	91	92	88	90.5	6.6	
9	91	95	82	84	79	80	80	82	82	79	86	86	89	81	81	81	80	83	85	87	90	78	87	87	83.5	5.7	
10	89	88	94	88	88	84	85	77	84	80	83	82	78	85	85	89	85	85	90	92	92	93	94	98	86.7	6.1	
11	96	94	94	93	91	93	97	96	93	93	93	91	90	93	93	85	75	74	70	72	74	82	75	78	87.3	7.6	
12	76	84	92	93	82	95	90	85	85	82	81	74	80	74	76	77	78	78	81	79	82	84	81	82	82.0	6.9	
13	89	93	90	91	91	90	93	89	93	94	93	92	92	93	96	98	96	98	96	94	94	94	96	96	93.0	10.0	
14	96	95	98	91	88	85	83	83	83	84	88	83	83	74	70	74	75	75	79	79	83	81	81	76	83.2	8.3	
15	81	81	79	87	89	81	84	88	83	82	80	73	73	76	76	76	82	83	82	85	79	80	80	89	80	81.3	6.5
16	74	78	78	79	82	90	95	94	97	98	89	83	83	80	87	88	88	86	91	89	87	90	96	88	86.9	6.2	
17	85	84	93	96	93	90	90	92	93	96	98	95	96	96	96	93	94	96	97	95	95	95	95	91	93.5	6.2	
18	98	97	98	97	100	97	100	100	96	10																	

For exact hours, Greenwich Mean Time.

209. Eskdalemuir : (Louvred Hut) $h_t = 0.9$ metres.

1929.

Hour G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Relative Humidity ...	% 88.6	% 89.0	% 89.4	% 89.4	% 89.5	% 88.6	% 88.0	% 85.9	% 82.8	% 79.8	% 76.9	% 75.2	% 73.1	% 73.2	% 73.0	% 74.7	% 76.8	% 79.1	% 82.2	% 84.3	% 86.0	% 87.0	% 87.7	% 88.2	% 82.9
Vapour Pressure (in Millibars)* ...	mb. 7.6	mb. 7.5	mb. 7.5	mb. 7.5	mb. 7.5	mb. 7.6	mb. 7.8	mb. 8.0	mb. 8.2	mb. 8.4	mb. 8.5	mb. 8.6	mb. 8.5	mb. 8.6	mb. 8.6	mb. 8.5	mb. 8.5	mb. 8.3	mb. 8.2	mb. 8.0	mb. 7.9	mb. 7.8	mb. 7.7	mb. 7.6	mb. 8.1

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

RELATIVE HUMIDITY : MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

210. Eskdalemuir : (Louvred Hut) $h_t = 0.9$ metres.

1929.

Month.	Mean.	Hour GMT. 1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Jan.	% 87.2	% +0.2	% +0.5	% +0.9	% +1.1	% +0.7	% +0.7	% +1.1	% +1.4	% +1.5	% +1.3	% +0.1	% -1.6	% -3.5	% -3.9	% -3.1	% -2.4	% -0.5	% +0.7	% +1.1	% +1.1	% +0.4	% +0.7	% +0.9	% +0.6
Feb.	% 82.9	% +3.7	% +3.9	% +3.9	% +3.7	% +3.7	% +3.1	% +3.7	% +3.3	% +3.3	% +0.2	% -2.6	% -5.4	% -7.8	% -8.4	% -8.9	% -7.4	% -4.0	% -2.1	% -0.1	% +1.5	% +2.1	% +2.8	% +4.2	% +3.7
Mar.	% 81.1	% +10.7	% +11.2	% +11.0	% +10.9	% +10.8	% +11.4	% +11.6	% +10.7	% +6.8	% -2.4	% -10.7	% -15.7	% -19.8	% -20.9	% -22.4	% -18.3	% -13.0	% -5.0	% +0.6	% +2.5	% +4.7	% +7.6	% +8.5	% +9.2
April	% 76.7	% +8.9	% +9.1	% +10.3	% +10.9	% +11.1	% +10.1	% +9.0	% +3.9	% -3.3	% -7.6	% -9.1	% -8.5	% -13.5	% -13.7	% -13.7	% -12.6	% -11.3	% -6.9	% -0.9	% +1.1	% +4.4	% +6.4	% +7.7	% +8.2
May	% 75.7	% +8.9	% +10.7	% +11.6	% +11.7	% +11.5	% +9.4	% +6.4	% +0.3	% -5.6	% -8.3	% -10.2	% -9.6	% -14.3	% -11.1	% -12.0	% -10.9	% -9.1	% -7.9	% -2.7	% +2.3	% +5.2	% +6.9	% +7.8	% +9.0
June	% 76.7	% +10.0	% +10.4	% +10.7	% +9.8	% +8.4	% +7.6	% +5.3	% +1.2	% -2.3	% -3.7	% -8.3	% -9.3	% -11.5	% -12.8	% -13.6	% -12.9	% -11.5	% -8.9	% -3.5	% +1.5	% +6.8	% +7.2	% +9.3	% +10.1
July	% 82.3	% +8.0	% +7.8	% +8.9	% +8.6	% +7.9	% +6.6	% +4.7	% +1.1	% -1.6	% -4.4	% -6.7	% -8.6	% -10.4	% -10.7	% -10.6	% -9.5	% -7.8	% -5.8	% -2.0	% +1.8	% +4.0	% +5.5	% +5.9	% +7.3
Aug.	% 84.6	% +7.1	% +7.4	% +7.4	% +8.1	% +7.7	% +5.6	% +4.0	% +0.2	% -3.8	% -6.7	% -8.9	% -11.5	% -11.1	% -10.3	% -9.4	% -6.8	% -4.4	% -2.8	% +0.5	% +3.3	% +5.1	% +6.4	% +6.1	% +6.8
Sept.	% 85.3	% +5.8	% +5.7	% +6.4	% +6.8	% +7.9	% +6.3	% +7.6	% +6.7	% +2.4	% -1.5	% -5.8	% -8.1	% -9.4	% -9.6	% -10.3	% -10.0	% -8.5	% -4.7	% -1.4	% +0.1	% +1.3	% +3.0	% +4.3	% +5.0
Oct.	% 83.5	% +4.6	% +5.4	% +4.0	% +4.0	% +4.7	% +5.3	% +5.9	% +4.9	% +1.3	% -3.1	% -8.1	% -10.6	% -11.0	% -10.1	% -9.6	% -5.1	% -1.2	% +0.2	% +1.9	% +3.8	% +3.4	% +3.1	% +2.9	% +3.3
Nov.	% 89.7	% +0.9	% +0.8	% +1.1	% +0.2	% +2.4	% +0.8	% +1.2	% +1.0	% +0.9	% -0.9	% -1.2	% -1.7	% -1.6	% -1.3	% -1.9	% 0.0	% +0.1	% -0.8	% -0.7	% -0.8	% +0.7	% +0.1	% +0.1	% +0.6
Dec.	% 88.4	% +0.1	% +0.5	% +2.5	% +2.4	% +2.4	% +1.8	% +1.3	% +1.4	% +0.4	% +0.7	% +0.5	% -0.9	% -2.5	% -2.5	% -2.5	% -2.1	% -1.5	% -0.7	% -0.5	% -0.7	% -0.3	% +0.2	% -0.2	% +0.2
Year	% 82.9	% +5.7	% +6.1	% +6.6	% +6.6	% +6.6	% +5.7	% +5.2	% +3.0	% 0.0	% -3.1	% -5.9	% -7.7	% -9.7	% -9.6	% -9.8	% -8.2	% -6.1	% -3.7	% -0.7	% +1.5	% +3.2	% +4.2	% +4.8	% +5.3

RAINFALL : ANNUAL TOTALS OF HOURLY VALUES.

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

211. Eskdalemuir : $H_t = 242.0$ metres + 0.4 metres.

1929.

Hour G.M.T.	0 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	21 to 22.	22 to 23.	23 to 24.	0 to 24.
Amount ...	mm. 63.0	mm. 64.6	mm. 67.6	mm. 67.5	mm. 75.9	mm. 76.2	mm. 78.1	mm. 81.4	mm. 59.6	mm. 51.8	mm. 69.9	mm. 83.6	mm. 64.4	mm. 60.1	mm. 68.7	mm. 64.7	mm. 61.6	mm. 61.6	mm. 64.2	mm. 73.8	mm. 77.0	mm. 63.5	mm. 57.8	mm. 54.9	mm. 1611.5
Duration...	hr. 47.7	hr. 53.3	hr. 63.6	hr. 65.7	hr. 63.9	hr. 62.5	hr. 59.5	hr. 58.6	hr. 50.4	hr. 44.9	hr. 46.1	hr. 57.7	hr. 51.1	hr. 46.1	hr. 48.1	hr. 53.3	hr. 47.4	hr. 54.8	hr. 44.1	hr. 47.6	hr. 49.4	hr. 44.9	hr. 42.7	hr. 45.5	hr. 1248.9

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

NOTES ON RAINFALL.

212. Eskdalemuir.

1929.

Rainfall Duration.—There were 146 days on which no duration of rainfall was registered. There were 42 days on which the duration of rainfall was registered as 0.1 hour to 1.0 hour, 22 days with 1.1 to 2.0 hours, 68 days with 2.1 to 6.0 hours, 61 days with 6.1 to 12.0 hours, and 26 days with more than 12 hours. The day with the greatest duration was July 10th, when the duration was 22.6 hours, the amount falling being 40.3 mm. On January 29th, the duration was 22.3 hours and the amount falling 18.1 mm.

Notable Falls of the Year.

- (a) The greatest amount in a 60-minute period was 18.1 mm., which was recorded between 14 h and 15 h, July 5th. On this day 5 mm. of rain fell in 6 minutes. Falls of 5 mm. in less than one hour occurred on 18 days.
- (b) Details of the greatest continuous falls are as follows:—

Date	Amount. mm.	Duration. hrs.
July 9th—10th	27	21.2
August 3rd	33	14.2
October 1st	28	8.7
October 23rd—24th	32	15.0
November 4th—5th	45	15.3
November 11th	46	12.3
December 2nd	29	8.3
December 20th—21st	29	12.5
December 28th—29th	30	13.8

Wet Periods.

- (a) There was one "rain spell" (i.e., a period of fifteen or more consecutive days on each of which 0.2 mm. or more of rain fell), viz., November 23rd to December 15th.
- (b) There were no "wet spells" (i.e., periods of fifteen or more consecutive days on each of which 1.0 mm. or more of rain fell). The period November 23rd to December 14th failed to classify as a "wet spell" in having only 0.3 mm. on December 1st.

Dry Periods.

- (a) There was one period of "absolute drought" (i.e., fifteen or more consecutive days on which less than 0.2 mm. of rain fell), viz., February 26th to March 20th.
- (b) There was no 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).

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

213. 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, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24			
Day.	mm.	mm.	hr.																										
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	(*)	(*)	(*)	(.1)	(*)	(*)	(*)	...	...	...	...	...	...	...	...	...	...	...	(*)	(*)	(.1)	(*)	(*)	(*)	(*)	0.1	0.4
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	(*)	(*)	(*)	(.1)	(*)	(*)	(*)	...	...	...	(.1)	(*)	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.7
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	.2	...	...	.5	.3	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.6	8.3
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	0.2	0.2	
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	.4	.3	.1	.1	.1112	...	(fe)	(fe)	(.1)	(fe)	(fe)	3.0	6.4	
19	.26	.9	.5	.3	.1	.6	1.1	.8	.4	.2	.2	.4	.4	12.9	0.7	
20	.1	0.7	0.7
21
22
23
24
25
26
27
28
29	.9	.6	.4	1.0	.7	.9	.5	1.1	.5	.3	.2	.7	.3	.6	.3	.5	.5	.1
30	1.9	1.7	.5	.3	.2	.5	.3	1.4	.22	.2
313	.6	.7	1.0	.7	.4	.3	.11	.1
Sum.	3.7	2.9	1.6	2.8	2.3	2.9	2.2	3.3	1.5	1.9	1.7	2.6	1.4	2.4	1.6	2.6	3.1	2.0	1.3	1.2	1.6	3.1	3.0	3.4	56.1	78.4	78.4	78.4	
Total Duration.	hr. 4.4	hr. 3.1	hr. 3.8	hr. 4.2	hr. 3.9	hr. 4.4	hr. 4.2	hr. 3.5	hr. 4.0	hr. 2.5	hr. 3.9	hr. 3.8	hr. 2.5	hr. 2.7	hr. 2.9	hr. 3.4	hr. 2.9	hr. 2.4	hr. 1.4	hr. 2.0	hr. 1.8	hr. 2.5	hr. 3.8	hr. 3.5	hr. 78.4	hr. 78.4	hr. 78.4	hr. 78.4	

214. Eskdalemuir : $H_r = 242.0$ metres + 0.4 metres. February, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24			
Day.	mm.	mm.	hr.																										
12	.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
Sum.	0.5	0.2	0.3	0.7	1.1	1.4	1.8	3.1	2.5	1.7	2.3	2.4	2.6	3.1	4.0	4.4	4.0	2.3	2.9	2.8	2.5	1.2	4.7	0.5	53.0	81.0	81.0	81.0	
Total Duration.	hr. 1.6	hr. 1.1	hr. 0.6	hr. 3.3	hr. 2.2	hr. 2.0	hr. 2.3	hr. 4.5	hr. 4.1	hr. 4.6	hr. 4.5	hr. 4.5	hr. 4.8	hr. 4.4	hr. 4.8	hr. 5.1	hr. 3.6	hr. 4.3	hr. 2.9	hr. 2.8	hr. 4.3	hr. 3.8	hr. 3.2	hr. 1.7	hr. 81.0	hr. 81.0	hr. 81.0	hr. 81.0	

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

215. Eskdalemuir : H_1 (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h (height of receiving surface above ground = 242.0 metres + 0.4 metres. March, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21	...	·3	1·3	1·5	1·3	2·1	2·0	1·8	1·2	·5	1·1	·6	·6	·7	·2	·3	·1	·4	...	·5	·1	...	...	...	...	16·6	18·2
22	1·6	1·0	...	·3	·2	·5	1·4	·4	...	...	...	...	...	...	...	...	...	...	...	5·4	3·6
23	...	·3	...	...	...	...	...	...	...	...	...	...	...	...	...	·1	...	·3	·1	...	...	...	...	...	...	0·8	1·5
24	·1	...	·1	...	...	...	·4	0·7	2·1
25	·9	1·5	1·1	·1	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·7	4·0
26
27
28
29
30
31	·4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·7	0·8
Sum.	0·9	2·1	2·4	1·6	1·4	2·1	4·0	2·8	1·2	0·8	1·3	1·1	2·0	1·1	0·2	0·4	0·1	0·7	0·2	0·5	0·2	0·3	...	0·5	27·9	30·2	
Total Duration.	hr. 1·0	hr. 2·6	hr. 1·9	hr. 1·6	hr. 1·5	hr. 1·0	hr. 1·8	hr. 1·7	hr. 1·0	hr. 1·5	hr. 1·4	hr. 1·2	hr. 1·5	hr. 1·9	hr. 1·0	hr. 1·4	hr. 1·0	hr. 1·2	hr. 0·8	hr. 1·0	hr. 0·9	hr. 0·6	hr. ...	hr. 0·7	hr. 30·2	hr. ...	

216. Eskdalemuir : H_1 = 242.0 metres + 0.4 metres.

April, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
Day.	mm.	mm.	hr.																									
1	...	...	...	·1	·6	3·1	1·7	1·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·1	3·6
2
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	2·0	2·6	·9	·1	·3	·1	...	...	...	...	...	...	...	6·3	5·9
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	·3	·1	...	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·8	2·6
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·1	3·5
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·1	0·5
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·3	0·3
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4·1	6·3
18	1·3	·3	...	1·0	·3	·1	·1	...	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·8	4·9
19	...	...	...	·6	·3	·2	·2	·2	·1	·2	·2	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	2·1	8·4
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·2	0·3
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·5	0·8
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·1	0·3
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10·8	4·2
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·8	1·2
28	·2	·2	·4	·4	·4	·3	·1	·2	...	...	...	...	·5	·4	·3	·2	...	...	...	...	...	...	...	...	...	5·6	16·2
29	·4	·3	·6	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·4	3·4
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	2·2	0·9	1·0	2·3	1·9	3·8	2·4	2·1	0·3	0·2	1·2	4·2	6·3	6·6	1·4	1·6	1·2	0·8	0·3	0·6	1·1	0·7	0·4	2·6	46·1	62·4		
Total Duration.	hr. 3·2	hr. 2·3	hr. 2·0	hr. 4·0	hr. 3·8	hr. 4·1	hr. 4·0	hr. 3·1	hr. 1·2	hr. 1·0	hr. 2·8	hr. 3·5	hr. 3·0	hr. 3·0	hr. 2·8	hr. 3·0	hr. 1·9	hr. 2·9	hr. 1·4	hr. 1·5	hr. 1·8	hr. 2·3	hr. 0·7	hr. 3·1	hr. 62·4	hr. ...		
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		

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

217. Eskdalemuir : H, (height of receiving surface above M.S.L.)=H (height of station above M.S.L.)+h, (height of receiving surface above ground = 242.0 metres + 0.4 metres. May, 1929.

Table with 25 columns (0-1 to 23-24) and 26 rows (Day 1 to 31, Sum, Total Duration). Columns represent 60-minute intervals. Rows show rainfall in mm and total duration in hours.

218. Eskdalemuir : H, = 242.0 metres + 0.4 metres.

June, 1929.

Table with 25 columns (0-1 to 23-24) and 32 rows (Day 1 to 30, Sum, Total Duration, Hour G.M.T.). Columns represent 60-minute intervals. Rows show rainfall in mm and total duration in hours.

RAINFALL.

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

221. Eskdalemuir : H, (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h, (height of receiving surface above ground) = 242.0 metres + 0.4 metres. September, 1929.

Hour G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24			
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.											
1	3	2.8	9	5	2.3	5	...	...	...	...	1	6	...	...	...	...	...	...	...	...	...	...	...	8.0	4.2		
2	
3	5	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	0.7	0.4		
4	
5	
6	
7	
8	
9	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.6	
10	
11	
12	1	...	2	...	...	...	...	...	...	...	...	0.3	0.8	
13	
14	1	1	6	...	...	...	...	...	...	...	...	...	...	...	...	0.8	2.6	
15	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1.0	
16	
17	
18	1	2	...	...	...	...	...	...	...	...	...	0.7	1.9	
19	2	4	...	...	...	...	...	...	...	...	8.1	10.8	
20	1.6	4	...	7	...	...	...	...	3	4	2	3	3	5	9	1	3	9	2.9	1.0	...	2.7	1.6		
21	2	4	1.1	6	1.6	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.2	4.9	
22	1	1	1	1	4	...	...	1	...	...	...	...	...	...	...	...	...	...	0.9	4.9	
23	5	5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	2.6	
24
25
26
27	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1.0	
28	4	1	1	1	1	2	8	2	1	...	...	...	...	...	...	...	...	...	2.1	4.7	
29	1	...	3	4	...	2	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	1.8	4.4	
30	1	4	8	2.6	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.5	3.2	
Sum.	0.5	3.5	8.7	2.6	3.4	3.6	1.8	2.8	0.8	0.4	1.1	2.4	0.4	0.7	0.5	1.1	1.3	0.1	0.8	1.0	2.9	1.0	36.4	49.6			
Total Duration.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.										
	2.1	1.8	4.2	3.4	3.7	3.9	3.2	2.3	1.8	2.9	3.1	3.2	2.0	2.2	1.6	2.5	1.2	0.7	1.2	0.6	1.0	1.0	49.6	...	...

222. Eskdalemuir : H, = 242.0 metres + 0.4 metres.

October, 1929.

Hour G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24			
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.		
1	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	1.3	2.0	5.4	4.6	3.8	4.9	2.4	1.7	28.5	8.2	...		
2	2.0	...	...	...	...	2	...	...	...	...	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	4.2	2.2	
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	5	...	...	...	...	...	...	...	...	...	0.7	0.6
4	...	...	...	...	3	...	...	...	...	...	...	4	1	...	...	...	...	...	...	...	...	...	...	1.6	2.4	2.5	...	
5	3.5	5.0	2	2.0	1.0	...	2	6	2	...	2	3.8	1.5	...	...	5	8	2	...	...	...	...	...	...	...	19.7	10.3	
6	1.3	2.6	1.9	2	1	6	...	3	...	...	...	...	...	...	...	...	...	...	...	4	1.0	2.7	2.7	13.8	8.1	...		
7	1.2	2	2	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2.2	4.8	...	
8	5	4	8	6	6	2.2	1.8	2	1	1	2	3	3	...	...	...	...	...	...	...	...	...	...	...	...	8.1	10.4	
9	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.4
10	...	...	2	...	...	1	...	2	1	2	...	...	5	1	2	7	7	4	...	...	2	1	...	...	...	3.7	7.0	
11	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.5
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	0.2	0.2
14	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	3	2	...	...	1	...	...	...	...	...	...	...	1.6	1.7
15	...	...	...	...	...	3	4	4	6	1.2	2	9	2	...	1	1	1	5	...	...	1	...	...	1	...	...	5.2	9.4
16	...	...	1	5	2	1	1	1.2	2	4	9	1.5	1.2	...	1.2	3	1	1.2	4	2	...	...	...	...	...	...	9.8	10.0
17	...	2	1.0	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.3	1.5
18	2	1	...	...	1	6	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	2.1
19
20	...	...	...	...	2	1.4	1.8	3.6	2.3	1	...	...	...	...	2	2	...	...	1	1	...	...	...	...	...	...	10.0	5.1
21
22	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	...	1	...	...	...	...	...	0.5	1.3
23	...	...	1	1	...	3	1	2	2	...	...	...	1	1	...	...	...	3	1.6	3.4	3.5	4.1	2.2	3.5	19.8	11.1	...	
24	1.6	7	8	1.4	2.2	2.0	1.5	2.4	1.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.7	8.6
25
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	0.3	0.7
27
28	...	...	2.4	2.1	3.5	2.6	2.9	1.3	1.1	9	6	...	...	...	3	...	...	...	...	...	...	...	...	6	1.0	19.3	10.6	
29	6.7	1.8	6	4	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	1	...	...	...	...	...	...	10.0	5.8
30
31
Sum.	17.0	11.0	8.5	7.6	8.4	10.5	9.9	10.4	5.9	2.9	2.1	6.9	4.0	1.3	2.7	2.8	4.4	5.8	7.7	8.3	8.1	10.1	7.9	10.8	175.0	123.1			
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.	hr.	hr.	
	6.8	6.0	8.1	8.0	7.0	8.2	7.9	7.8	5.3	3.8	2.5	3.6	4.5	1.7	3.1	4.8	3.9	6.8	3.9	3.2	3.2	3.1							

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

225. Eskdalemuir : h, (height of recorder above ground) = 1.5 metres.

January, 1929.

Hour. L.A.T.	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	11 to	Noon to 13	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	4.	5.	6.	7.	8.	9.	10.	11.	11 to Noon		14.	15.	16.	17.	18.	19.	20.	21.			Time G.M.T.	Inten- sity.	p/p ₀ sec. Z.	Sky.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	h. m.	mw/cm ²		
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	11	...	...	...	...
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	29	...	...	...	...
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1	...	...	...	...
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	4	...	...	...	...
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	12	...	...	...	...
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1	...	...	...	...
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	8	...	...	...	...
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.3	56	...	...	...	...
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	74	...	...	...	...
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1	...	...	...	...
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.6	33	...	...	...	...
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	87	...	...	...	...
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.8	73	...	...	...	...
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.0	62	...	...	...	...
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.0	86	...	...	...	...
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.3	52	...	...	...	...
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	19	...	...	...	...
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	2	...	...	...	...
Sum.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	48.4	—	—	—	—	—
Mean.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.56	20	—	—	—	—

226. Eskdalemuir : h, = 1.5 metres.

February, 1929.

Day.	hr.	%	h. m.	mw/cm ²																				
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1	...	...	...	...
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	6	...	...	...	...
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	2	...	...	...	...
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1	...	...	...	...
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	15	...	...	...	...
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.2	89	...	...	...	...
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	47	...	...	...	...
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.1	43	...	...	...	...
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.1	85	...	...	...	...
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	21	...	...	...	...
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.3	85	...	...	...	...
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.2	63	...	...	...	...
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.0	51	...	...	...	...
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1	...	...	...	...
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	2	...	...	...	...
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	2	...	...	...	...
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	19	...	...	...	...
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.8	83	...	...	...	...
Sum.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	59.9	—	—	—	—	—
Mean.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.14	22	—	—	—	—

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

227. Eskdalemuir : h, (height of recorder above ground) = 1.5 metres.

March, 1929.

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	—	—	—	—	4	1.0	1.0	1	—	1	5	7	6	2	—	—	—	—	4.6	43	—	—	—	—
2	—	—	—	—	—	—	—	—	1	2	—	—	—	—	—	—	—	—	0.4	4	—	—	—	—
3	—	—	—	—	6	1.0	9	6	8	2	5	9	1.0	6	—	—	—	—	7.1	66	—	—	—	—
4	—	—	—	—	—	5	—	—	—	1	2	—	4	—	—	—	—	—	1.6	15	—	—	—	—
5	—	—	—	—	—	—	—	5	8	8	1.0	1.0	4	—	—	—	—	—	4.5	41	—	—	—	—
6	—	—	—	—	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	—	—	—	—	—	—	8.4	76	—	—	—	—
7	—	—	—	—	—	—	—	—	2	1.0	1.0	1.0	1.0	7	—	—	—	—	4.9	44	—	—	—	—
8	—	—	—	—	—	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	—	—	—	—	8.7	78	—	—	—	—
9	—	—	—	—	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	—	—	—	—	9.0	80	—	—	—	—
10	—	—	—	—	6	1.0	1.0	1.0	1.0	1.0	9	1.0	1.0	8	—	—	—	—	9.3	82	—	—	—	—
11	—	—	—	—	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	—	—	—	—	—	9.4	82	—	—	—	—
12	—	—	—	—	—	6	1.0	8	—	—	—	—	—	—	—	—	—	—	2.4	21	—	—	—	—
13	—	—	—	—	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	—	—	—	—	9.0	78	—	—	—	—
14	—	—	—	—	3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	—	—	—	—	9.2	79	—	—	—	—
15	—	—	—	—	1	1.0	1.0	1.0	1.0	1.0	1.0	—	—	—	—	—	—	—	7.1	61	—	—	—	—
16	—	—	—	—	2	1.0	1.0	1.0	1.0	1.0	9	8	—	—	—	—	—	—	6.9	59	—	—	—	—
17	—	—	—	—	—	—	1	1.0	1.0	1.0	1.0	1.0	1.0	7	—	—	—	—	6.8	57	—	—	—	—
18	—	—	—	—	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	—	—	—	—	9.2	77	—	—	—	—
19	—	—	—	—	—	5	1.0	1.0	7	8	3	5	—	—	—	—	—	—	4.8	40	—	—	—	—
20	—	—	—	—	2	6	3	1	—	—	1	—	—	—	—	—	—	—	1.3	11	—	—	—	—
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	—	—	—	—	—	—	—	—	—	—	—	2	7	5	—	—	—	—	1.4	11	—	—	—	—
23	—	—	—	—	2	7	2	1.0	9	2	1	5	—	—	—	—	—	—	3.8	31	—	—	—	—
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	5	3	—	—	3	—	—	4	8	9	2	—	—	—	3.4	27	—	—	—	—
26	—	—	—	—	1	8	6	1.0	1.0	1.0	3	—	—	—	—	—	—	—	4.8	38	—	—	—	—
27	—	—	—	—	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	—	—	—	11.1	88	—	—	—	—
28	—	—	—	—	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2	—	—	—	10.9	86	—	—	—	—
29	—	—	—	—	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	—	—	—	11.3	88	—	—	—	—
30	—	—	—	—	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	9	—	—	—	—	10.5	82	—	—	—	—
31	—	—	—	—	4	1	—	1	4	8	3	4	2	—	—	—	—	—	2.7	21	—	—	—	—
Sum.	—	—	—	3.9	12.0	18.9	20.4	20.8	19.6	18.9	19.7	19.1	17.3	12.5	1.4	—	—	—	184.5	—	—	—	—	—
Mean	—	—	—	13	39	61	66	67	63	61	64	62	56	40	05	—	—	—	5.95	51	—	—	—	—

228. Eskdalemuir : h, = 1.5 metres.

April, 1929.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	h. m.	mw/cm ²		
1	—	—	—	—	2	1.0	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	—	—	—	9.5	73	—	—	—	—
2	—	—	—	—	7	8	9	5	2	1	8	6	—	—	—	—	—	—	4.7	36	—	—	—	—
3	—	—	—	—	—	—	—	1	—	—	—	—	1	2	5	—	—	—	0.9	7	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1	—	—	—	—
5	—	—	—	—	7	7	1.0	3	1	1	1	1	3	—	—	—	—	—	3.4	26	—	—	—	—
6	—	—	—	—	4	3	9	1.0	1.0	1.0	1.0	1.0	1.0	3	—	—	—	—	9.9	74	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	3	6	—	—	—	—	—	0.9	7	—	—	—	—
8	—	—	—	—	—	—	—	—	—	2	7	2	—	—	—	—	—	—	1.1	8	—	—	—	—
9	—	—	—	—	5	—	4	9	8	6	1.0	9	1.0	6	—	—	—	—	7.6	56	—	—	—	—
10	—	—	—	—	—	—	4	9	8	9	1.0	1.0	5	1	—	—	—	—	5.7	42	—	—	—	—
11	—	—	—	—	9	1.0	6	3	8	8	1.0	1.0	1.0	8	6	—	—	—	8.8	64	—	—	—	—
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.6	69	—	—	—	—
13	—	—	—	—	1.0	7	—	8	1.0	9	1	2	1.0	1.0	4	—	—	—	8.1	58	—	—	—	—
14	—	—	—	—	—	—	—	—	—	—	—	1	1	7	1.0	2	—	—	2.1	15	—	—	—	—
15	—	—	—	—	—	—	—	—	2	5	3	2	—	—	—	—	—	—	1.2	9	—	—	—	—
16	—	—	—	—	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	—	—	—	—	11.6	82	—	—	—	—
17	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1	—	—	—	—
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	—	—	—	—	8	1.0	1.0	1.0	5	1.0	1.0	8	5	1	2	—	—	—	8.9	62	—	—	—	—
21	—	—	—	—	5	6	7	6	1.0	1.0	1.0	—	—	—	—	—	—	—	7.4	51	—	—	—	—
22	—	—	—	—	—	3	9	7	1	4	7	1	4	—	—	—	—	—	3.7	25	—	—	—	—
23	—	—	—	—	4	1.0	1.0	7	3	2	1	3	2	1	—	—	—	—	5.2	36	—	—	—	—
24	—	—	—	—	4	—	—	—	7	7	6	7	9	2	7	3	5	—	5.7	39	—	—	—	—
25	—	—	—	—	1	6	1.0	9	8	4	1	—	—	—	—	—	—	—	4.0	27	—	—	—	—
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	—	—	—	—	—	2	5	—	—	—	4	1	—	—	—	—	—	—	1.2	8	—	—	—	—
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	—	—	—	—	—	—	—	—	3	9	2	8	9	7	9	7	—	—	5.4	36	—	—	—	—
30	—	—	—	—	5	1	9	9	4	—	3	—	5	—	—	—	—	—	4.7	31	—	—	—	—
Sum.	—	—	—	2.2	8.3	9.1	13.0	12.2	11.1	11.9	13.4	12.2	11.2	10.0	10.3	5.3	1.3	—	131.5	—	—	—	—	—
Mean	—	—	—	07	28	30	43	41	37	40	45	41	37	33	34	18	04	—	4.38	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.	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 ²		

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

229. Eskdalemuir : h, (height of recorder above ground) = 1.5 metres.

May, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	h. m.	Intensity.						
1	—	5	1.0	1.0	1.0	1.0	1.0	9	7	...	4	7	7	...	...	...	8.9	59	...	...	...	...
2	—	0.7	5	...	...	...	...
3	—	3	1.0	1.0	6	1	6	9	9	8	1.0	1.0	...	...	...	...	8.2	53	...	...	...	...
4	—	2	5	9	6	6	7	...	...	...	...	...	3.5	23	...	...	...	...
5	—	...	4	3	7	7	...	...	1	3	...	...	...	...	...	...	...	...	2.9	19	...	...	...	...
6	—	1	...	...	...	0.1	1	...	...	...	...
7	—	5	4	3	1	2	3	5	6	6	7	...	...	...	...	...	4.2	27	...	...	...	...
8	—	1	...	3	2	3	6	4	...	6	5	1	...	...	...	3.1	20	...	...	...	...
9	—	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	6	1	2	4	2	...	...	9.6	61	...	...	...	...
10	—
11	—	...	5	9	1.0	1.0	6	5	3	1.0	8	3	2	...	...	...	...	...	7.1	45	...	...	...	...
12	—	6	...	...	...	5	5	8	9	9	1	...	4.3	27	...	...	...	...
13	—	3	3	...	...	1	...	1	...	...	...	...	...	...	...	0.8	5	...	...	...	...
14
15	4	4	9	5	3	6	7	9	9	1	2	...	...	...	5.9	37	...	...	...	...
16	4	1.0	1.0	1.0	6	1.0	9	6	4	5	5	6	...	...	...	...	8.5	53	...	...	...	...
17	2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8	...	...	...	11.0	68	...	...	...	...
18	1	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	9	9	...	...	...	10.5	64	...	...	...	...
19	4	1.0	1.0	1.0	3	6	7	...	...	...	...	5.0	31	...	...	...	...
20	1.0	7	8	1.0	8	8	1.0	3	1	8	1.0	1	...	...	...	...	8.4	51	...	...	...	...
21	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	9	...	...	...	...	12.3	75	...	...	...	...
22
23	4	1	1	...	...	...	...	9	1	...	2	...	...	...	...	1.8	11	...	...	...	...
24	4	4	1	...	...	...	...	...	1	...	...	...	...	...	...	1.0	6	...	...	...	...
25	6	1.0	1.0	1.0	1.0	1.0	1.0	5	1	...	...	...	...	7.2	43	...	...	...	...
26	7	1.0	3	2	5	4	4	1	...	...	3.6	22	...	...	...	...
27	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	8	...	...	13.5	81	...	...	...	...
28	6	1.0	1.0	1.0	9	6	1.0	9	7	9	1.0	9	9	1.0	3	...	12.7	76	...	...	...	...
29	1	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	12.4	74	...	...	...	...
30	3	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	12.6	75	...	...	...	...
31	...	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	2	...	...	...	...	11.5	68	...	...	...	...
Sum.	...	0.4	5.7	10.5	14.7	16.6	15.0	15.5	17.3	18.1	16.9	15.9	15.2	12.2	10.1	5.8	1.4	...	191.3	—	—	—	—	—
Mean.01	.18	.34	.47	.54	.48	.50	.56	.58	.55	.51	.49	.39	.33	.19	.05	...	6.17	38	—	—	—	—

230. Eskdalemuir : h, = 1.5 metres.

June, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	h. m.	Intensity.						
1	1	1.0	1.0	1.0	8	2	...	...	...	...	...	...	...	...	4.1	24	...	...	...	...
2	2	6	8	9	1.0	4	...	...	3.9	23	...	...	...	...
3	2	1	...	...	1.0	1.0	8	8	1	...	...	...	...	4.0	23	...	...	...	...
4	4	6	1	4	...	...	...	...	...	1.5	9	...	...	...	...
5	...	4	1.0	7	6	6	5	1.0	6	2	4	2	2	3	...	...	...	...	6.7	39	...	...	...	...
6	3	7	...	...	2	1	1	3	8	...	...	...	2.5	15	...	...	...	...
7	8	5	2	5	9	8	8	1.0	5	...	4	1	...	...	6.5	38	...	...	...	...
8	3	1.0	1.0	1.0	8	3	4	1.0	4	2	1	3	3	...	...	7.1	41	...	...	...	...
9	...	3	1.0	9	2	9	9	7	4	9	9	1.0	1.0	1.0	1.0	7	2	...	12.0	70	...	...	...	...
10	3	1	5	9	8	2	6	7	6	3	2	8	5	...	...	6.5	38	...	...	...	...
11	4	3	8	9	8	1.0	1.0	1.0	1.0	1.0	7	...	...	8.9	52	...	...	...	...
12	1.0	1.0	1.0	1.0	9	7	9	4	2	3	...	...	...	...	...	...	7.4	43	...	...	...	...
13	3	2	4	3	2	...	...	...	...	1.4	8	...	...	...	...
14	1	3	4	2	5	6	1	3	...	2	1	1	1	...	...	3.0	17	...	...	...	...
15	...	2	1.0	1.0	1.0	1.0	8	7	3	...	1	3	3	...	...	...	...	...	6.7	39	...	...	...	...
16	1	1	4	...	...	6	1.0	3	1	...	6	3	1	...	...	3.6	21	...	...	...	...
17	1	...	1	2	7	...	...	...	...	1	3	...	...	...	1.5	9	...	...	...	...
18
19
20	...	3	7	8	1	...	8	9	2	7	1.0	1.0	1.0	1.0	1.0	9	2	...	10.6	61	...	...	...	...
21	1	7	2	1	3	5	...	...	...	...	...	...	...	...	...	...	1.9	11	...	...	...	...
22	4	4	4	7	1.0	1.0	1.0	1.0	4	8	1	...	...	6.2	36	...	...	...	...
23	4	1.0	1.0	1.0	1.0	1.0	1.0	8	1.0	1.0	1.0	1.0	6	1	...	...	11.9	69	...	...	...	...
24	...	6	1.0	1.0	1.0	9	9	6	7	9	1.0	5	2	2	2	1	2	...	10.0	58	...	...	...	...
25	...	9	1.0	1.0	1.0	1.0	1.0	7	1.0	1.0	9	3	9	1.0	7	3	2	...	12.9	74	...	...	...	...
26	...	4	1.0	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	7	...	14.8	85	...	...	...	...
27	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	...	11.8	68	...	...	...	...
28	8	9	1.0	9	1.0	2	...	4.8	28	...	...	...	...
29	2	1.0	6	...	...	4	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	...	10.7	62	...	...	...	...
30	2	1	...	...	...	...	5	9	2	...	...	1.9	11	...	...	...	...
Sum.	...	3.1	8.4	10.9	10.3	12.9	13.6	15.1	13.4	14.2	15.8	14.2	14.1	13.0	14.1	8.6	3.1	...	184.8	—	—	—	—	—
Mean.10	.28	.36	.34	.43	.45	.50	.45	.47	.53	.47	.47	.43	.47	.29	.10	...	6.16	36	—	—	—	—

DURATION OF BRIGHT SUNSHINE.

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

231. Eskdalemuir : h, (height of recorder above ground) = 1.5 metres.

July, 1929.

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.			%	h. m.	Intensity. mw/cm ²	p/p ₀ sec. Z.						
Day. 1	2.7	16	...	...	...
2	...	4	...	1	...	5	6	3	...	...	...	...	...	...	...	...	...	...	3.3	19	...	...	...
3	1	6	9	1	...	...	...	...	...	...	...	...	...	...	4.0	23	...	...	...
4	1	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...
5	1	1	8	5	2	...	...	...	...	...	...	...	1.7	10	...	...	...
6	5	1	3	...	7	2	...	2	7	7	...	...	...	...	...	3.8	22	...	...	...
7	8	7	8	...	8	4	7	2	2	1	...	...	...	...	...	7.5	44	...	...	...
8	7	1.0	1.0	1.0	...	1.0	4	4	7	...	1	...	...	...	...	...	5.8	34	...	...	...
9	1	...	...	...	...	...	...	...	...	0.1	1	...	...	...
10	
11	
12	7	1.0	1.0	1.0	1.0	9	9	1.0	1.0	9	4	...	...	9.8	58	...	...	...
13	...	4	6	1.0	1.0	8	7	1.0	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	13.9	82	...	...	...
14	...	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3	...	14.7	88	...	...	...
15	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	...	...	...	13.1	78	...	...	...
16	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	9	5	...	...	...	...	12.1	72	...	...	...
17	1	1.0	1.0	9	4	8	5	4	5	9	9	8	7	...	...	...	9.8	59	...	...	...
18	3	3	4	3	7	7	6	2	...	...	...	...	...	...	...	3.5	21	...	...	...
19	6	1.0	1.0	3	1.0	7	8	7	...	...	6.1	31	...	...	...
20	1	5	6	6	...	...	...	1.8	11	...	...	...
21	...	5	1.0	1.0	1.0	5	1.0	5	6	4	5	1.0	9	3	...	...	...	...	9.2	56	...	...	...
22	
23	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6	4	1.0	1.0	1	...	12.5	76	...	...	...
24	2	7	8	3	4	...	1	...	...	2.5	15	...	...	...
25	4	1.0	2	6	8	9	8	4	1	...	...	...	...	...	5.2	32	...	...	...
26	1	5	3	6	9	4	3	...	...	1	...	...	...	...	...	3.2	20	...	...	...
27	7	4	6	7	9	7	4	...	4	...	1	...	...	...	...	4.9	30	...	...	...
28	
29	6	1.0	1.0	7	5	...	...	...	...	3.8	24	...	...	...
30	2	1	6	2	...	...	...	5	5	2	...	...	...	...	2.3	14	...	...	...
31	2	4	3	2	2	1	...	...	...	1.4	9	...	...	...
Sum.	...	2.2	5.6	10.5	10.5	12.4	12.2	12.4	11.9	12.8	12.6	12.8	12.9	11.7	9.6	7.5	1.2	...	158.8	—	—	—	—	
Mean.07	.18	.34	.34	.40	.39	.40	.38	.41	.41	.41	.42	.38	.31	.24	.04	...	5.12	30	—	—	—	

232. Eskdalemuir : h, = 1.5 metres.

August, 1929.

hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	h. m.	Intensity. mw/cm ²	...	...
1	3	8	1	9	7	5	2	2	2	2	4	8	1	...	...	...	5.4	34	...	...	...
2	8	1.0	8	6	8	9	9	7	5	3	8	1.0	1.0	4	...	...	...	10.6	67	...	...	...
3
4
5	4	1.0	1.0	1.0	1.0	1.0	5	7	2	...	1	...	...	...	...	...	...	6.9	44	...	...	...
6
7	1	1	1.0	2	1	6	2	3	...	...	8	...	...	...	...	...	3.4	22	...	...	...
8	1	9	9	1	1	...	...	...	1	...	...	...	...	...	...	...	2.2	14	...	...	...
9	3	2	...	3	...	...	...	...	...	...	...	...	0.8	5	...	...	...
10
11	2	1.0	1.0	...	2	...	1	6	9	4	...	...	...	...	4.4	29	...	...	...
12	4	9	9	1.0	4	5	1.0	1.0	1.0	6	6	5	1.0	5	...	...	10.3	68	...	...	...
13	2	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	3	...	...	...
14	7	1.0	6	2	5	9	8	9	9	4	9	1.0	9	...	...	...	9.7	64	...	...	...
15	1	1	9	4	1	...	1	1	2	...	1	...	...	...	...	2.1	14	...	...	...
16	1	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...
17	3	6	5	7	3	7	7	2	...	...	...	...	...	...	4.0	27	...	...	...
18	2	1	8	8	8	6	9	6	1.0	9	1.0	1.0	2	...	...	...	8.9	60	...	...	...
19	1	1	...	...	...	...	...	...	...	...	0.2	1	...	...	...
20	1	3	1.0	3	...	...	...	...	...	...	...	1.7	12	...	...	...
21	5	...	1	...	...	...	...	...	...	...	...	...	...	...	0.6	4	...	...	...
22	6	9	9	1.0	7	8	1.0	4	2	2	...	...	...	...	...	...	6.7	46	...	...	...
23	3	...	...	...	...	...	...	...	...	...	...	...	0.3	2	...	...	...
24	1	9	1.0	1.0	1.0	1.0	1.0	7	...	...	...	...	...	7.7	54	...	...	...
25	2	1.0	1.0	1.0	1.0	1.0	1.0	5	7	1	1	...	...	...	7.3	51	...	...	...
26	9	1.0	1.0	1.0	9	1.0	3	1.0	3	2	1	...	...	...	...	7.7	54	...	...	...
27	(1.0)	(1.0)	...	...	...	...	...	...	...	...	...	...	...	...	...	(2.0)	(14)	...	...	...
28	9	8	4	1.0	6	7	4	2	2	2	2	...	...	...	5.6	40	...	...	...
29	2	8	1.0	...	9	7	8	2	...	...	...	...	...	4.6	33	...	...	...
30	4	4	1	4	...	...	...	...	...	1.3	9	...	...	...
31	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	1	...	...	...
Sum.	3.1	6.7	9.4	11.7	10.9	12.9	11.5	10.4	10.6	7.0	6.8	7.4	5.4	1.3	...	...	115.1	—	—	—	—	
Mean.10	.22	.30	.38	.35	.42	.37	.34	.34	.23	.22	.24	.17	.04	...	...	3.71	25	—	—	—	
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.	%	h. m.	Intensity. mw/cm ²	p/p ₀ sec. Z.	Sky.						

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

233. Eskdalemuir : h, (height of recorder above ground) = 1.5 metres.

September, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	h. m.	mw/cm ²						
1	—	—	4	2	1	...	...	1	3	9	6	6	1	—	—	3.3	24	...	...	...	...
2	—	—	...	5	4	8	1.0	9	4	9	1	...	5	3	...	...	—	—	5.8	42	...	...	...	...
3	—	—	1	...	...	...	1	...	...	...	—	—	0.2	1	...	...	...	...
4	—	—	—	—
5	—	—	(1.0)	(1.0)	...	—	—	(2.0)	(15)	...	...	...	...
6	—	—	2	1	...	...	...	1	1	6	1	...	...	...	—	—	1.2	9	...	...	...	...
7	—	—	2	1	...	...	...	...	...	...	...	...	—	—	0.3	2	...	...	...	...
8	—	—	5	...	...	6	1.0	1.0	1.0	1.0	1.0	1.0	5	...	—	—	6.6	50	...	...	...	...
9	—	—	4	1	9	1.0	1.0	1.0	1.0	1.0	9	...	—	—	7.3	55	...	...	...	...
10	—	—	5	9	4	4	8	2	8	5	...	...	—	—	4.5	34	...	...	...	...
11	—	—	2	1.0	1.0	1.0	1.0	5	4	3	...	...	...	...	—	—	5.4	41	...	...	...	...
12	—	—	1	...	...	...	...	...	—	—	0.1	1	...	...	...	...
13	—	—	...	1	3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	3	...	—	—	9.8	74	...	...	...	...
14	—	—	1	6	1	...	...	—	—	0.8	6	...	...	...	...
15	—	—	7	2	9	1.0	6	...	—	—	3.4	27	...	...	...	...
16	—	—	8	1.0	1.0	8	7	1.0	7	1.0	8	6	...	—	—	8.4	66	...	...	...	...
17	—	—	9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	—	—	8.4	67	...	...	...	...
18	—	—	1	3	8	1.0	...	...	...	...	...	...	...	—	—	2.2	18	...	...	...	...
19	—	—	—	—
20	—	—	1	9	7	1.0	8	5	1.0	1.0	1.0	1.0	5	...	—	—	8.5	69	...	...	...	...
21	—	—	1	2	1.0	1.0	1.0	1.0	1.0	5	...	...	...	—	—	6.8	55	...	...	...	...
22	—	—	—	—
23	—	—	—	—
24	—	—	2	...	...	...	...	...	...	...	...	—	—	0.2	2	...	...	...	...
25	—	—	4	4	7	...	...	...	—	—	1.5	13	...	...	...	...
26	—	—	2	5	9	1.0	1.0	1.0	1.0	...	...	—	—	5.6	47	...	...	...	...
27	—	—	—	—
28	—	—	—	—
29	—	—	9	5	5	8	1.0	1.0	1.0	9	8	...	...	—	—	7.4	63	...	...	...	...
30	—	—	4	2	1	...	...	...	...	...	—	—	0.7	6	...	...	...	...
Sum.	—	—	...	0.6	1.7	6.1	7.9	9.8	10.7	10.2	11.4	10.8	13.2	12.2	5.5	0.1	—	—	100.2	—	—	—	—	—
Mean.	—	—02	.06	.20	.26	.33	.36	.34	.38	.36	.44	.41	.18	.00	—	—	3.34	26	—	—	—	—

234. Eskdalemuir : h, = 1.5 metres.

October, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation by Ångström Pyrheliometer.			
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	h. m.	mw/cm ²						
1	—	—	2	7	1.0	1.0	6	1	...	...	...	...	...	...	—	—	3.6	31	...	...	...	...
2	—	—	3	5	6	5	3	6	...	...	—	—	2.8	24	...	...	...	...
3	—	—	6	1.0	1.0	1.0	8	8	4	1	2	...	...	...	—	—	5.9	52	...	...	...	...
4	—	—	1.0	1.0	1.0	3	1.0	1.0	7	4	2	...	...	—	—	6.6	58	...	...	...	...
5	—	—	1	2	...	...	...	...	...	...	...	...	...	...	—	—	0.3	3	...	...	...	...
6	—	—	6	1.0	8	3	9	7	5	...	...	...	—	—	4.8	43	...	...	...	...
7	—	—	1	9	1.0	1.0	8	3	5	8	7	1	1	...	—	—	6.2	56	...	...	...	...
8	—	—	1	1	1	...	...	—	—	0.3	3	...	...	...	...
9	—	—	9	1.0	1.0	7	8	5	7	1.0	7	...	...	...	—	—	7.3	67	...	...	...	...
10	—	—	—	—
11	—	—	7	8	1.0	1.0	1.0	1.0	1.0	1.0	2	...	...	—	—	7.7	71	...	...	...	...
12	—	—	1	3	1	3	...	...	...	...	—	—	0.8	7	...	...	...	...
13	—	—	—	—
14	—	—	2	...	...	...	...	...	...	...	—	—	0.2	2	...	...	...	...
15	—	—	—	—
16	—	—	—	—
17	—	—	4	2	1.0	5	...	...	1	...	...	...	...	—	—	2.2	21	...	...	...	...
18	—	—	5	9	7	5	1.0	1.0	1.0	1.0	1	...	...	—	—	6.7	65	...	...	...	...
19	—	—	8	1.0	1.0	1.0	7	...	...	...	...	...	...	—	—	4.5	44	...	...	...	...
20	—	—	8	5	5	...	...	...	1	...	...	...	—	—	1.9	19	...	...	...	...
21	—	—	—	—
22	—	—	—	—
23	—	—	—	—
24	—	—	—	—
25	—	—	7	9	9	8	1.0	1.0	1.0	1	...	...	...	—	—	6.4	66	...	...	...	...
26	—	—	2	1.0	3	...	...	...	2	3	8	1	...	...	—	—	2.9	30	...	...	...	...
27	—	—	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	...	—	—	8.4	87	...	...	...	...
28	—	—	3	1.0	6	5	3	...	...	...	...	...	—	—	2.7	28	...	...	...	...
29	—	—	2	7	9	1	1	...	...	...	...	...	...	—	—	2.0	21	...	...	...	...
30	—	—	1	1.0	1.0	1.0	1.0	9	1.0	8	6	...	...	...	—	—	7.4	79	...	...	...	...
31	—	—	1	9	9	1.0	6	9	...	...	...	—	—	4.4	47	...	...	...	...
Sum.	—	—	2.2	10.4	13.0	14.1	13.1	10.8	10.9	10.3	9.3	1.9	—	—	—	—	96.0	—	—	—	—	—
Mean.	—	—07	.34	.42	.45	.42	.35	.35	.33	.30	.06	—	—	—	—	3.10	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.	Radiation by Ångström Pyrheliometer.			
hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	h. m.	mw/cm ²	p/p ₀ sec. Z.	Sky.

DURATION OF BRIGHT SUNSHINE.

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

235. Eskdalemuir : h, (height of recorder above ground) = 1.5 metres

November, 1929.

Hour. L.A.T.	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	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	21.			Time. G.M.T.	Inten- sity.	p/p ₀ sec. Z.	Sky.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	h. m.	mw/cm ²									
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.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

236. Eskdalemuir : h, = 1.5 metres.

December and Year, 1929.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	h. m.	mw/cm ²								
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.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual Total.	...	5.7	25.0	51.4	72.0	113.5	126.0	189.0	137.6	138.5	137.0	115.0	105.2	81.5	51.4	24.6	5.7	...	1329.1	—	—	—	—	—	—
Annual Mean.	...	.02	.07	.14	.20	.31	.35	.88	.38	.38	.32	.29	.22	.14	.07	.02	...	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.	Time G.M.T.	Intensity.	p/p ₀ sec. Z.	Sky.	

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

237. Eskdalmuir :

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
Day.																								
1	—	1.4	—	0.3	—	0.2	—	0.1	—	0.4	—	0.2	—	0.0	—	0.0	—	0.1	—	0.0	—	0.1	—	0.0
2	—	0.6	—	0.4	—	0.5	—	1.2	—	1.5	10	1.6	—	1.0	—	0.6	—	1.0	—	0.9	—	1.2	20	3.6
3	50	3.9	50	3.6	50	4.1	50	4.2	30	2.1	30	2.3	30	2.4	50	2.8	60	2.7	50	2.5	50	2.1	20	1.5
4	50	2.1	50	2.5	60	3.1	40	3.0	30	2.4	30	2.0	20	1.7	360	2.4	360	2.2	—	1.0	40	2.0	50	4.8
5	30	3.9	60	3.0	70	3.6	40	4.6	60	4.9	50	6.1	70	5.1	60	5.5	40	4.1	40	4.3	60	5.3	90	7.8
6	20	3.0	60	4.0	60	4.8	50	5.2	60	5.2	40	5.6	70	6.1	80	5.0	80	5.4	50	5.2	60	7.2	40	5.6
7	80	3.0	80	3.0	60	2.9	50	2.9	40	2.5	30	3.5	30	4.0	20	3.1	30	4.3	30	2.7	60	3.5	40	3.1
8	—	1.5	360	3.1	270	2.5	280	2.5	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.1
9	—	0.1	—	0.4	—	0.4	—	0.7	210	2.0	200	3.2	190	4.4	190	3.3	190	2.4	180	4.0	160	2.7	180	5.9
10	180	2.2	—	0.8	—	0.0	—	0.0	—	0.0	—	0.5	40	2.4	10	3.5	10	2.9	10	4.8	30	4.9	20	3.1
11	70	7.1	60	6.1	50	6.6	60	6.0	60	8.4	40	5.9	50	7.0	40	8.2	40	7.0	40	8.3	50	9.8	40	12.0
12	20	5.1	30	5.4	30	5.7	30	5.8	30	5.3	30	4.0	30	3.5	50	2.0	—	1.0	30	3.8	40	2.8	40	2.6
13	—	0.6	—	0.5	—	0.5	—	1.3	340	4.4	—	1.3	—	0.1	—	0.0	—	0.0	—	0.1	—	0.1	—	0.0
14	10	4.5	10	5.1	360	4.5	10	4.0	10	4.0	360	4.0	10	5.3	10	5.7	360	4.5	(360)	5.6	(360)	4.0	10	4.4
15	300	14.7	290	12.9	290	12.2	280	10.2	290	12.1	310	12.4	320	10.5	340	8.7	350	9.6	360	8.1	360	8.7	350	7.3
16	340	10.5	340	10.5	340	11.1	350	9.9	360	8.1	350	7.1	360	4.9	360	2.8	350	3.0	—	0.4	320	3.6	340	6.3
17	—	1.5	—	1.4	—	1.5	260	4.0	180	1.9	—	0.5	—	0.4	—	0.2	—	0.0	—	0.1	—	0.0	—	0.0
18	190	5.4	190	3.5	200	3.9	210	5.5	220	6.4	220	4.7	200	2.8	—	1.1	—	1.4	200	2.7	220	3.5	—	1.5
19	210	4.7	210	6.0	220	7.7	210	6.0	210	2.1	190	4.9	200	6.4	200	5.8	190	5.0	190	3.6	200	5.2	200	5.8
20	190	5.7	190	7.3	190	7.5	190	8.0	200	7.8	210	7.9	220	6.6	200	5.4	200	4.5	160	2.1	170	2.4	170	2.2
21	—	0.5	—	0.6	—	0.9	—	0.8	—	1.4	—	1.5	360	1.9	350	1.6	—	0.5	—	0.5	—	0.0	—	0.0
22	360	1.7	—	1.5	350	2.8	350	3.1	—	1.5	350	3.0	350	2.7	350	3.1	360	1.8	20	3.1	—	1.5	20	1.6
23	50	2.1	—	0.5	—	0.6	—	0.8	—	0.9	—	0.9	—	1.0	50	1.8	50	2.0	—	1.5	—	0.3	—	1.5
24	360	4.0	20	2.8	20	5.1	10	3.4	20	7.5	10	5.8	10	5.4	10	5.5	10	6.6	20	8.1	20	8.0	10	6.4
25	330	3.6	350	3.3	20	2.0	20	1.6	—	0.7	350	1.7	350	3.0	340	4.0	—	0.9	—	1.0	—	0.4	320	3.4
26	360	4.3	360	4.0	10	4.6	10	4.0	360	4.4	10	4.2	350	2.6	—	1.1	—	0.1	—	0.5	—	0.8	—	0.3
27	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	0.5	—	0.0	—	0.0	150	1.8
28	—	0.0	—	0.6	350	1.7	—	0.1	—	0.0	—	0.0	—	0.1	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0
29	120	5.4	120	7.6	120	8.6	120	8.5	130	7.0	140	6.3	150	6.0	150	5.8	150	4.0	—	1.0	—	0.2	—	0.7
30	210	4.3	190	7.4	190	7.9	190	7.5	180	8.2	190	7.7	190	9.2	190	9.2	190	9.5	190	9.4	200	8.7	200	8.1
31	—	0.1	200	3.1	190	2.4	180	3.7	170	4.0	170	4.3	180	3.7	160	4.0	160	5.1	160	5.6	170	5.9	160	6.3
Mean ...	—	3.5	—	3.6	—	3.9	—	3.8	—	3.8	—	3.7	—	3.5	—	3.3	—	3.0	—	2.9	—	3.1	—	3.5

238. Eskdalemuir : H_a = 235 metres + 15 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	120	5.7	120	5.9	110	7.9	100	5.8	110	8.0	100	5.9	110	6.6	110	7.5	100	5.7	110	5.6	100	6.0	100	4.7
2	190	3.0	190	3.5	190	4.2	190	5.1	170	4.5	150	2.5	—	1.5	—	0.5	—	1.1	160	4.5	160	7.0	150	5.0
3	160	5.7	160	6.3	160	6.2	160	6.7	160	5.7	160	6.6	150	6.0	160	5.5	160	5.1	160	3.2	160	4.2	160	5.5
4	210	7.0	210	7.3	220	6.2	220	4.8	240	5.9	240	8.1	230	6.4	230	6.8	240	6.5	220	5.2	220	5.0	220	4.6
5	—	0.5	—	0.7	260	2.5	—	0.3	—	0.5	—	1.0	—	0.5	—	0.2	—	0.2	—	0.0	—	0.2	—	1.5
6	—	0.4	—	0.5	—	0.2	—	0.1	—	0.2	—	0.5	180	2.0	180	3.0	180	2.5	180	3.6	180	3.7	190	3.6
7	—	1.1	—	1.5	180	2.0	200	1.6	—	1.0	—	1.5	—	0.6	—	0.2	—	0.1	180	2.6	160	4.5	150	5.5
8	170	2.6	180	2.2	200	3.0	180	3.5	180	5.1	190	4.7	190	4.1	180	4.0	180	3.2	180	4.5	180	5.5	180	5.4
9	—	0.5	—	0.1	—	1.1	—	0.7	—	0.9	—	0.9	210	1.6	200	2.5	210	3.0	210	3.2	210	4.5	210	5.4
10	—	0.6	300	1.6	300	4.3	310	2.5	310	2.1	310	3.4	330	3.0	330	3.6	350	2.9	340	4.8	350	5.1	360	4.6
11	130	5.4	140	7.4	140	8.5	140	10.9	140	11.4	140	9.5	140	9.4	140	9.9	140	10.0	140	11.9	120	11.9	140	10.6
12	130	10.5	120	8.5	120	7.5	130	8.2	120	6.9	120	6.9	120	5.5	130	5.4	130	6.8	140	6.5	140	6.7	140	6.8
13	—	0.3	—	0.3	—	1.4	—	1.5	—	0.9	—	0.5	—	0.6	—	0.3	170	2.7	150	6.2	150	6.9	150	7.5
14	340	2.4	350	2.7	340	2.3	340	2.0	340	3.0	340	2.6	340	2.0	350	2.1	—	0.6	—	0.5	160	3.2	150	4.9
15	50	3.1	50	2.1	50	4.3	—	1.3	—	1.2	40	3.1	—	1.5	30	2.5	60	5.6	70	6.7	120	8.3	110	8.5
16	70	3.2	80	1.9	—	1.0	—	1.4	20	1.7	360	1.9	360	3.0	360	3.1	360	2.5	350	1.7	—	1.1	—	0.5
17	360	2.9	360	1.9	350	2.0	—	1.5	—	1.1	—	1.1	—	1.1	—	0.9	—	0.0	—	0.0	—	0.4	40	2.6
18	70	5.7	60	2.5	—	0.5	—	0.7	—	1.0	—	0.8	—	0.9	—	0.5	—	0.2	100	2.6	150	5.4	150	6.9
19	—	0.1	—	0.6	60	2.2	—	0.5	—	0.6	—	0.6	—	0.2	—	0.1	—	0.1	—	0.1	120	3.8	140	4.8
20	—	0.1	—	0.3	—	0.5	—	0.6	—	1.4	240	1.7	210	2.5	—	1.2	180	2.5	170	4.0	180	4.0	180	3.0
21	200	3.0	200	3.3	190	2.7	—	0.3	—	1.3	200	2.5	200	2.7	200	4.0	190	3.5	190	4.5	190	4.7	190	4.5
22	200	3.1	190	4.3	200	3.3	170	2.6	—	1.4	170	2.1	—	0.7	—	0.6	180	1.8	190	1.8	170	2.6	—	1.2
23	10	3.8	360	3.9	350	3.7	350	3.8	350	3.0	10	2.8	350	4.4	360	3.5	350	3.7	30	3.9	40	4.4	30	4.5
24	—	1.0	360	3.2	30	3.0	10	2.7	20	4.4	50	2.8	40	3.5	40	3.0	60	3.7	60	4.1	50	4.5	50	3.6
25	100	7.2	100	7.7	100	6.2	100	7.1	100	7.5	130	7.2	100	7.5	90	7.5	80	8.5	80	6.8	90	7.0	80	7.9
26	70	7.1	70	8.5	70	9.5	70	8.5	80	10.6	80	9.0	80	10.2	80	10.0	80	9.5	90	10.3	90	10.0	100	

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

M.S.L. + h_a (height of anemograph above ground) = 235 metres + 15 metres.

January, 1929.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day.
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
—	0.1	—	0.0	310	1.7	360	3.8	70	2.1	350	3.2	80	2.1	—	1.5	10	2.7	50	1.6	10	2.0	—	1.4	1.0	1
50	2.9	50	2.6	40	3.7	60	3.5	40	3.4	40	3.2	60	2.1	50	3.1	60	3.7	40	3.9	50	3.4	50	3.3	2.2	2
—	1.2	60	1.8	50	2.0	50	2.1	50	2.1	—	1.5	50	2.2	50	2.2	50	2.0	50	2.2	50	2.1	50	2.1	2.4	3
60	4.5	50	2.5	30	2.0	40	2.5	30	3.5	40	2.9	50	3.5	50	4.0	50	4.1	40	4.1	50	3.3	30	3.9	2.9	4
80	7.9	60	7.5	60	6.9	70	8.2	80	7.0	70	6.1	60	5.6	60	5.1	80	6.5	80	7.8	60	4.6	60	3.4	5.6	5
50	6.4	50	7.2	60	7.3	80	6.1	80	4.9	100	6.1	120	5.5	110	3.5	130	3.7	130	3.5	100	3.5	110	3.1	5.1	6
—	1.2	50	1.8	30	1.7	—	1.5	360	2.1	360	2.0	—	1.2	—	0.6	—	1.3	—	1.5	—	0.9	—	1.5	2.4	7
—	0.0	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.2	—	0.2	—	0.0	—	0.0	—	0.2	—	0.3	0.5	8
170	5.9	160	6.5	160	7.0	160	5.1	170	3.6	170	3.5	170	5.2	170	4.0	160	2.1	170	2.5	—	1.5	170	2.2	3.2	9
40	4.0	40	6.4	50	5.0	50	6.1	50	7.0	60	6.5	60	8.1	60	6.2	60	6.1	60	5.9	60	5.6	70	7.5	4.0	10
40	9.5	30	8.9	40	8.5	40	8.5	40	8.5	30	5.8	30	5.1	30	8.1	40	6.6	10	5.2	30	6.9	30	7.4	7.6	11
20	4.7	40	3.4	40	2.6	50	2.7	360	2.5	340	2.8	360	3.2	20	2.7	360	3.3	360	2.2	10	1.6	—	0.5	3.4	12
—	0.0	—	1.0	—	1.5	310	1.6	360	4.3	20	2.5	350	2.7	10	2.1	10	3.7	10	5.7	10	6.0	360	5.0	1.8	13
340	5.5	340	4.7	330	4.7	300	5.1	300	4.1	310	4.1	310	2.8	300	5.2	280	2.6	280	3.2	260	7.0	300	10.1	4.7	14
350	9.0	350	8.6	350	9.5	350	8.4	350	8.0	350	7.5	350	8.2	360	7.2	350	7.5	350	9.2	340	10.0	340	10.0	9.6	15
320	7.9	310	8.2	300	5.6	300	4.9	300	6.7	290	6.9	300	6.5	—	1.3	260	3.1	270	2.7	—	0.6	—	0.4	5.7	16
—	0.0	—	0.0	—	0.1	—	0.0	—	0.0	—	0.2	—	0.0	—	0.0	—	0.2	190	2.9	190	4.6	190	6.4	1.0	17
—	1.5	210	3.5	190	2.5	200	2.6	220	3.5	200	2.5	190	2.4	180	2.8	210	3.5	220	5.5	210	4.6	210	4.8	3.5	18
200	6.8	200	7.6	200	6.5	210	5.1	210	6.2	220	5.8	210	4.1	200	4.5	190	4.3	200	5.9	200	8.0	200	6.1	5.6	19
190	4.4	190	3.5	—	1.5	—	0.2	—	0.1	—	0.0	—	0.0	—	0.0	—	0.2	—	1.2	—	0.9	—	0.6	3.4	20
—	0.5	—	1.0	—	0.8	—	0.6	—	1.5	—	0.5	—	0.2	—	0.1	—	0.1	—	0.2	—	0.5	—	1.5	0.7	21
20	3.5	30	4.2	30	3.9	10	5.7	10	7.4	360	5.6	10	5.7	10	5.2	20	4.9	30	3.1	30	2.7	50	2.8	3.4	22
40	1.9	—	1.5	20	3.0	20	3.5	20	3.0	10	2.0	360	1.9	360	1.6	10	1.9	10	3.0	350	3.5	350	4.8	1.9	23
10	6.6	10	6.5	360	5.6	360	4.4	20	4.5	360	3.6	360	3.5	340	3.1	360	4.5	10	4.2	10	5.3	340	3.5	5.2	24
310	4.2	320	4.1	330	5.0	340	5.6	340	6.4	340	4.6	360	2.9	—	0.5	—	0.4	350	4.4	360	5.8	350	6.5	3.1	25
—	0.2	280	2.3	270	3.6	230	3.1	—	0.4	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	1.8	26
—	1.4	—	1.0	—	0.2	—	0.0	—	0.0	—	0.0	10	1.6	10	1.7	20	2.6	—	0.5	—	0.5	—	0.1	0.5	27
—	0.0	—	0.0	—	0.3	—	1.1	—	1.3	—	1.4	—	0.7	—	0.2	110	1.9	110	2.1	120	3.5	120	4.6	0.7	28
—	0.3	—	0.2	—	0.4	—	0.3	—	1.3	—	0.5	—	0.0	—	0.0	—	0.1	—	1.2	—	0.6	—	0.4	2.9	29
190	6.1	200	7.1	210	6.9	210	5.0	210	4.8	—	0.3	—	0.5	—	0.2	—	1.5	—	0.2	—	0.1	—	0.1	5.4	30
150	6.0	150	6.6	150	6.7	150	5.7	150	6.1	150	6.2	150	4.8	150	4.9	140	6.4	140	5.0	130	6.2	130	6.5	4.8	31
—	3.7	—	8.9	—	3.8	—	3.7	—	3.7	—	3.2	—	3.0	—	2.6	—	2.9	—	3.3	—	3.4	—	3.6	3.4	

February, 1929.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day.
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
110	3.0	—	0.8	—	1.0	—	1.2	360	1.6	—	0.7	—	0.0	180	1.6	210	3.9	210	4.4	220	4.5	200	3.0	4.3	1
130	8.0	140	8.5	150	9.4	160	8.5	160	7.2	160	6.6	160	5.0	160	4.6	160	4.5	160	5.3	170	4.8	170	4.6	5.1	2
160	5.4	160	4.0	160	1.8	160	2.5	160	3.0	170	4.4	180	5.3	180	4.7	180	2.9	190	3.0	190	3.5	210	3.7	4.6	3
210	4.3	260	6.0	290	4.9	280	3.5	270	2.6	270	3.9	270	4.8	290	4.2	290	1.8	—	1.1	—	1.2	—	1.5	4.8	4
250	2.5	250	3.8	230	3.7	220	3.2	220	2.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.4	—	0.2	1.0	5
230	4.2	230	3.7	240	3.3	—	1.0	—	0.3	—	0.1	—	0.0	—	0.4	—	1.4	—	0.2	—	0.1	—	0.4	1.5	6
150	5.4	150	5.6	160	5.0	160	4.2	170	3.4	170	3.0	180	2.2	—	0.8	—	1.3	190	3.9	170	2.1	180	2.5	2.5	7
180	5.0	190	6.6	190	5.1	190	4.5	190	5.1	220	6.1	230	5.1	240	2.3	—	0.3	—	0.2	—	0.0	—	0.3	3.7	8
210	7.0	210	7.1	200	7.0	210	5.7	210	5.6	190	3.9	210	6.6	200	5.3	200	5.8	210	6.8	240	3.5	—	0.0	3.9	9
20	4.7	10	3.9	10	3.5	350	3.0	350	3.5	10	2.0	360	1.8	350	2.4	360	1.9	—	0.7	—	0.2	120	2.2	2.8	10
140	12.5	150	12.0	140	9.9	140	10.6	140	11.0	140	10.5	130	11.0	130	11.1	130	8.2	130	9.0	130	9.9	130	10.7	10.0	11
130	8.6	130	8.5	140	7.0	140	6.1	130	6.4	120	5.5	120	2.5	—	0.2	—	0.3	—	0.3	—	0.2	—	0.1	5.7	12
150	7.0	160	5.9	150	5.8	140	5.5	140	1.7	—	0.3	—	0.4	340	1.7	350	1.8	340	1.9	340	2.0	340	2.7	2.7	13
150	5.0	160	5.2	140	5.1	130	4.5	110	4.2	120	3.7	—	0.9	—	0.3	—	0.5	—	0.5	—	0.5	60	4.1	2.6	14
120	8.7	120	7.6	120	6.0	110	4.5	90	3.5	60	3.2	50	3.1	60	3.6	90	4.3	130	5.4	130	3.9	90	2.5	4.4	15
—	0.5	—	0.2	—	0.0	—	0.1	—	1.5	350	3.1	10	2.8	350	3.6	350	3.3	350	3.7	360	3.1	350	3.0	2.0	16
60	4.0	60	4.7	70	2.3	50	2.2	—	0.7	—	1.5	—	1.2	40	1.9	60	3.7	60	4.2	70	5.7	70	6.0	2.2	17
150	7.4	150	7.0	150	5.7	140	2.8	120	2.0	—	1.0	—	0.5	—	0.0	—	0.0	—	0.0	—	0.2	—	0.1	2.4	18
130	4.7	120	4.4	120	4.2	90	3.0	50	2.3	—	0.1	—	0.1	10	1.6	360	2.6	360	2.6	—	0.2	—	0.5	1.8	19
160	3.5	160	4.7	160	4.8	160	4.6	160	4.5	170	2.2	170	4.0	180	4.1	190	3.6	180	3.5	180	3.4	180	3.3	2.8	20
200	6.1	200	5.8	190	5.5	190	6.6	200	7.0	220	6.5	220	5.0	200	3.5	200	5.2	100	2.1	200	1.7	180	1.6	3.9	21
—	0.1	—	0.1	—	0.3	90	2.5	40	4.1	10	2.2	—	1.0	320	2.5	340	3.1	350	2.7	360	3.1	10	4.9	2.1	22
50	3.7	50	3.5	30	2.7	40	2.1	60	1.7	30	2.3	10	1.6	10	1.6	360	2.9	350	3.5	340	3.6	330	2.5	3.3	23
60	3.7	60	3.8	40	3.5	50	3.6	60	3.5	70	4.5	80	4.0	80	3.5	80	5.1	90	4.5	100	5.0	100	7.9	3.7	24
90																									

Direction expressed in degrees from North (E = 90°, S = 180°, W = 270°, N = 260°). Speed in metres per second.

239. Eskdalemuir :

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	Day.	m/s.	°	m/s.																					
1	—	1.0	—	0.2	—	0.2	—	0.5	—	0.5	210	3.2	190	5.4	190	5.2	190	7.0	190	8.1	200	9.0	200	9.6	
2	—	1.5	210	3.7	210	4.4	200	3.9	210	4.4	190	4.1	200	4.0	190	3.5	210	5.0	210	4.4	200	5.9	210	6.0	
3	—	0.0	—	0.7	—	0.5	—	0.2	—	0.1	—	0.2	—	0.4	—	0.4	—	0.1	—	0.0	—	0.1	—	1.2	
4	20	6.9	20	6.0	20	6.9	30	8.9	30	9.6	30	7.0	40	7.5	40	7.1	40	6.8	50	5.5	50	5.4	60	5.4	
5	—	0.1	—	0.1	—	0.1	—	0.1	—	0.2	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	290	3.0	
6	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.2	—	0.1	—	0.0	240	2.5	250	5.4	250	5.5	
7	—	0.2	—	0.2	—	0.0	—	0.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	140	2.6	140	5.1	
8	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	140	1.6	190	3.5	
9	—	0.2	—	0.0	—	0.9	—	0.3	—	0.1	—	0.3	—	0.2	—	0.1	—	0.0	—	0.0	—	1.5	170	2.7	
10	—	0.2	—	0.1	—	0.2	—	0.2	—	0.1	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	—	0.9	190	3.7	
11	—	0.3	—	0.4	—	0.5	—	0.3	—	0.3	—	0.3	—	0.2	—	0.1	—	0.0	—	0.2	120	2.4	260	3.1	
12	—	0.2	—	0.0	—	1.3	330	5.2	350	6.7	360	6.2	360	5.1	10	3.9	20	1.6	70	2.5	70	4.6	60	4.8	
13	—	0.1	—	0.1	—	0.0	—	0.1	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	140	2.3	—	1.1	—	4.1	
14	340	2.1	350	1.9	—	1.4	—	0.4	—	0.8	—	1.2	—	0.5	—	0.8	—	0.3	40	1.6	70	3.1	60	5.3	
15	10	5.5	10	4.2	10	4.1	10	4.1	10	3.8	10	4.1	10	5.3	10	4.1	20	4.0	40	5.7	50	6.7	40	7.0	
16	—	1.5	—	0.7	350	1.9	320	1.6	—	0.9	—	1.4	—	0.7	—	0.0	—	0.0	180	3.0	180	3.9	190	3.6	
17	—	0.5	230	2.9	230	4.6	—	0.5	—	0.2	—	0.1	—	0.2	—	0.7	—	0.0	210	3.5	200	3.6	170	4.1	
18	—	1.5	—	1.5	330	2.0	350	1.6	340	1.9	350	1.6	350	1.6	—	0.2	—	0.1	—	0.5	—	1.0	160	2.0	
19	350	3.5	350	3.9	350	3.6	350	3.3	350	2.4	350	3.5	350	2.7	360	2.9	—	1.5	40	4.0	50	5.5	50	5.5	
20	—	0.2	—	0.1	—	0.1	—	0.1	—	0.2	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	210	4.1	
21	—	0.4	180	1.6	190	3.5	—	1.5	180	2.5	200	6.5	200	7.4	200	7.6	200	8.3	200	8.0	200	7.2	200	8.0	
22	190	1.7	180	3.0	210	2.1	210	3.5	210	4.3	200	3.6	200	7.5	200	8.1	210	9.2	200	8.6	200	7.9	200	6.4	
23	210	2.9	230	2.0	—	1.2	—	0.8	270	3.7	280	4.7	270	4.6	270	5.4	270	5.5	260	6.5	240	7.0	250	6.2	
24	—	1.2	180	2.1	160	2.5	140	3.0	160	3.2	200	4.0	190	3.2	190	4.1	190	4.1	200	6.2	200	6.7	200	7.6	
25	190	5.2	210	4.5	240	2.5	200	3.4	230	5.5	220	4.3	210	6.4	190	5.9	190	5.0	230	5.0	250	6.6	270	7.0	
26	—	0.0	—	0.0	—	0.0	—	0.0	—	1.1	—	1.4	170	1.8	150	4.0	180	5.5	230	9.5	210	7.8	210	7.2	
27	—	0.4	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	170	4.5	200	5.0	220	6.6	
28	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	0.7	190	3.2	250	4.6	250	4.3	
29	—	0.0	—	0.1	—	0.1	—	0.1	—	0.1	—	0.2	—	0.2	—	0.3	—	2.5	1.6	250	3.3	280	5.5	270	5.1
30	—	0.7	—	0.4	—	0.5	—	0.6	—	0.3	—	0.2	—	0.4	—	0.6	—	1.5	1.7	300	2.9	270	4.2	210	5.8
31	280	11.5	290	11.0	290	12.3	280	9.5	290	9.0	290	11.5	290	8.9	290	8.5	300	8.2	300	8.2	290	10.0	300	10.5	
Mean...	—	1.6	—	1.7	—	1.9	—	1.7	—	2.0	—	2.3	—	2.4	—	2.4	—	2.5	—	3.5	—	4.4	—	5.2	

240. Eskdalemuir : H_a = 235 metres + 15 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	Day.	m/s.	°	m/s.																					
1	260	8.2	240	8.6	240	9.7	220	8.5	210	9.1	220	9.0	250	6.5	330	11.0	320	11.9	330	10.8	320	11.0	310	11.6	
2	340	6.4	340	7.6	340	6.7	340	5.1	310	7.5	310	7.4	310	8.5	310	10.2	310	10.1	320	8.3	340	7.0	360	7.2	
3	—	0.0	—	0.3	—	0.6	330	2.0	300	5.6	290	5.6	300	6.7	—	7.0	340	7.4	350	5.7	10	5.2	360	4.8	
4	—	0.0	—	0.1	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.5	270	3.5	280	7.1	300	2.8	290	6.0	
5	10	3.0	360	3.4	20	6.9	20	6.5	20	6.0	20	7.5	30	8.1	30	9.1	30	9.2	30	7.5	40	7.3	40	6.4	
6	—	0.0	—	0.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	210	4.6	260	7.7	250	6.5	230	6.2	220	5.6
7	200	2.3	190	1.6	200	1.6	180	2.0	—	1.2	—	1.2	—	1.5	—	200	2.5	190	3.7	200	3.7	200	4.0	200	4.4
8	210	3.4	210	3.2	220	2.5	—	1.4	210	2.0	—	1.2	—	0.0	—	1.5	—	190	5.6	200	5.6	220	6.1	230	3.0
9	—	0.4	—	0.1	—	0.0	350	2.9	360	4.5	350	4.3	350	4.6	360	4.5	350	5.6	360	5.8	20	4.4	10	4.0	
10	310	4.0	360	6.1	10	6.5	10	7.6	10	7.7	10	8.6	20	10.6	20	11.4	20	11.5	20	12.1	20	12.1	20	12.4	
11	20	6.3	20	6.1	30	6.6	40	6.3	40	4.4	30	5.6	40	6.7	50	9.0	60	9.0	60	9.4	60	9.5	50	9.3	
12	30	6.3	30	6.8	30	6.8	30	6.7	40	5.8	40	5.4	50	6.1	50	6.3	60	8.9	60	9.5	50	9.7	50	10.3	
13	30	6.0	20	5.7	30	5.7	30	6.5	40	9.1	40	9.5	40	10.0	40	11.8	50	12.5	50	13.1	50	12.5	50	12.5	
14	40	5.4	40	7.8	40	4.6	30	4.0	40	5.2	40	5.6	50	5.5	50	6.4	60	5.9	60	5.5	60	6.0	60	6.3	
15	30	6.7	30	6.8	40	7.2	40	8.1	50	7.5	60	8.0	70	5.7	50	7.2	50	6.2	50	5.9	70	6.7	100	7.4	
16	30	4.0	70	6.8	50	5.3	50	4.5	60	6.0	50	4.6	50	5.5	30	5.2	40	5.6	60	6.3	90	7.0	90	6.5	
17	—	1.0	—	1.0	—	1.0	—	0.6	—	0.6	—	0.4	—	0.5	—	0.0	160	2.4	200	4.5	210	5.4	200	5.5	
18	200	5.5	200	7.3	190	6.2	190	6.0	200	5.2	180	4.5	190	5.9	210	6.1	210	7.3	220	8.5	220	7.6	210	8.7	
19	210	10.9	210	11.2	210	11.1	210	10.2	220	10.4	220	10.0	220	10.1	220	12.0	220	10.7	230	9.3	260	7.4	290	8.5	
20	340	7.8	350	6.8	350	6.0	360	2.9	350	4.0	350	6.6	360	8.1	10	7.9	360	7.6	10	7.4	20	7.2	10	7.4	
21	—	0.3	280	2.2	280	4.8	350	2.3	350	1.6	320	3.7	310	5.9	320	7.4	320	5.6	360	5.5	20	5.2	20	5.6	
22	—	1.1	—	0.2	—	0.0	—	0.0	—	0.0	—	0.0	170	2.0	250	7.9	250	7.1	270	5.7	270	6.7	280	7.4	
23	350	2.2	350	3.0	360	5.2	360	4.0	10	3.0	—	1.3	20	2.5	360	4.1	340	5.0	360	4.4	360	4.6	360	4.6	
24	270	5.1	280	8.5	280	9.5	280	6.7	270	6.8	300	8.7	320	8.6	360	5.5	330	6.0	350	6.3	360	7.0	360	8.3	
25	360	3.0	340	3.1	—	1.1	—	1.4	—	1.5	—	1.2	—	1.5	—	310	4.9	320	6.4	310	6.5	340	5.6	310	5.3
26	—	0.2	—	0.2	—	0.1	—	0.0	—	0.4	—	0.0	—	0.0	—	1.0	—	4.2	200	4.8	180	3.5	150	3.7	
27	40	3.2	360	2.3	340	1.9	320	1.9	—	0.6	—														

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

M.S.L. + h_a (height of anemograph above ground) = 235 metres + 15 metres.

March, 1929.

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.	
200	10.0	210	9.0	200	9.9	200	8.5	200	6.5	180	3.3	160	2.1	180	2.6	190	2.8	190	3.0	210	4.1	200	2.8	m/s.	1
210	6.1	210	5.9	220	5.1	220	5.1	200	5.4	190	3.1	160	3.5	—	1.1	—	0.5	—	0.1	—	0.1	—	0.2	m/s.	2
270	2.9	240	2.6	270	2.3	280	1.6	300	2.1	10	4.5	20	6.5	350	4.1	350	2.1	—	0.4	20	2.0	20	5.5	m/s.	3
40	4.4	60	3.7	60	2.5	—	1.3	—	1.5	310	2.1	—	1.5	—	0.5	—	0.0	—	0.0	—	0.1	—	0.1	m/s.	4
290	3.7	300	4.4	280	4.0	280	4.0	320	2.0	360	2.4	—	1.1	—	1.1	340	1.7	—	0.7	—	1.2	—	0.7	m/s.	5
220	5.7	200	5.5	160	5.6	150	5.1	150	2.1	—	1.4	—	0.6	—	0.5	—	0.4	—	0.1	—	0.2	—	0.0	m/s.	6
170	5.6	220	6.5	220	6.6	210	5.5	—	1.5	—	0.5	130	2.1	130	2.5	130	2.0	—	0.6	—	0.1	—	0.1	m/s.	7
230	4.1	210	4.0	210	4.0	210	3.9	280	2.5	320	2.1	340	1.8	—	0.7	—	0.3	—	0.2	—	0.1	—	0.1	m/s.	8
210	3.0	230	3.8	220	3.6	220	3.0	270	1.6	320	2.5	330	1.8	—	1.1	—	0.7	—	0.3	—	0.4	—	0.2	m/s.	9
200	5.2	210	6.4	220	6.2	230	4.6	250	3.9	—	1.4	—	0.5	—	0.3	—	0.4	—	0.4	—	0.3	—	0.4	m/s.	10
230	3.5	280	4.3	290	6.0	290	5.0	290	3.0	320	2.5	—	1.5	—	0.1	—	0.0	—	0.0	—	0.1	—	0.1	m/s.	11
60	5.7	70	5.0	70	4.0	60	3.1	80	2.5	40	1.6	40	1.9	10	1.8	350	2.5	—	1.0	—	0.1	—	0.0	m/s.	12
70	2.0	70	3.2	60	3.4	40	2.1	40	2.5	20	1.8	350	2.0	360	4.0	360	2.9	350	2.0	—	1.5	350	1.6	m/s.	13
60	6.1	60	6.5	50	8.5	40	7.7	30	4.9	360	5.2	350	5.6	360	7.9	360	7.5	20	7.4	20	7.5	20	6.0	m/s.	14
40	6.1	40	6.0	30	5.0	20	4.8	10	4.7	10	4.5	10	3.2	340	3.5	360	3.3	10	2.0	10	2.5	10	2.1	m/s.	15
200	3.5	200	3.0	200	2.4	210	3.1	—	1.1	—	0.7	—	0.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	m/s.	16
170	4.0	170	4.4	180	4.5	190	4.0	200	3.9	—	1.4	—	1.2	—	0.9	—	0.5	—	0.5	—	0.8	—	1.1	m/s.	17
170	2.8	190	3.2	190	2.2	160	2.0	70	3.8	30	3.9	30	2.9	20	1.6	20	1.7	30	2.6	350	2.1	350	2.5	m/s.	18
50	6.0	50	5.6	50	5.0	360	3.4	360	2.9	350	3.1	360	4.2	350	3.6	350	3.6	350	3.2	350	2.0	—	0.3	m/s.	19
210	6.0	200	5.1	200	5.5	200	5.1	220	4.8	220	4.5	170	3.6	170	4.0	150	3.2	150	2.2	—	1.5	—	0.1	m/s.	20
200	7.9	200	7.1	200	7.0	200	5.1	180	3.5	170	1.6	—	1.4	—	1.1	—	1.5	—	1.2	—	0.1	—	1.5	m/s.	21
200	7.3	200	7.4	190	6.4	180	7.0	190	5.1	190	5.6	190	4.1	190	5.4	200	6.1	200	4.7	190	4.5	190	4.1	m/s.	22
230	7.8	220	8.4	230	7.5	220	6.1	210	5.6	210	5.6	190	5.1	210	6.5	210	5.2	180	2.7	160	3.0	—	1.5	m/s.	23
190	7.7	190	8.0	190	7.6	190	7.5	200	8.6	190	7.9	200	10.2	200	8.0	200	7.5	190	8.1	190	6.5	190	4.4	m/s.	24
270	7.7	280	8.1	300	7.6	300	7.8	290	6.2	290	3.1	310	3.1	310	2.0	—	0.4	—	0.2	—	0.5	—	0.1	m/s.	25
200	7.3	190	7.5	180	7.5	190	5.6	160	4.5	150	3.5	200	3.4	—	1.0	—	0.0	—	0.1	—	0.2	—	0.1	m/s.	26
230	6.5	230	7.0	230	6.5	230	6.2	220	5.3	200	2.5	—	1.1	—	0.3	—	0.1	—	0.0	—	0.0	—	0.0	m/s.	27
270	3.8	290	4.9	270	4.4	260	3.6	200	4.7	200	2.5	—	0.6	—	0.9	—	0.5	—	0.5	—	0.1	—	0.1	m/s.	28
280	7.0	280	6.5	280	5.5	280	5.4	270	4.6	290	4.3	290	4.1	310	3.4	340	1.8	—	1.4	—	0.9	—	0.9	m/s.	29
210	5.9	200	7.0	210	7.5	190	6.8	190	6.5	160	3.6	160	3.0	190	4.8	180	3.2	250	5.7	270	9.5	260	8.3	m/s.	30
290	11.5	300	12.1	300	11.1	290	7.5	290	11.4	280	7.8	280	7.1	270	6.8	290	8.1	270	6.1	260	10.2	260	9.2	m/s.	31
—	5.7	—	5.9	—	5.6	—	4.9	—	4.2	—	3.2	—	2.9	—	2.7	—	2.3	—	1.9	—	2.0	—	1.7	m/s.	3.1

April, 1929.

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.	
310	12.0	310	12.1	300	11.5	300	10.5	300	11.0	300	10.0	330	8.1	330	8.0	340	7.1	350	6.1	350	6.1	340	6.5	m/s.	1
20	8.1	20	7.1	30	6.1	20	5.0	20	5.0	10	3.7	10	3.0	350	2.5	340	1.8	—	1.5	—	0.2	—	0.0	m/s.	2
360	4.6	360	4.0	360	4.0	350	3.5	360	3.1	330	3.1	310	2.5	350	2.2	360	1.6	340	1.6	—	0.8	—	0.5	m/s.	3
280	8.1	280	5.7	280	10.0	290	9.1	290	8.6	300	7.6	320	5.5	340	4.9	350	3.7	350	4.1	350	3.1	10	3.1	m/s.	4
50	6.0	40	5.9	50	6.5	60	6.5	50	5.2	50	4.0	30	2.5	340	2.0	—	1.5	—	0.9	—	0.1	—	0.0	m/s.	5
220	6.7	220	7.2	220	7.2	220	7.9	220	8.0	220	5.4	260	2.4	—	1.0	150	2.4	200	2.4	210	2.5	210	3.0	m/s.	6
190	5.2	200	5.5	200	5.5	220	6.0	200	7.3	200	4.2	200	2.7	210	3.1	—	0.3	—	0.5	180	2.5	200	3.5	m/s.	7
180	3.5	220	6.4	200	5.2	220	6.5	210	7.0	210	5.6	240	4.5	—	1.5	—	0.7	—	1.0	—	0.9	—	0.9	m/s.	8
360	5.6	350	5.9	340	5.4	360	6.3	40	6.2	60	2.0	20	2.3	330	3.3	—	1.3	—	1.2	—	1.2	360	3.0	m/s.	9
20	12.7	30	12.3	30	11.1	30	10.9	40	10.5	40	9.0	30	6.7	30	7.0	20	7.1	20	6.8	20	5.8	20	5.6	m/s.	10
60	9.5	60	10.5	50	10.0	50	9.4	50	8.6	50	6.2	40	4.2	—	1.0	—	0.1	20	2.8	20	6.3	30	5.6	m/s.	11
50	9.7	50	10.6	50	10.4	60	10.0	40	8.0	40	6.5	30	5.2	30	5.0	40	5.5	40	6.7	40	8.6	40	7.3	m/s.	12
50	9.2	50	11.0	50	9.1	50	10.3	40	11.1	40	8.4	30	7.5	30	8.4	20	7.9	30	11.6	40	11.1	40	6.0	m/s.	13
60	4.9	50	6.7	50	5.1	60	9.1	60	10.5	30	8.1	20	5.0	20	5.3	10	6.2	10	5.3	20	4.4	40	6.5	m/s.	14
100	7.4	100	7.9	90	6.5	70	6.4	50	6.7	60	8.2	60	7.0	50	4.1	60	3.4	70	4.5	30	2.7	30	3.2	m/s.	15
110	5.9	100	4.9	120	4.2	100	4.8	90	4.8	90	3.8	40	2.2	10	2.0	360	1.7	350	1.9	340	2.0	—	1.5	m/s.	16
210	6.7	200	7.4	210	10.0	210	9.5	210	8.2	200	7.8	200	6.6	190	5.9	180	4.2	170	4.2	160	3.7	170	3.2	m/s.	17
220	11.0	220	11.7	230	13.4	230	12.6	230	12.0	230	13.2	220	12.3	230	13.0	220	12.4	220	13.9	220	10.8	220	12.1	m/s.	18
290	7.9	290	8.3	290	7.3	290	8.0	350	6.5	40	6.6	40	3.5	—	1.0	350	4.7	350	4.5	350	6.9	350	7.9	m/s.	19
10	7.0	350	6.7	360	5.6	350	5.0	350	5.5	330	4.0	340	3.0	—	1.4	—	0.8	—	0.4	—	0.7	—	0.5	m/s.	20
360	4.5	30	4.4	210	3.9	210	4.5	230	4.0	340	1.9	60	2.7	—	1.5	—	1.0	—	0.3	—	0.5	—	1.0	m/s.	21
280	7.5	280	7.6	280	7.5	280	7.8	290	7.7	300	5.0	340	4.9	40	4.2	20	5.5	20	3.8	360	3.1	—	0.6	m/s.	22
350	5.0	310	4.0	330	4.1	350	3.5	310	4.0	310	3.7	280	3.6	300	4.0	300	4.5	300	6.8	270	7.2	220	6.1	m/s.	23
350	7.9	10	9.3	10	8.9	10	7.4	30	7.1	30	5.0	10	5.6	350	4.1	350	5.5	360	4.1	10	2.3	330	2.2	m/s.	24

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

241. Eskdalemuir :

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.3	—	0.4	—	0.7	—	0.1	—	0.0	—	0.0	—	0.0	—	1.5	180	3.0	220	2.6	220	3.5	220	3.8
2	—	0.6	330	1.8	—	0.7	—	0.5	—	1.1	—	0.5	—	0.9	30	2.9	50	5.5	60	5.1	60	3.7	40	6.0
3	360	3.5	360	2.5	360	3.5	360	2.9	10	2.0	—	0.6	360	2.6	—	1.0	—	0.5	160	2.5	150	2.8	160	3.9
4	160	6.9	180	8.0	180	6.8	170	7.8	180	8.9	170	7.3	170	7.9	180	7.1	210	10.2	200	10.6	200	11.8	200	10.8
5	—	1.1	—	0.1	—	0.8	220	4.3	220	4.9	210	4.6	220	6.6	210	7.3	190	8.1	190	8.0	200	9.4	200	9.4
6	—	0.4	—	0.9	—	0.5	—	0.4	—	1.0	—	1.4	20	1.9	30	5.7	60	6.6	50	6.9	40	9.3	30	8.0
7	220	10.2	220	10.6	220	8.6	210	7.0	220	7.0	210	7.4	220	8.7	220	8.0	210	10.5	210	10.5	210	9.1	210	10.4
8	—	0.0	160	(2.4)	180	(3.4)	170	(3.4)	—	(1.1)	—	(0.2)	—	(0.2)	—	0.6	230	5.0	240	5.4	240	5.4	310	4.1
9	10	2.0	—	0.6	—	0.5	—	0.3	—	0.0	—	0.4	—	1.0	150	2.0	250	2.2	250	2.6	250	2.4	250	2.7
10	190	4.5	200	6.5	200	8.7	200	8.7	200	8.4	200	8.9	210	12.1	210	12.4	210	12.5	210	14.7	210	14.1	210	13.0
11	190	10.7	200	10.4	220	12.0	270	8.7	260	9.4	260	9.5	250	7.9	240	9.6	250	8.8	240	8.0	240	8.2	240	8.4
12	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	1.0	—	1.5	190	2.0	250	3.0	—	1.4	250	2.0	280	6.4
13	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.6	190	4.0	190	8.6	180	7.3	170	8.2	170	8.0
14	170	8.1	160	6.7	150	7.7	150	8.0	150	7.3	150	8.1	160	8.7	180	12.9	180	13.4	190	13.5	190	13.9	190	14.0
15	220	5.4	230	6.0	240	4.8	230	4.0	230	1.7	260	3.8	270	3.7	280	4.9	290	6.4	290	7.2	290	7.9	280	7.4
16	210	1.6	330	2.3	—	1.0	—	0.0	—	0.1	—	0.0	—	0.9	150	1.7	140	2.0	—	1.4	—	1.5	150	2.2
17	350	2.2	360	3.5	10	1.9	20	3.0	20	3.9	30	4.6	40	4.8	40	4.6	50	4.5	40	5.0	50	4.7	50	5.5
18	20	4.9	10	4.6	30	4.1	30	4.5	20	4.5	30	4.5	30	4.6	40	5.6	40	5.6	50	4.4	50	3.6	60	5.0
19	40	2.2	30	2.0	—	1.5	—	1.0	360	2.2	360	2.5	360	2.5	360	3.0	10	3.1	60	4.1	60	4.7	50	3.9
20	—	0.7	—	0.2	—	0.0	—	0.0	—	0.1	—	0.0	—	0.0	—	0.4	120	1.7	200	3.8	210	3.6	270	2.2
21	—	0.3	—	0.1	—	0.1	—	0.1	—	0.1	—	0.0	—	1.5	200	5.4	210	6.2	200	6.5	200	7.3	210	7.0
22	210	5.2	210	4.2	190	8.0	200	9.8	190	9.9	190	8.6	180	8.4	190	9.6	190	11.0	190	11.2	190	10.3	190	10.1
23	170	6.0	170	7.0	170	6.4	170	4.8	170	4.0	180	3.7	170	5.4	170	6.5	200	7.8	220	7.7	220	6.0	210	4.5
24	—	0.7	350	2.0	320	2.3	360	3.0	10	2.7	—	1.5	—	1.0	130	1.7	180	2.3	200	3.4	210	4.2	230	3.7
25	—	0.4	—	0.2	—	0.8	—	0.2	—	0.1	—	0.1	—	1.0	190	5.4	200	8.7	200	10.5	200	12.0	200	13.2
26	210	6.7	210	6.3	190	4.5	170	2.6	160	2.0	—	0.5	—	0.0	—	0.1	—	1.5	170	3.0	190	2.3	—	0.7
27	360	4.2	10	2.0	360	3.5	350	4.2	10	3.5	20	3.4	20	3.4	60	3.6	60	4.4	50	4.8	50	5.1	50	4.8
28	360	5.0	10	5.2	20	6.1	20	6.1	10	5.6	10	5.7	20	7.4	30	7.9	40	9.6	50	9.2	50	10.5	60	9.1
29	30	8.2	40	8.7	40	6.4	30	7.4	30	8.0	30	8.3	40	10.4	30	9.9	40	9.5	40	9.6	40	9.6	40	10.3
30	20	7.7	20	7.6	20	6.1	30	7.4	30	6.9	40	7.6	50	8.0	60	7.4	60	6.8	60	5.1	50	5.5	50	5.5
31	—	0.7	—	0.7	—	0.7	—	1.3	30	5.0	20	6.1	10	6.9	20	6.3	40	7.4	50	10.0	50	8.9	30	7.0
Mean...	—	3.7	—	3.8	—	3.7	—	3.7	—	3.7	—	3.7	—	4.5	—	5.4	—	6.5	—	6.8	—	7.0	—	6.8

242. Eskdalemuir : H_a = 235 metres + 15 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	30	2.4	30	2.4	40	2.4	—	0.7	—	0.0	—	0.6	190	2.5	200	3.5	220	5.3	230	6.0	230	6.7	230	7.7
2	210	8.7	210	7.7	210	7.7	210	7.1	210	7.3	210	7.2	210	5.3	190	5.0	190	4.7	210	8.0	230	8.8	230	8.7
3	230	3.9	250	4.2	260	5.5	270	3.6	260	3.8	230	4.3	230	4.2	250	5.7	260	6.0	260	7.9	250	8.3	260	7.7
4	10	2.1	10	2.3	10	1.6	10	3.0	40	3.4	40	3.8	40	4.7	40	4.9	60	4.1	70	3.3	50	3.9	20	4.2
5	—	1.0	—	0.4	—	0.9	350	2.1	360	3.7	30	4.2	50	4.6	70	3.9	70	2.2	—	1.2	170	2.4	140	2.5
6	—	1.4	—	0.9	—	1.4	—	1.3	—	1.1	—	1.3	360	2.0	—	1.4	—	0.7	—	0.7	210	4.5	270	5.1
7	250	5.8	250	4.6	270	4.0	280	3.8	320	5.2	10	3.3	30	4.3	40	4.2	40	4.6	40	3.0	40	2.8	50	2.5
8	—	0.5	—	0.5	—	0.0	—	0.0	—	0.0	—	0.3	—	0.2	170	1.8	190	3.2	200	2.3	250	2.8	200	3.0
9	—	0.5	300	5.0	300	6.2	300	3.9	360	2.3	330	3.8	290	3.2	290	6.0	270	5.5	270	5.6	260	7.1	260	4.6
10	190	1.7	210	3.6	220	3.5	200	3.8	200	4.3	220	6.0	230	6.9	250	7.4	240	7.8	240	9.6	260	7.6	270	6.5
11	200	5.5	200	3.5	200	6.2	210	5.1	200	6.0	200	7.5	200	11.0	200	11.8	200	11.8	210	11.2	210	10.3	210	11.6
12	—	0.5	—	0.0	—	0.0	—	0.1	—	1.1	—	0.0	—	0.4	—	0.1	—	1.0	—	1.1	160	4.0	160	4.2
13	30	5.6	20	4.6	40	4.5	40	3.3	—	0.5	180	3.5	190	6.1	210	8.4	220	8.3	220	9.2	230	10.2	220	10.5
14	210	9.6	190	7.5	170	5.8	160	5.1	170	4.8	170	4.2	170	4.5	180	6.5	180	6.1	200	3.8	180	4.3	190	5.1
15	—	0.3	—	0.1	—	0.2	—	0.0	—	0.3	—	0.1	150	3.2	220	5.6	220	6.7	210	7.3	200	9.3	200	11.3
16	200	9.8	200	8.0	200	9.7	210	11.1	210	12.6	220	13.2	230	13.5	230	15.0	230	13.0	230	10.0	220	11.0	250	12.7
17	250	5.3	250	5.9	240	5.2	260	6.4	250	6.3	240	6.0	230	5.3	240	6.3	240	7.5	250	6.0	240	5.1	270	5.1
18	200	4.8	210	6.4	210	9.5	210	9.0	210	9.0	210	9.7	210	9.5	200	10.0	200	9.2	200	9.2	200	9.0	200	9.9
19	200	7.5	200	7.5	200	7.2	200	7.6	190	6.3	190	7.3	190	8.5	190	6.7	200	8.8	200	8.5	200	9.0	200	9.3
20	270	3.9	280	5.0	280	3.1	280	3.2	250	3.3	250	2.7	270	5.6	270	5.9	260	6.0	270	8.0	270	9.0	260	7.0
21	270	5.1	270	5.4	280	5.6	260	4.4	260	3.0	280	4.4	280	6.0	290	7.5	290	7.0	290	7.0	290	8.8	290	9.1
22	190	5.2	200	6.5	200	6.0	200	5.4	210	5.8	220	5.5	230	5.3	260	4.6	260	5.7	270	8.7	270	7.9	270	10.4
23	250	7.8	250	5.7	270	9.4	290	10.5	290	7.7	290	10.4	300	9.5	300	10.3	290	9.5	300	11.1	300	10.3	300	11.0
24	310	7.8	300	7.2	310	5.0	310	3.2	310	4.0	310	4.7	310	5.2	310	5.1	320	5.6	310	5.7	310	6.5	320	7.4
25	80	1.6	20	2.9	10	3.7	10	4.8	360	3.3	10	4.9	10	4.4	20	4.4	350	3.5	10	3.5	340	2.2	260	2.0
26	—	1.5	—	1.1	340	2.1	—	1.5	—	0.4														

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

243. Eskdalemuir :

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	Day.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°
1	—	0.1	—	0.2	—	0.2	—	0.2	180	1.8	170	1.6	180	3.1	210	4.0	200	4.6	210	4.6	210	5.2	220	5.3
2	270	3.0	250	2.5	240	4.4	250	4.0	220	3.2	240	4.3	240	5.0	230	7.4	230	6.1	250	6.4	240	6.7	220	6.2
3	—	0.1	—	0.0	—	0.1	—	0.0	—	0.0	—	0.1	—	0.1	—	1.1	180	4.0	200	4.9	200	5.0	200	4.7
4	360	2.4	360	2.9	360	2.9	360	3.0	360	3.4	360	3.3	360	2.7	360	2.6	30	3.3	60	4.8	70	5.0	80	5.2
5	—	0.6	30	2.0	—	1.5	10	1.7	360	2.0	—	1.4	50	3.5	60	2.0	140	3.2	—	0.7	160	3.1	120	3.1
6	360	6.0	360	6.0	360	5.3	350	6.4	350	8.3	350	8.4	360	6.7	350	6.8	360	7.7	360	7.0	360	7.8	360	8.2
7	360	1.8	360	3.0	360	4.2	350	3.9	10	2.7	360	3.8	360	5.2	310	5.6	20	6.5	360	5.6	10	6.1	360	6.0
8	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	140	1.7	220	4.4	260	3.3	270	4.4	270	4.9	270	5.0
9	180	2.7	170	2.7	190	2.6	190	3.3	190	4.6	190	5.0	200	5.6	200	6.3	200	6.0	220	7.5	210	9.0	200	9.2
10	210	10.5	200	10.0	200	9.5	200	9.9	200	11.0	200	13.9	190	13.0	190	13.3	190	12.5	190	13.3	200	13.2	200	13.5
11	200	7.9	200	9.0	200	7.8	200	7.0	210	8.3	200	6.7	200	8.6	190	8.2	200	9.3	200	10.0	200	10.5	200	10.0
12	280	3.4	—	1.1	—	1.0	—	1.3	—	0.6	—	0.7	—	1.5	220	2.0	250	3.5	260	4.6	270	5.5	270	5.0
13	—	0.7	—	0.7	—	1.1	—	0.5	—	0.9	—	0.6	—	1.3	260	2.0	280	5.5	260	5.0	260	5.6	260	6.0
14	—	0.0	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	250	2.2	220	5.3	230	7.2	220	6.7	220	6.4	220	6.1
15	—	0.4	—	0.7	—	0.3	—	0.3	—	0.0	—	0.1	—	0.0	—	0.0	—	0.5	—	0.6	—	0.8	—	1.5
16	360	3.0	350	3.5	350	3.5	350	2.5	350	2.5	350	2.7	60	4.5	110	4.7	120	6.7	140	8.6	140	8.2	130	7.9
17	350	3.1	350	2.4	—	0.0	—	0.8	—	1.2	—	0.0	—	0.6	190	3.2	210	4.5	220	5.4	230	5.0	230	5.0
18	200	6.4	190	6.1	190	5.5	210	6.5	200	6.0	210	5.2	200	5.8	200	7.1	210	7.1	190	8.6	200	9.5	210	9.6
19	200	6.1	190	5.7	200	6.1	210	4.7	200	4.8	200	3.6	190	4.5	180	4.5	180	5.5	200	6.6	200	8.2	200	9.0
20	210	7.3	200	7.2	200	6.4	200	5.5	190	5.5	180	5.6	180	4.5	180	7.2	180	7.5	190	7.0	200	8.1	200	8.1
21	210	3.1	210	3.4	230	3.0	230	2.3	—	0.7	260	2.9	250	3.8	220	3.6	230	3.7	230	5.4	210	6.2	210	7.3
22	—	1.1	180	2.1	200	3.2	210	3.2	230	4.3	240	1.7	—	0.5	—	0.1	—	0.5	—	0.8	—	1.2	—	1.0
23	—	0.3	—	0.2	—	0.2	—	0.2	—	1.1	—	0.2	—	0.5	270	3.1	280	4.1	300	5.1	260	5.7	260	5.6
24	250	4.0	260	6.3	260	5.5	290	7.5	280	4.6	280	5.4	290	5.5	290	4.8	280	4.0	290	3.0	280	3.0	300	3.1
25	—	1.0	—	1.2	—	0.1	—	0.2	—	0.1	—	0.0	—	0.1	140	2.3	140	2.5	120	2.2	150	2.5	210	2.6
26	350	2.1	350	2.7	—	0.8	—	0.5	—	0.1	—	0.1	—	0.1	—	0.0	—	0.5	—	1.2	—	1.3	—	1.5
27	—	0.5	—	0.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.6	170	3.3	220	3.5	220	5.0	250	5.4
28	—	1.1	—	1.4	—	1.3	—	1.5	170	3.0	170	3.6	170	3.4	160	4.2	170	6.0	190	7.5	180	7.6	190	7.6
29	30	2.5	20	2.7	10	2.2	10	2.0	—	1.3	—	0.7	—	0.4	—	1.4	300	2.0	280	3.6	280	5.1	290	6.2
30	220	6.4	230	7.7	230	7.7	220	7.3	220	7.4	240	8.6	240	7.3	250	6.7	270	5.9	250	8.7	260	8.0	270	9.0
31	210	6.1	210	5.6	200	5.4	200	7.9	190	8.0	190	6.7	160	5.7	160	6.0	160	6.6	200	9.1	220	7.7	210	6.7
Mean...	—	3.0	—	3.2	—	3.0	—	3.0	—	3.1	—	3.1	—	3.5	—	4.2	—	4.9	—	5.5	—	6.0	—	6.1

244. Eskdalemuir : H_a = 235 metres + 15 metres.

Hour G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	Day.	°	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	10	4.4	350	4.5	350	6.5	350	9.2	350	10.0	350	10.8	340	11.7	350	10.5	360	10.1	360	9.1	350	8.5
2	350	5.0	80	1.8	350	1.5	—	0.5	—	0.1	—	0.1	350	1.6	150	2.8	310	2.2	270	4.0	300	5.2	290	6.5
3	170	5.4	180	6.7	190	9.8	200	11.5	190	12.0	180	10.7	170	8.8	170	9.2	170	7.7	180	11.1	190	12.2	190	10.7
4	200	7.0	200	6.5	200	4.7	190	1.6	—	0.1	—	0.0	—	0.0	360	1.9	10	(3.1)	10	(2.5)	10	(1.8)	20	5.6
5	—	0.5	—	0.5	—	0.6	—	0.6	—	0.7	290	5.3	310	3.5	290	4.5	300	4.6	280	5.2	270	5.7	260	5.0
6	160	1.6	120	4.0	80	3.0	60	3.7	50	3.7	50	4.5	50	4.3	50	5.2	60	5.8	50	5.5	40	4.6	40	5.0
7	10	6.5	360	5.7	360	5.1	10	4.3	360	3.7	360	3.3	360	2.7	360	3.5	10	2.5	—	1.2	—	1.1	140	2.4
8	—	0.2	—	0.0	—	0.1	—	0.1	—	0.1	—	0.0	—	0.0	330	1.6	270	3.8	280	5.0	270	4.5	270	3.1
9	200	5.4	200	5.0	210	4.6	240	4.1	—	1.5	240	3.3	240	3.9	260	3.6	260	4.0	270	5.5	270	5.5	260	5.5
10	230	4.1	240	4.0	220	3.0	250	4.0	230	4.1	220	4.5	230	3.1	220	3.8	210	4.6	210	5.5	200	6.5	200	6.5
11	210	7.5	220	8.9	220	9.1	220	8.3	230	7.1	280	5.1	340	3.1	340	4.1	330	4.4	290	7.6	280	7.4	280	6.6
12	230	5.2	230	5.2	220	5.2	210	5.2	220	4.9	240	6.0	250	5.5	250	6.3	250	7.9	270	7.3	270	7.6	270	8.9
13	—	0.5	—	0.3	—	0.1	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	160	2.7	160	3.5	190	5.5	200	6.7
14	300	6.2	290	1.6	310	2.1	290	7.3	300	7.0	280	5.4	290	5.6	270	4.5	260	5.1	270	4.9	270	6.8	280	7.0
15	—	0.7	—	0.0	—	0.3	240	2.1	250	4.4	230	6.0	220	5.4	230	5.2	220	7.8	210	8.3	200	9.1	220	10.5
16	200	3.0	190	2.9	190	2.5	210	4.0	200	5.6	190	4.9	170	5.7	160	5.9	180	7.5	200	7.8	200	8.0	190	7.5
17	160	4.1	170	3.2	180	2.3	—	0.1	—	0.7	(0.7)	—	0.0	180	(3.0)	170	(2.3)	200	2.4	190	3.7	200	4.7	
18	*	4.5	*	4.6	*	4.5	*	3.8	*	3.0	*	4.7	*	5.6	*	6.2	*	5.3	*	4.6	*	3.8	*	4.4
19	*	1.2	*	1.1	*	2.1	*	1.2	*	2.2	*	2.8	230	3.4	*	5.3	230	5.8	*	*	*	(6.6)	*	(6.7)
20	*	2.0	*	1.5	*	1.7	*	2.2	*	1.7	*	3.2	180	3.8	*	4.3	180	6.1	*	7.2	*	8.2	*	9.3
21	*	2.3	*	3.5	*	1.3	*	2.2	*	4.3	*	6.0	230	7.0	*	7.1	230	7.9	*	6.8	*	7.7	*	7.5
22	*	7.3	*	6.3	*	6.0	*	4.5	*	3.1	*	1.7	250	3.3	*	3.2	250	3.7	*	4.7	*	4.7	*	5.0
23	*	10.5	*	10.0	*	9.3	*	10.4	*	9.7	*	7.8	260	6.8	*	7.6	240	8.0	*	8.2	*	8.2	*	7.9
24	*	3.8	*	2.7	*	3.5	*	3.7	*	3.3	*	3.4	260	5.5	*	5.9	250	6.0	*	7.5	*	9.2	*	9.6
25	*	4.8	*	4.7	*	4.5	*	3.7	*	3.1	*	4.3	230	5.0	*	4.7	250	5.1	*	5.4	*	7.7	*	7.1
26	*	0.6	*	0.4	*	1.2	*	0.4	*	0.8	*	0.2	—	0.2	*	1.7	130	2.2	*	4.0	*	3.3	*	3.4
27	*	1.8	*	1.5	*	1.8	*	1.3	*	1.2	*	0.6	—	0.6	*	0.5	—	0.5	*	0.8	*	1.0	*	1.2
28	*	5.2	*	6.4	*																			

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

M.S.L. + h_a (height of anemograph above ground) = 235 metres + 15 metres.

July, 1929.

Table for July 1929 showing wind direction and speed data for days 1 through 31. Columns represent hours (13-24) and Mean Day. Each cell contains wind speed in m/s.

August, 1929.

Table for August 1929 showing wind direction and speed data for days 1 through 31. Columns represent hours (13-24) and Mean Day. Each cell contains wind speed in m/s. Asterisks indicate defective records.

*Defective record. Any directions given after 17th are eye readings at exact hours.

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

245. Eskdalemuir :

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	Day.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°										
1	*	12.5	*	11.8	*	11.1	*	11.3	*	11.2	*	11.7	200	12.8	*	14.9	230	13.3	*	11.2	*	10.5	*	10.2
2	*	3.1	*	3.0	*	(3.0)	*	(3.2)	*	(3.5)	*	(4.0)	250	4.7	*	6.2	250	5.7	*	7.5	*	8.4	*	7.7
3	*	(0.6)	*	(0.7)	*	(0.6)	*	(0.8)	*	(0.8)	*	1.7	360	1.9	*	(1.0)	—	(1.0)	*	0.4	*	0.2	*	0.1
4	*	0.6	*	0.2	*	0.2	*	1.0	*	0.3	*	0.3	310	1.7	*	1.2	—	0.4	*	0.8	*	1.7	*	2.7
5	*	0.3	*	2.5	*	1.0	*	0.9	*	1.3	*	1.3	—	1.4	*	1.8	230	4.0	*	4.4	*	5.0	*	5.2
6	*	0.7	*	1.3	*	3.2	*	1.3	*	1.1	*	1.1	50	2.9	*	1.4	50	2.3	*	2.0	*	1.1	*	0.6
7	*	2.6	*	2.8	*	3.5	*	3.9	*	4.6	*	4.9	250	4.9	*	4.5	230	4.3	*	4.8	*	4.6	*	4.0
8	*	0.0	*	0.0	*	0.1	*	0.5	*	1.3	*	5.3	230	5.9	*	5.5	230	5.6	*	5.0	*	6.0	*	7.2
9	*	2.4	*	2.5	*	0.2	*	0.4	*	1.3	*	1.3	280	4.1	*	3.8	270	4.0	*	4.6	*	3.9	*	5.0
10	*	0.3	*	0.3	*	0.4	*	0.7	*	1.3	*	1.2	—	0.8	*	0.0	—	0.1	*	2.9	*	4.9	*	4.1
11	*	0.0	*	0.0	*	0.0	*	0.0	*	0.0	*	0.0	—	0.0	*	0.6	230	3.5	*	4.2	*	3.8	*	5.1
12	*	0.0	*	0.0	*	0.0	*	0.0	*	0.1	*	0.6	180	4.5	*	(3.3)	200	(4.0)	*	5.5	*	9.0	*	9.2
13	*	3.2	*	2.5	*	2.9	*	1.4	*	2.2	*	1.1	—	0.5	*	0.3	130	2.3	*	3.3	*	(4.2)	230	5.1
14	—	0.2	—	0.4	220	2.6	220	4.0	220	3.8	210	3.3	190	3.3	—	7.5	220	7.8	220	7.7	220	8.0	230	8.7
15	—	0.0	—	0.1	—	0.2	—	0.2	—	0.0	—	0.0	—	0.1	—	0.0	—	1.1	210	4.0	230	5.0	230	4.8
16	—	0.5	—	0.5	—	0.5	—	0.3	—	0.3	10	2.5	20	2.0	—	1.4	(40)	1.7	—	0.8	—	1.3	180	(2.5)
17	—	0.8	—	0.4	—	0.3	—	0.3	—	0.0	—	0.1	—	0.1	—	0.0	—	0.0	220	3.0	240	6.3	230	5.7
18	—	0.0	—	0.0	—	0.0	—	0.1	—	0.1	(220)	2.5	(200)	2.0	(230)	2.0	220	4.5	230	6.0	230	7.5	230	8.0
19	270	3.5	230	4.3	220	4.7	220	4.8	230	4.9	230	5.6	230	5.5	230	6.0	220	6.3	220	7.4	230	7.8	230	8.5
20	280	10.0	280	10.1	270	8.2	280	10.3	280	10.5	290	10.0	290	11.0	310	10.6	330	9.5	360	9.3	360	9.0	360	8.3
21	(260)	4.9	(250)	3.7	(240)	6.8	(240)	9.8	(220)	10.3	(220)	8.0	230	9.5	290	11.8	290	12.5	270	15.0	270	15.9	270	14.0
22	240	4.9	230	4.2	230	4.9	220	5.0	200	4.2	210	4.5	190	4.6	190	5.4	200	5.6	220	5.6	220	6.3	240	6.0
23	220	4.2	210	4.8	190	4.6	210	5.9	220	8.4	230	8.3	220	7.1	220	7.0	220	6.5	230	6.5	230	7.5	220	7.9
24	220	5.4	230	5.4	230	5.6	230	5.3	220	4.6	230	4.4	220	4.4	220	6.6	220	6.3	220	6.3	220	5.8	210	6.9
25	190	3.0	200	3.5	200	3.7	200	2.2	200	2.2	200	3.0	190	2.6	200	4.4	190	4.7	200	6.0	200	6.9	200	7.2
26	—	0.3	—	0.3	—	0.4	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.8	210	7.4	210	7.4	220	8.8
27	—	0.3	—	1.5	200	3.0	190	3.6	210	5.6	210	6.6	210	6.4	210	5.5	210	5.6	220	7.3	210	7.5	210	6.4
28	180	3.5	170	4.4	190	6.6	200	9.6	200	10.7	200	10.8	200	11.1	210	11.7	210	11.6	230	11.5	230	13.5	240	13.3
29	—	0.0	—	0.6	340	1.7	—	1.0	—	0.4	—	0.9	—	0.7	—	0.0	270	2.7	260	5.0	240	7.4	240	7.1
30	190	2.2	190	4.3	200	4.6	180	5.0	190	5.5	210	7.2	240	8.5	240	6.6	260	4.8	300	3.3	330	2.3	—	1.2
Mean...	—	2.3	—	2.5	—	2.8	—	3.1	—	3.3	—	3.7	—	4.2	—	4.4	—	4.7	—	5.6	—	6.3	—	6.4

246. Eskdalemuir : H_a = 235 metres + 15 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	Day.	°	m/s.	°	m/s.	°	m/s.	°																
1	260	3.5	210	2.9	—	1.0	210	1.7	20	1.7	130	1.6	—	0.8	200	2.3	210	4.8	220	5.3	210	6.3	210	7.3
2	240	11.5	240	11.4	240	9.0	230	9.4	220	8.9	220	9.2	220	8.6	220	8.7	220	10.1	230	11.7	230	12.8	230	13.0
3	230	11.7	230	10.5	230	10.6	230	11.5	230	10.3	220	9.9	220	9.5	230	11.6	230	14.1	230	15.0	240	15.5	230	15.0
4	240	6.0	240	6.8	220	5.4	230	6.3	240	4.4	210	1.9	—	1.0	200	1.8	250	3.5	240	5.3	230	5.1	230	4.8
5	20	1.7	—	0.5	150	2.2	180	3.0	210	(3.8)	200	(4.0)	200	(3.3)	190	4.0	160	3.7	(160)	5.2	*	6.0	(360)	2.5
6	90	6.3	100	7.3	130	7.2	160	8.1	150	6.5	160	5.3	160	5.2	160	3.8	150	5.7	150	7.0	140	6.0	150	3.5
7	260	11.9	260	12.9	260	12.8	270	11.6	250	10.7	260	10.7	270	12.7	270	11.9	270	12.6	270	12.3	260	(10.8)	250	7.6
8	—	1.5	360	2.6	360	2.9	350	4.5	360	3.5	360	4.0	10	4.2	10	5.2	20	6.5	360	6.6	10	6.5	10	5.2
9	310	6.9	300	6.9	300	7.4	310	7.8	310	7.4	310	7.3	310	6.6	320	8.5	320	8.5	310	7.3	320	4.6	310	6.1
10	230	5.2	230	5.6	260	6.5	260	7.6	240	5.4	230	6.1	230	6.3	230	8.5	240	8.0	230	8.4	230	8.5	230	9.3
11	270	9.7	270	10.1	270	12.0	250	12.0	250	9.9	240	9.6	260	9.3	260	7.3	260	7.9	270	10.1	270	10.8	280	11.0
12	230	3.7	220	4.0	200	2.3	190	2.5	190	3.5	190	2.3	190	3.0	210	3.7	200	3.5	240	7.5	240	7.8	240	9.5
13	240	6.3	230	4.8	230	5.3	230	4.8	240	5.1	230	5.0	230	4.8	230	6.0	230	8.0	230	8.3	230	8.5	230	9.3
14	210	8.3	210	8.7	210	11.2	210	11.7	220	12.5	220	13.3	220	15.0	230	16.1	230	15.8	230	14.0	230	14.5	240	14.9
15	—	1.1	350	1.6	360	2.4	360	3.7	20	2.3	360	3.5	350	3.5	360	2.7	—	1.0	—	0.2	—	0.9	220	6.5
16	200	2.3	200	2.3	190	3.0	190	4.9	180	4.9	170	4.6	160	6.7	170	7.3	190	11.1	200	13.7	200	13.3	210	13.3
17	240	10.9	240	10.7	250	9.9	260	9.0	250	9.0	240	8.3	230	(6.2)	240	8.4	260	7.3	240	7.4	260	7.0	270	5.5
18	240	6.2	220	3.0	260	4.3	290	4.8	300	4.0	300	3.2	100	2.3	290	3.6	290	4.9	300	5.5	290	6.0	290	5.2
19	—	(0.0)	—	(0.0)	—	(0.0)	—	(0.0)	—	(0.0)	—	(0.5)	—	(0.1)	—	(0.0)	—	(0.1)	—	1.0	—	0.7	—	1.4
20	220	5.8	210	6.5	220	7.9	230	8.5	210	8.2	210	9.1	210	8.5	230	9.3	290	5.5	300	7.8	300	4.9	290	6.9
21	20	8.3	30	7.2	40	6.0	20	4.3	50	3.3	40	3.7	40	2.3	—	(1.5)	—	(0.8)	—	(0.7)	—	(0.4)	200	(2.4)
22	210	4.3	240	3.9	280	5.7	270	4.3	240	3.3	200	2.6	250	4.3	270	2.9	220	3.0	220	3.0	260	3.5	260	3.2
23	190	6.8	210	8.1	220	9.3	210	9.3	210	9.4	220	10.6	220	10.1	220	9.5	210	9.3	220	11.0	220	13.3	230	16.0
24	200	5.5	210	6.3	210	6.8	220	6.5	220	6.4	220	5.3	220	3.2	270	3.6	220	3.4	210	4.9	210	6.5	210	6.8
25	200	2.3	—	(0.5)	—	(0.0)	—	(0.2)	—	(1.5)	—	(1.5)	180	2.8	170	(1.8)	—	(1.5)	230	3.9	230	4.8	220	5.4
26	—	0.9	—	0.5	—	0.2	—	0.6	240	(2.1)	240	(3.2)	180	(2.8)	200	(3.8)	180	(3.5)	180	3.7	220	3.5	310	4.6
27	10	3.7	—	1.5	—	0.7	—	1.5	—	0.7	—	0.1	—	0.7	—	0.6	—	0.9	10	4.9	350	3.2	340	3.4
28	—	0.9	190	6.5	210	9.0	190	8.9	180	10.0	180	7.6	180	6.8	180	5.3	—	1.3	—	0.9	270	6.1		

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

M.S.L. + h_a (height of anemograph above ground) = 235 metres + 15 metres.

September, 1929.

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	9.6	*	9.2	250	7.6	*	7.7	*	7.7	250	5.2	*	4.5	*	5.2	250	4.4	*	4.8	*	5.1	*	4.2	m/s.	9.2	1
270	7.5	*	6.4	270	5.2	*	3.7	*	3.8	280	3.2	*	1.4	*	1.3	—	0.7	*	0.7	*	0.2	*	0.7	m/s.	4.0	2
—	0.8	*	1.8	—	1.1	*	(0.1)	*	(0.2)	360	1.6	*	2.2	*	1.2	—	1.0	*	0.6	*	0.7	*	0.6	m/s.	0.9	3
230	4.2	*	5.4	230	4.0	*	3.4	*	3.5	230	1.9	*	0.8	*	1.8	—	0.5	*	0.5	*	0.1	*	0.2	m/s.	1.6	4
250	5.2	*	5.4	200	6.0	*	4.0	*	4.2	270	3.7	*	2.8	*	0.7	270	1.1	*	2.1	*	—	*	1.2	m/s.	2.8	5
180	2.6	*	3.2	230	3.6	*	4.0	*	4.9	230	3.6	*	3.3	*	1.7	—	1.1	*	0.3	*	1.4	*	2.7	m/s.	2.1	6
190	3.7	*	4.8	200	4.9	*	4.7	*	5.4	270	4.0	*	2.6	*	2.7	—	1.2	*	(0.3)	*	0.5	*	0.6	m/s.	3.6	7
230	9.4	*	7.9	230	7.9	*	8.0	*	7.3	230	6.2	*	6.0	*	5.1	230	5.6	*	4.8	*	(1.0)	*	(0.5)	m/s.	4.7	8
290	5.7	*	4.9	310	3.7	*	4.3	*	3.3	290	2.4	*	1.4	*	(1.3)	—	1.5	*	1.0	*	0.7	*	0.7	m/s.	2.7	9
290	2.9	*	3.1	290	3.5	*	3.3	*	3.3	250	2.7	*	2.5	*	2.0	—	1.4	*	0.0	*	0.0	*	0.0	m/s.	1.7	10
230	6.3	*	5.8	230	5.6	*	4.8	*	3.8	190	2.5	*	0.8	*	0.1	—	0.6	*	(0.3)	*	(0.0)	*	(0.1)	m/s.	2.0	11
230	6.7	*	5.3	200	4.9	*	6.1	*	4.7	270	2.8	*	1.3	*	1.3	(180)	2.0	*	1.5	*	1.2	*	1.3	m/s.	3.1	12
240	5.1	230	5.2	220	5.2	210	5.4	210	5.6	220	3.2	220	3.2	200	3.0	210	2.4	—	1.0	—	0.6	—	0.3	m/s.	2.9	13
230	8.3	240	7.7	230	6.0	210	5.7	230	4.0	250	4.5	250	4.3	250	3.0	—	1.0	—	0.2	—	1.0	—	1.0	m/s.	4.3	14
220	4.2	240	4.4	280	4.9	(310)	5.0	(310)	5.8	(310)	3.0	(320)	2.5	—	1.3	—	0.3	—	0.2	—	0.3	—	0.4	m/s.	2.0	15
230	2.6	230	2.9	240	2.5	250	2.7	260	2.8	310	2.5	—	1.0	—	0.1	—	1.5	—	1.5	340	2.0	—	1.2	m/s.	1.5	16
230	6.0	230	5.7	230	5.8	230	5.8	240	5.7	240	3.0	—	1.0	—	0.8	—	0.2	—	0.1	—	0.0	—	0.0	m/s.	2.2	17
230	7.3	240	7.5	240	6.8	240	6.7	250	6.1	300	5.0	310	3.5	310	4.5	300	2.7	—	0.4	—	1.5	270	4.2	m/s.	3.6	18
230	10.2	240	10.0	240	10.0	250	9.0	250	9.2	250	9.5	270	9.6	260	8.3	260	8.8	250	10.3	270	10.5	280	9.3	m/s.	7.6	19
340	8.2	320	8.7	310	9.5	310	9.8	310	8.7	320	6.5	310	4.9	—	0.7	—	1.2	(30)	2.7	—	1.5	350	4.5	m/s.	7.8	20
260	13.5	260	12.5	270	11.8	270	11.0	270	9.3	270	7.8	260	7.7	270	7.6	270	9.5	260	8.6	260	5.3	250	5.0	m/s.	9.7	21
270	7.9	240	8.1	260	8.1	270	8.3	270	5.2	260	5.8	250	6.4	270	7.6	270	7.3	260	5.0	260	5.8	270	4.5	m/s.	5.9	22
220	8.5	220	8.6	220	7.6	220	7.8	220	8.3	210	8.4	210	6.5	230	6.3	230	5.2	200	3.4	200	3.4	190	3.2	m/s.	6.5	23
200	6.1	(200)	6.0	200	6.5	200	6.0	200	5.0	190	3.8	200	4.1	200	3.0	200	3.3	200	3.2	210	2.6	200	2.5	m/s.	5.0	24
210	7.3	200	7.2	200	6.5	200	5.8	210	5.1	270	2.2	—	0.5	—	1.2	—	0.5	—	0.0	—	0.0	—	0.0	m/s.	3.6	25
200	9.3	220	9.0	220	9.6	210	8.7	210	5.0	230	4.2	220	4.0	200	3.7	220	3.6	200	2.6	—	0.4	—	0.0	m/s.	3.6	26
200	6.6	200	6.4	200	5.1	200	4.1	200	4.2	200	3.9	210	4.2	200	3.9	180	3.6	170	3.2	190	3.2	180	3.4	m/s.	4.6	27
230	12.2	250	10.4	250	8.5	250	7.4	240	6.3	240	4.0	250	3.3	250	4.8	230	3.5	—	1.2	—	0.0	—	0.1	m/s.	7.6	28
250	6.4	240	7.6	240	7.7	230	6.6	210	4.7	190	4.6	180	2.6	190	2.6	190	2.0	200	2.8	200	2.9	190	2.4	m/s.	3.3	29
310	3.0	310	3.6	310	3.6	300	3.8	290	3.7	290	4.5	—	—	—	—	—	—	—	—	—	—	—	—	m/s.	4.0	30
—	6.6	—	6.5	—	6.1	—	5.8	—	5.2	—	4.2	—	3.4	—	3.0	—	2.7	—	2.2	—	1.9	—	1.9	m/s.	4.1	—

October, 1929.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day.	
°	m/s.	°	m/s.	m/s.																						
200	7.7	200	8.4	190	8.2	180	6.8	180	7.9	180	6.2	160	6.4	160	6.9	160	6.5	170	6.7	190	10.3	220	10.9	m/s.	5.3	1
230	13.7	220	14.0	240	10.9	230	10.2	230	8.3	220	6.4	210	6.0	210	7.5	200	7.6	230	11.4	240	10.7	230	11.6	m/s.	10.1	2
230	15.0	230	13.1	240	14.5	250	11.1	230	15.0	240	16.7	240	15.9	230	12.2	220	7.9	240	7.5	230	7.5	220	6.5	m/s.	12.1	3
210	6.1	190	5.6	200	6.6	200	4.9	200	3.5	—	1.5	20	3.0	20	3.2	360	1.8	20	1.9	20	1.8	20	1.6	m/s.	4.0	4
—	1.5	170	3.0	160	4.2	130	3.5	80	4.5	100	7.1	120	6.8	120	5.3	130	4.7	120	4.0	110	4.2	100	4.6	m/s.	3.8	5
170	2.5	170	2.5	210	2.3	250	2.9	270	3.0	280	3.5	260	4.6	240	6.5	270	9.0	270	13.5	270	12.6	270	12.1	m/s.	6.0	6
240	8.7	230	9.2	220	8.2	210	7.7	210	5.4	210	3.1	210	2.8	—	0.8	—	0.7	—	0.8	—	0.5	—	0.8	m/s.	8.0	7
10	4.6	10	4.2	360	4.0	330	3.5	330	4.5	320	4.2	310	5.3	310	4.7	310	5.7	300	4.7	300	3.6	300	3.7	m/s.	4.4	8
310	6.9	310	8.7	300	6.7	290	6.0	290	5.0	300	2.5	290	2.2	270	3.2	260	3.7	270	6.5	260	7.7	250	6.8	m/s.	6.2	9
230	10.0	230	10.3	230	12.0	230	13.8	230	16.0	230	17.0	230	15.0	240	14.5	240	12.6	250	13.2	260	13.0	260	10.9	m/s.	10.1	10
270	11.0	270	11.2	280	10.2	270	8.9	270	6.5	270	5.0	270	5.8	240	3.0	240	4.3	200	4.6	210	3.6	210	5.0	m/s.	8.4	11
250	9.9	260	7.8	260	8.0	240	7.4	220	6.6	220	5.0	220	5.2	210	5.0	200	5.7	220	6.6	210	5.8	240	7.1	m/s.	5.5	12
220	9.5	220	8.6	210	8.3	210	6.8	210	10.0	210	10.4	220	10.0	210	10.2	190	7.8	190	6.3	180	(5.5)	190	5.3	m/s.	7.3	13
240	14.3	240	13.0	240	10.4	250	5.7	250	4.2	270	3.3	260	2.1	210	1.9	240	2.9	—	1.5	330	1.7	—	1.3	m/s.	9.2	14
220	6.4	220	5.9	210	5.4	200	6.0	210	4.7	210	5.4	210	5.5	210	5.8	200	4.4	210	3.1	200	2.4	200	2.9	m/s.	3.7	15
220	12.7	220	12.3	230	12.7	240	14.5	250	14.0	250	14.5	250	14.6	260	11.3	260	11.2	270	10.9	250	11.0	260	10.9	m/s.	9.7	16
270	5.5	270	5.6	260	5.8	260	5.6	250	6.0	240	5.5	220	4.7	220	5.0	260	3.5	260	4.6	240	5.4	240	4.4	m/s.</		

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

247. Eskdalemuir :

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
Day.	—	0·1	—	1·3	—	1·4	—	1·0	—	0·7	—	1·4	190	2·0	200	2·4	180	2·4	—	1·3	190	2·8	190	3·0
1	—	0·1	—	1·3	—	1·4	—	1·0	—	0·7	—	1·4	190	2·0	200	2·4	180	2·4	—	1·3	190	2·8	190	3·0
2	200	2·0	190	1·9	200	2·0	200	2·7	190	5·6	190	3·6	180	4·9	180	4·3	190	7·2	190	9·5	200	9·9	200	10·1
3	230	4·5	230	4·4	210	3·3	230	4·3	230	3·4	240	2·6	250	3·8	270	4·4	280	4·5	280	8·6	290	9·2	270	6·7
4	240	2·1	210	1·9	190	2·3	200	4·3	180	3·9	190	4·0	240	5·8	230	6·0	220	7·1	210	8·5	210	9·3	210	10·3
5	210	9·2	200	12·4	200	12·4	200	12·3	200	12·5	200	13·1	200	15·1	200	14·5	200	15·4	200	17·0	200	15·0	200	14·1
6	210	3·0	220	(3·5)	220	(3·5)	210	(3·5)	—	1·4	—	0·1	—	0·8	—	0·5	—	1·0	—	0·0	—	0·0	210	2·2
7	230	2·9	260	2·6	—	1·5	—	1·3	—	0·3	—	1·5	—	0·3	160	2·5	180	3·0	180	3·0	190	5·0	190	5·1
8	220	11·1	230	8·4	240	7·8	270	8·5	300	8·4	300	6·8	310	3·0	310	3·9	310	4·5	300	6·5	300	(5·0)	290	5·0
9	200	3·6	210	9·3	230	10·5	240	11·8	240	10·2	240	9·1	220	8·3	230	8·0	240	9·9	240	11·4	240	11·3	240	11·6
10	360	2·0	—	0·4	310	2·6	—	1·3	210	2·6	220	3·9	240	5·4	250	6·5	240	5·3	230	4·5	250	5·5	240	6·6
11	230	9·8	200	6·7	210	5·9	220	8·2	210	9·0	210	10·8	210	11·1	210	12·6	210	14·6	200	15·9	200	16·6	190	17·0
12	270	(4·5)	240	(6·7)	240	(7·8)	250	(6·1)	260	(5·1)	230	(5·1)	250	4·5	250	3·0	190	(2·8)	250	6·3	250	7·8	250	9·5
13	230	5·3	240	5·1	180	2·7	200	4·2	200	3·4	250	5·0	260	5·5	220	2·4	220	3·4	280	3·4	290	3·4	280	3·7
14	—	0·3	—	0·1	—	0·0	—	0·2	—	(0·3)	—	(0·4)	—	(0·5)	—	(0·5)	—	0·3	—	0·1	—	0·9	—	0·8
15	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·2	—	0·3	—	1·0
16	—	0·9	—	1·0	—	1·1	—	0·7	*	1·7	*	2·7	10	6·1	20	5·9	20	5·7	20	5·4	30	4·5	30	4·2
17	300	2·3	—	1·4	340	4·4	50	2·6	—	1·3	20	1·9	30	1·9	20	1·6	20	2·9	360	3·0	10	4·9	10	4·7
18	10	2·6	—	1·5	350	3·3	360	3·3	240	1·9	20	2·6	—	1·0	90	1·8	60	2·6	—	1·1	—	1·5	50	2·0
19	160	6·9	160	5·9	170	5·5	170	4·8	180	5·6	200	8·0	200	6·6	210	8·8	210	8·7	210	7·5	220	9·0	220	9·3
20	200	13·3	200	15·3	200	12·7	200	(12·0)	200	(11·8)	220	(10·0)	220	(7·4)	200	5·3	210	6·2	*	*	*	*	200	(7·2)
21	—	0·3	—	1·2	—	1·3	—	1·0	—	1·5	130	2·8	—	1·3	160	3·6	170	4·8	170	5·4	170	6·1	180	5·2
22	150	2·5	150	2·7	150	4·9	150	5·7	140	5·3	140	5·6	150	4·2	140	6·3	140	6·8	150	7·1	140	6·5	140	6·4
23	150	9·7	150	7·5	150	7·2	150	8·0	160	7·5	160	5·4	160	5·6	160	5·5	160	7·7	150	8·6	150	8·2	150	8·0
24	180	7·3	180	6·5	180	6·3	180	6·3	180	4·9	180	4·8	180	5·7	190	5·3	180	8·4	180	9·1	200	10·3	210	10·0
25	150	9·8	150	13·7	150	11·5	150	10·5	160	8·0	190	9·3	200	8·7	190	6·7	180	5·6	190	6·5	180	6·7	170	1·8
26	210	7·3	210	4·0	210	3·7	220	6·3	230	6·1	220	7·5	220	6·0	220	8·5	210	7·4	220	8·4	220	8·0	220	6·8
27	240	6·4	240	6·4	250	7·2	240	4·9	210	3·4	220	3·5	200	3·3	210	3·5	200	3·3	200	4·5	210	6·3	210	6·0
28	140	1·7	100	3·4	130	4·8	140	(3·5)	160	(2·6)	180	(2·3)	—	(1·5)	—	0·3	—	1·5	40	1·8	40	2·5	20	2·6
29	—	(1·4)	—	0·6	—	0·1	—	0·1	—	0·5	—	0·5	—	(5·0)	—	(0·1)	—	(0·1)	—	0·0	—	0·0	—	0·0
30	40	(3·3)	50	(3·5)	50	(3·0)	40	(3·1)	50	(3·0)	50	(3·5)	70	(5·3)	60	4·8	50	5·1	50	6·3	60	6·0	60	5·6
†Mean...	—	4·2	—	4·3	—	4·4	—	4·5	—	4·1	—	4·4	—	4·5	—	4·6	—	5·2	—	5·9	—	6·3	—	6·2

248. Eskdalemuir : H_a = 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	—	1·2	—	0·9	350	1·9	350	(3·2)	350	(3·0)	340	(3·1)	310	(2·1)	—	(1·5)	300	(3·0)	—	1·5	250	2·3	240	3·2
2	170	6·7	170	7·3	180	8·5	170	8·6	160	8·5	170	8·1	170	10·8	170	11·4	170	11·1	170	11·1	170	11·3	180	12·8
3	200	7·2	210	8·0	200	5·0	180	3·4	180	5·5	180	7·7	200	10·3	190	8·7	200	9·3	210	9·0	210	11·3	200	12·3
4	170	10·0	170	8·7	150	6·8	160	6·8	150	8·5	150	7·2	190	7·4	200	4·0	190	4·7	200	7·7	220	7·5	210	8·0
5	150	7·7	150	9·4	150	11·0	140	12·8	140	14·6	150	13·4	160	11·5	170	9·3	170	8·0	160	7·7	170	8·3	180	9·8
6	210	14·4	210	13·7	210	15·3	220	14·3	220	14·5	220	14·0	210	12·1	220	11·0	220	11·8	220	11·8	220	11·2	210	10·6
7	130	5·8	110	5·3	80	4·2	60	3·8	10	4·5	360	4·5	360	4·1	350	5·2	300	6·6	270	7·3	270	9·5	270	14·1
8	180	1·6	180	4·6	180	4·7	170	4·7	170	4·3	220	(2·2)	180	(3·2)	200	6·3	180	(4·1)	180	4·7	180	4·2	190	(3·0)
9	230	8·3	240	12·2	230	8·5	230	10·6	220	9·7	220	10·7	220	10·5	220	11·3	220	10·3	240	8·1	200	5·0	200	2·1
10	240	8·5	230	9·3	230	9·7	260	9·8	270	8·9	260	10·3	260	9·9	250	10·6	240	10·7	240	9·0	230	6·5	250	9·0
11	150	5·8	—	0·8	350	2·2	—	1·5	—	0·5	—	1·5	230	5·5	230	7·0	240	8·1	240	9·2	240	9·8	230	8·7
12	220	16·9	240	14·8	250	16·2	250	16·3	250	15·8	260	14·2	270	12·6	270	13·2	260	11·7	270	12·0	270	10·0	270	11·5
13	220	6·1	190	3·8	190	4·8	210	7·7	220	10·2	210	9·6	210	10·3	220	12·1	220	12·9	220	15·9	230	17·1	230	17·6
14	220	14·7	220	14·5	230	12·2	280	6·0	270	5·2	230	4·1	240	7·4	240	5·3	230	4·6	240	6·3	250	7·7	250	8·8
15	250	5·2	260	8·3	260	7·9	240	7·9	240	8·6	250	8·0	260	7·1	270	6·5	270	7·0	280	8·3	280	10·4	300	9·3
16	300	2·0	190	2·5	—	1·3	220	2·4	210	1·9	150	2·0	160	1·6	—	1·0	170	2·6	170	2·5	170	3·0	180	3·5
17	—	1·5	220	1·6	—	1·5	—	1·4	—	1·5	180	2·3	—	1·3	210	2·8	—	1·5	—	1·3	—	0·8	—	1·3
18	190	3·7	210	5·5	220	7·0	190	2·5	190	2·8	180	4·0	200	4·8	200	4·3	200	5·3	210	7·0	200	8·5	200	7·3
19	200	8·5	200	8·6	200	9·2	190	8·0	190	9·0	200	8·0	200	8·8	190	8·0	190	7·5	190	5·0	190	4·5	190	5·0
20	170	6·0	170	8·0	170	7·8	180	7·9	180	7·7	210	7·6	220	8·1	220	6·0	210	5·3	170	3·5	160	5·4	160	5·7
21	160	8·0	160	8·5	160	8·0	160	7·3	160	7·8	160	8·0	160	6·5	160	(5·6)	180	7·0	280	5·0	220	2·5	240	3·3
22	—	(1·5)	—	(1·3)	—	(0·1)	—	(0·4)	—	(0·3)	—	(0·5)	—	(0·2)	*	2·0	*	2·3	30	3·0	—	1·3	—	0·6
23	—	(0·0)	—	(0·0)	—	(0·3)	140	(3·9)	150	(5·7)	150	(4·5)	150	(2·7)	150	5·4	140	6·7	140	6·7	140	7·7	140	10·0
24	140	5·5	140	6·3	150	5·6	160	2·8	180	2·5	200	2·1	—	0·1	—	0·1	—	0·1	—	0·0	—	0·0	—	1·0
25	120	15·1	130	15·4	130	14·5	120	15·7	120	13·4	130	10·5	120	9·8	130	9·4	140	10·7	160	11·3	160	10·0	170	8·0
26	260	11·0	260	11·3	270	9·9	270	8·5	27															

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

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

Month.	DISTRIBUTION OF WIND SPEED.								EXTREME VELOCITIES.				
	More than 17.1 m/s.		10.8 to 17.1 m/s.		5.5 to 10.7 m/s.	1.6 to 5.4 m/s.	Less than 1.6 m/s.	No Record.	Highest Hourly Wind.			Highest Gust.	
	Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Date.
Jan. ...	—	hr.	3	hr.	hr.	hr.	hr.	hr.	300	m/s.	day. hour.	m/s.	day. h. m.
Feb. ...	—	—	1	9	173	325	239	—	140	15	15 1	19	15 1 15
Mar. ...	—	—	1	8	174	315	174	—	290	13	11 13	20	11 10 15
April ...	—	—	1	8	161	280	295	—	220	12	31 3	20	31 13 15
May ...	—	—	5	43	343	221	113	—	210	14	18 22	21	10 13 15
June ...	—	—	9	46	286	278	132	2	270	15	10 10	21	14 10 45
July ...	—	—	6	44	262	314	100	—	210	16	16 14	26	16 14 55
Aug. ...	—	—	3	28	258	302	156	—	210	15	10 10	23	10 15 35
Sept. ...	—	—	6	22	298	312	111	1	(220)	16	29 12	21	24 20 50
Oct. ...	—	—	4	28	191	286	215	—	270	13	21 11	29	21 11 2
Nov. ...	—	—	11	93	251	295	105	—	230 } 220 }	16	10 18 23 13	28	6 22 20
Dec. ...	11th	1	9	49	235	303	130	2	50	17	11 13	27	11 11 50
Year ...	5th, 13th	3	18	126	340	199	76	—	180	18	5 20	28	12 4 20
Year ...	3 days	4	76	503	2972	3430	1846	5	180	18	Dec. 5 20	29	Sept. 21 11 2

251. Eskdalemuir.

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

1929.

Day.	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm	30 cm	122 cm
1	a. 75.8	a. 79.1	a. 74.8	a. 77.8	a. 74.2	a. 77.1	a. 78.6	a. 77.4	a. 78.0	a. 78.5	a. 84.2	a. 80.7	a. 85.6	a. 82.4	a. 86.8	a. 84.1	a. 86.9	a. 84.3	a. 84.5	a. 84.2	a. 80.2	a. 82.6	a. 79.4	a. 80.8
2	75.6	78.9	74.9	77.6	74.2	77.1	78.4	77.4	78.0	78.5	84.2	80.7	85.6	82.4	86.6	84.1	86.5	84.4	84.2	84.1	80.2	82.5	79.5	80.8
3	75.6	78.8	75.3	77.6	74.2	77.0	78.6	77.5	78.3	78.5	84.2	80.8	85.6	82.4	86.4	84.1	86.3	84.4	83.9	84.2	80.3	82.4	79.4	80.8
4	75.7	79.0	75.6	77.5	74.2	77.0	78.6	77.6	78.6	78.4	84.1	80.9	85.6	82.4	86.2	84.1	86.3	84.4	83.6	84.1	80.2	82.4	79.4	80.8
5	75.6	79.0	75.8	77.5	74.2	76.9	77.9	77.7	79.0	78.4	83.6	80.9	85.3	82.6	85.9	84.1	86.9	84.4	83.3	84.2	80.7	82.3	79.3	80.8
6	75.4	78.8	75.8	77.4	74.2	76.9	77.6	77.8	79.1	78.5	83.6	80.9	85.3	82.6	85.9	84.2	87.1	84.4	83.0	84.1	80.8	82.3	79.3	80.8
7	75.3	78.6	75.9	77.4	74.2	76.9	77.8	77.8	78.8	78.5	83.6	81.1	85.2	82.8	85.8	84.2	87.1	84.5	83.1	84.1	80.6	82.2	79.2	80.8
8	75.3	78.6	75.8	77.4	74.2	76.9	78.1	77.8	79.2	78.6	83.6	81.3	85.1	82.8	85.8	84.1	87.2	84.5	82.8	84.1	80.7	82.2	79.0	80.8
9	75.3	78.6	75.8	77.4	74.2	76.9	78.3	77.8	79.7	78.6	84.0	81.2	85.1	82.8	85.8	84.1	87.4	84.5	82.4	83.9	80.5	82.1	78.9	80.7
10	75.3	78.6	75.9	77.4	74.2	76.9	78.6	77.9	80.0	78.6	84.1	81.3	85.1	82.8	85.8	84.1	87.1	84.6	82.3	83.9	80.1	82.1	78.2	80.7
11	75.3	78.5	75.8	77.5	74.2	76.9	78.4	77.9	80.3	78.6	84.2	81.3	85.2	82.9	85.8	84.1	86.8	84.6	82.4	83.8	80.1	82.1	77.8	80.6
12	75.3	78.4	75.6	77.6	74.2	76.9	78.1	78.0	80.3	78.6	84.4	81.3	85.2	82.9	86.3	84.1	86.8	84.6	82.6	83.7	79.7	81.9	78.0	80.6
13	75.3	78.3	75.3	77.6	74.3	76.8	78.1	78.0	80.6	78.7	84.7	81.3	85.6	83.0	86.1	84.1	86.6	84.7	82.7	83.6	79.2	81.9	78.0	80.6
14	75.3	78.4	75.1	77.6	74.3	76.8	78.1	78.0	80.5	78.8	84.6	81.4	85.8	83.0	85.8	84.1	86.3	84.7	83.0	83.6	78.8	81.9	78.6	80.4
15	75.3	78.4	74.8	77.5	74.4	76.8	78.0	78.0	80.3	78.9	84.6	81.5	86.3	83.0	85.8	84.1	86.2	84.7	83.0	83.6	78.6	81.9	78.9	80.4
16	75.3	78.3	74.7	77.6	74.6	76.8	78.0	78.0	80.4	79.1	84.7	81.6	87.3	83.0	85.8	84.1	85.9	84.7	83.2	83.5	78.2	81.9	78.4	80.4
17	75.2	78.3	74.7	77.5	74.8	76.8	78.2	78.0	81.2	79.1	84.5	81.7	87.6	83.0	85.8	84.1	85.9	84.7	83.1	83.5	77.8	81.8	78.3	80.3
18	75.1	78.2	74.6	77.5	75.3	76.7	78.4	78.0	81.6	79.1	84.3	81.8	87.7	83.1	86.1	84.2	85.8	84.7	83.0	83.6	77.5	81.5	78.2	80.3
19	74.8	78.1	74.5	77.4	75.5	76.7	78.9	78.1	82.2	79.1	84.3	81.9	87.3	83.2	86.1	84.1	85.7	84.7	82.6	83.4	77.3	81.3	77.8	80.2
20	74.9	78.1	74.4	77.4	75.5	76.7	78.9	78.1	82.4	79.2	84.3	81.9	87.4	83.3	85.8	84.1	85.6	84.7	82.4	83.4	77.9	81.3	77.8	80.2
21	74.9	78.1	74.4	77.4	75.9	76.7	78.6	78.1	83.1	79.4	84.4	81.9	87.1	83.4	85.9	84.1	85.2	84.7	82.3	83.3	78.4	81.2	77.6	80.2
22	74.9	78.0	74.3	77.4	76.6	76.7	78.6	78.3	83.2	79.4	84.2	81.9	87.4	83.5	85.9	84.1	84.9	84.6	82.3	83.3	78.9	81.1	77.3	80.2
23	74.9	78.0	74.2	77.4	76.8	76.9	78.7	78.3	83.0	79.6	84.5	81.9	87.4	83.6	86.3	84.1	85.3	84.7	82.2	83.2	79.3	81.0	76.9	80.2
24	74.9	78.0	74.2	77.3	77.6	76.8	78.7	78.3	83.3	79.9	84.2	81.9	87.4	83.6	86.3	84.1	85.4	84.7	82.2	83.2	79.4	81.0	76.9	80.2
25	74.8	78.0	74.2	77.2	77.6	76.8	78.6	78.4	83.3	79.9	84.3	82.1	87.2	83.7	86.3	84.1	85.2	84.6	81.8	83.2	79.3	80.9	76.9	80.2
26	74.8	77.9	74.2	77.2	77.7	76.9	78.3	78.4	83.5	79.9	84.7	82.1	87.3	83.7	86.3	84.2	85.1	84.6	81.3	83.1	79.3	81.1	77.0	80.2
27	74.7	77.9	74.2	77.2	77.8	76.9	77.9	78.4	84.1	80.1	85.2	82.1	87.3	83.8	86.3	84.2	85.2	84.5	80.7	83.0	79.3	80.7	77.0	80.1
28	74.8	78.0	74.2	77.2	77.9	77.1	77.8	78.4	84.5	80.2	85.3	82.1	87.2	83.9	86.5	84.2	85.2	84.6	80.2	83.0	79.2	80.8	77.2	80.0
29	74.7	78.0			78.1	77.1	77.8	78.5	84.2	80.2	85.3	82.2	87.0	83.9	86.7	84.2	85.0	84.5	80.2	82.9	79.2	80.8	77.3	79.9
30	74.8	77.6			78.4	77.2	78.0	78.5	84.1	80.3	85.3	82.2	87.2	84.0	86.5	84.2	85.0	84.5	80.6	82.8	79.3	80.8	77.4	79.7
31	74.7	77.9			78.6	77.2			84.2	80.4			87.0	84.1	86.7	84.3			80.5	82.7			77.2	79.7
Mean	75.1	78.3	75.0	77.4	75.6	76.9	78.3	78.0	81.3	79.2	84.4	81.5	86.4	83.1	86.1	84.1	86.1	84.6	82.4	83.6	79.3	81.7	78.1	80.4

The initial 2 or 3 of the readings is omitted; i.e., 275.0 degrees absolute is written 75.0.

Year 80.7 80.7

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

252. Eskdalemuir.

Readings, in degrees absolute.

1929.

Month.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	60.5	77.6	61.8	74.3	64.7	79.2	82.1	79.4	85.8	69.6	65.5	77.3
2	64.8	77.0	67.5	70.6	69.3	82.9	77.7	72.2	77.1	79.3	78.8	76.9
3	67.8	78.0	66.8	70.0	68.9	81.7	76.1	72.4	78.1	76.2	72.0	73.0
4	65.9	76.2	71.0	70.0	75.7	77.6	80.0	85.6	83.6	71.4	72.0	75.8
5	70.7	71.1	64.8	73.0	76.1	68.8	79.7	76.9	86.8	73.1	82.5	74.2
6	70.9	74.0	65.9	64.8	71.0	78.0	80.5	81.0	79.0	79.0	73.2	74.7
7	71.5	71.0	68.8	72.8	75.0	78.8	75.0	80.8	83.4	77.0	69.5	74.5
8	70.2	72.3	65.3	74.4	76.8	71.8	74.0	72.2	85.0	70.4	75.3	68.9
9	68.9	73.8	67.0	70.0	70.9	76.8	81.8	81.0	82.1	70.6	70.0	72.2
10	72.9	69.6	66.9	68.9	74.7	76.8	84.3	81.4	73.7	78.2	72.2	71.9
11	73.0	65.8	66.9	73.0	79.6	80.3	85.7	84.5	72.4	78.1	73.1	70.0
12	73.1	65.5	69.0	67.9	77.1	73.6	78.1	80.1	82.0	78.5	70.7	74.5
13	66.5	58.9	73.0	70.0	69.1	83.3	73.3	75.0	74.5	81.8	70.3	76.0
14	71.0	58.1	68.2	75.0	77.7	80.8	73.8	78.0	74.0	83.0	63.6	78.1
15	70.0	60.8	71.0	72.8	76.8	72.6	75.9	75.4	78.3	72.3	62.4	74.1
16	69.4	56.8	69.0	73.9	71.1	82.3	81.8	83.2	71.6	82.4	64.8	69.3
17	67.9	59.8	68.8	67.9	72.4	79.6	83.2	82.0	72.0	77.6	66.0	70.9
18	67.8	63.0	66.9	79.4	76.2	80.1	81.2	80.0	71.0	76.0	71.0	68.9
19	74.9	65.0	68.8	79.6	77.0	84.0	85.2	78.2	77.3	68.9	73.0	74.0
20	76.8	64.6	67.6	68.3	73.2	78.7	84.7	80.5	79.0	76.9	79.5	72.8
21	70.2	71.3	76.7	65.4	75.0	76.5	81.7	83.5	74.7	75.0	77.3	72.8
22	65.8	74.0	77.9	65.1	76.3	79.5	84.8	81.0	77.4	74.8	79.1	65.9
23	68.8	74.8	75.3	70.1	81.2	80.2	80.8	85.1				

253. Eskdalemuir.

Table for January 1929 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows 1-31 and Mean Cloud Amt.

254. Eskdalemuir.

Table for February 1929 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows 1-28 and Mean Cloud Amt.

255. Eskdalemuir.

March, 1929.

Table for Eskdalemuir in March 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows 1-31.

256. Eskdalemuir.

April, 1929.

Table for Eskdalemuir in April 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows 1-30.

259. Eskdalemuir.

Table for July 1929 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

260. Eskdalemuir.

August, 1929.

Table for August 1929 at Eskdalemuir. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

261. Eskdalemuir.

Table for Eskdalemuir, September 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

262. Eskdalemuir.

Table for Eskdalemuir, October 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

263. Eskdalemuir.

Table for station 263, Eskdalemuir, covering the month of November 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. The table contains 30 rows of daily data and a summary row for Mean Cloud Am't.

264. Eskdalemuir.

Table for station 264, Eskdalemuir, covering the month of December 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms) (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. The table contains 31 rows of daily data and a summary row for Mean Cloud Am't. The bottom of the table includes a section for Mean Annual Cloud Am't and a final Remarks on the Weather of the Day.

POTENTIAL GRADIENT (reduced to level surface) : VOLTS PER METRE.
 Mean Values for periods of sixty minutes, centred at the exact hours, Greenwich Mean Time.

265. Eskdalemuir.

Month.		January. Factor 6.22.				February. Factor 6.29.				March. Factor 6.36.			
Hour. G.M.T.		3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
Day.		v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.
1		400	420	365	225	145	125	35	485	400	395	430	580
2		155	200	230	615	405	390	-30	-150	390	385	460	1045
3		440	95	125	330	290	205	315	z-	885	565	440	665
4		135	95	215	590	255	695	-145	310	135	115	170	340
5		215	130	195	80	330	325	160	290	235	450	175	580
6		105	80	130	0	170	-60	150	75	375	555	660	995
7		135	135	175	325	75	140	285	490	815	815	460	910
8		140	135	230	345	270	75	z-	390	275	775	515	930
9		150	285	350	-135	890	520	215	440	465	625	340	1005
10		-15	365	240	130	195	175	180	380	275	385	390	915
11		135	115	195	150	145	95	135	235	175	465	260	545
12		85	120	305	355	175	125	175	440	305	350	235	225
13		215	445	370	z-	140	200	195	345	415	175	245	260
14		170	155	390	655	355	280	155	615	495	425	250	930
15		60	130	175	195	500	485	340	405	605	620	285	690
16		130	215	445	265	300	155	190	385	735	675	565	735
17		190	180	340	425	345	330	250	330	475	700	535	715
18		155	440	845	570	245	230	320	365	655	520	340	1040
19		150	85	175	305	285	310	405	330	795	640	460	565
20		180	300	615	450	280	325	400	375	245	480	425	395
21		340	445	420	405	405	390	185	260	120	170	330	115
22		330	515	1250	265	280	550	355	505	330	215	225	360
23		285	215	210	325	115	20	55	465	220	125	-225	355
24		425	250	400	315	380	415	640	z±	300	290	410	190
25		125	310	545	510	65	105	55	230	-220	130	175	360
26		270	390	235	750	140	180	285	180	340	300	310	515
27		250	555	440	300	55	200	255	210	580	465	370	665
28		380	385	315	390	325	290	340	485	385	355	265	510
29		525	70	75	-100					335	410	310	845
30		35	55	210	365					160	140	165	430
31		-230	310	325	230					80	95	190	155
(a)		218	246	340	352	270	272	243	361	400	413	346	599
(b)		195	239	339	321	265	263	198	339	380	413	328	599
Mean	...	(a) 289.	(b) 274.			(a) 286.	(b) 266.			(a) 440.	(b) 430.		

Month.		April. Factor 6.37.				May. Factor 6.37.				June. Factor 6.32.			
Hour. G.M.T.		3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
Day.		v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.
1		70	200	150	375	160	145	z±	155	100	140	185	285
2		215	90	80	215	180	230	z±	90	10	205	170	135
3		190	210	180	240	55	85	155	160	95	105	130	25
4		345	230	z-	110	z±	105	160	z-	50	20	100	185
5		125	140	155	250	105	125	z-	155	255	175	105	15
6		535	425	315	530	300	z-	-	-	-110	225	z-	155
7		505	530	220	40	-	-	175	95	175	95	145	175
8		415	325	95	415	135	95	z±	330	340	195	90	z±
9		220	165	150	565	230	120	125	205	50	115	140	210
10		165	125	120	230	100	75	185	-70	z-	45	110	230
11		185	150	135	885	-195	105	100	305	225	115	160	285
12		55	140	155	270	185	-100	z-	140	150	135	160	255
13		190	145	180	160	125	(175)	-95	115	-60	25	155	145
14		10	85	90	310	-30	z-	z-	-10	-200	145	125	245
15		265	55	245	205	135	140	z+	145	210	160	155	-140
16		160	135	240	425	125	95	85	120	135	165	85	180
17		220	240	475	z±	105	105	80	120	95	80	185	250
17		175	100	75	185	430	240	100	180	115	250	405	215
19		120	80	120	415	155	(195)	115	80	z-	75	220	165
20		255	185	130	175	80	130	90	140	230	220	215	380
21		190	135	130	140	120	135	90	145	130	95	115	115
22		125	250	125	z-	70	265	165	190	-15	400	135	150
23		245	205	140	265	-145	175	125	115	-170	115	195	250
24		125	160	175	235	230	90	250	235	240	170	175	385
25		295	150	205	170	410	195	165	125	95	265	195	180
26		175	290	1025	450	220	135	65	335	135	140	185	390
27		305	240	z±	90	180	95	145	290	215	145	190	270
28		505	-20	-520	290	150	210	195	200	165	65	155	390
29		-445	110	110	125	150	195	235	195	135	95	165	270
30		80	100	105	150	120	160	230	310	395	80	105	290
(a)		223	186	190	283	172	150	138	175	163	142	161	222
(b)		194	170	154	297	138	152	124	168	114	143	163	213
Mean	...	(a) 220.	(b) 204.			(a) 159.	(b) 146.			(a) 172.	(b) 158.		

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

265. Eskdalemuir.

1929.

Month.	July. Factor 6.28				August. Factor 6.09				September. Factor 6.03.							
	Hour. G.M.T.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.			
Day.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.	v/m.			
1	-10	200	(z-)	360	355	150	z±	155	10	65	130	190	190			
2	165	145	120	245	130	220	115	240	110	145	165	190	190			
3	115	165	155	160	-445	40	115	555	130	40	180	365	365			
4	310	510	-60	z±	330	160	125	115	190	225	-	-	-			
5	305	-	z±	120	z-	195	65	(170)	-	-	265	265	265			
6	100	125	155	125	-	-	15	z±	215	90	210	395	395			
7	275	175	155	180	z-	225	670	-210	265	275	175	335	335			
8	75	165	140	260	380	175	125	180	305	90	180	230	230			
9	185	-75	75	165	160	120	110	-155	310	(155)	260	445	445			
10	-305	-15	-365	75	445	140	105	-55	475	460	195	525	525			
11	200	235	(160)	z±	130	375	115	-50	150	175	195	275	275			
12	245	535	185	370	135	120	170	315	210	115	140	220	220			
13	190	175	160	430	195	160	-115	105	285	190	250	370	370			
14	255	250	215	365	325	155	90	175	255	130	165	515	515			
15	235	165	120	400	250	225	z-	210	505	390	180	320	320			
16	425	215	195	225	65	265	170	275	115	145	210	385	385			
17	(100)	160	115	285	410	200	145	195	365	590	290	545	545			
18	(175)	75	100	85	100	170	165	130	465	390	75	300	300			
19	115	195	155	255	185	135	80	350	70	55	215	40	40			
20	205	315	365	355	285	245	105	455	105	230	250	465	465			
21	330	145	110	80	120	160	95	-620	150	120	170	160	160			
22	90	100	45	95	115	145	160	30	150	135	95	215	215			
23	160	260	275	290	55	160	95	220	70	285	110	170	170			
24	140	80	145	195	135	95	130	145	215	185	195	280	280			
25	235	220	160	160	130	115	185	380	180	270	170	195	195			
26	390	85	135	255	165	170	285	475	400	305	335	380	380			
27	295	200	140	210	315	250	240	80	250	210	220	420	420			
28	25	45	-	-	195	230	120	205	280	40	110	230	230			
29	-	-	195	170	130	(70)	175	235	100	180	125	235	235			
30	80	145	210	310	420	125	140	370	(240)	-75	155	165	165			
31	-245	z-	-120	290	170	220	120	310	-	-	-	-	-			
(a)	201	196	159	233	216	174	151	243	227	203	187	304	304			
(b)	178	167	136	232	184	170	129	179	228	192	184	306	306			
Mean .. .	(a) 197.				(b) 178.				(a) 230.				(b) 227.			

Month.	October. Factor 6.00				November. Factor 6.03.				December. Factor 6.11.							
	Hour. G.M.T.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.			
Day.																
1	245	190	190	-285	310	385	370	315	-280	165	140	365	365			
2	95	125	135	z±	270	-295	365	310	115	-950	140	z+	z+			
3	-	-	-95	145	115	120	230	60	135	60	455	285	285			
4	90	205	-65	635	155	-25	75	60	15	305	240	285	285			
5	z±	320	145	100	20	-680	120	395	-290	185	150	-240	-240			
6	-440	185	180	-440	420	605	410	595	-35	140	255	z-	z-			
7	-30	100	165	270	260	310	220	25	z-	345	65	190	190			
8	140	z-	275	630	-65	175	290	380	175	z-	z-	135	135			
9	140	170	135	215	20	135	z±	z±	50	85	265	325	325			
10	85	75	65	70	140	250	190	140	145	z-	315	475	475			
11	75	105	100	120	185	-1050	-230	135	z±	115	z-	125	125			
12	160	185	120	225	175	585	z+	z±	z-	-50	335	140	140			
13	175	140	80	145	230	210	305	500	330	20	z±	35	35			
14	85	50	260	205	175	390	300	440	-405	105	140	100	100			
15	85	160	165	235	250	460	475	670	105	155	315	185	185			
16	230	-155	-190	120	495	125	370	700	165	345	265	305	305			
17	z-	115	120	20	300	140	-180	185	170	195	605	715	715			
18	35	135	180	480	135	170	265	z±	245	165	615	270	270			
19	210	215	155	380	-250	245	275	85	110	255	335	325	325			
20	140	z-	65	-170	-10	165	290	570	z-	320	480	z-	z-			
21	135	195	(190)	(210)	140	145	210	155	z-	-30	610	515	515			
22	-	-	-	(-190)	-	-	260	120	350	225	300	350	350			
23	80	120	25	-915	85	200	z±	145	155	455	155	140	140			
24	-365	-155	130	265	215	z±	170	275	z-	90	305	-	-			
25	345	350	235	325	z-	160	125	z-	-	-	-900	z-	z-			
26	405	260	250	295	-15	255	235	z-	-175	-15	275	305	305			
27	140	345	285	720	90	65	-380	400	-40	165	165	305	305			
28	z-	120	225	285	z-	60	320	535	-	-	-480	z-	z-			
29	-50	345	80	90	105	95	245	530	40	35	z-	z±	z±			
30	140	230	260	550	425	-265	z-	-5	165	220	305	-5	-5			
31	470	435	260	480	-	-	-	-	190	140	155	330	330			
(a)	168	195	166	289	205	237	266	331	156	187	295	282	282			
(b)	106	169	142	191	169	87	196	340	37	197	275	252	252			
Mean .. .	(a) 204.				(b) 152.				(a) 230.				(b) 190.			

Annual Means		(a)	(b)	(a)	(b)
218	217	220	306	218	217
182	197	197	286	182	197
		(a) 240	(b) 216		

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.

Month.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	Day.	Character	Duration of Negative Pot. Grad.	Character								
		hours.		hours.		hours.		hours.		hours.		hours.
1	oa	...	2b	4.5	oa	...	1c	2.9	1b	0.7	1a	0.5
2	1a	0.7	2b	5.7	ob	...	1a	0.3	1b	2.3	2b	3.3
3	oa	...	2c	5.3	oa	...	oa	...	1a	0.1	1a	0.4
4	oa	...	1b	1.3	1a	0.1	2c	4.9	2b	15.1	1a	2.3
5	oa	...	oa	...	oa	...	1a	0.8	2b	3.2	1b	2.7
6	1b	1.4	1b	1.8	oa	...	oa	...	(2b)	—	2c	8.7
7	oa	...	oa	...	oa	...	1b	0.9	2b	(4.3)	1b	1.0
8	oa	...	2c	(7.7)	oa	...	1c	2.2	2c	(3.2)	1b	1.6
9	2b	5.1	1b	(0.7)	oa	...	oa	...	oa	...	1b	1.2
10	1a	3.2	oa	...	oa	...	1a	0.1	2b	3.4	2b	4.5
11	oa	...	1a	0.2	oa	...	oa	...	1b	1.1	oa	...
12	oa	...	oa	...	oa	...	1a	1.0	2c	6.5	oa	...
13	1b	1.0	oa	...	oa	...	oa	...	2b	3.7	1b	2.8
14	oa	...	oa	...	oa	...	2a	3.4	2c	11.6	2c	4.3
15	1b	1.4	oa	...	oa	...	1a	0.2	1b	1.3	1b	1.8
16	oa	...	oa	...	oa	...	oa	...	oa	...	1b	0.6
17	1a	1.5	oa	...	oa	...	1b	1.3	oa	...	oa	...
18	oa	...	oa	...	oa	...	1b	0.7	oa	...	1a	0.3
19	1b	0.7	oa	...	oa	...	1a	0.4	oa	...	2b	3.2
20	oa	...	oa	...	oa	...	oa	...	oa	...	oa	...
21	oa	...	1a	0.1	1a	2.8	oa	...	oa	...	1b	1.7
22	oa	...	oa	...	2c	3.4	1b	2.2	2b	3.6	1a	0.7
23	oa	...	2c	9.2	1b	2.2	oa	...	1a	1.4	1b	0.5
24	oa	...	1b	1.2	1b	0.4	1b	1.3	1b	0.7	1b	1.2
25	oa	...	1a	0.1	1b	2.3	1a	0.1	oa	...	oa	...
26	oa	...	oa	...	oa	...	1c	1.2	1b	0.1	oa	...
27	oa	...	1a	0.1	oa	...	1b	1.0	oa	...	1a	0.1
28	oa	...	oa	...	oa	...	2b	7.9	oa	...	1a	0.1
29	2b	4.5	oa	...	oa	...	2a	4.1	oa	...	oa	...
30	2b	3.7	oa	...	oa	...	1b	0.4	oa	...	1a	0.1
31	1b	1.5	...	...	1b	1.6	...	...	1a	0.5	...	...
Total ...	—	24.7	—	37.9	—	12.8	—	37.3	—	62.8	—	43.6
No. of days used	—	31	—	28	—	31	—	30	—	30	—	30
Mean ...	—	0.8	—	1.4	—	0.4	—	1.2	—	2.1	—	1.5

Month.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	Day.	Character	Duration of Negative Pot. Grad.	Character								
		hours.		hours.		hours.		hours.		hours.		hours.
1	(1b)	—	2b	3.3	1a	1.3	2c	6.1	oa	...	2b	3.2
2	1a	0.1	oa	...	oa	...	2c	4.4	1b	2.3	2c	9.7
3	1b	1.4	2c	9.1	1b	0.5	1b	1.4	1c	2.8	1b	1.6
4	2c	6.2	1b	2.8	oa	...	2b	3.1	2a	5.5	2c	4.3
5	2c	5.1	2b	3.9	oa	...	2c	8.0	2b	8.6	2c	12.1
6	1a	1.0	2b	3.8	oa	...	2c	8.4	1b	0.5	2c	6.0
7	1a	0.8	2b	6.7	oa	...	1b	2.1	2b	3.1	2c	10.5
8	oa	...	oa	...	oa	...	2c	8.0	2c	3.8	2c	4.2
9	1a	1.8	1a	0.9	oa	...	1a	0.1	2c	5.8	1b	0.9
10	2c	9.6	1a	1.7	oa	...	1a	2.6	1c	1.3	2c	3.7
11	2c	(3.5)	1b	1.8	oa	...	oa	...	2b	12.4	2c	8.6
12	oa	...	oa	...	1a	0.3	oa	...	1c	2.6	2c	8.4
13	oa	...	2a	4.7	oa	...	oa	...	oa	...	2b	8.4
14	oa	...	1a	0.1	1a	0.1	oa	...	oa	...	2b	3.9
15	oa	...	1b	2.1	oa	...	1b	0.3	oa	...	1b	1.3
16	1b	0.1	1b	1.6	oa	...	2b	4.5	1a	0.2	1a	0.1
17	oa	...	2c	4.9	oa	...	1b	2.3	1b	2.9	oa	...
18	oa	...	1a	0.5	1a	0.2	1b	2.0	1b	2.3	oa	...
19	oa	...	1a	2.1	1b	1.5	oa	...	2c	9.1	1b	0.6
20	1a	0.1	1a	0.1	1b	1.1	2b	5.5	1b	1.9	2c	10.3
21	oa	...	2b	6.1	1b	0.4	(oa)	...	2b	6.3	2c	9.5
22	2b	3.6	2b	3.8	oa	...	(1b)	1.4	1a	0.9	oa	...
23	oa	...	1a	2.4	oa	...	2b	6.5	2c	7.5	2c	(5.5)
24	oa	...	1a	0.1	oa	...	2b	7.9	2c	4.6	2c	(7.4)
25	oa	...	oa	...	oa	...	oa	...	2c	8.9	2c	—
26	oa	...	1a	0.3	oa	...	1b	0.3	2b	3.9	2c	7.5
27	oa	...	2c	4.3	oa	...	oa	...	1b	2.8	2(c)	5.1
28	(2b)	—	1b	1.0	1a	0.6	2c	4.8	1b	2.8	2c	(9.7)
29	(oa)	...	1a	0.4	1b	2.2	2b	3.7	1a	2.2	2c	10.9
30	1b	1.7	1b	2.0	1b	2.4	1a	0.2	2c	8.7	1b	0.6
31	2c	10.7	1a	0.1	...	...	oa	...	...	...	1a	0.1
Total ...	—	45.7	—	70.6	—	10.6	—	83.6	—	113.7	—	154.1
No. of days used	—	29	—	31	—	30	—	31	—	30	—	30
Mean ...	—	1.6	—	2.3	—	0.4	—	2.7	—	3.8	—	5.1

Annual Values.	Character Frequency ...	0	1	2	Duration ...	Total.	No. of Days.	Mean.
		141	133	91					697.4	361	1.93 hours.

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

269. Eskdalemuir. (X.)

15,000 γ (.15 C.G.S. unit) +

January, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.		
Day.	γ																											
1 Q	1039	1041	1040	1043	1042	1041	1041	1040	1038	1035	1032	1029	1026	1031	1036	1041	1046	1047	1050	1051	1051	1047	1047	1041	1042	1041	1041	
2	1042	1042	1042	1044	1046	1051	1051	1051	1051	1047	1046	1041	1033	1036	1041	1042	1041	1037	1042	1051	1051	1051	1047	1047	1041	1046	1045	
3	1046	1046	1046	1046	1047	1050	1047	1046	1041	1034	1033	1032	1032	1038	1046	1051	1051	1056	1042	1047	1042	1034	1022	1031	1047	1035	1042	
4	1035	1037	1052	1041	1036	1030	1031	1050	1040	1035	1035	1031	1025	1027	1032	1040	1040	1041	1047	1044	1043	1043	1040	1041	1040	1038	1038	
5 D	1040	1040	1040	1047	1054	1061	1050	1046	1045	1035	1032	1025	1023	1035	1040	1040	1035	1021	1021	1006	1020	995	1008	1020	1031	1032	1032	
6	1031	1026	1020	1029	1030	1030	1025	1025	1031	1030	1024	1019	1019	1022	1020	1021	1022	1017	1014	1031	1038	1040	1040	1036	1036	1027	1027	
7	1036	1036	1037	1038	1039	1039	1039	1039	1038	1034	1029	1024	1019	1019	1021	1024	1029	1034	1035	1039	1038	1040	1039	1041	1038	1034	1034	
8 D	1038	1039	1039	1045	1043	1046	1049	1049	1049	1039	1030	1024	1023	1013	1012	1004	1015	1030	1039	1039	1039	1041	1037	1017	999	1032	1032	
9 D	999	963	1030	1019	1047	1026	1029	1024	1025	1024	1019	1008	1021	1024	1014	1025	1026	1019	1029	1040	1013	1019	1037	1049	1037	1023	1023	
10 D	1037	1015	1016	1018	1023	1023	1028	1029	1020	1019	1018	1014	1013	1014	1018	1020	1006	1023	1025	1023	1025	1043	1048	1029	1033	1023	1023	
11	1033	1053	1028	1029	1028	1048	1044	1033	1012	1019	1018	1013	1014	1020	1028	1037	1038	1038	1038	1038	1038	1038	1038	1038	1037	1032	1032	
12	1037	1034	1034	1036	1039	1040	1043	1044	1043	1033	1023	1019	1023	1033	1037	1037	1038	1038	1039	1040	1041	1039	1043	1042	1040	1037	1037	
13	1040	1042	1043	1043	1043	1042	1042	1043	1039	1028	1018	1013	1007	1019	1027	1031	1034	1039	1042	1043	1044	1041	1053	1034	1034	1034	1035	1035
14 D	1033	1052	1038	1037	1042	1043	1048	1047	1038	1037	1017	1012	1017	1020	1021	986	1007	1032	1037	1028	1038	1037	1032	1033	1034	1031	1031	
15	1034	1027	1037	1034	1037	1042	1040	1043	1038	1032	1027	1017	1013	1013	1026	1033	1033	1036	1037	1037	1037	1037	1040	1041	1042	1033	1033	
16	1042	1040	1042	1042	1043	1047	1047	1048	1043	1037	1023	1017	1012	1014	1021	1028	1027	1031	1038	1044	1042	1033	1037	1052	1043	1035	1035	
17 Q	1043	1040	1042	1042	1043	1047	1046	1047	1051	1044	1037	1028	1025	1025	1030	1035	1037	1040	1047	1049	1049	1047	1046	1046	1044	1041	1041	
18 Q	1044	1046	1046	1046	1046	1051	1056	1051	1048	1042	1031	1026	1022	1026	1032	1032	1031	1040	1045	1047	1046	1046	1046	1046	1046	1041	1041	
19 Q	1046	1045	1046	1046	1046	1047	1051	1048	1050	1047	1041	1036	1031	1032	1036	1037	1036	1036	1041	1046	1050	1047	1046	1045	1047	1043	1043	
20	1047	1050	1047	1050	1051	1052	1055	1055	1051	1045	1036	1031	1028	1036	1047	1051	1052	1056	1054	1058	1058	1046	1032	1031	1036	1046	1046	
21	1036	1038	1038	1041	1046	1042	1046	1047	1041	1041	1032	1031	1031	1031	1027	1036	1041	1037	1031	1036	1042	1046	1046	1045	1041	1039	1039	
22	1041	1043	1062	1042	1043	1041	1041	1042	1042	1036	1025	1018	1016	1013	1026	1036	1026	1041	1044	1046	1043	1033	1032	1040	1035	1036	1036	
23 Q	1035	1035	1035	1035	1038	1041	1040	1040	1040	1031	1021	1020	1020	1021	1030	1036	1041	1044	1033	1038	1041	1044	1043	1040	1038	1035	1035	
24	1038	1040	1042	1045	1045	1045	1045	1048	1040	1033	1025	1019	1016	1025	1030	1035	1040	1040	1045	1049	1042	1044	1038	1041	1041	1038	1038	
25	1041	1041	1041	1045	1045	1046	1046	1048	1047	1040	1026	1025	1023	1030	1035	1036	1040	1035	1030	1034	1044	1045	1045	1045	1045	1039	1039	
26	1045	1045	1045	1045	1046	1046	1047	1046	1045	1041	1035	1025	1024	1030	1035	1035	1031	1034	1041	1042	1035	1029	1035	1040	1039	1038	1038	
27	1039	1036	1040	1040	1041	1045	1046	1045	1044	1040	1035	1026	1025	1033	1040	1043	1043	1043	1045	1050	1050	1047	1046	1047	1047	1041	1041	
28	1047	1046	1047	1046	1048	1050	1050	1050	1050	1041	1030	1024	1028	1033	1042	1043	1038	1034	1034	1040	1042	1046	1050	1049	1046	1042	1042	
29	1046	1049	1050	1050	1050	1051	1046	1050	1043	1041	1035	1025	1017	1024	1035	1044	1043	1044	1047	1035	1019	1025	1037	1030	1034	1039	1039	
30	1034	1035	1037	1040	1045	1047	1047	1046	1040	1031	1025	1022	1024	1035	1036	1036	1032	1040	1041	1046	1045	1045	1048	1052	1045	1039	1039	
31	1045	1040	1040	1040	1049	1049	1049	1049	1045	1034	1028	1024	1023	1029	1030	1032	1040	1044	1044	1043	1045	1045	1049	1044	1041	1040	1040	
Mean	1038	1037	1040	1040	1043	1044	1044	1044	1041	1036	1029	1023	1022	1026	1031	1033	1034	1037	1039	1041	1040	1039	1040	1040	1038	1037	1037	

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

270. Eskdalemuir. (-Y.)

4,000 γ (.04 C.G.S. unit) +

January, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1 Q	313	316	317	316	314	317	317	317	317	315	317	321	329	331	331	325	324	325	325	323	321	317	314	323	319	320	320
2	319	319	321	323	324	324	324	323	323	324	328	329	331	337	331	331	331	336	330	325	324	324	323	323	323	326	326
3	323	323	323	323	323	323	319	317	317	318	323	328	331	337	336	337	331	344	345	343	324	319	299	299	316	325	325
4	316	311	291	270	285	311	312	317	317	317	319	328	331	337	337	336	330	330	330	324	319	318	318	317	318	318	318
5 D	318	324	325	326	331	324	318	318	317	312	318	330	330	338	338	335	324	344	346	320	292	267	291	305	304	320	320
6	304	304	325	325	319	318	312	311	312	312	306	311	318	326	326	326	324	319	304	297	322	318	318	318	318	316	316
7	318	318	319	319	319	318	318	314	312	311	312	318	321														

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

271. Eskdalemuir. (Z.)

44,000 γ (44 C.G.S. unit) +

January, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day. 1 Q	885	885	885	885	885	884	884	885	885	885	884	883	881	884	888	888	885	884	884	884	884	886	885	885	885	885	885
2	885	884	884	883	882	881	881	882	882	881	884	882	883	884	886	886	886	886	887	883	886	890	898	901	912	904	888
3	882	882	882	882	882	882	882	883	883	885	885	883	883	886	886	886	887	883	886	886	887	888	888	888	887	887	886
4	896	892	888	878	878	880	884	883	886	885	884	881	883	886	888	887	888	888	888	886	887	888	888	888	887	887	886
5 D	887	885	884	884	881	880	881	883	884	887	885	882	884	880	884	885	893	898	915	944	937	928	918	902	893	895	
6	893	883	883	877	881	885	888	890	890	891	894	894	891	890	892	894	894	898	903	906	895	894	892	891	891	891	
7	891	890	890	890	890	890	891	891	892	892	891	891	891	892	892	891	891	892	892	892	892	892	891	891	891	891	
8 D	890	888	888	885	883	884	884	885	885	887	889	892	891	891	891	892	898	901	900	896	896	896	899	899	899	891	
9 D	864	813	841	862	863	877	884	889	891	893	888	888	891	893	905	911	915	925	931	920	919	926	921	914	900	893	
10 D	900	895	894	895	894	894	894	890	890	894	895	898	898	901	902	906	916	916	907	910	908	905	897	896	896	900	
11	896	882	877	879	875	862	866	878	883	883	883	885	887	890	895	896	897	896	895	895	895	894	893	893	893	886	
12	893	893	894	893	893	892	892	892	894	896	896	893	890	894	897	897	897	896	893	893	892	892	893	893	893	894	
13	893	892	891	890	890	890	889	889	890	893	893	890	889	891	893	898	898	898	897	896	895	898	896	896	896	893	
14 D	896	890	889	889	886	888	889	890	890	890	892	891	891	891	891	898	920	920	911	904	903	907	903	899	896	897	
15	895	895	890	892	892	892	892	892	893	894	894	891	890	893	895	898	901	904	901	899	897	896	895	892	893	895	
16	893	893	893	893	892	892	892	892	892	890	888	885	885	885	889	893	893	893	893	894	893	892	891	890	890	889	
17 Q	886	886	889	889	889	889	889	889	889	889	889	889	889	889	889	891	893	893	893	894	893	892	891	890	890	889	
18 Q	890	890	890	890	890	890	889	889	889	890	892	891	890	890	890	891	895	895	892	892	891	891	891	891	891	891	
19 Q	889	889	889	889	889	888	888	888	889	890	890	887	884	888	892	892	893	893	892	892	892	892	892	892	892	890	
20	891	888	888	888	888	888	888	888	889	889	889	885	885	885	886	886	885	885	887	889	889	893	898	901	898	889	
21	898	894	893	893	890	889	889	890	890	890	891	886	888	890	892	894	894	897	899	902	898	898	897	895	895	893	
22	895	894	887	886	887	887	890	891	893	895	895	891	884	883	887	893	900	899	895	895	896	901	904	904	904	893	
23 Q	904	900	898	896	896	895	894	895	895	892	893	896	896	895	895	896	896	893	896	896	896	896	896	897	897	896	
24	897	897	894	894	893	893	892	892	893	894	894	896	897	897	898	898	897	894	894	894	893	895	898	898	899	895	
25	898	895	895	894	894	894	893	892	893	893	892	890	885	883	890	894	894	895	896	897	896	895	895	894	893	893	
26	893	892	892	891	891	891	891	891	890	888	889	891	891	891	896	896	897	897	897	897	896	900	904	904	902	894	
27	900	899	896	896	894	893	892	892	892	889	887	886	886	889	891	893	894	894	894	892	892	892	891	890	890	890	
28	890	890	891	890	890	890	890	890	890	890	892	891	890	891	895	896	902	908	906	906	905	904	904	900	900	896	
29	900	900	898	896	896	896	895	894	895	896	895	893	895	895	900	900	900	900	902	907	920	917	911	909	908	901	
30	908	904	899	899	899	899	897	899	899	899	899	899	896	895	899	900	901	900	900	900	900	900	900	899	895	899	
31	893	895	895	894	891	895	895	895	899	902	900	900	899	900	903	904	904	904	904	904	904	904	903	902	903	900	
Mean	893	889	889	888	888	888	889	889	890	891	891	890	889	890	893	896	897	897	897	897	898	899	898	896	893	893	

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

272. Eskdalemuir.

January, 1929.

Day.	Terrestrial Magnetic Elements															Character ER ² Figure $\frac{ER^2}{100\gamma^2}$ §	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 +
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 44000 γ +		Minimum 44000 γ +		Range.			
	h. m.	γ	γ	h. m.		h. m.	γ	γ	h. m.		h. m.	γ	γ	h. m.					$\gamma$
1 Q	21 58	1052	1022	12 13	30	13 29	334	311	0 14	23	14 43	888	880	12 0	8	15	0	84.1
2	6 46	1052	1028	12 0	24	12 49	338	318	1 19	20	14 3	888	881	8 40	7	10	0	84.0
3	17 17	1061	1010	21 41	51	17 21	353	290	22 28	63	21 50	913	881	5 0	32	76	1	84.0
4	2 0	1067	1016	6 38	51	12 59	344	258	2 29	86	0 1	896	875	3 20	21	104	1	84.0
5 D	19 40	1076	959	18 52	117	18 3	365	231	19 33	134	19 31	962	879	13 7	83	385	1	84.0
6	0 20	1055	1005	18 28	50	2 27	339	265	18 29	74	18 40	910	876	2 41	34	91	1	83.9
7	23 3	1046	1014	12 10	32	13 6	332	305	22 59	27	13 30	893	889	4 40	4	18	0	83.9
8 D	21 33	1055	988	23 17	67	13 57	344	177	23 41	167	15 30	904	863	23 41	41	341	1	83.9
9 D	22 13	1080	927	1 3	153	13 23	352	159	0 46	193	17 58	943	792	0 50	151	835	1	83.9
10 D	21 33	1071	987	16 8	84	12 35	346	263	0 3	83	16 28	924	889	7 50	35	152	1	83.7
11	0 55	1096	1002	8 20	94	11 49	340	258	1 26	82	0 1	896	857	4 36	39	171	1	83.7
12	21 42	1049	1016	11 48	33	12 40	332	305	9 5	27	9 43	897	889	11 58	8	19	0	83.7
13	21 45	1069	999	11 50	70	12 50	344	305	21 39	39	16 16 & 22 30	898	888	12 10	10	65	1	83.7
14 D	0 52	1063	972	15 29	91	14 23	358	232	20 1	126	15 31	928	885	3 28	43	260	1	83.5
15	6 44	1051	1007	13 23	44	12 46	338	292	17 10	46	16 42	906	889	11 30	17	43	1	83.5
16	22 53	1062	1007	11 49	55	12 51	344	298	23 42	46	16 30	901	884	11 20	17	54	1	83.5
17 Q	8 8	1052	1022	12 40	30	14 9	332	304	0 6	28	17 10	894	884	11 30	10	18	0	83.4
18 Q	6 11	1057	1021	11 50	36													

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

273. Eskdalemuir. (X.)

15,000 γ (·15 C.G.S. unit) +

February, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1	1041	1054	1050	1045	1045	1044	1049	1050	1048	1041	1024	1020	1019	1020	1030	1041	1044	1044	1042	1043	1041	1043	1045	1049	1049	1049	1041
2	1049	1045	1045	1045	1044	1045	1049	1049	1044	1038	1027	1024	1019	1014	1024	1035	1041	1045	1049	1046	1050	1049	1049	1044	1044	1040	1040
3 Q	1044	1044	1044	1044	1044	1054	1045	1049	1044	1029	1021	1011	1014	1020	1034	1039	1044	1044	1044	1045	1049	1049	1049	1049	1049	1045	1040
4 Q	1045	1047	1049	1050	1050	1052	1051	1054	1049	1039	1027	1021	1020	1024	1031	1039	1044	1049	1049	1050	1050	1050	1049	1049	1049	1050	1043
5 Q	1050	1049	1049	1048	1049	1054	1054	1055	1050	1040	1029	1015	1003	1019	1032	1040	1045	1052	1053	1049	1048	1049	1053	1054	1054	1043	1043
6	1054	1055	1055	1056	1057	1056	1054	1058	1055	1047	1035	1024	1015	1019	1024	1019	1009	1019	1021	1036	1033	1045	1044	1049	1018	1038	1038
7	1018	1030	1045	1033	1035	1035	1040	1048	1039	1029	1019	1004	1006	1009	1024	1032	1039	1040	1044	1042	1044	1055	1060	1040	1044	1034	1034
8	1044	1041	1043	1044	1045	1045	1054	1045	1044	1034	1027	1022	1022	1029	1029	1039	1034	1039	1039	1024	1024	1015	1039	1045	1039	1037	1037
9 D	1039	1034	1032	1035	1039	1036	1045	1040	1036	1006	1014	1004	1002	1004	1009	1011	1044	1040	1044	1034	1032	1044	1045	1044	1044	1044	1030
10	1044	1049	1045	1041	1044	1039	1045	1049	1039	1025	1014	999	983	1009	1016	1024	1029	1039	1033	1040	1045	1044	1039	1043	1039	1032	1032
11	1039	1044	1043	1040	1044	1049	1046	1049	1046	1029	1014	999	999	1004	1016	1025	1024	1035	1039	1044	1043	1046	1045	1058	1055	1035	1035
12	1055	1035	1034	1032	1039	1039	1044	1044	1035	1029	1024	1014	1041	1016	1025	1029	1033	1036	1039	1043	1052	1043	1044	1045	1049	1035	1035
13	1049	1049	1049	1050	1049	1054	1055	1054	1040	1040	1932	1021	1018	1021	1024	1030	1033	1039	1044	1049	1051	1050	1050	1049	1049	1042	1042
14 Q	1049	1048	1048	1048	1051	1050	1052	1050	1049	1037	1028	1024	1023	1022	1027	1028	1032	1036	1042	1043	1044	1044	1053	1048	1048	1041	1041
15 Q	1048	1048	1048	1048	1049	1053	1054	1058	1053	1043	1032	1028	1028	1031	1028	1029	1036	1039	1043	1047	1048	1049	1049	1048	1048	1043	1043
16	1048	1048	1048	1050	1051	1052	1056	1056	1056	1055	1044	1039	1036	1039	1040	1038	1038	1022	1031	1040	1053	1059	1055	1050	1104	1047	
17 D	1104	1049	1054	1064	1064	1064	1055	1009	1049	1020	973	992	994	983	1014	1014	1038	1043	1002	978	974	968	943	968	995	1015	1015
18 D	995	995	1013	1046	1009	1013	1002	1018	1015	980	994	998	1002	1002	1009	1012	1013	1013	1019	1023	1018	1018	1018	1020	1034	1011	1011
19	1034	1048	1028	1028	1039	1029	1045	1045	1024	1018	1006	989	974	978	1009	1008	993	1028	1026	1024	1023	1018	1031	1033	1033	1020	1020
20	1033	1043	1029	1024	1027	1038	1034	1033	1029	1021	1009	1004	1007	1008	1015	1024	1032	1033	1040	1029	1028	1033	1040	1038	1035	1027	1027
21	1035	1034	1035	1042	1054	1054	1057	1046	1033	1024	1014	1005	1003	1008	1017	1027	1028	1043	1040	1040	1038	1028	1033	1064	1053	1034	1034
22	1053	1038	1037	1034	1028	1043	1041	1043	1039	1034	1027	1001	998	1023	1023	1023	1008	1022	1028	1033	1038	1044	1022	1030	1038	1029	1029
23	1037	1027	1027	1038	1034	1035	1022	1034	1042	1037	1032	1022	1024	1018	1017	1030	1036	1038	1039	1044	1048	1052	1047	1041	1053	1035	1035
24	1053	1050	1042	1038	1030	1040	1045	1048	1042	1033	1022	1012	1010	1020	1027	1028	1024	1033	1032	1039	1047	1047	1044	1040	1042	1035	1035
25	1042	1043	1942	1042	1042	1043	1047	1048	1047	1041	1034	1028	1024	1025	1029	1032	1037	1042	1038	1017	1012	1015	1026	1022	1030	1034	1034
26	1030	1036	1033	1033	1036	1038	1039	1040	1037	1029	1017	1015	1018	1025	1029	1036	1031	1035	1037	1048	1074	1050	1037	1007	991	1033	
27 D	991	997	1017	1027	1030	1027	1077	1057	1027	1021	1017	1008	1007	1003	1026	1057	1088	1062	1081	1077	1037	960	796	834	829	1010	
28 D	829	648	885	896	1026	966	948	970	955	970	986	996	965	1000	1036	1011	1005	1004	996	1016	1022	1026	1024	1022	1027	971	
Mean	1034	1026	1035	1036	1041	1041	1043	1043	1038	1029	1020	1012	1009	1014	1024	1029	1032	1036	1037	1037	1038	1035	1030	1032	1034	1031	

TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

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

274. Eskdalemuir. (—Y.)

4,000 γ (·04 C.G.S. unit) +

February, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1	313	298	296	299	304	312	312	313	312	306	306	323	338	344	338	333	326	324	324	324	319	305	299	307	300	315	
2	300	318	318	318	318	318	318	318	312	312	312	324	333	344	344	339	326	326	325	319	319	313	312	312	318	318	321
3 Q	318	318	318	313	312	313	312	312	306	299	304	312	327	337	334	330	324	324	324	319	319	319	318	318	318	318	318
4 Q	318	319	319	318	318	318	316	312	309	303	308	318	328	338	338	332	326	322	320	320	318	318	318	318	318	320	319
5 Q	318	318	318	318	315	312	312	312	305	300	304	312	322	331	339	337	330	325	324	324	318	320	319	319	319	319	319
6	319	319	319	320	318	312	318	312	305	299	312	321	334	347	352	357	359	332	330	298	318	313	296	232	285	318	
7	285	298	305	298	304	306	315	312	304	298	304	304	315	328	332	325	319	319	320	318	306	304	291	305	306	309	
8	306	322	315	316	314	317	313	313	306	299	304	312	320	326	331	332	345	338	348	345	346	305	311	298	282	320	
9 D	282	302	305	312	318	318	314	311	309	313	311	312	318	339	338	332	317	324	280	300	304	306	292	306	314	312	
10	314	320	311	314	305	312	312	312	310	304	304	312	318	331	339	342	312	312	312	291	305	306	306	311	312	313	
11	312	31																									

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

275. Eskdalemuir. (Z.)

44,000 γ ('44 C.G.S. unit) +

February, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mean.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day. 1	γ 903	γ 900	γ 899	γ 897	γ 896	γ 895	γ 895	γ 896	γ 899	γ 899	γ 899	γ 895	γ 891	γ 891	γ 896	γ 900	γ 903	γ 900	γ 895	γ 891	γ 898						
2	891	891	893	895	895	895	895	895	896	899	899	892	891	895	900	904	904	900	900	900	900	899	898	897	896	895	897
3 Q	895	895	895	895	895	891	891	892	896	902	900	897	894	891	894	896	895	895	895	896	896	895	895	894	894	894	895
4 Q	894	893	892	891	891	891	891	892	895	900	897	896	896	898	899	900	899	895	895	895	895	895	895	894	893	895	895
5 Q	893	892	892	891	890	890	891	891	892	894	890	890	890	887	887	889	891	891	891	892	895	894	892	892	891	891	891
6	891	891	891	890	887	888	887	887	887	891	887	886	886	887	891	896	912	919	917	926	917	912	908	908	899	898	898
7	899	891	876	882	886	890	891	890	893	895	896	899	900	899	896	897	897	896	895	896	899	897	892	891	891	893	893
8	891	890	890	890	891	891	891	891	895	896	895	895	895	895	893	896	900	903	908	921	942	961	927	903	899	902	902
9 D	899	895	895	895	892	894	891	892	892	895	896	896	899	899	908	916	916	909	921	913	912	904	902	899	895	901	901
10	895	890	883	887	890	891	891	892	895	895	896	895	899	902	900	908	929	921	912	913	904	900	899	896	896	899	899
11	896	893	893	895	893	893	893	894	896	898	895	894	895	898	906	912	912	914	903	900	899	899	899	895	889	898	898
12	889	887	887	890	890	891	893	895	897	899	894	891	890	890	891	897	903	902	900	900	900	900	899	898	895	895	895
13	895	887	886	887	890	891	891	892	895	894	890	890	890	891	892	895	899	899	899	900	896	895	895	895	893	893	893
14 Q	893	893	893	892	891	893	892	893	895	897	895	891	891	891	891	891	895	899	896	895	895	895	894	892	892	892	893
15 Q	892	891	891	891	891	891	890	891	893	895	891	888	886	886	890	892	892	895	895	894	894	894	893	892	891	891	892
16	891	891	891	891	891	891	891	891	891	890	890	886	882	878	882	886	891	897	902	903	896	892	894	899	878	891	891
17 D	878	882	886	885	848	834	831	838	835	856	871	874	880	909	952	973	1046	1038	1022	982	990	848	837	774	819	897	897
18 D	819	822	823	792	771	828	877	894	899	901	899	899	897	900	902	908	912	916	921	920	921	929	926	921	913	885	885
19	913	906	896	883	869	844	856	869	874	883	893	895	895	900	902	913	943	938	925	929	929	926	919	911	907	900	900
20	907	897	895	894	887	890	895	900	907	908	908	903	902	900	900	901	903	905	904	908	917	913	909	909	904	908	908
21	904	901	902	896	887	882	884	887	893	897	899	896	893	891	890	895	899	901	902	901	904	915	914	908	894	897	897
22	894	891	890	891	895	895	896	897	897	897	891	891	891	890	891	900	929	939	919	913	921	914	903	891	878	901	901
23	878	878	886	874	886	892	893	892	893	893	891	891	891	891	891	897	900	900	900	899	900	899	896	893	886	892	892
24	886	875	882	885	887	889	891	891	893	891	890	887	886	882	884	893	900	902	902	900	900	897	897	899	897	891	891
25	897	897	897	896	896	896	895	892	891	892	890	884	880	879	882	890	895	899	905	921	930	927	908	865	891	896	896
26	891	895	897	899	900	899	898	896	895	895	890	885	884	887	890	892	895	899	899	897	898	896	893	866	826	892	892
27 D	826	814	801	839	856	867	869	876	887	889	887	886	887	900	914	941	1001	1024	1017	1081	1101	816	633	660	635	882	882
28 D	635	586	692	678	787	826	843	870	893	904	921	926	938	961	1029	978	952	956	960	930	919	916	913	913	912	878	878
Mean	880	875	878	878	880	882	885	888	892	894	894	893	893	895	902	906	915	916	914	915	917	901	890	884	880	894	894

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE:

276. Eskdalemuir.

MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

February, 1929.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{ER^2}{100\gamma^2}$ §	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + °A.
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 44000 γ +		Minimum 44000 γ +		Range.			
1	h. m. 1 19	γ 1071	γ 1017	h. m. 11 33	γ 54	h. m. 13 22	γ 346	γ 286	h. m. 23 48	γ 60	h. m. 21 22	γ 904	γ 890	h. m. 23 52	γ 14	67	I	82.9
2	22 33	1056	1010	12 39	46	13 25	351	298	0 1	53	15 20	905	890	1 9	15	51	0	82.9
3 Q	5 0	1055	1008	11 31	47	13 9	342	296	8 42	46	8 44	903	890	5 0	13	45	0	82.8
4 Q	6 34	1055	1017	11 41	38	13 27	341	299	8 59	42	9 10	900	891	2 50	9	33	0	82.8
5 Q	6 52	1059	993	11 48	66	13 48	345	298	9 0	47	20 26	895	887	13 31	8	66	0	82.8
6	23 4	1085	998	16 2	87	16 9	373	187	22 55	186	18 41	935	886	6 41 & 12 29	49	446	I	82.7
7	21 56	1079	994	10 54	85	13 50	336	280	21 48	56	11 12	900	874	1 53	26	110	I	82.7
8	22 31	1075	989	20 51	86	20 21	362	277	24 0	85	20 52	973	887	1 28	86	220	I	82.7
9 D	17 59	1079	983	13 38	96	13 32	358	212	17 51	146	17 53	929	890	6 5	39	321	I	82.6
10	16 28	1070	966	11 49	104	14 25	353	238	16 17	115	16 19	938	881	1 53	57	273	I	82.5
11	23 0	1070	994	13 31	76	13 19	344	283	16 38	61	16 50	917	889	24 0	28	103	I	82.5
12	19 48	1060	1008	11 49	52	12 46	332	285	19 40	47	15 52	903	886	2 10	17	52	I	82.6
13	1 35	1059	1014	11 32	45	14 12	340	298	18 28	42	18 30	900	885	1 37	15	40	0	82.6
14 Q	21 46	1056	1019	12 44	37	3 28	324	295	9 8	29	17 0	899	890	11 44	9	23	0	82.6
15 Q	7 5	1059	1023	14 33	86	13 55	337	298	8 50	39	17 8	896	886	12 4	10	29	0	82.6
16	23 46	1156	1009	17 0	147	16 0	353	272	23 42	81	18 34	906	873	24 0	33	293	I	82.6
17 D	17 4	1148	842	22 31	306	16 19	407	154	22 56	253	16 43	1109	702	22 46	407	3233	2	82.6
18 D	3 12	1084	967	0 37	117	19 45	336	148	1 8	188	20 48	930	752	3 31	178	807	I	82.6
19	0 50	1068	957	16 10	111	15 47	364	238	1 43	126	16 25	952	838	4 50	114	412	I	82.5
20	0 45	1064																

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

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

277. Eskdalemuir. (X.)

15,000 γ (.15 C.G.S. unit) +

March, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1	1027	1033	1015	1021	1022	1022	1031	1027	1025	1006	1006	997	996	997	1016	1018	1018	1018	1022	1037	1029	1034	1032	1021	1032	1032	1020
2	1032	1031	1032	1032	1026	1030	1035	1038	1031	1019	999	990	989	1001	1001	1016	1021	1021	1037	1036	1037	1037	1037	1032	1041	1032	1024
3	1040	1037	1036	1036	1035	1037	1037	1042	1042	1036	1022	1014	1011	1006	1016	1036	1027	1021	1017	1052	1047	1047	1037	1052	1036	1032	1032
4 Q	1036	1027	1039	1038	1037	1042	1037	1041	1033	1031	1024	1018	1022	1026	1031	1031	1033	1039	1040	1043	1044	1047	1047	1046	1047	1036	1036
5	1047	1047	1047	1047	1049	1062	1052	1056	1056	1041	1032	1021	1025	1018	1031	1041	1030	1040	1037	1037	1040	1041	1044	1041	1040	1040	1041
6 Q	1040	1040	1040	1040	1038	1039	1037	1036	1036	1031	1022	1021	1022	1030	1032	1034	1041	1041	1041	1050	1038	1041	1047	1045	1045	1055	1037
7	1055	1043	1044	1046	1047	1051	1047	1046	1043	1025	1020	1016	1016	1021	1025	1028	1035	1037	1056	1039	1027	1021	1037	1042	1042	1036	1037
8 D	1036	1031	1046	1047	1057	1056	1061	1042	1011	1011	1011	1001	1000	1010	1006	1028	1043	1036	1035	1051	1047	1035	1041	1041	1041	1033	1036
9	1041	1036	1032	1035	1035	1035	1034	1029	1031	1026	1013	1007	1010	1015	1028	1036	1040	1045	1048	1050	1046	1060	1055	1050	1046	1035	1035
10 Q	1046	1048	1055	1046	1055	1051	1055	1052	1046	1040	1024	1010	1004	1010	1028	1035	1034	1040	1045	1048	1050	1046	1051	1056	1050	1050	1041
11 D	1050	1043	1043	1045	1039	1046	1060	1038	1050	1035	1020	1005	1013	1019	1046	1052	1047	1030	1034	1050	1046	1040	1049	1040	1042	1042	1039
12	1042	1020	1029	924	979	873	828	836	848	882	913	909	944	1015	1136	1120	1131	1051	999	999	999	959	949	913	948	948	976
13	948	994	989	979	999	981	1010	1015	1001	995	999	985	984	980	995	999	1015	1026	1025	1030	1031	1053	1041	1041	1035	1000	
14	1035	1023	1025	1019	1016	1024	1029	1030	1024	1015	999	994	991	995	1005	1021	1007	1009	1024	1025	1030	1030	1040	1034	1036	1019	
15 D	1036	1034	1029	1029	1029	1034	1036	1036	1029	1030	1012	1014	1015	1010	1039	1045	1016	1069	999	1010	1009	998	993	1042	1034	1025	
16 D	1034	973	989	923	1029	994	1010	993	985	973	988	984	973	988	1011	1012	1029	999	1019	1019	1023	1029	1019	1049	1029	1002	
17	1029	1018	1014	1004	993	1014	1024	1027	1015	1008	1006	998	994	990	1003	1003	1019	1025	1034	1037	1059	1049	1028	1030	1034	1018	
18	1034	1033	1031	1031	1028	1023	1034	1034	1030	1019	998	1041	993	1005	1019	1024	1034	1034	1040	1034	1028	1034	1035	1039	1038	1027	
19	1038	1039	1038	1037	1029	1039	1039	1039	1034	1024	1016	1010	1010	1014	1022	1029	1034	1029	1034	1039	1039	1045	1049	1041	1043	1032	
20	1043	1039	1039	1044	1054	1047	1044	1039	1034	1034	1024	1024	1010	1015	1023	1044	1024	1038	1054	1039	1034	1044	1050	1049	1059	1037	
21 D	1059	1044	1054	1014	1038	1054	963	983	1009	1010	1003	988	968	983	994	1019	1012	1049	1074	1043	1024	1019	1023	1049	1053	1020	
22	1053	1033	1032	1027	1022	1023	1043	1023	1009	999	1004	1009	1009	1008	992	1022	1031	1018	1043	1050	1049	1043	1038	1038	1037	1025	
23	1037	1034	1033	1035	1038	1037	1033	1023	1012	997	992	992	992	1007	1008	1009	1023	1039	1032	1047	1038	1048	1058	1043	1040	1027	
24	1040	1035	1037	1043	1037	1041	1038	1028	1033	1021	1007	1041	992	1005	1020	1046	1052	1064	1030	1042	1058	1062	1041	1038	1038	1035	
25	1038	1043	1034	1035	1038	1032	1043	1048	1033	1022	1008	1002	1003	1012	1015	1023	1028	1033	1043	1037	1043	1043	1043	1058	1047	1032	
26	1047	1038	1043	1038	1043	1048	1055	1053	1043	1022	1007	1002	1007	1013	1023	1032	1033	1046	1048	1055	1056	1054	1049	1084	1043	1039	
27	1043	1036	1046	1043	1043	1040	1048	1048	1033	1019	1008	1003	997	1008	1022	1037	1048	1060	1055	1050	1043	1058	1053	1049	1054	1037	
28	1054	1058	1053	1060	1048	1048	1051	1049	1038	1028	1012	1003	1008	1022	1033	1043	1048	1047	1038	1053	1048	1053	1049	1054	1043	1043	
29	1043	1043	1023	1033	1033	1048	1043	1040	1041	1028	1013	1002	1001	1004	1012	1027	1033	1040	1053	1048	1048	1049	1048	1055	1049	1034	
30 Q	1049	1045	1043	1038	1040	1045	1048	1044	1038	1023	1012	997	996	1008	1022	1033	1040	1033	1042	1050	1052	1051	1050	1047	1048	1035	
31 Q	1048	1053	1048	1047	1043	1043	1048	1043	1040	1028	1013	998	1002	1012	1022	1032	1042	1047	1048	1053	1053	1054	1058	1064	1062	1039	
Mean	1039	1034	1034	1027	1033	1031	1031	1029	1024	1016	1007	1003	1000	1008	1022	1031	1034	1037	1038	1040	1039	1039	1040	1041	1040	1028	

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

278. Eskdalemuir. (-Y.)

4,000 γ (.04 C.G.S. unit) +

March, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1	298	285	298	299	299	305	299	299	299	292	294	309	320	324	332	338	319	312	306	285	298	299	285	278	298	303
2	298	305	306	305	306	305	299	299	289	285	292	307	319	333	332	325	322	318	312	292	312	308	306	305	303	308
3	303	305	305	312	311	305	305	299	294	291	299	313	326	332	333	332	326	314	298	289	308	305	293	286	298	308
4 Q	298	313	311	304	305	299	305	303	299	299	305	313	326	332	332	324	316	313	315	313	314	313	313	311	309	312
5	309	308	309	311	318	307	303	299	296	299	305	315	346	334	334	338	319	318	316	312	312	311	311	311	309	314
6 Q	309	307	302	301	301	304	299	299	299	299	305	318	326	333	333	321	318	311	311	311	293	305	309	303	296	309
7	296	308	312	306	305	299	298	299	291	292	299	311	332	345	345	339	327	322	285	320	299	298	292	285	271	308
8 D	271	272	273	258	272	285	298	307	319	323	326	333	339	355	351</											

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

279. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

March, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	910	904	907	907	910	909	907	907	908	911	911	909	907	907	907	912	923	924	920	919	915	911	911	908	903	911
2	903	902	901	903	902	901	902	904	907	905	902	894	894	894	902	907	907	907	910	914	907	906	903	902	899	903
3	899	898	898	898	898	898	898	898	900	898	889	882	885	889	898	898	911	924	932	921	910	907	906	904	889	901
4 Q	890	890	882	887	894	895	895	895	895	895	890	884	886	891	895	900	903	902	899	899	899	899	899	898	897	896
5	896	896	895	895	894	890	890	891	894	893	892	890	886	893	894	899	895	895	895	896	897	896	896	896	896	894
6 Q	896	896	896	896	895	895	895	895	894	894	890	890	890	891	896	902	902	899	899	898	903	900	896	895	890	896
7	890	890	892	894	894	894	895	894	894	895	893	887	885	887	896	903	907	907	916	912	920	920	920	911	900	890
8 D	900	887	869	878	886	886	887	890	890	883	881	878	881	887	896	916	940	937	920	916	912	903	899	899	897	897
9	897	895	894	886	886	889	894	895	898	897	895	890	890	893	896	903	908	912	903	899	899	899	894	890	890	896
10 Q	890	890	887	887	881	882	886	890	891	891	890	881	877	876	881	890	899	901	898	895	895	895	894	892	891	889
11 D	891	890	888	887	887	886	885	886	884	886	890	890	887	887	887	894	920	951	944	923	919	928	921	908	891	901
12	891	852	828	732	660	646	637	650	805	860	908	946	974	1007	1079	1051	1054	1037	1008	985	938	890	896	854	867	882
13	867	863	852	849	851	841	864	886	898	900	898	898	899	900	904	909	915	920	920	915	912	912	903	882	883	890
14	883	890	890	894	891	895	897	901	900	898	894	891	898	909	920	933	933	926	924	925	925	920	895	890	897	905
15 D	897	899	900	902	903	903	903	902	903	899	890	890	890	898	911	955	1016	1075	998	976	951	896	873	865	831	919
16 D	832	784	737	643	724	767	810	861	887	900	909	918	937	935	925	924	934	956	960	948	930	917	912	895	883	874
17	883	878	857	844	840	857	857	882	888	891	888	891	891	894	896	909	926	939	934	917	906	900	900	900	900	891
18	900	892	896	896	897	892	891	900	904	903	897	892	891	895	902	909	918	927	933	926	921	912	905	904	900	904
19	900	897	896	895	892	896	900	902	904	901	896	892	888	891	895	900	912	918	919	922	924	919	909	900	900	903
20	900	898	897	891	874	874	882	888	888	883	884	880	879	883	887	898	925	915	913	929	922	913	900	882	853	894
21 D	853	861	848	823	810	836	827	831	863	882	883	882	893	909	904	912	921	930	943	930	922	921	917	896	883	884
22	883	887	893	896	896	884	882	884	888	890	896	895	891	892	909	914	918	931	927	913	911	909	897	896	898	900
23	898	900	900	900	900	900	900	900	901	900	893	887	886	888	900	908	904	904	910	908	908	905	895	887	883	899
24	883	883	883	874	874	887	891	891	891	894	894	890	891	896	900	917	924	926	917	908	904	895	892	895	896	896
25	896	895	895	892	892	891	882	891	896	900	896	896	895	894	898	909	913	917	917	910	906	903	900	887	884	899
26	884	887	888	892	894	892	891	891	892	892	888	883	882	883	889	896	903	898	897	896	898	897	900	880	879	891
27	879	882	883	888	891	891	891	895	895	890	884	878	875	879	887	892	895	896	900	901	909	898	888	893	889	890
28	889	879	868	870	879	884	888	891	891	887	882	878	874	880	885	891	896	900	905	900	900	896	893	874	854	886
29	854	861	871	861	849	853	868	882	887	887	883	882	880	883	887	893	902	907	904	900	898	896	896	891	887	883
30 Q	887	883	876	881	888	891	895	898	895	889	887	883	882	882	885	890	897	900	897	895	893	892	892	891	891	890
31 Q	891	887	885	885	887	888	891	895	892	891	890	883	882	883	887	890	891	891	891	891	891	890	888	887	885	889
Mean.	887	884	879	872	872	874	877	883	891	893	892	891	892	896	903	910	920	925	921	916	911	905	900	892	887	895

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

280. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

March, 1929.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House $200 + ^\circ A.$
	North Component.					West Component.					Vertical Component.							
	Maximum $15000 \gamma +$		Minimum $15000 \gamma +$		Range.	Maximum $4000 \gamma +$		Minimum $4000 \gamma +$		Range.	Maximum $44000 \gamma +$		Minimum $44000 \gamma +$		Range.			
1	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	119	I	82.3
2	18 36	1053	986	12 43	67	14 45	348	265	22 18	83	16 22	926	903	23 57	23	106	O	82.3
3	7 0	1049	981	11 45	68	13 24	345	271	19 2	74	19 10	916	893	11 28	23	159	I	82.2
4 Q	18 48	1063	991	18 9	72	15 13	342	255	18 22	87	18 20	937	881	11 15	56	45	O	82.2
5	21 45	1051	1016	11 6	35	12 46	338	285	0 21	53	16 23	903	882	1 40	21	143	I	82.2
6 Q	5 22	1073	1000	12 30	73	12 46	385	292	7 48	93	14 55	899	882	12 0	17	61	O	82.2
7	23 40	1071	1020	10 4	51	13 56	342	285	20 12	57	20 30	904	888	12 0	16	140	I	82.2
8 D	17 58	1072	1013	12 11	59	13 34	352	257	23 39	95	20 10	923	884	12 0	39	492	I	82.1
9	5 45	1082	981	11 20	101	14 43	386	205	19 42	181	16 7	943	864	2 10	79	118	I	82.1
10 Q	21 3	1072	1003	11 31	69	12 30	352	272	21 0	80	16 41	912	886	4 12	26	94	I	82.1
11 D	22 9	1066	1000	12 45	66	13 0	353	288	22 24	65	16 54	903	875	12 32	28	570	I	82.1
12	13 59	1126	969	13 54	157	13 57	413	253	21 55	160	17 5	964	882	13 57	82	8910	I	82.1
13	15 26	1312	661	5 37	651	15 25	531	132	20 8	399	13 59	1145	590	6 35	555	586	I	82.1
14	22 11	1095	927	0 26	168	14 27	352	204	0 1	148	16 36	922	830	4 29	92	199	I	82.0
15 D	22 2	1078	979	11 0	99	15 12	352	273	22 46	79	15 27	937	875	22 22	62	1907	I	82.0
16 D	17 1	1125	932	22 9	193	15 0	413	205	20 27	208	17 8	1166	834	23 51	332	2032	I	81.9
17	23 9	1075	861	3 4	214	12 6	352	179	0 32	173	17 28	964	607	3 7	357	327	I	81.9
18	19 54	1074	973	3 52	101	15 1	344	239	4 4	105	17 29	942	835	4 0	107	141	I	81.9
19	17 19																	

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

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

281. Eskdalemuir. (X.)

15,000 γ ($\cdot 15$ C.G.S. unit) +

April, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1	1062	1057	1053	1055	1051	1052	1047	1050	1026	1018	1017	1012	1011	1018	1027	1032	1038	1046	1051	1051	1051	1053	1057	1072	1072	1042
2	1072	1042	1045	1045	1050	1049	1050	1046	1038	1027	1007	1000	1001	1012	1033	1032	1042	1051	1051	1053	1055	1057	1052	1047	1049	1039
3	1049	1047	1047	1042	1051	1046	1054	1037	1028	1024	1016	1008	1007	1007	1017	1026	1032	1038	1047	1048	1044	1049	1057	1057	1067	1037
4 D	1067	1047	1045	1051	1055	1062	1067	1062	1043	1024	1031	1013	1017	1011	1011	1021	1023	1032	1041	1062	1060	1058	1054	1058	1057	1042
5	1057	1055	1057	1057	1057	1052	1046	1036	1022	1012	996	1002	1002	1008	1022	1032	1042	1047	1047	1047	1044	1043	1048	1051	1063	1039
6	1063	1046	1037	1037	1039	1042	1042	1036	1022	1007	999	1002	1002	1012	1026	1036	1043	1042	1047	1052	1052	1052	1051	1053	1050	1036
7	1050	1047	1045	1047	1046	1051	1048	1037	1022	1012	1002	1001	1001	1007	1026	1032	1037	1042	1050	1051	1057	1057	1063	1054	1051	1039
8	1051	1050	1048	1051	1049	1042	1045	1042	1037	1022	1007	1006	996	1002	1017	1030	1039	1038	1047	1046	1047	1046	1047	1047	1047	1035
9 Q	1047	1051	1058	1047	1046	1053	1053	1051	1042	1027	1012	1003	1006	1011	1026	1033	1038	1043	1047	1051	1052	1051	1047	1047	1047	1039
10	1047	1047	1047	1051	1052	1052	1057	1057	1048	1037	1022	1017	1011	1002	1012	1018	1036	1045	1053	1060	1049	1054	1051	1053	1053	1041
11	1053	1062	1058	1057	1053	1051	1057	1053	1043	1026	1010	1001	1003	1011	1023	1032	1047	1046	1048	1057	1058	1062	1058	1057	1053	1043
12	1053	1052	1051	1047	1046	1052	1053	1053	1051	1023	1011	1000	1001	1010	1023	1034	1041	1043	1044	1051	1057	1056	1067	1057	1040	1040
13	1040	1047	1052	1053	1057	1069	1063	1058	1053	1040	1021	1001	1001	1007	1016	1037	1046	1058	1054	1048	1052	1051	1047	1047	1047	1043
14 Q	1047	1046	1047	1948	1052	1053	1053	1057	1047	1033	1017	1007	1006	1015	1023	1036	1041	1048	1051	1052	1054	1062	1062	1061	1057	1043
15	1057	1053	1053	1054	1054	1057	1057	1056	1046	1032	1012	1002	1001	1012	1032	1041	1059	1078	1072	1067	1072	1067	1062	1056	1058	1048
16 D	1058	1092	1062	1047	1047	1073	1042	1027	997	1006	991	981	972	982	1007	1037	1042	1063	1037	1058	1044	1039	1037	1060	1028	1033
17 D	1028	1046	991	1017	1031	1032	1022	1023	1020	996	974	987	988	1000	1028	1038	1042	1057	1062	1049	1062	1043	1067	1053	1047	1028
18	1047	1032	1032	1034	1032	1027	1029	1042	1032	1011	1002	997	1002	1010	1016	1037	1037	1051	1048	1053	1052	1043	1046	1056	1062	1032
19	1062	1033	1039	1042	1032	1047	1043	1043	1032	1029	1016	1012	1011	1011	1021	1027	1036	1045	1043	1046	1046	1046	1043	1047	1042	1035
20 Q	1042	1037	1036	1037	1037	1041	1042	1046	1041	1027	1012	1009	1012	1026	1033	1037	1039	1042	1042	1043	1043	1045	1042	1047	1047	1036
21	1047	1043	1047	1057	1073	1053	1036	1048	1041	1027	1012	1008	1008	1012	1022	1030	1037	1042	1049	1052	1053	1057	1053	1047	1041	1040
22	1041	1043	1046	1042	1042	1037	1037	1036	1033	1026	1018	1013	1011	1016	1022	1032	1043	1053	1052	1051	1047	1047	1045	1046	1046	1037
23 Q	1046	1046	1042	1042	1041	1039	1038	1037	1033	1026	1012	1006	1006	1012	1022	1038	1047	1057	1058	1053	1051	1055	1056	1048	1048	1038
24 Q	1048	1048	1049	1047	1047	1047	1049	1046	1037	1027	1012	1011	1006	1012	1026	1037	1052	1057	1062	1062	1053	1049	1048	1052	1058	1041
25	1058	1053	1046	1046	1047	1050	1053	1045	1040	1030	1020	1011	1011	1026	1032	1041	1046	1056	1056	1061	1056	1047	1045	1053	1067	1043
26	1067	1046	1045	1046	1046	1053	1051	1045	1035	1028	1021	1016	1018	1030	1036	1041	1051	1061	1059	1056	1053	1057	1051	1056	1045	1044
27	1045	1045	1053	1051	1049	1046	1046	1051	1044	1036	1021	1016	1006	1001	1016	1031	1045	1051	1057	1063	1065	1069	1051	1051	1056	1042
28	1056	1062	1072	1056	1051	1046	1053	1161	1042	1026	1011	1016	1009	1021	1020	1016	1053	1055	1050	1060	1071	1062	1062	1056	1057	1045
29 D	1057	1056	1052	1056	1055	1051	1043	1041	1031	1021	1016	1006	1016	1020	1017	1051	1066	1077	1061	1076	1066	1051	1056	1042	1046	
30 D	1042	1041	1045	1043	1046	1036	1035	1035	1936	1025	1021	1020	1020	1015	1031	1051	1041	1031	1051	1057	1066	1061	1062	1061	1066	1041
Mean	1052	1049	1047	1047	1048	1049	1047	1046	1037	1025	1012	1006	1005	1011	1023	1034	1043	1050	1051	1055	1054	1053	1053	1054	1052	1040

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

282. Eskdalemuir. (-Y.)

4,000 γ ($\cdot 04$ C.G.S. unit) +

April, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1	318	325	311	299	299	292	299	296	292	305	305	313	327	339	339	331	319	313	312	305	299	312	315	313	292	311
2	292	296	299	303	301	299	299	291	280	282	284	305	323	335	351	333	325	319	313	313	313	306	298	311	307	308
3	307	319	318	305	292	292	299	286	299	292	298	312	326	339	340	337	332	324	311	311	311	311	312	299	296	311
4 D	296	305	305	300	298	301	299	290	289	301	312	349	365	363	351	334	332	325	299	316	319	319	315	312	306	317
5	306	305	299	297	294	293	288	281	278	278	292	304	314	323	329	325	319	306	305	305	312	311	305	318	306	304
6	306	291	292	298	299	298	299	285	278	278	286	300	322	333	335	326	323	313	312	312	312	312	313	311	307	306
7	307	305	305	305	299	299	294	285	279	279	292	306	319	332	332	326	320	319	316	312	312	313	311	299	306	307
8	307	321	311	300	299	298	298	292	284	285	292	307	325	331	334	326	319	313	312	306	306	305	311	311	305	308
9 Q	305	312	311	301	304	305	299	290	278	276	280	292	311	324	331	325	319	313	311	311	309	311	309			

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

283. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

April, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	885	873	878	880	883	886	886	883	882	878	878	875	874	871	875	883	891	899	897	899	899	895	891	886	874	884
2	874	880	883	887	887	887	888	891	891	886	879	877	870	869	874	883	886	887	888	889	891	892	891	888	887	884
3	887	887	878	879	882	883	888	887	887	883	879	874	874	878	887	892	899	903	907	905	902	897	894	883	879	888
4 D	879	879	883	887	887	886	886	884	879	878	870	870	866	878	892	895	899	904	916	907	909	899	893	891	890	891
5	891	889	889	888	887	887	887	888	886	881	877	877	877	876	881	890	897	903	907	905	899	895	894	889	866	889
6	866	873	879	881	885	886	886	890	887	885	882	881	879	879	882	886	886	890	887	890	890	890	890	890	890	885
7	890	890	890	890	890	887	890	894	894	891	886	885	882	882	885	890	887	890	890	890	890	890	890	888	886	889
8	886	882	881	884	885	885	886	886	886	882	882	875	876	881	882	886	890	890	893	894	894	891	891	890	887	886
9 Q	887	886	882	882	885	885	886	889	889	886	882	875	871	870	873	881	882	885	886	886	886	886	887	887	888	883
10	888	889	890	887	887	886	886	890	890	887	885	878	872	876	882	887	890	893	891	894	895	894	891	889	887	887
11	887	882	870	877	881	882	885	889	889	882	872	868	867	868	876	885	890	894	893	893	893	894	893	890	890	883
12	890	893	893	893	893	893	893	895	896	893	890	885	880	874	879	886	890	897	898	898	895	894	894	891	889	891
13	889	884	886	889	889	885	886	889	890	890	885	885	881	880	883	889	898	906	911	907	902	901	897	894	893	892
14 Q	893	893	893	893	893	892	893	892	892	888	880	875	870	868	876	885	889	892	896	897	896	892	889	889	889	888
15	889	891	889	889	889	891	892	892	890	888	883	877	875	875	879	883	884	888	896	897	897	903	898	893	892	889
16 D	892	868	867	855	784	793	835	858	865	867	870	877	879	887	905	918	920	942	952	942	926	917	907	861	848	882
17 D	848	827	823	849	874	884	887	884	887	884	883	882	882	882	887	899	916	918	918	913	905	900	896	884	879	884
18	879	879	886	888	890	887	881	878	877	878	877	877	878	881	882	891	891	895	901	903	900	898	894	884	873	886
19	873	878	885	886	877	874	882	886	886	883	881	878	878	881	886	890	895	902	903	901	899	897	895	894	891	887
20 Q	891	891	890	890	891	891	892	893	891	889	885	877	868	865	872	880	885	890	893	894	893	893	893	893	893	887
21	893	893	892	887	875	867	863	864	872	879	879	879	879	881	885	892	893	890	892	897	899	897	889	884	884	884
22	884	884	880	872	867	872	877	883	885	884	876	875	871	872	879	885	889	892	893	893	893	892	892	892	890	883
23 Q	890	890	891	891	891	892	892	891	887	883	873	870	867	870	875	880	887	892	895	896	895	892	891	890	890	886
24 Q	890	891	890	891	890	888	887	887	884	880	875	875	872	872	875	881	887	893	899	899	897	895	892	890	886	887
25	886	882	886	887	890	889	887	887	884	882	877	873	868	865	874	881	885	891	896	899	899	896	895	891	874	885
26	874	875	882	886	886	887	887	886	886	881	874	874	869	869	874	882	890	891	895	895	891	891	890	885	885	884
27	885	885	879	872	877	881	881	879	879	877	876	874	872	875	878	881	885	888	889	888	887	886	889	892	889	882
28	889	885	868	863	871	876	863	863	867	868	867	864	863	868	878	884	887	897	901	897	895	887	880	883	883	878
29 D	883	879	876	872	871	879	880	879	875	869	866	865	863	871	882	890	897	909	913	908	906	896	887	879	874	883
30 D	874	873	874	870	874	882	882	879	874	867	865	865	861	861	866	879	890	896	898	898	895	890	885	881	878	878
Mean.	884	882	881	881	880	881	883	885	884	882	878	875	873	874	880	887	892	897	900	899	897	894	892	887	883	885

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

284. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

April, 1929.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + $^{\circ}A.$
	North Component.					West Component.					Vertical Component							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 44000 γ +		Minimum 44000 γ +		Range.			
1	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	115	I	81.9
2	23 10	1087	1007	12 18	80	13 9	351	286	8 4	65	19 21	900	870	0 58	30	125	I	81.9
3	21 22	1071	996	11 6	75	14 11	357	278	9 40	79	21 8	892	867	12 28	25	105	O	82.0
4 D	23 52	1072	1001	12 49	71	14 2	345	279	23 26	66	17 42	907	874	11 20	33	304	I	82.0
5	18 43	1074	981	13 57	93	12 9	401	265	9 29	136	17 56	920	863	11 33	57	161	I	82.0
6	23 24	1077	987	11 11	90	14 11	345	268	8 16	77	18 0	910	864	24 0	46		I	82.0
7	18 38	1062	997	12 4	65	13 30	339	272	8 32	67	19 9	891	864	0 1	27	94	O	82.0
8	21 50	1077	992	11 51	85	13 18	339	274	9 14	65	19 11	894	881	12 21	13	116	O	82.1
9 Q	20 37	1058	987	12 32	71	13 46	338	272	8 16	66	19 11	895	873	11 12	22	99	O	82.1
10	2 2	1064	1000	11 14	64	14 8	333	272	8 51	61	6 50	890	869	12 28	21	83	O	82.1
11	19 4	1067	991	13 22	76	14 12	352	271	9 0	81	20 12	895	869	11 51	26	130	I	82.1
12	1 2	1073	1001	10 40 & 10 50	72	1 25	358	264	9 6	94	21 6	896	864	11 25	32	150	I	82.2
13	21 40	1074	996	11 29	78	14 19	349	258	8 41	91	18 32	901	872	13 10	29	152	I	82.2
14 Q	4 52	1072	996	10 58	76	14 0	352	271	8 50	81	18 22	913	880	12 40	33	134	I	82.2
15	21 21	1066	1001	11 38	65	13 20	338	270	8 42	68	18 49	897	867	12 41	30	97	O	82.2
16 D	16 59	1095	996	11 35	99	13 50	351	269	21 56	82	20 59	908	875	13 1	33	176	I	82.2
17 D	0 51	1118	961	12 19	152	14 20	355	217	7 7	138	17 19	957	775	4 9	182	753	2	82.2
18	22 3	1091	962	11 57	129	14 28	346	249	1 26	97	18 0	921	815	1 59	106	373	2	82.2
19	23 33	1073	995	10 55	78	13 40	338	267	0 10	71	18 33	903	871	24 0	32	121	2	82.2
20 Q	0 1	1062	1006	12 31	56	13 55												

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

285. Eskdalemuir. (X.)

15,000 γ (.15 C.G.S. unit) +

May, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1	1067	1077	1051	1051	1053	1053	1056	1057	1052	1041	1027	1016	1009	1020	1021	1040	1052	1052	1051	1062	1059	1058	1059	1056	1052	1047	1047
2	1052	1051	1035	1037	1037	1038	1041	1048	1047	1042	1026	1026	1026	1031	1037	1039	1051	1058	1067	1057	1061	1056	1054	1056	1056	1045	1045
3	1056	1057	1043	1048	1047	1047	1051	1042	1022	1024	1026	1026	1017	1026	1047	1057	1056	1053	1067	1059	1060	1054	1058	1061	1071	1046	1046
4	1071	1052	1041	1041	1052	1056	1047	1042	1032	1007	1019	1021	1026	1028	1032	1037	1046	1058	1061	1057	1061	1057	1057	1057	1057	1067	1044
5 Q	1067	1051	1047	1045	1047	1049	1044	1044	1038	1028	1022	1011	1009	1008	1023	1033	1038	1052	1057	1056	1053	1052	1052	1052	1052	1041	1041
6	1052	1050	1050	1048	1051	1052	1052	1044	1033	1022	1013	1008	1012	1007	1021	1042	1041	1063	1063	1063	1066	1058	1058	1057	1056	1043	1043
7	1056	1052	1047	1047	1048	1053	1057	1050	1038	1032	1027	1012	1002	1011	1027	1043	1053	1063	1073	1074	1067	1067	1050	1047	1046	1045	1045
8	1046	1048	1048	1048	1048	1048	1047	1038	1033	1030	1025	1026	1027	1016	1023	1041	1038	1053	1062	1073	1069	1077	1054	1052	1050	1042	1042
9	1050	1047	1046	1043	1049	1046	1037	1036	1032	1018	1013	1018	1022	1022	1033	1037	1048	1053	1068	1069	1061	1058	1056	1054	1053	1042	1042
10 Q	1053	1052	1052	1052	1052	1050	1047	1038	1038	1035	1021	1017	1020	1029	1032	1043	1056	1067	1072	1068	1063	1058	1058	1057	1057	1047	1047
11	1057	1057	1058	1058	1058	1058	1053	1048	1042	1037	1022	1017	1009	1022	1036	1063	1048	1063	1082	1072	1063	1062	1063	1068	1069	1051	1051
12	1069	1062	1052	1042	1051	1048	1074	1063	1059	1037	1018	992	991	1007	1013	1031	1043	1074	1057	1062	1064	1063	1051	1050	1050	1044	1044
13 D	1050	1052	1052	1062	1063	1063	1061	1050	1037	1033	1007	1001	1007	1017	1027	1089	1036	1058	1089	1048	1049	1053	1048	1051	1040	1036	1036
14 D	1040	1037	1032	1033	1038	1040	1042	1033	1034	1027	1013	1013	1013	1017	1008	1044	1046	1053	1053	1060	1065	1092	1057	1039	1043	1049	1049
15 D	1043	1033	1043	1048	1028	1043	1042	1022	1014	1028	1018	998	1019	1026	1060	1033	1059	1078	1068	1064	1089	1073	1059	1043	1039	1041	1041
16 D	1039	1044	1055	1013	1042	1054	1043	1038	1033	1027	1021	1008	988	1024	1034	1039	1074	1084	1079	1064	1073	1068	1043	1054	1058	1044	1044
17	1058	1039	1043	1023	1043	1049	1044	1042	1039	1033	1013	1007	996	1016	1023	1042	1060	1077	1069	1064	1059	1049	1045	1045	1050	1041	1041
18 Q	1044	1043	1041	1043	1047	1049	1043	1037	1029	1024	1018	1012	1009	1014	1024	1034	1042	1054	1064	1064	1065	1070	1059	1045	1050	1041	1041
19	1050	1054	1053	1048	1060	1060	1054	1045	1045	1039	1030	1019	1017	1019	1034	1039	1049	1059	1060	1069	1080	1060	1049	1044	1045	1047	1047
20	1045	1055	1055	1054	1055	1050	1053	1045	1044	1030	1027	1024	1021	1024	1043	1049	1054	1070	1078	1075	1070	1067	1064	1074	1067	1051	1051
21 Q	1067	1060	1059	1055	1055	1055	1054	1049	1044	1040	1034	1024	1023	1029	1034	1049	1060	1070	1081	1074	1070	1069	1062	1062	1065	1053	1053
22 Q	1065	1063	1065	1060	1056	1057	1055	1055	1040	1029	1019	1027	1034	1039	1049	1052	1061	1075	1076	1080	1070	1062	1060	1060	1058	1054	1054
23 D	1058	1060	1062	1057	1059	1062	1036	1006	1004	990	994	1010	1016	1021	1025	1035	1035	1050	1061	1061	1056	1049	1043	1041	1045	1037	1037
24	1045	1046	1051	1052	1050	1047	1042	1039	1032	1026	1016	1007	1007	1012	1026	1037	1041	1063	1067	1066	1066	1057	1048	1041	1051	1041	1041
25	1051	1049	1051	1062	1021	1041	1026	1021	1021	1017	1006	1000	992	1007	1026	1042	1032	1052	1052	1071	1070	1063	1056	1047	1065	1087	1087
26	1065	1047	1047	1046	1044	1046	1043	1037	1032	1030	1016	1007	1009	1027	1022	1040	1042	1043	1073	1081	1078	1062	1058	1054	1064	1044	1044
27	1064	1064	1047	1048	1056	1048	1047	1052	1047	1033	1017	1006	1003	993	1013	1037	1048	1064	1080	1083	1082	1070	1068	1063	1063	1047	1047
28	1063	1068	1073	1064	1070	1077	1073	1067	1053	1036	1023	1027	1014	977	1007	1046	1063	1073	1078	1088	1083	1069	1066	1067	1068	1055	1055
29	1068	1063	1063	1064	1072	1064	1059	1058	1053	1034	1028	1027	1024	1028	1032	1053	1047	1063	1082	1083	1073	1074	1069	1067	1065	1056	1056
30	1065	1061	1058	1060	1063	1066	1060	1056	1046	1029	1023	1037	1034	1033	1048	1058	1043	1074	1085	1083	1079	1084	1061	1054	1065	1056	1056
31	1055	1056	1058	1059	1062	1060	1057	1048	1034	1012	1025	1034	1026	1025	1050	1060	1065	1065	1085	1076	1075	1065	1065	1064	1064	1054	1054
Mean	1056	1053	1051	1049	1051	1053	1050	1044	1037	1028	1019	1015	1014	1019	1030	1044	1049	1062	1070	1069	1067	1064	1056	1054	1056	1046	1046

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

286. Eskdalemuir. (-Y.)

4,000 γ (.04 C.G.S. unit) +

May, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1	307	306	297	295	290	289	277	269	269	269	279	290	308	325	329	330	325	316	314	316	303	303	303	304	302	300	300
2	302	304	310	322	317	302	298	297	289	282	289	291	304	312	316	310	310	310	310	297	303	304	304	302	304	304	304
3	304	316	297	289	302	312	287	283	279	283	283	289	310	317	318	320	311	309	310	310	310	305	304	306	304	302	302
4	304	295	297	308	299	282	282	282	283	288	303	308	315	315	323	324	322	317	316	315	310	309	307	309	310	316	305
5 Q	316	296	296	295	290	285	281	280	277	283	289	304	324	326	324	316	310	304	302	297	302	303	303	304	304	300	300
6	304	303	303	299	297	289	283	275	271	269	283	309	332	336	336	336	320	316	308	304	304	293	302	302	303	303	303
7	303	303	302	296	297	291																					

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

287. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

May, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	878	864	871	875	880	882	883	880	875	871	867	863	865	864	871	875	881	888	892	892	893	888	885	882	880	878
2	880	879	879	869	866	870	874	874	879	882	879	878	872	871	876	882	884	887	891	888	886	882	881	881	878	879
3	878	867	847	856	860	857	864	869	869	864	861	857	857	865	869	878	882	882	881	882	881	882	880	880	876	869
4	862	864	864	861	858	865	869	872	872	869	865	866	866	867	871	874	877	877	877	877	878	879	877	877	877	868
5 Q	868	866	871	873	876	877	877	877	877	872	868	861	859	862	868	876	877	880	880	880	880	878	877	877	877	873
6	877	877	877	877	877	877	877	877	873	868	863	855	850	852	856	865	870	873	878	881	881	881	877	876	876	871
7	876	873	875	875	873	872	875	876	873	868	867	864	867	870	868	871	878	881	888	888	888	881	880	880	875	875
8	875	876	875	875	878	879	879	878	875	869	859	858	857	861	866	875	875	875	877	879	885	880	878	875	875	873
9	875	875	875	872	871	875	875	874	871	866	858	857	856	862	866	879	883	882	878	878	879	877	875	875	874	872
10 Q	874	875	875	875	876	876	877	874	869	862	854	853	853	861	865	868	872	873	874	873	873	873	871	872	873	869
11	873	872	872	873	873	873	872	868	864	856	855	852	850	851	859	868	877	881	881	882	878	873	872	871	868	868
12	868	868	864	864	864	855	843	855	855	855	853	852	851	852	859	863	868	877	890	890	881	878	881	877	875	865
13 D	875	873	872	855	811	792	792	805	822	833	834	833	833	850	889	921	912	916	922	898	888	880	872	863	868	860
14 D	868	867	863	855	860	862	866	866	866	864	862	857	850	854	858	858	867	876	887	888	887	880	856	861	863	866
15 D	863	858	853	854	853	852	862	866	865	861	857	856	850	852	865	882	882	882	886	887	885	870	861	861	849	865
16 D	849	840	842	836	814	834	851	860	860	856	848	843	847	854	860	869	878	896	894	890	885	877	876	869	864	860
17	864	860	860	855	835	835	839	843	843	841	838	843	847	853	864	872	878	880	884	882	878	873	872	871	871	859
18 Q	871	869	870	871	872	876	876	873	872	868	863	863	859	857	860	868	876	876	880	880	876	880	873	870	867	871
19	867	859	854	854	851	851	858	859	856	855	847	847	847	855	860	868	872	876	881	883	883	880	879	875	871	863
20	871	867	866	864	865	868	867	866	866	859	854	848	846	853	858	867	875	875	875	875	874	872	872	867	859	865
21 Q	859	858	862	864	867	870	871	871	868	863	858	854	857	861	866	870	871	871	870	873	870	869	869	869	866	866
22 Q	866	865	862	865	866	866	866	864	863	857	848	844	848	850	853	855	861	868	873	874	876	873	870	869	869	863
23 D	869	868	868	868	865	863	864	852	847	850	847	847	855	860	865	872	876	877	877	875	873	870	870	872	872	865
24	872	872	872	872	873	875	875	871	866	860	859	859	855	855	860	867	873	876	876	876	872	876	876	872	850	869
25	850	849	841	828	820	807	825	841	849	854	849	847	847	854	864	875	888	888	883	879	882	883	879	871	863	857
26	863	863	865	866	869	870	870	870	866	858	852	841	837	845	857	865	874	878	878	884	891	886	878	873	864	867
27	864	846	852	861	864	864	858	858	856	852	852	848	848	856	856	861	866	869	870	872	872	870	869	868	860	
28	868	865	865	868	868	869	868	863	860	857	851	846	843	841	838	849	859	873	882	889	881	876	871	868	865	
29	865	865	867	868	868	868	864	860	858	854	850	850	850	855	858	863	871	872	875	874	872	871	867	866	864	
30	864	866	867	867	867	867	867	863	862	858	844	840	840	844	851	863	870	870	875	877	876	874	866	866	866	
31	866	866	866	867	869	871	871	870	866	861	854	850	848	860	865	869	873	873	869	873	877	874	870	867	865	866
Mean	868	866	865	864	862	862	864	864	863	860	855	853	852	856	863	870	876	879	881	881	880	877	874	871	868	867

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE:

288. Eskdalemuir.

MAGNETIC CHARACTER FIGURES: TEMPERATURE IN MAGNET HOUSE.

May, 1929.

Day.	Terrestrial Magnetic Elements.															Character Figure ΣR^2 $100\gamma^2$	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 +
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 44000 γ +		Minimum 44000 γ +		Range.			
	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ				
1	0 40	1092	1005	13 14	87	14 33	336	263	7 38	73	19 51	896	863	12 50	33	140	1	82.3
2	17 55	1083	1001	10 29	82	2 38	342	275	7 58	67	18 10	891	865	4 20	26	119	1	82.4
3	23 41	1088	986	12 24	102	0 20	330	269	9 10	61	16 0	883	843	2 9	40	157	1	82.4
4	24 0	1077	996	9 13	81	14 25	327	275	5 35	52	20 0	880	857	3 58	23	98	1	82.4
5 Q	0 1	1077	999	11 26	78	12 20	331	273	7 40	58	19 10	881	858	11 47	23	100	0	82.4
6	20 11	1077	986	12 30	91	14 48	343	266	8 34	77	20 50	881	848	12 0	33	153	0	82.4
7	18 43	1082	997	11 49	85	15 15	330	263	7 56	67	19 4	889	863	11 5	26	124	1	82.4
8	20 38	1085	1005	12 50	80	12 10	324	269	7 33	55	20 18	887	854	11 42	33	105	0	82.4
9	19 5	1077	1007	9 57	70	12 38	327	277	6 30	50	15 57	884	855	11 52	29	82	0	82.4
10 Q	17 7	1073	1012	11 11	61	13 5	330	269	8 40	61	6 3	877	852	10 40	25	81	0	82.4
11	18 15	1089	1003	11 55	86	12 38	335	270	7 31	65	18 39	885	848	12 31	37	130	0	82.4
12	5 39	1088	971	11 21	117	12 52	336	263	8 29	73	18 32	893	839	5 38	54	219	1	82.4
13 D	14 41	1118	972	10 19	146	13 9	364	211	5 0	153	17 37	929	783	4 39	146	660	2	82.4
14 D	21 20	1180	973	13 19	157	15 6	365	221	21 13	144	19 8	891	848	12 21	43	469	2	82.4
15 D	20 20	1103	972	10 18	131	13 43	357	243	21 10	114	19 17	891	848	23 48	43	320	1	82.5
16 D	20 30	1106	975	11 45	131	16 21	348	249	6 58	99	17 11	899	809	3 51	90	351	2	82.5
17	17 38	1090	992	11 59 & 12 46	98	13 23	330	259	8 39	71	18 27	885	830	4 22	55	177	1	82.5
18 Q	21 4	1083	1009	12 21	74	12 56	330	257	8									

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

289. Eskdalemuir. (X.)

15,000 γ ($\cdot 15$ C.G.S. unit) +

June, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1	1063	1061	1055	1062	1064	1059	1058	1053	1043	1034	1028	1026	1024	1013	1040	1051	1069	1068	1074	1079	1084	1073	1064	1068	1055	1055	1055
2	1055	1054	1054	1056	1058	1053	1038	1048	1048	1043	1034	1035	1030	1035	1044	1060	1075	1071	1074	1069	1064	1063	1055	1054	1053	1053	1053
3	1053	1050	1050	1055	1058	1059	1054	1049	1040	1036	1031	1039	1040	1041	1044	1048	1065	1073	1080	1080	1082	1064	1059	1050	1050	1050	1054
4 Q	1050	1049	1049	1054	1059	1059	1055	1045	1035	1028	1019	1019	1022	1037	1055	1076	1080	1080	1071	1070	1061	1056	1055	1053	1051	1052	1052
5 Q	1051	1054	1051	1055	1056	1055	1052	1045	1035	1025	1019	1020	1027	1035	1045	1055	1060	1065	1065	1065	1067	1065	1063	1063	1063	1061	1050
6	1061	1063	1065	1062	1064	1065	1062	1059	1054	1043	1032	1030	1028	1031	1040	1054	1065	1077	1083	1085	1070	1066	1066	1066	1065	1065	1058
7	1065	1065	1065	1065	1065	1060	1060	1059	1057	1037	1026	1024	1027	1031	1033	1046	1058	1066	1076	1077	1063	1063	1060	1061	1056	1052	1052
8	1056	1056	1055	1059	1062	1066	1065	1056	1047	1040	1026	1023	1021	1036	1062	1042	1041	1041	1066	1077	1081	1068	1083	1057	1048	1053	1053
9	1048	1050	1051	1053	1056	1056	1051	1052	1057	1046	1037	1031	1032	1037	1041	1052	1072	1078	1083	1097	1087	1088	1062	1067	1059	1058	1058
10 D	1059	1052	1043	1057	1067	1057	1022	1028	1027	1032	1027	1012	1001	1032	1012	1047	1062	1104	1123	1093	1072	1073	1077	1062	1062	1047	1051
11 D	1047	1068	1023	1042	1037	1032	1039	1018	1020	1017	1001	987	973	1001	1027	1072	1113	1118	1097	1088	1062	1052	1042	1042	1042	1044	1044
12	1042	1047	1040	1039	1042	1043	1040	1038	1033	1019	1019	1017	1011	1028	1038	1068	1079	1095	1089	1109	1088	1058	1049	1048	1043	1048	1048
13	1043	1039	1048	1048	1044	1048	1049	1048	1048	1039	1028	1023	1026	1025	1029	1063	1069	1069	1073	1070	1063	1054	1058	1053	1049	1048	1048
14 Q	1049	1051	1050	1051	1053	1054	1050	1043	1043	1040	1038	1028	1029	1033	1038	1039	1045	1053	1053	1059	1064	1061	1059	1054	1054	1047	1047
15	1054	1053	1053	1053	1057	1058	1052	1043	1037	1033	1030	1031	1025	1019	1028	1038	1065	1075	1075	1083	1074	1060	1056	1053	1053	1050	1050
16	1053	1052	1054	1059	1070	1069	1064	1058	1045	1035	1024	1015	1029	1038	1039	1039	1046	1063	1080	1080	1081	1068	1059	1061	1059	1053	1053
17	1059	1054	1054	1055	1055	1055	1056	1055	1053	1044	1033	1019	1023	1026	1034	1039	1054	1060	1064	1071	1076	1081	1070	1065	1061	1052	1052
18 Q	1061	1065	1065	1060	1056	1066	1064	1056	1054	1046	1040	1031	1035	1030	1036	1049	1056	1061	1070	1073	1073	1071	1066	1065	1060	1056	1056
19	1060	1060	1055	1059	1059	1060	1062	1057	1046	1040	1041	1030	1036	1043	1039	1038	1048	1065	1080	1083	1083	1080	1073	1066	1064	1057	1057
20	1064	1068	1060	1059	1060	1062	1072	1065	1050	1032	1020	1015	1018	1026	1042	1047	1060	1063	1070	1076	1086	1066	1066	1061	1061	1054	1054
21	1061	1061	1061	1059	1063	1067	1066	1058	1048	1038	1026	1022	1027	1036	1047	1068	1087	1082	1108	1076	1068	1062	1060	1061	1059	1059	1059
22 D	1061	1058	1061	1061	1061	1055	1047	1021	1025	1046	1051	1046	1040	1041	1036	1061	1062	1066	1082	1107	1118	1082	1076	1076	1082	1060	1060
23 D	1082	1066	1066	1061	1056	1061	1062	1046	1031	1030	1021	1010	1011	1031	1026	1061	1046	1083	1071	1087	1081	1088	1092	1067	1057	1055	1055
24	1057	1054	1047	1051	1026	1032	1056	1051	1043	1036	1028	1017	1017	1032	1061	1047	1037	1057	1076	1058	1058	1058	1061	1060	1056	1047	1047
25	1056	1057	1052	1052	1046	1026	1036	1037	1041	1036	1026	1026	1021	1035	1040	1056	1064	1067	1071	1072	1066	1064	1059	1058	1056	1049	1049
26 Q	1056	1056	1052	1052	1056	1056	1055	1053	1046	1036	1021	1012	1007	1015	1032	1048	1061	1067	1063	1062	1058	1057	1057	1057	1056	1047	1047
27	1056	1056	1057	1060	1067	1072	1068	1062	1047	1031	1022	1022	1037	1057	1077	1083	1072	1067	1072	1067	1072	1068	1058	1057	1057	1058	1059
28	1058	1052	1057	1062	1059	1062	1063	1048	1042	1022	1002	1001	1004	1047	1072	1089	1098	1098	1084	1083	1053	1042	1043	1047	1044	1053	1053
29	1044	1043	1046	1048	1052	1052	1047	1039	1033	1023	1020	1017	1023	1026	1043	1057	1063	1064	1065	1062	1061	1063	1062	1057	1061	1047	1047
30 D	1061	1057	1062	1062	1067	1063	1063	1047	1036	1023	1016	1020	1032	1042	1028	1042	1062	1067	1088	1089	1087	1078	1059	1049	1053	1054	1054
Mean	1056	1056	1053	1055	1056	1056	1054	1048	1041	1034	1026	1022	1023	1032	1041	1055	1064	1072	1078	1078	1073	1067	1063	1059	1056	1053	1053

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

290. Eskdalemuir. (-Y.)

4,000 γ ($\cdot 04$ C.G.S. unit) +

June, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1	304	305	304	290	276	264	261	261	264	276	289	303	317	310	314	316	323	316	312	310	303	302	296	296	296	296	296
2	296	302	296	290	290	288	289	276	264	264	274	289	304	310	316	316	318	303	303	310	308	304	302	302	310	310	297
3	310	302	304	296	290	282	270	268	270	283	296	316	316	323	318	316	316	309	310	309	302	304	305	304	303	303	299
4 Q	303	298	293	290	282	272	264	259	257	263	274	290	310	327	330	329	317	304	303	304	303	304	304	303	303	298	295
5 Q	298	297	291	290	285	279	271	265	266	276	290	299	311	317	323	323	317	311	305	303	303	304	304	305	304	304	297
6	304	305	304	295	291	289	283	283	277	283	291	303	319	331	332	331	332	328	317	315	304	304	304	304	301	305	305
7	301	293	297	304	268	271	266	265	272	282	290	304	322	331	332	337	325	315	311	308	299	299	299	297	291	299	299
8	291	289	283	281	285	273	264</																				

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

291. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

June, 1929.

Table with 25 columns (0-24 hours + Mean) and 30 rows (Day 1-30 + Mean). Columns represent hours of the day, and rows represent days of the month. Values are in γ units.

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

292. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

June, 1929.

Table with 13 columns: Day, North Component (Maximum, Minimum, Range), West Component (Maximum, Minimum, Range), Vertical Component (Maximum, Minimum, Range), Character Figure, Magnetic Character of Day, and Temperature in Magnet House. Rows represent days of the month.

§ For explanation see page 169. Q denotes an "International Quiet Day," while D denotes a disturbed day used for the computation of Tables 322-333.

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

July, 1929.

293. Eskdalemuir. (X.)

15,000 γ (·15 C.G.S. unit) +

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1	1053	1063	1044	1039	1063	1059	1035	1018	1008	1003	1004	999	1008	1017	1043	1048	1054	1053	1056	1069	1068	1073	1074	1069	1064	1043
2	1064	1065	1066	1058	1058	1063	1054	1046	1044	1038	1028	1017	1023	1028	1029	1038	1043	1058	1065	1074	1078	1073	1068	1063	1058	1052
3	1058	1063	1059	1059	1063	1064	1061	1057	1049	1035	1028	1024	1029	1033	1042	1055	1068	1079	1078	1068	1063	1073	1074	1069	1073	1057
4	1073	1071	1068	1063	1058	1054	1049	1043	1044	1048	1041	1038	1033	1033	1038	1043	1056	1073	1078	1073	1070	1058	1055	1051	1051	1054
5 D	1051	1054	1054	1055	1059	1059	1054	1049	1045	1040	1029	1024	1034	1039	1049	1071	1130	1064	1082	1105	1095	1074	1050	1039	1050	1059
6 D	1050	1056	1054	1060	1065	1059	1018	1044	1035	1008	1027	1024	1015	1016	1018	1034	1064	1059	1070	1077	1069	1064	1060	1059	1064	1046
7	1064	1054	1045	1049	1035	1045	1044	1034	1013	998	998	988	999	1008	1018	1038	1044	1060	1095	1093	1079	1069	1056	1054	1054	1041
8	1054	1050	1050	1050	1059	1057	1054	1049	1034	1008	993	994	1008	1019	1034	1059	1054	1060	1076	1078	1069	1061	1055	1055	1055	1045
9 Q	1055	1056	1055	1055	1060	1051	1047	1040	1027	1009	1005	1009	1009	1019	1035	1048	1054	1060	1060	1071	1070	1060	1060	1060	1065	1047
10 D	1064	1055	1056	1056	1065	1070	1055	1015	1005	990	984	1005	1045	1000	1065	1071	1090	1146	1101	1152	1093	1080	1051	990	1030	1054
11	1030	1055	1051	1045	1040	1040	1055	1037	1041	1035	1005	996	1010	1009	1015	1031	1040	1051	1070	1070	1060	1049	1050	1045	1045	1039
12	1045	1040	1034	1041	1041	1035	1039	1038	1027	1015	996	1000	1000	1006	1021	1041	1057	1059	1055	1065	1060	1055	1050	1045	1041	1036
13 Q	1041	1041	1041	1041	1046	1046	1044	1036	1027	1020	1017	1016	1016	1012	1014	1026	1038	1052	1064	1076	1076	1066	1056	1051	1042	1040
14	1042	1041	1046	1051	1051	1051	1051	1046	1046	1042	1027	1020	1021	1021	1026	1036	1041	1106	1112	1102	1092	1066	1042	1036	1001	1050
15 D	1001	991	1046	1071	1042	1051	1016	1001	1026	1011	986	983	986	1001	1012	1027	1047	1061	1106	1101	1081	1061	1026	1001	991	1030
16 D	991	1042	1042	1046	1042	1046	1031	1020	1005	987	1001	990	980	1016	1026	1102	1096	1072	1092	1092	1061	1041	1036	1036	1033	1038
17	1033	1037	1036	1037	1038	1037	1037	1021	1005	1007	1004	991	993	991	1028	1038	1032	1037	1043	1048	1052	1053	1053	1055	1046	1030
18	1046	1043	1043	1042	1043	1046	1043	1040	1034	1025	1012	998	999	1021	1029	1047	1056	1067	1062	1052	1052	1052	1052	1052	1053	1040
19 Q	1053	1045	1042	1047	1048	1050	1048	1037	1032	1026	1013	1011	1015	1027	1037	1047	1051	1054	1057	1057	1052	1053	1056	1062	1060	1043
20	1060	1060	1052	1052	1054	1057	1053	1047	1037	1012	1021	1027	1038	1043	1078	1038	1062	1072	1067	1062	1071	1068	1058	1063	1067	1052
21	1067	1073	1055	1053	1057	1057	1052	1049	1043	1032	1017	1022	1027	1007	1032	1037	1047	1064	1070	1065	1062	1053	1057	1057	1053	1048
22	1053	1058	1043	1047	1047	1052	1049	1042	1032	997	1008	1013	1018	1027	1037	1050	1052	1063	1058	1077	1067	1059	1052	1053	1052	1044
23	1052	1046	1053	1053	1053	1053	1054	1049	1034	1024	1017	1018	1022	1028	1041	1058	1063	1058	1064	1064	1059	1054	1058	1058	1058	1047
24	1058	1053	1049	1049	1048	1039	1043	1048	1034	1028	1020	1015	1023	1033	1048	1063	1063	1103	1103	1105	1062	1059	1053	1063	1044	1052
25	1044	1044	1046	1046	1047	1048	1043	1043	1032	1017	1007	1012	1007	1000	1028	1019	1048	1054	1058	1059	1059	1058	1058	1058	1048	1039
26	1048	1044	1045	1049	1053	1053	1049	1044	1034	1027	1017	1028	1033	1022	1018	1048	1049	1078	1065	1054	1053	1054	1055	1054	1054	1045
27	1054	1052	1052	1054	1053	1053	1054	1053	1043	1034	1028	1019	1028	1033	1043	1043	1047	1049	1051	1059	1060	1058	1058	1054	1053	1047
28 Q	1053	1048	1048	1052	1053	1054	1054	1051	1041	1028	1013	1013	1018	1016	1028	1042	1053	1053	1057	1068	1068	1064	1060	1068	1058	1046
29 Q	1058	1057	1054	1056	1055	1056	1054	1049	1044	1038	1032	1024	1026	1019	1018	1030	1041	1052	1063	1064	1066	1068	1068	1065	1060	1048
30	1060	1059	1061	1061	1064	1064	1063	1054	1038	1023	1013	1022	1025	1037	1048	1044	1062	1068	1074	1083	1075	1067	1065	1058	1053	1053
31	1053	1058	1058	1064	1059	1063	1059	1053	1041	1025	1017	1017	1017	1012	1018	1033	1043	1055	1068	1064	1063	1088	1087	1088	1078	1051
Mean	1049	1051	1050	1052	1052	1053	1047	1041	1033	1021	1013	1011	1016	1019	1033	1045	1056	1066	1072	1076	1068	1062	1057	1052	1050	1046

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

July, 1929.

294. Eskdalemuir. (-Y.)

4,000 γ (·04 C.G.S. unit) +

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1	273	227	228	234	249	247	256	249	242	254	268	287	307	321	328	321	314	307	301	301	301	307	307	301	294	281
2	294	293	294	303	301	287	273	267	268	274	287	301	309	320	320	327	326	321	315	314	308	307	301	297	294	300
3	294	293	285	281	280	269	267	262	258	260	274	287	302	315	317	314	320	320	314	307	302	308	309	302	301	293
4	301	295	287	287	282	275	276	280	287	285	287	301	321	328	325	314	311	308	307	302	301	301	300	295	293	298
5 D	293	291	288	287	280	268	260	262	264	267	281	295	319	327	341	354	368	321	325	323	321	301	275	281	287	300
6 D	287	281	281	286	273	275	307	295	267	268	287	301	321	334	334	335	343	327	321	321	307	301	304	295	295	302
7	295	275	273	281	281	273	256	254	248	254	267	285	301	320	321	322	314	311	313	311	307	301	295	295	295	290
8	295	295	300	288	280	267	255	249	249	254	267	283	302	315	327	325	310	307	304	295	295	298				

295. Eskdalemuir. (Z.)

44,000 γ (44 C.G.S. unit) +

July, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	859	848	837	837	839	839	843	860	872	871	870	871	867	871	868	872	875	880	882	880	877	876	875	875	875	865
2	875	875	872	868	849	845	856	860	865	871	864	853	852	856	861	864	868	871	875	876	876	876	876	875	875	866
3	875	872	872	875	876	878	875	868	868	868	863	859	859	860	862	864	868	868	871	876	875	872	871	872	872	869
4	872	872	872	872	874	875	872	870	864	861	856	855	857	860	869	876	876	879	879	879	879	876	876	875	875	871
5 D	875	874	874	875	876	878	875	870	868	864	861	861	854	849	849	853	868	900	902	901	901	900	892	880	880	875
6 D	880	872	873	869	869	870	860	837	846	857	861	857	855	857	868	877	885	889	886	881	881	880	877	877	865	869
7	865	865	869	871	873	873	876	876	876	877	869	868	861	861	866	873	880	880	880	883	880	880	880	880	876	873
8	873	873	870	873	873	877	876	873	875	877	869	868	861	861	864	868	874	877	880	884	881	877	877	876	876	873
9 Q	876	876	873	874	877	882	881	873	870	865	860	853	853	853	857	868	876	880	880	880	877	880	877	874	873	871
10 D	873	873	870	872	873	872	873	875	872	872	869	873	873	884	880	896	892	924	939	963	944	908	866	814	844	885
11	844	861	865	869	856	849	841	860	865	869	871	870	866	873	880	884	884	892	891	897	889	888	884	884	873	873
12	873	865	873	876	879	880	878	877	881	884	881	877	868	869	870	873	880	887	888	888	888	888	884	884	880	879
13 Q	880	879	877	873	877	880	881	881	880	873	864	854	861	866	868	866	869	880	884	888	888	888	884	880	879	876
14	879	877	879	877	878	878	880	880	880	877	873	865	858	853	853	863	874	880	892	900	911	892	880	865	841	876
15 D	841	770	770	754	754	758	789	811	836	856	868	868	868	872	876	883	889	903	932	938	928	919	894	812	797	849
16 D	797	844	862	849	852	856	859	863	863	859	871	868	876	891	919	963	1008	1005	977	969	954	919	899	894	889	898
17	889	883	873	879	887	890	887	887	883	887	887	886	892	919	910	901	896	896	895	894	888	887	887	885	883	890
18	883	885	887	887	887	888	887	883	885	887	883	875	869	873	882	884	884	889	896	896	891	890	887	879	872	885
19 Q	872	872	876	879	879	879	879	882	883	880	879	876	876	876	879	884	884	887	887	887	884	883	880	879	876	880
20	876	876	876	876	879	880	880	879	879	877	872	868	860	867	879	896	895	890	886	882	883	887	887	882	877	880
21	877	867	871	877	879	882	883	882	878	868	863	859	861	865	866	875	887	894	902	898	890	886	882	879	878	878
22	878	875	877	875	878	883	883	882	878	875	874	871	870	870	875	879	882	887	890	895	892	887	882	878	875	880
23	875	874	872	875	878	879	882	882	871	870	870	870	864	868	875	883	890	892	891	886	882	878	878	878	876	877
24	876	878	878	878	878	878	878	878	875	874	870	868	867	871	871	882	890	895	906	911	899	890	882	859	863	880
25	863	870	871	870	870	870	874	877	878	876	874	867	863	867	874	883	887	891	886	883	882	882	882	871	864	875
26	864	865	869	871	875	878	876	878	882	879	871	866	858	859	866	870	879	889	895	893	883	880	879	878	872	875
27	872	869	869	871	875	878	875	878	878	874	867	863	864	867	874	879	886	886	886	886	883	882	879	878	878	876
28 Q	878	878	878	878	879	879	878	881	882	878	873	865	866	867	867	873	875	883	886	882	882	878	876	875	875	876
29 Q	875	875	875	877	878	880	878	875	874	871	867	862	858	856	862	868	871	875	875	875	875	874	874	875	875	872
30	875	874	873	875	878	878	875	874	874	867	857	851	852	863	867	872	875	879	882	882	878	879	878	878	875	872
31	875	874	874	868	871	872	868	866	866	862	855	852	849	856	867	868	871	877	878	879	878	871	869	870	865	868
Mean	870	868	869	868	869	871	871	871	872	872	869	865	863	867	872	879	884	890	893	894	890	886	880	873	870	875

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

296. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

July, 1929.

Day.	Terrestrial Magnetic Elements.															Character Figure ΣR^2 100γ ²	Magnetic Character of Day (0-2)	Temperature in Magnet House 200 + °A.
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 44000 γ +		Minimum 44000 γ +		Range.			
1	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	h. m.	γ	265	I	83.9	
2	19 4	1080	1013	11 8	67	14 59	335	262	7 13	73	20 5	878	843	4 39	35	110	83.9	
3	18 36	1097	1023	10 59	74	16 28	326	256	8 11	70	5 0	878	858	11 10	20	108	83.9	
4	17 32	1082	1018	13 35	64	13 3	334	269	6 41	65	17 38	880	854	11 35	26	90	83.9	
5 D	16 31	1197	1008	16 53	189	16 30	415	260	5 49	155	17 3	904	849	13 11	55	628	83.9	
6 D	18 3	1085	999	8 43	86	16 0	356	248	8 6	108	16 59	891	835	6 40	56	222	83.9	
7	18 20	1110	975	10 41	135	14 42	327	244	8 22	83	18 40	884	860	12 50	24	257	84.0	
8	18 29	1084	989	10 46	95	14 26	334	242	7 32	92	19 10	885	860	12 51	25	181	84.0	
9 Q	19 10	1078	1004	11 1	74	13 51 & 14 30	335	248	8 11	87	5 25	884	852	12 50	32	141	84.0	
10 D	16 41	1384	954	23 4	380	16 35	454	240	23 51	214	18 35	973	794	23 10	179	2222	84.1	
11	18 52	1093	985	10 43	108	15 33	327	226	8 15	101	18 48	899	840	5 35	59	253	84.1	
12	19 10	1067	994	10 30	73	14 0	327	247	8 28	80	19 0	889	865	12 22	24	123	84.1	
13 Q	19 2	1085	1006	13 43	79	14 58	320	258	7 42	62	20 0	893	853	10 51	40	117	84.1	
14	17 16	1135	1006	23 48	129	16 35	334	228	23 48	106	19 48	919	849	24 0	70	328	84.2	
15 D	18 21	1126	905	0 40	221	17 43	375	174	2 19	201	18 14	946	707	23 22	239	1464	84.3	
16 D	15 6	1177	970	12 5	207	15 9	400	188	0 1	212	16 19	1016	805	0 1	211	1323	84.3	
17	20 38	1063	971	13 16	92	14 28	341	248	5 20	93	13 18	923	871	1 50	52	198	84.3	
18	18 18	1072	986	11 22	86	13 55	337	252	7 35	85	18 32	899	868	12 0	31	156	84.5	
19 Q	22 22	1063	1009	11 26	54	14 38	320	248	8 30	72	17 1	888	870	0 35	18	84	84.5	
20	14 6	1098	997	9 31	101	13 34</												

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

297. Eskdalemuir. (X.)

15,000 γ (·15 C.G.S. unit) +

August, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1 D	γ 1078	γ 1079	γ 1065	γ 1055	γ 1049	γ 1050	γ 1054	γ 1049	γ 1034	γ 1024	γ *	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ *	γ —
2	*	—	—	—	—	—	—	—	—	—	*	1004	1014	1029	1029	1034	1038	1038	*	—	—	*	1064	1045	1048	—
3	1048	*	—	—	—	—	—	—	—	—	*	1015	1014	1030	1034	1039	1050	1050	1054	1059	1060	1059	1054	1049	1049	—
4	1049	1048	1042	1049	1055	1044	1039	1039	1036	1027	1027	1009	996	1019	1033	1050	1060	1079	1070	1069	1069	1064	1059	1055	1049	1044
5	1049	1039	1030	1060	1059	1060	1054	1030	1018	1010	1004	999	1008	1025	1019	1023	1054	1054	1065	1055	1051	1049	1047	1054	1049	1038
6	1049	1042	1044	1045	1045	1045	1040	1034	1025	1019	1014	1014	1024	1034	1039	1044	1054	1059	1064	1059	1059	1055	1054	1056	1049	1042
7 Q	1049	1045	1044	1049	1049	1049	1044	1040	1030	1015	1004	1004	1018	1023	1030	1044	1049	1060	1069	1069	1064	1055	1054	1050	1053	1042
8 Q	1053	1049	1050	1049	1049	1049	1049	1042	1032	1020	1013	1008	1004	1013	1023	1035	1044	1049	1054	1061	1062	1059	1054	1055	1054	1041
9 Q	1054	1054	1054	1054	1054	1052	1049	1044	1034	1020	1014	1014	1018	1024	1030	1040	1049	1055	1059	1062	1061	1059	1059	1059	1061	1045
10	1061	1064	1064	1064	1065	1065	1064	*	—	*	1020	1019	1023	1034	1039	1050	1060	1069	1065	1069	1074	1069	1069	1070	1075	—
11 D	1075	1079	1079	1074	1079	1075	1074	1055	1044	1044	1040	1024	1019	1044	1025	1044	1059	1084	1073	1080	1089	1068	1050	1054	1059	1059
12	1059	1054	1046	1048	1050	1045	1041	1035	1030	1020	1015	1007	1006	1020	1037	1040	1050	1051	1060	1060	1061	1070	1057	1051	1052	1042
13	1052	1053	1051	1050	1050	1050	1041	1035	1033	1025	1014	1015	1019	1028	1041	1055	1055	1055	1055	1060	1056	1055	1055	1051	1050	1044
14 D	1050	1050	1050	1050	1051	1050	1045	1040	1035	1030	1027	1031	1019	1057	1067	1090	1182	1193	1117	1046	1055	1035	1018	1031	975	1059
15 D	1050	995	1030	1035	1025	1034	1016	1010	1005	985	976	985	999	1021	1030	1016	1045	1051	1059	1065	1056	1053	1060	1042	1031	1023
16	1031	1040	1035	1035	1035	1031	1020	1006	1019	1005	990	1010	1005	1014	1020	1045	1035	1035	1058	1055	1061	1047	1046	1051	1050	1031
17	1050	1040	1037	1039	1046	1040	1036	1030	1020	1019	1012	1010	1010	1030	1036	1040	1055	1055	1056	1055	1060	1057	1068	1060	1060	1040
18 D	1060	1035	1066	1055	1034	1026	1019	1015	1025	1018	959	956	995	1010	1018	1041	1055	1055	1052	1061	1064	1046	1048	1051	1039	1031
19	1039	1040	1031	1026	1042	1034	1035	1030	1030	1020	1000	1005	1020	1006	1035	1087	1065	1040	1049	1041	1046	1042	1041	1041	1043	1031
20	1043	1041	1030	1037	1038	1040	1035	1026	1016	1010	1004	1004	1016	1021	1030	1031	1042	1053	1058	1056	1046	1050	1050	1047	1045	1034
21	1045	1051	1060	1049	1049	1038	1040	1032	1017	1015	1000	995	1001	1020	1034	1040	1047	1051	1053	1052	1052	1051	1050	1051	1039	1037
22	1039	1047	1041	1041	1043	1040	1040	1030	1014	1007	1000	1005	1019	1031	1039	1045	1050	1055	1052	1055	1055	1051	1050	1050	1050	1038
23	1050	1046	1045	1046	1045	1050	1045	1044	1033	1024	1015	1015	1023	1030	1041	1040	1040	1046	1052	1055	1056	1056	1060	1055	1055	1042
24	1055	1055	1053	1055	1055	1047	1056	1055	1042	1029	1010	1006	1004	1012	1015	1036	1050	1047	1045	1055	1055	1055	1058	1050	1048	1042
25 Q	1048	1050	1050	1050	1050	1052	1054	1050	1040	1026	1010	1001	1000	1005	1017	1030	1040	1050	1050	1053	1055	1955	1051	1053	1053	1039
26	1053	1052	1051	1052	1052	1052	1051	1046	1036	1026	1011	1006	1012	1025	1035	1050	1061	1070	1071	1068	1070	1072	1075	1068	1060	1049
27	1060	1059	1053	1053	1053	1060	1060	1060	1045	1032	1016	1008	1017	1028	1034	1047	1053	1060	1056	1061	1056	1057	1057	1057	1051	1047
28 Q	1051	1051	1051	1050	1053	1053	1048	1045	1040	1029	1021	1017	1015	1017	1027	1032	1038	1047	1052	1053	1055	1056	1056	1056	1054	1042
29	1054	1056	1051	1047	1049	1047	1050	1044	1036	1022	1011	1010	1016	1027	1040	1051	1052	1054	1057	1061	1053	1050	1050	1051	1043	1048
30	1051	1052	1054	1050	1057	1057	1052	1046	1039	1034	1029	1028	1030	1039	1046	1051	1052	1053	1053	1056	1056	1058	1055	1054	1057	1048
31	1057	1065	1057	1051	1033	1050	1048	1042	1032	1024	1017	1017	1029	1056	1047	1055	1057	1070	1056	1052	1065	1054	1057	1085	1060	1049
Mean †	1049	1048	1048	1048	1048	1047	1044	1037	1030	1021	1009	1007	1014	1024	1032	1045	1055	1060	1060	1058	1059	1055	1053	1053	1048	1042

† Mean of 27 days, 1st, 2nd, 3rd and 10th omitted.

TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

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

298. Eskdalemuir. (-Y.)

4,000 γ (·04 C.G.S. unit) +

August, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1 D	γ 287	γ 274	γ 228	γ 240	γ 244	γ 254	γ 253	γ 254	γ 254	γ 267	γ *	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ —	γ *	γ —
2	*	—	—	—	—	—	—	—	—	—	*	290	298	308	302	300	294	288	293	298	—	—	280	*	*	—
3	*	—	—	—	—	—	—	—	—	—	*	274	288	314	307	300	300	295	294	294	300	287	286	290	281	—
4	281	280	280	286	274	267	273	261	274	280	288	306	324	333	329	320	306	307	300	300	301	294	282	260	260	291
5	260	254	280	279	260	*	—	—	—	—	*	294	315	331	322	310	309	300	294	293	293	291	283	281	286	—
6	286	280	280	278	276	272	266	261	264	272	280	293	308	315	314	306	300	294	293	294	294	294	292	287	280	287
7 Q	280	274	273	274	274	268	262	262	266	268	287	300	313	317	316	312	300	299	294	295	298	293	293	287	287	288
8 Q	287	284	281	280	276	272	264	264	260	260	267	280	300	316	314	308	300	293	293	295	294	289	290	289	288	286
9 Q	288	287	286	292	280	274	268	267	261	266	281	300	318	327	327	320	313	303	294	295	298	294	293	291	288	293
10	288	287	287	284	280	273	268	267	260	264	268	282	300	309	314	314	308	306	300	300	306	301	300	294	294	290
11 D	294	287	280	286	279	267	262	247	254	274	286	306	314	328	327	329	327	328	314	300	26					

TERRESTRIAL MAGNETIC FORCE: NORTH COMPONENT.

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

301. Eskdalemuir. (X.)

15,000 γ (.15 C.G.S. unit) +

September, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1	1060	1044	1055	1049	1051	1052	1052	1043	1029	1022	1010	1014	1017	1028	1036	1039	1047	1063	1049	1055	1058	1056	1057	1048	1054	1043	
2	1054	1071	1048	1049	1049	1051	1047	1036	1028	1022	1021	1028	1027	1036	1038	1041	1044	1055	1048	1055	1057	1055	1057	1053	1051	1045	
3 Q	1051	1049	1048	1048	1049	1047	1042	1040	1035	1021	1008	1005	1014	1027	1033	1036	1038	1048	1052	1056	1058	1057	1053	1052	1051	1040	
4 Q	1051	1051	1052	1050	1048	1047	1046	1038	1028	1021	1011	1011	1012	1023	1033	1040	1043	1058	1057	1060	1061	1056	1061	1055	1048	1042	
5 Q	1048	1048	1047	1049	1048	1046	1044	1037	1025	1011	1001	1001	1006	1021	1036	1045	1048	1051	1053	1057	1061	1063	1056	1055	1053	1040	
6	1053	1053	1053	1052	1052	1051	1051	1045	1039	1033	1031	1032	1038	1042	1045	1055	1063	1056	1053	1057	1061	1058	1057	1057	1074	1050	
7 D	1074	1068	1094	1088	1082	1034	1025	1038	1042	1013	962	967	994	1006	1018	1006	1030	1041	1041	1042	1045	1060	1046	1060	1060	1044	1036
8	1044	1042	1035	1034	1036	1041	1040	1033	1021	1014	1006	1008	1008	1014	1021	1028	1031	1038	1047	1047	1050	1060	1047	1057	1046	1033	
9	1046	1046	1038	1040	1031	1042	1048	1039	1026	1015	1010	1006	999	1009	1020	1027	1038	1047	1058	1054	1057	1057	1063	1039	1038	1035	
10 D	1038	1020	1054	1050	1039	1052	1023	1004	969	958	950	965	989	1010	1010	1020	1012	1058	1093	1040	1065	1035	1035	1039	1042	1022	
11 D	1042	1011	1022	1049	1049	1039	1044	1040	988	963	977	988	981	979	1014	1019	1051	1036	1034	1043	1044	1058	1048	1036	1038	1023	
12	1038	1033	1031	1033	1042	1039	1028	1017	1014	1010	1007	988	984	1001	1012	1022	1058	1047	1029	1049	1037	1044	1034	1055	1037	1027	
13	1037	1021	1033	1055	1013	1039	1048	1042	1035	1018	1006	992	985	1000	1022	1038	1044	1035	1052	1041	1039	1044	1051	1051	1039	1031	
14 D	1039	1037	1058	1051	1040	1034	1013	1023	1043	1000	976	979	995	1018	1019	1020	1044	1056	1059	1041	1068	1032	1041	1048	1033	1030	
15	1033	1008	1042	1029	1038	1032	1033	1043	1022	1017	987	975	993	1012	1023	1032	1053	1062	1067	1056	1059	1047	1043	1043	1043	1031	
16	1043	1046	1043	1041	1040	1033	1029	1036	1028	1015	1004	1000	1004	1002	1008	1028	1059	1034	1047	1045	1045	1043	1050	1049	1043	1032	
17	1043	1042	1043	1033	1032	1046	1039	1031	1024	1014	1005	1011	1008	1010	1020	1029	1033	1038	1045	1043	1043	1045	1044	1050	1045	1032	
18	1045	1044	1043	1040	1038	1042	1040	1037	1028	1023	1012	1006	1005	1017	1019	1023	1029	1038	1042	1039	1040	1045	1045	1047	1045	1033	
19 Q	1045	1042	1043	1040	1038	1047	1047	1043	1032	1025	1016	1016	1022	1035	1043	1046	1043	1042	1045	1045	1047	1051	1053	1047	1047	1040	
20	1047	1045	1048	1048	1048	1048	1048	1047	1042	1029	1027	1017	1017	1034	1037	1039	1042	1052	1052	1049	1053	1053	1052	1057	1054	1043	
21	1054	1039	1047	1048	1048	1048	1052	1054	1049	1039	1024	1018	1010	1010	1014	1038	1043	1039	1021	1047	1057	1060	1062	1047	1048	1040	
22 D	1048	1032	1048	1057	1015	1056	1047	1006	1011	1005	957	924	958	982	1016	1035	1013	1032	1033	1029	1038	1043	1038	1033	1037	1019	
23	1037	1032	1033	1033	1032	1033	1033	1028	1021	1007	987	973	982	992	1006	1026	1023	1048	1042	1046	1044	1055	1055	1043	1042	1026	
24	1042	1038	1038	1038	1046	1063	1054	1046	1033	1018	1007	1003	1003	1009	1017	1028	1033	1039	1043	1047	1045	1046	1045	1049	1062	1035	
25	1062	1050	1034	1038	1042	1043	1052	1048	1043	1034	1020	1015	1019	1004	988	1015	1036	1043	1049	1045	1048	1053	1047	1063	1041	1037	
26	1041	1052	1041	1042	1043	1043	1047	1043	1041	1029	992	996	1009	1011	1014	1010	1029	1039	1043	1042	1040	1052	1048	1047	1053	1033	
27	1053	1058	1058	1061	1043	1045	1049	1051	1048	1038	1013	984	982	1003	1013	993	1005	1013	1021	1026	1075	1043	1034	1043	1042	1031	
28	1042	1042	1038	1038	1042	1042	1047	1038	1033	1022	1012	1008	1010	1014	1023	1024	1027	1038	1040	1044	1042	1042	1042	1042	1041	1033	
29 Q	1041	1042	1038	1042	1045	1043	1043	1039	1037	1028	1017	1010	1008	1017	1025	1033	1037	1039	1041	1047	1046	1045	1047	1047	1047	1036	
30	1047	1048	1048	1047	1057	1054	1054	1052	1048	1038	1028	1022	1019	1017	1013	1017	1023	1040	1049	1044	1046	1049	1057	1057	1054	1041	
Mean	1047	1042	1045	1046	1043	1044	1042	1037	1029	1017	1003	999	1003	1013	1021	1028	1037	1044	1047	1046	1051	1050	1049	1049	1046	1035	

TERRESTRIAL MAGNETIC FORCE: WEST COMPONENT.

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

302. Eskdalemuir. (-Y.)

4,000 γ (.04 C.G.S. unit) +

September, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1	255	248	258	265	272	268	259	252	253	260	280	297	309	315	308	293	286	290	281	288	292	286	294	288	280	280
2	280	296	274	272	269	268	261	258	261	270	296	307	315	320	312	294	281	279	277	276	285	286	286	285	288	284
3 Q	288	287	284	281	276	273	268	268	269	281	296	313	314	320	311	295	283	281	287	287	281	286	286	286	282	285
4 Q	282	282	282	282	278	275	270	265	264	268	285	302	314	316	314	301	289	288	282	287	286	288	289	279	281	286
5 Q	281	282	281	279	275	271	263	255	251	259	275	295	310	319	318	306	294	289	289	292	290	287	285	285	283	285
6	283	282	281	279	275	272	271	265	263	269	285	302	318	319	314	307	304	299	301	294	289	289	289	285	293	289
7 D	293	295	275	210	198	221	254	281	267	283	278	302	306	315	322	312	270	255	267	281	273	276	285	293	275	275
8	275	271	271	272	269	269	263	261	261	262	275	290	301	305	306	297	288	287	289	288	287	287	271	267	249	279
9	249	263	271	268	287	270	256	257	251	253	279	301	316	326	329	319	310	299	299	295	287	282	263	208	223	

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

303. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

September, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day. 1	874	865	871	877	877	877	878	879	875	871	865	863	861	862	868	873	875	877	888	888	883	882	881	869	856	874	
2	856	862	866	872	876	879	882	885	883	876	868	870	863	863	877	885	886	886	885	884	882	880	881	882	881	877	
3 Q	881	882	882	883	883	883	883	883	882	875	873	867	863	865	875	884	886	882	877	878	879	879	880	879	882	879	
4 Q	882	881	881	882	882	882	883	883	880	875	867	863	862	862	872	879	881	879	873	871	871	871	872	871	871	875	
5 Q	871	872	872	873	872	873	873	874	872	865	868	868	868	868	874	879	882	882	883	883	884	883	882	881	881	875	
6	881	883	885	885	885	886	887	888	885	878	866	858	858	865	865	869	873	874	871	871	875	875	873	873	866	875	
7 D	866	855	858	868	814	831	834	836	846	843	856	857	855	856	864	880	911	922	920	908	897	874	867	855	861	875	
8	851	854	863	867	871	873	875	876	868	863	857	852	850	850	854	863	868	869	867	868	869	870	871	864	848	864	
9	848	843	856	860	854	832	843	855	859	860	852	846	842	844	852	860	863	864	863	864	865	867	854	839	832	853	
10 D	832	827	805	813	840	849	837	818	832	844	852	859	865	872	870	878	890	901	914	889	887	861	859	852	844	856	
11 D	844	816	808	825	844	848	857	860	864	863	863	866	872	872	885	891	913	912	894	878	874	872	863	853	851	864	
12	851	856	860	861	861	862	858	860	862	863	860	859	861	858	860	879	910	909	905	897	881	871	860	844	829	868	
13	829	833	816	830	839	825	843	857	858	857	859	855	860	870	874	872	879	886	889	900	888	878	869	860	845	860	
14 D	845	805	814	830	843	850	837	826	830	836	849	848	853	867	890	916	932	924	918	909	866	857	837	825	833	858	
15	833	835	800	832	851	857	863	866	867	862	860	865	863	864	869	871	877	889	896	887	870	859	859	862	860	861	
16	860	848	844	848	854	854	854	858	859	856	855	858	859	864	869	880	906	892	880	883	877	872	862	846	840	864	
17	840	852	859	860	855	856	862	867	868	865	866	862	860	865	870	870	871	869	870	870	869	867	861	861	861	864	
18	861	863	864	864	861	861	861	861	859	858	856	853	852	859	867	868	871	873	876	881	880	867	864	851	856	864	
19 Q	856	859	858	859	860	861	862	863	864	861	862	857	853	850	857	863	866	866	865	865	865	865	866	865	863	861	861
20	863	864	864	864	862	862	861	861	858	857	855	849	849	849	853	856	857	861	865	864	864	864	864	861	860	859	
21	860	856	845	854	858	860	860	861	864	861	857	852	852	854	861	866	873	888	896	887	873	875	862	853	854	864	
22 D	854	795	787	779	759	761	771	790	811	834	847	856	862	870	896	894	894	931	930	911	901	880	857	858	860	847	
23	862	866	864	867	869	868	871	873	873	871	864	858	854	858	867	884	881	882	875	872	870	868	859	862	868	868	
24	860	862	861	857	844	843	849	855	858	856	855	847	843	850	854	861	866	870	871	868	867	866	866	865	859	858	
25	859	856	859	862	863	863	863	864	865	863	862	858	854	858	856	858	864	868	871	871	869	867	870	865	860	863	
26	860	856	861	863	863	863	864	866	866	862	862	858	855	852	858	863	870	870	871	875	877	867	863	866	866	864	
27	866	860	856	852	848	852	856	860	863	863	857	855	852	858	869	885	879	876	875	885	867	863	869	866	866	864	
28	866	868	864	863	864	865	866	868	868	865	859	853	852	853	857	864	868	868	868	868	867	867	867	867	867	864	
29 Q	867	865	865	864	863	864	864	867	867	866	863	860	859	860	860	861	863	863	863	863	864	864	864	864	864	863	
30	864	863	863	859	859	860	861	863	863	863	858	853	852	854	859	863	862	864	864	868	868	865	869	864	862	861	
Mean	858	853	851	854	856	857	859	861	862	861	860	857	857	860	867	874	881	883	883	880	875	870	866	861	858	864	

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

304. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

September, 1929.

Day.	Terrestrial Magnetic Force.															Character ΣR^2 Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House 200 + $^{\circ}A.$
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 44000 γ +		Minimum 44000 γ +		Range.			
	h. m.	γ	γ	h. m.		h. m.	γ	γ	h. m.		γ	h. m.	γ	h. m.					$\gamma$
1	17 4	1077	1001	10 20	76	13 6	319	234	0 36	85	18 22	893	854	23 59	39	145	I	85.4
2	0 53	1088	1017	9 52	71	12 39	328	253	7 12	75	15 55	887	855	0 3	32	117	I	85.4
3 Q	20 59	1062	1002	10 55	60	13 0	322	263	6 42	59	15 40	886	862	12 30	24	77	0	85.5
4 Q	22 12	1072	1007	11 27	65	13 36	320	262	8 0	58	5 57	883	860	12 35	23	81	0	85.5
5 Q	21 12	1067	997	10 20	70	13 15	323	249	8 0	74	18 20	884	860	9 33	24	110	0	85.5
6	23 43	1102	1026	10 11	76	12 52	322	261	7 2	61	6 48	888	857	11 35	31	105	0	85.6
7 D	2 39	1102	941	10 5	161	14 28	330	174	3 25	156	18 5	925	803	3 23	122	651	I	85.6
8	22 59	1065	997	12 26	68	12 19	310	242	24 0	68	5 44	876	847	24 0	29	101	I	85.6
9	21 36	1082	990	11 40	92	14 0	337	202	22 40	135	21 16	869	827	4 56	42	285	I	85.6
10 D	17 58	1140	941	9 45	199	6 12	354	176	20 0	178	17 37	937	797	2 20	140	909	2	85.6
11 D	20 48	1098	952	13 30	146	13 5	330	225	20 40	105	16 10	919	793	1 30	126	482	I	85.6
12	19 12	1089	966	11 27	123	13 50	329	215	19 6	114	16 12	915	826	23 52	89	360	I	85.6
13	18 13	1073	956	11 34	117	12 32	330	234	19 14	96	18 41	902	811	2 0	91	312	I	85.7
14 D	16 29	1133	961	9 23	172	0 40	349	216	16 19	133	16 20	942	794	0 52	148	692	I	85.6
15	18 15	1128	963	10 24	165	13 55	303	214	18 23	89	18 6	900	796	1 44	104	460	I	85.7
16	15 40	1069	986	13 31	83	12 21	317	240	19 4	77	16 4	910	836	23 38	74	183	I	85.7
17	22 32	1057	992	13 30	65	12 46	303	252	7 40	51	14 12	872	859	11 46	13	70	I	85.7
18	20 28	1067	995	12 19	72	13 3	311	241	20 20	70	19 32	884	847	22 45	37	115	I	85.7
19 Q	22 16	1071	1013	10 40	58	13 16	309	253	8 33	56	22 5	868	849	12 40	19	69	0	85.7
20	22 30	1073	999	11 22	74	12 55	314	261	9 35	53	21 40	866	849	11 0	17	86	0	85.7
21	21 33	1098	1003	13 21	95	1 17	324	154	21 44	170	17 42	898	842	1 42	56	411	I	85.7
22 D	4 44	1077	900	10 50	177	0 47	369	224	2 7	145	17 32	937	745	4 21	192	892	2	85.7
23	21 25	1086	969	11 10	117	13 20	317	242	8 53	75	15 27 & 16 39	883	854	12 8	29	202	I	85.7
24	5 18	1069	1001	11 12	68	13 19	309	249	24 0	60	17 40	871	842	4 15	29	91	I	85.7
25	23 10	1093	982	13 38	111	12 51	328	236	0 18	92	22 39	874	851	12 11	23	213		

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

305. Eskdalemuir. (X.)

15,000 γ ($\cdot 15$ C.G.S. unit) +

October, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1 Q	1054	1046	1044	1045	1047	1047	1047	1046	1039	1026	1016	1008	1005	1012	1018	1028	1034	1041	1048	1052	1054	1058	1051	1049	1048	1038
2 Q	1048	1045	1047	1049	1049	1053	1049	1046	1038	1027	1016	1009	1009	1016	1027	1037	1044	1047	1052	1044	1044	1040	1052	1056	1053	1039
3	1053	1053	1057	1054	1046	1059	1052	1049	1040	1024	1008	1008	1013	1026	1031	1034	1043	1047	1049	1048	1049	1050	1052	1050	1058	1042
4	1058	1045	1050	1059	1050	1049	1052	1049	1044	1037	1014	1003	1014	1019	1034	1037	1029	1040	1051	1059	1052	1044	1085	1070	1051	1043
5	1051	1044	1044	1044	1043	1047	1048	1044	1040	1020	993	1001	1007	1014	1021	1028	1037	1041	1049	1045	1049	1058	1051	1048	1049	1036
6	1049	1049	1050	1053	1055	1057	1057	1059	1057	1039	1015	999	1000	1005	1014	1022	1034	1043	1049	1049	1049	1051	1054	1053	1050	1040
7 D	1050	1052	1050	1053	1046	1054	1059	1064	1064	1049	1020	989	995	974	983	999	1029	1023	1017	1049	1018	1022	997	1020	1034	1028
8 D	1034	1018	1003	998	1008	1003	1012	1024	1025	1014	1001	979	952	997	1022	1034	1034	1019	1051	1069	1034	1038	1035	1070	1019	1019
9	1019	1027	1023	1027	1021	1036	1034	1028	1019	991	976	978	962	984	988	1035	1024	1031	1039	1067	1066	1035	1055	1044	1023	1021
10	1023	1026	1029	1038	1035	1032	1018	1020	1009	1010	987	993	978	993	1006	1016	1028	1035	1042	1044	1074	1053	1043	1043	1041	1024
11	1041	1037	1033	1026	1036	1042	1044	1038	1028	1017	998	1002	1000	1002	1011	1020	1033	1033	1038	1045	1069	1047	1042	1044	1045	1030
12	1045	1047	1063	1025	1066	1057	1051	1044	1049	1047	1011	1003	983	997	1002	1011	1019	1017	1022	1038	1026	1036	1041	1044	1043	1031
13	1043	1022	1043	1053	1041	1054	1017	1023	1028	1010	987	978	975	1002	998	1023	1015	1042	1025	1037	1035	1044	1043	1043	1042	1024
14	1042	1043	1048	1042	1047	1045	1037	1025	1023	1017	1010	1008	1008	1012	1022	1017	1023	1035	1036	1041	1043	1044	1033	1042	1040	1032
15 Q	1040	1041	1040	1042	1042	1048	1048	1042	1033	1021	1004	997	998	1012	1017	1023	1025	1033	1043	1044	1046	1044	1052	1047	1047	1033
16 D	1047	1047	1045	1045	1048	1047	1050	1053	1043	1036	1027	1027	1018	1019	997	1033	1041	1050	1030	972	968	966	1045	1021	1047	1028
17 D	1047	1032	1000	1042	1012	1013	1026	1028	1037	1041	1028	1023	1025	1031	1039	1040	1048	1050	1049	1008	995	1007	976	1018	1019	1025
18	1019	1027	1013	1048	1043	1020	1035	1039	1027	1009	1002	990	990	998	1001	1022	1017	1006	1023	1034	1035	1042	1064	1015	1032	1022
19	1032	1025	976	1045	1071	1032	1029	1007	976	973	991	992	1008	1018	1004	1022	1027	1015	1013	1017	1036	1022	1028	1038	1040	1016
20	1040	1040	1040	1044	1048	1039	1036	1048	1041	1023	1002	1002	1005	1004	1015	1014	1032	1033	1059	1020	1026	1039	1039	1043	1038	1031
21	1038	1038	1055	1039	1040	1042	1038	1038	1033	1014	1005	1007	1009	1017	1022	1026	1036	1040	1043	1038	1036	1046	1043	1043	1040	1033
22	1040	1043	1045	1043	1048	1053	1054	1048	1047	1032	1012	1011	1014	1002	1013	1026	1041	1046	1051	1053	1050	1048	1051	1039	1041	1038
23	1041	1045	1049	1051	1048	1052	1049	1047	1040	1022	1017	1017	1018	1018	1026	1030	1043	1035	1038	1047	1044	1043	1044	1045	1058	1037
24	1058	1043	1044	1040	1045	1044	1048	1046	1033	1021	997	998	1008	1018	1028	1028	1033	1028	1033	1044	1043	1042	1059	1056	1038	1038
25	1056	1047	1043	1047	1046	1047	1044	1042	1042	1032	1022	1013	1015	1022	1023	1027	1035	1042	1045	1048	1052	1068	1044	1046	1043	1039
26 Q	1043	1043	1041	1043	1043	1045	1046	1043	1044	1042	1033	1026	1027	1027	1034	1038	1043	1046	1048	1049	1048	1048	1049	1048	1047	1042
27 Q	1047	1048	1049	1043	1045	1048	1048	1049	1043	1035	1024	1020	1017	1018	1026	1033	1039	1045	1043	1047	1048	1053	1048	1049	1048	1040
28	1048	1048	1048	1048	1051	1053	1053	1051	1046	1033	1028	1029	1029	1037	1042	1044	1045	1048	1052	1054	1057	1054	1052	1052	1049	1047
29	1049	1089	1038	1038	1046	1053	1042	1053	1043	1038	1028	1024	1021	1013	1016	1029	1038	1043	1046	1051	1053	1053	1048	1046	1041	1041
30 D	1041	1046	1047	1048	1048	1059	1058	1053	1049	1048	1043	1040	1043	1008	980	1012	1023	1029	1028	1022	1037	1027	1067	1037	1036	1037
31	1036	1013	1033	1041	1043	1047	1032	1043	1026	1020	1016	1012	1014	1022	1022	1038	1042	1041	1042	1034	1037	1054	1041	1043	1038	1033
Mean	1043	1041	1038	1042	1044	1044	1042	1042	1036	1026	1012	1006	1005	1011	1016	1027	1033	1036	1040	1041	1042	1041	1044	1044	1042	1033

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

306. Eskdalemuir. (-Y.)

4,000 γ ($\cdot 04$ C.G.S. unit) +

October, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1 Q	281	277	277	277	276	276	272	267	258	255	260	272	288	298	298	294	287	284	284	284	282	274	270	276	277	278
2 Q	277	278	279	277	277	276	274	268	261	256	261	276	291	303	304	303	295	290	288	282	280	277	264	272	271	279
3	271	283	281	264	268	273	260	263	258	258	264	282	299	311	311	304	298	292	290	290	289	284	282	277	266	281
4	266	272	272	270	257	268	270	267	264	261	266	272	305	307	311	319	309	294	296	264	270	269	277	265	256	279
5	256	268	274	276	276	276	272	271	264	260	280	288	299	304	305	303	294	284	283	284	283	277	276	276	275	281
6	275	278	280	278	276	274	276	266	262	252	260	271	284	298	304	303	297	289	284	282	277	278	277	276	276	279
7 D	277	279	278	277	286	284	280	276	267	260	264	284	317	320	335	312	323	284	264	222	210	190	254	278	264	276
8 D	264	277	284	291	276	277	292	269	275	260	263	272	298	307	317	296	306	277	276	258	250	252	2			

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

307. Eskdalemuir. (Z.)

44,000 γ (.44 C.G.S. unit) +

October, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day. 1 Q	862	865	866	866	865	865	865	868	869	868	862	858	857	856	857	860	864	865	864	864	865	864	865	864	864	864	864
2 Q	864	865	865	865	864	862	863	866	869	868	858	854	853	853	853	860	862	864	866	870	870	873	872	869	866	866	864
3	866	864	861	863	863	853	854	856	857	855	853	848	846	848	855	861	865	866	868	868	866	866	866	867	867	860	860
4	867	867	865	856	853	857	859	860	859	854	849	851	846	847	851	860	869	873	871	880	872	872	856	840	843	859	860
5	843	854	858	861	862	862	862	862	861	859	857	853	850	850	854	860	864	866	866	866	866	865	863	863	863	862	860
6	862	862	862	861	861	861	858	858	858	858	855	852	847	845	847	854	861	865	865	864	864	862	861	861	861	861	858
7 D	861	861	861	861	859	855	856	858	861	860	849	849	850	866	887	905	920	925	927	921	867	852	824	807	821	868	868
8 D	821	811	818	808	821	818	834	835	864	869	870	877	886	885	890	909	901	911	891	878	874	837	858	837	821	859	
9	821	841	847	857	860	860	863	869	872	877	877	880	902	905	903	904	889	884	885	887	875	869	854	853	853	873	
10	853	845	847	851	858	864	861	865	871	874	873	869	869	873	868	872	879	884	881	877	870	862	865	863	863	867	
11	858	858	858	843	849	860	864	867	870	871	868	862	858	858	861	868	873	877	877	874	869	866	867	868	866	864	
12	866	865	853	845	826	834	841	849	858	863	864	859	861	869	877	883	891	893	896	895	886	870	869	868	863	866	
13	863	853	818	818	811	802	818	838	849	857	855	862	866	870	880	893	899	897	885	880	880	877	870	869	870	859	
14	870	869	865	866	858	857	858	860	866	866	865	862	861	863	869	881	879	876	873	872	870	870	870	868	866	867	
15 Q	866	865	866	866	866	865	864	865	870	870	867	864	864	867	869	870	873	870	869	869	869	869	869	866	866	867	
16 D	866	866	865	865	864	862	860	860	864	866	861	854	851	858	867	868	903	866	1005	945	950	816	853	833	798	877	
17 D	798	789	794	791	824	843	852	860	862	862	863	861	861	862	861	865	866	866	866	866	902	937	903	860	825	854	
18	849	821	828	825	823	860	847	853	859	861	862	866	869	874	892	913	918	916	908	888	881	874	860	865	856	867	
19	856	804	750	752	760	767	777	794	804	838	848	851	853	861	875	885	895	914	912	901	891	884	881	875	870	863	
20	870	869	869	868	865	864	859	858	862	864	864	861	862	865	869	884	884	885	891	885	884	876	872	870	868	871	
21	868	863	845	850	858	860	857	857	860	864	863	858	857	861	866	875	877	873	872	883	875	873	865	862	864	864	
22	864	862	863	864	861	861	861	862	862	862	854	852	849	853	854	858	867	863	863	862	862	871	864	864	848	860	
23	848	843	851	854	855	854	856	856	860	862	866	862	860	858	859	862	869	873	874	871	873	877	875	872	861	862	
24	861	851	847	853	860	862	864	865	865	864	854	854	856	858	862	870	878	877	878	881	877	873	873	871	847	864	
25	847	853	857	860	860	860	864	866	866	868	862	861	860	859	864	870	873	871	870	870	873	865	862	861	864	864	
26 Q	864	861	861	862	865	865	866	867	869	869	865	864	864	862	864	869	869	869	867	866	866	866	866	866	866	866	
27 Q	866	862	861	862	863	864	865	867	869	870	867	866	866	860	866	866	866	866	872	872	868	867	869	868	868	867	
28	868	866	866	865	865	865	865	865	865	866	864	860	861	860	858	862	863	861	862	864	864	866	870	871	872	864	
29	872	854	850	855	861	861	858	854	857	860	861	861	862	863	869	870	869	869	869	868	868	868	869	870	872	863	
30 D	872	870	866	865	862	862	861	861	862	862	860	855	855	870	887	888	904	895	880	888	857	872	859	853	857	869	
31	857	834	818	842	850	849	848	841	846	851	849	843	848	852	858	862	858	856	867	864	858	849	841	849	853	849	
Mean	857	852	848	849	851	853	854	858	861	863	861	859	860	862	868	874	879	883	882	880	876	867	863	859	857	863	

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE:

308. Eskdalemuir. MAGNETIC CHARACTER FIGURES: TEMPERATURE OF MAGNET HOUSE.

October, 1929.

Day.	Terrestrial Magnetic Elements.															Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2).	Temperature in Magnet House 200+
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 46000 γ +		Minimum 46000 γ +		Range.			
1 Q	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	80	0	85.7
2 Q	20 36	1074	1003	12 23	71	13 43	304	251	8 48	53	21 55	869	856	13 0	13	68	0	85.7
3	23 35	1063	1004	11 10	59	13 50	305	252	9 3	53	21 32	874	852	13 28	22	100	1	85.7
4	24 0	1070	1003	10 33	67	14 23	321	251	8 10	70	18 4	869	845	12 10	24	231	1	85.7
5	22 0	1109	989	10 30	120	14 54	330	249	3 47	81	18 54	884	838	23 32	46	108	0	85.6
6	20 48	1064	989	9 41	75	13 35	313	245	0 11	68	16 33	866	842	0 1	24			
7 D	6 42	1064	988	10 24	76	13 31	311	245	9 4	66	17 20	866	845	13 20	21	106	0	85.6
8 D	15 45	1076	949	13 11	127	15 57	360	158	20 16	202	18 17	937	764	22 21	173	869	2	85.6
9	23 0	1160	907	11 53	253	14 6	343	212	21 2	131	15 3	917	791	2 43	126	970	2	85.6
10	19 9	1100	931	11 50	169	13 59	321	163	19 0	158	12 18	912	818	0 1	94	624	1	85.6
11	19 52	1097	967	12 25	130	14 18	305	237	17 22	68	17 32	886	844	0 34	42	233	1	85.5
12	20 8	1083	995	10 38	88	2 49	305	247	9 7	58	16 33	878	833	3 21	45	131	1	85.5
13	3 50	1073	967	11 45	106	13 41	325	232	18 30	93	18 29	900	821	3 42	79	261	1	85.4
14	5 1	1063	961	10 36	102	13 30	323	237	20 38	86	16 28	905	802	5 3	103	284	1	85.4
15 Q	22 55	1053	1003	14 43	50	14 11	311	252	9 22	59	15 18	885	855	2 41	30	69	0	85.4
16 D	21 46	1053	992	10 40	61	13 15	310	246	21 27	64	15 51	874	862	11 50	12	80	0	85.4
17 D	18 7	1127	762	20 57	365	15 56	351	58	18 21	293	18 7	1066	683	20 56	383	3658	2	85.4
18	22 31	1108	914	22 12	194	2 30	389	158	22 23	231	19 34	959	782	2 45	17			

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

309. Eskdalemuir. (X.)

15,000 γ ($\cdot 15$ C.G.S. unit) +

November, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	γ 1038	γ 1042	γ 1047	γ 1051	γ 1049	γ 1047	γ 1053	γ 1061	γ 1058	γ 1056	γ 1035	γ 1042	γ 1029	γ 1035	γ 1032	γ 1032	γ 1041	γ 1046	γ 1046	γ 1056	γ 1047	γ 1032	γ 1025	γ 1020	γ 1033	γ 1042
2 D	1033	1037	1057	1046	1049	1045	1052	1040	1023	1008	1000	1007	1015	1011	1007	1020	1025	1021	1023	1029	1028	1051	1032	1032	1011	1028
3 D	1011	1047	1052	1062	1041	1032	973	940	961	986	906	910	981	987	1000	1031	1010	1054	1019	1051	997	1006	988	982	1048	1002
4 D	1048	1011	994	989	1007	1032	1016	1027	1015	1003	997	981	996	1007	1012	1001	1028	1023	1038	1012	1023	1032	1051	1022	1032	1015
5 D	1032	1029	1025	1032	1028	1021	1021	1032	1030	1009	1008	1006	982	1012	1015	1006	1031	1030	1073	1046	1046	1033	1030	1039	1038	1026
6	1038	1035	1013	1022	1040	1040	1022	1030	1020	1009	985	988	1002	1007	1022	1023	1030	1061	1030	1031	1041	1032	1039	1033	1043	1025
7	1043	1033	1032	1036	1037	1030	1037	1031	1028	1024	1016	1008	982	1006	1014	1027	1026	1031	1012	1012	1021	1037	1022	1037	1032	1024
8	1032	1037	1036	1033	1026	1042	1047	1036	1028	1011	1016	1016	1015	1015	1021	1024	1030	1037	1041	1042	1044	1046	1057	1054	1057	1033
9	1057	1051	1046	1046	1049	1050	1046	1045	1046	1045	1034	1031	1024	1027	1018	1015	1030	1024	1030	1035	1037	1038	1037	1036	1034	1037
10 Q	1034	1032	1036	1036	1036	1036	1036	1034	1031	1023	1011	1015	1017	1020	1022	1027	1030	1035	1038	1042	1045	1043	1045	1042	1042	1032
11 Q	1042	1041	1041	1042	1046	1046	1045	1041	1037	1025	1010	1009	1012	1018	1031	1036	1037	1042	1046	1047	1050	1050	1049	1047	1046	1037
12	1046	1046	1046	1046	1045	1056	1051	1050	1046	1039	1032	1032	1033	1038	1040	1035	1035	1040	1038	1040	1041	1042	1045	1040	1036	1042
13	1036	1041	1043	1043	1046	1042	1049	1046	1042	1036	1025	1020	1020	1024	1028	1027	1031	1036	1041	1044	1039	1030	1025	1035	1039	1035
14	1039	1035	1035	1039	1041	1045	1049	1045	1045	1041	1039	1032	1031	1029	1025	1025	1024	1027	1041	1045	1041	1037	1031	1035	1041	1036
15	1041	1036	1046	1046	1045	1060	1051	1036	1040	1031	1014	1025	1023	1021	1023	1030	1010	1032	1037	1034	1040	1034	1043	1061	1060	1036
16 D	1060	1041	1045	1051	1045	1025	1051	1026	1020	1015	1009	990	969	975	1008	1010	1034	1015	1024	1012	995	1015	1016	1030	1026	1019
17	1026	1026	1027	1027	1029	1029	1029	1025	1022	1019	1014	1012	1009	1020	1026	1029	1034	1038	1040	1040	1040	1039	1035	1034	1035	1028
18 Q	1035	1036	1039	1039	1040	1041	1044	1044	1040	1032	1025	1019	1019	1026	1030	1030	1031	1035	1039	1040	1040	1044	1043	1041	1041	1036
19	1041	1040	1040	1040	1043	1045	1051	1059	1051	1042	1039	1036	1035	1027	1027	1038	1036	1039	1042	1045	1043	1042	1044	1041	1043	1041
20	1043	1040	1041	1043	1039	1036	1045	1048	1049	1045	1042	1040	1045	1041	1039	1029	1035	1024	1008	990	1010	1022	1028	1024	1024	1033
21	1024	1026	1027	1030	1035	1035	1042	1050	1045	1040	1028	1019	1024	1040	1043	1042	1045	1051	1055	1041	1031	1045	1047	1045	1041	1038
22	1041	1040	1044	1048	1046	1048	1049	1048	1044	1039	1034	1030	1034	1043	1047	1053	1054	1043	1040	1041	1044	1047	1048	1049	1058	1044
23	1058	1056	1040	1039	1040	1046	1049	1047	1044	1043	1034	1032	1029	1030	1035	1041	1045	1049	1049	1049	1049	1044	1044	1043	1044	1043
24 Q	1044	1044	1044	1044	1049	1049	1050	1053	1050	1045	1038	1034	1034	1038	1042	1040	1041	1044	1047	1049	1054	1054	1053	1050	1049	1046
25 Q	1049	1047	1048	1048	1048	1052	1053	1052	1048	1043	1037	1033	1033	1032	1032	1024	1039	1046	1055	1059	1058	1058	1057	1053	1053	1046
26	1053	1049	1048	1053	1052	1053	1057	1057	1060	1060	1057	1049	1038	1042	1048	1048	1051	1053	1060	1057	1046	1048	1053	1052	1053	1052
27	1053	1043	1038	1035	1032	1038	1043	1043	1046	1046	1040	1038	1036	1029	1031	1038	1036	1034	1042	1040	1036	1048	1078	1046	1037	1041
28	1037	1047	1047	1042	1040	1038	1042	1046	1047	1045	1039	1032	1031	1037	1042	1041	1042	1042	1041	1030	1027	1045	1042	1048	1042	1041
29	1042	1047	1045	1047	1047	1042	1052	1051	1042	1037	1031	1026	1021	1023	1031	1032	1027	1046	1042	1052	1044	1049	1052	1048	1045	1041
30	1045	1046	1045	1045	1043	1046	1050	1046	1045	1037	1031	1027	1029	1032	1037	1027	1025	1043	1039	1042	1052	1067	1056	1042	1046	1042
Mean	1041	1039	1039	1040	1040	1042	1040	1037	1031	1021	1018	1018	1018	1023	1028	1029	1033	1038	1039	1038	1037	1040	1041	1039	1041	1035

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

310. Eskdalemuir. (-Y.)

4,000 γ ($\cdot 04$ C.G.S. unit) +

November, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	γ 273	γ 286	γ 277	γ 271	γ 271	γ 272	γ 279	γ 279	γ 274	γ 271	γ 272	γ 291	γ 291	γ 296	γ 290	γ 284	γ 284	γ 284	γ 284	γ 286	γ 272	γ 257	γ 237	γ 231	γ 270	γ 275
2 D	270	248	243	243	246	251	264	264	263	278	270	275	284	298	286	292	287	290	287	280	272	283	250	264	256	271
3 D	256	231	231	214	251	284	299	326	305	290	284	284	300	282	284	236	273	238	247	253	238	179	278	291	250	265
4 D	250	243	264	277	284	259	255	274	270	257	272	278	282	299	295	272	263	244	183	242	263	264	257	252	259	263
5 D	259	272	275	274	265	278	271	270	264	251	261	284	278	284	298	272	261	257	243	244	245	272	256	265	276	267
6	276	265	258	275	263	260	270	280	282	268	266	279	282	286	284	280	276	242	269	274	251	251	247	259	254	268
7	254	262	266	264	264	272	271	264	261	253	259	284	301	309	298	285	208	245	266	255	261	238	266	244	253	265
8	253	255	250	262	277	273	283	282	284	283	282	282	285	285	285	281	278	277	277	279	277	277	280	276	273	276
9	273	271	270	270	273	271	270	270	271	269	271	282	287	301	310	290	279	283	288	274	271	270	270	270	267	277
10 Q	267	267	269	269	268	268	267	265	264	263	264	272	279	283	278	279	278	277	277	276	274</					

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

311. Eskdalemuir. (Z.)

44,000 γ ('44 C.G.S. unit) +

November, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day. 1	853	850	850	852	851	851	845	845	845	845	845	842	845	849	852	855	855	854	853	852	856	864	858	863	845	851
2 D	845	844	838	837	840	842	841	842	844	842	845	851	851	856	868	874	870	869	873	876	877	845	849	839	796	851
3 D	796	836	825	792	797	794	805	796	817	840	860	868	893	916	917	941	939	928	897	891	861	853	836	798	826	855
4 D	826	841	838	821	825	837	847	853	853	858	861	863	862	862	868	881	896	897	897	881	876	872	857	832	836	859
5 D	836	848	849	849	848	851	853	857	857	858	856	855	860	862	869	881	885	886	882	872	862	849	853	850	835	859
6	835	830	832	832	839	847	850	852	858	860	870	868	874	880	885	882	880	886	876	872	874	867	860	856	843	861
7	843	851	858	858	858	857	857	859	860	860	861	857	859	868	884	892	923	908	898	904	896	885	863	857	864	872
8	864	865	865	865	864	863	861	865	865	868	861	862	865	870	873	896	877	880	880	880	880	880	876	876	876	870
9	876	877	877	877	877	877	877	877	876	877	877	877	881	892	909	916	920	906	897	893	889	886	885	885	885	887
10 Q	885	885	883	885	885	885	884	885	886	887	887	885	882	881	882	882	882	883	883	882	882	881	881	881	881	883
11 Q	881	881	881	881	881	881	881	881	885	885	885	880	878	878	877	877	878	879	878	877	877	879	880	879	878	880
12	878	877	877	877	877	874	874	875	877	879	878	866	868	870	873	875	877	877	878	879	878	879	877	878	870	876
13	870	866	868	870	870	872	870	870	872	871	869	865	863	869	874	877	878	880	878	879	877	885	885	874	870	873
14	870	872	871	874	874	874	874	874	874	874	874	872	876	882	883	885	888	891	890	886	887	890	892	883	878	880
15	878	871	855	862	871	872	871	870	870	871	878	878	882	886	891	893	902	901	895	900	897	891	888	874	854	881
16 D	854	859	866	867	867	855	837	853	857	863	876	879	888	906	911	951	953	930	951	969	897	875	894	893	890	890
17	890	882	880	882	882	883	884	886	886	883	882	882	882	884	887	890	890	888	888	886	886	886	887	888	878	885
18 Q	887	888	887	887	886	885	884	885	887	889	886	882	883	887	893	898	898	895	892	891	890	889	889	887	885	889
19	885	884	884	884	883	883	880	879	879	879	877	875	879	883	883	886	888	890	889	887	887	887	887	884	879	883
20	879	877	880	880	882	881	881	880	880	876	876	879	879	884	891	900	914	928	964	988	966	941	924	914	905	902
21	905	900	897	896	893	892	890	888	888	888	883	880	882	881	882	884	886	884	883	888	904	895	888	885	884	889
22	884	884	884	881	882	882	882	881	880	880	877	874	872	872	876	879	880	882	884	892	896	889	886	884	877	882
23	877	872	876	877	878	879	879	879	879	881	881	877	877	877	881	881	881	882	883	883	882	885	885	885	881	880
24 Q	881	881	881	881	880	880	879	879	879	880	875	875	875	876	876	876	876	875	876	873	875	875	875	876	876	877
25 Q	876	876	876	875	874	875	875	875	874	875	875	877	877	879	881	884	885	885	885	881	875	870	870	870	870	877
26	870	872	870	870	870	870	869	870	869	870	869	868	870	870	872	872	873	873	874	877	887	885	883	883	877	873
27	877	873	866	869	873	877	877	877	876	872	870	873	874	877	881	882	885	893	897	894	891	889	885	882	881	880
28	881	878	878	878	877	876	875	875	875	875	872	868	871	873	874	880	882	882	882	892	893	887	886	883	882	879
29	882	876	876	876	876	872	868	872	872	875	876	876	879	880	880	882	888	887	887	887	885	883	880	874	876	879
30	876	879	878	876	876	876	876	876	877	879	877	876	877	879	878	882	888	890	887	885	883	875	872	875	875	879
Mean	868	869	868	867	868	868	869	870	871	872	871	873	873	878	882	887	891	890	889	890	886	881	878	873	869	876

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

312. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

November, 1929.

Day.	Terrestrial Magnetic Force.															Character Figure ΣR^2 $\frac{100\gamma^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House $200 +$
	North Component.					West Component.					Vertical Component.							
	Maximum 15000 γ +		Minimum 15000 γ +		Range.	Maximum 4000 γ +		Minimum 4000 γ +		Range.	Maximum 44000 γ +		Minimum 44000 γ +		Range.			
1	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	137	I	85.2
2 D	7 14	1076	1002	11 50	74	13 10	305	220	22 10	85	20 38	872	841	11 17	31	567	I	85.0
3 D	20 36	1118	951	23 56	167	13 40	318	184	20 30	134	20 28	881	777	24 0	104	2224	2	85.1
4 D	19 22	1214	872	10 21	342	6 48	350	99	17 6	251	15 8	968	762	0 6	206	560	I	85.0
5 D	0 6	1082	968	10 40	114	13 24	311	130	17 42	181	17 42	914	813	3 9	101	720	I	85.0
6	20 27	1118	956	14 54	162	11 4	331	130	17 43	201	17 42	898	825	0 1	73		I	85.0
7	17 0	1096	945	10 0	151	13 29	305	217	16 43	88	16 40	889	835	23 46	54	335	I	85.0
8	16 26	1073	966	11 33	107	12 50	332	150	16 3	182	16 6	936	838	0 1	98	542	I	85.0
9	21 50	1082	1006	9 7	76	21 49	291	240	1 52	51	19 48	881	860	9 52	21	88	I	85.1
10 Q	0 25	1057	1004	14 20	53	13 48	324	263	9 34	61	15 44	925	875	17 50	50	90	I	85.1
11 Q	20 18	1046	1005	10 23	41	12 59	289	262	8 44 & 10 18	27	10 27	889	881	13 0	8	25	0	85.1
12	20 23	1051	1001	11 22	50	12 22	283	255	8 20	28	10 0	885	877	15 0	8	33	0	85.0
13	5 10	1060	1030	9 52	30	24 0	288	230	22 51	58	22 33	880	869	24 0	11	44	0	85.0
14	6 18	1053	1015	21 20	38	12 38	296	216	21 24	80	21 33	889	862	11 34	27	86	0	85.0
15	23 42	1059	1018	16 35	41	15 44	295	217	23 29	78	21 36	893	867	0 42	26	84	0	84.9
16 D	23 1	1081	994	15 52	87	12 42	304	191	19 12	113	16 12	907	852	1 55	55	234	I	84.9
17	20 13	1076	878	20 6	198	20 3	375	161	19 30	214	19 29	1013	834	5 47	179	1170	2	84.9
18 Q	20 47	1042	1005	11 38	37	13 20	293	250	8 50	43	15 48	890	879	0 41	11	33	0	84.8
19	22 12	1048	1014	11 3	34	13 36	290	249	21 57	41	15 22	899	881	11 0	18	32	0	84.8
20	6 49	1060	10															

TERRESTRIAL MAGNETIC FORCE : NORTH COMPONENT.

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

313. Eskdalemuir. (X.)

15,000 γ (·15 C.G.S. unit) +

December, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1 Q	1046	1041	1039	1041	1042	1046	1046	1046	1044	1037	1031	1028	1029	1032	1031	1037	1043	1046	1051	1053	1055	1051	1051	1048	1047	1042
2 Q	1047	1051	1050	1051	1053	1056	1061	1057	1050	1040	1032	1030	1026	1026	1026	1034	1040	1044	1046	1053	1055	1051	1050	1050	1050	1045
3	1050	1050	1047	1047	1049	1053	1055	1053	1048	1042	1039	1035	1031	1036	1035	1042	1023	1019	1041	1047	1026	1041	980	1030	999	1037
4 D	999	991	1046	1008	1021	1025	1009	984	954	975	979	979	1000	1004	1007	988	1005	997	987	986	987	993	1005	1014	1026	998
5 D	1026	1019	1021	1045	1004	975	1025	1015	971	953	978	979	989	1009	1021	999	1011	1003	1007	995	1002	1009	1014	1022	1056	1004
6	1056	1039	1038	1037	1015	1010	998	1004	984	985	993	986	992	1003	1004	1025	1030	1014	1008	1005	1031	1003	1025	1025	1022	1012
7	1022	1029	1028	1030	1034	1033	1022	1022	1016	1004	1011	1016	1015	1003	1002	1003	1017	1025	1031	1034	1035	1038	1038	1037	1034	1023
8	1034	1034	1038	1018	1054	1049	1041	1033	1029	1029	1025	1021	1012	999	1008	1020	1014	1012	1035	1038	1039	1034	1028	1031	1036	1028
9	1036	1033	1033	1037	1032	1040	1044	1038	1026	1024	1023	1024	1022	1019	1023	1025	1027	1028	1027	1016	1022	1020	1030	1049	1033	1029
10	1033	1036	1041	1037	1033	1037	1038	1047	1043	1038	1028	1026	1029	1031	1027	1007	1017	1024	1023	1034	1035	1033	1044	1053	1038	1033
11	1038	1037	1052	1040	1051	1038	1050	1042	1041	1027	1011	1009	1021	1022	1030	1025	1042	1025	1018	1021	1036	1024	1029	1011	1022	1031
12	1022	1038	1025	1036	1035	1046	1042	1029	1019	1004	1012	1011	1016	1010	1023	1031	1037	1035	1037	1024	1020	1031	1037	1040	1036	1028
13	1036	1041	1040	1040	1042	1041	1045	1037	1039	1037	1032	1026	1027	1030	1033	1036	1035	1038	1041	1043	1043	1042	1042	1042	1040	1038
14	1040	1039	1037	1038	1038	1041	1041	1041	1039	1036	1031	1031	1029	1030	1032	1037	1043	1041	1030	1040	1030	1038	1039	1043	1046	1037
15	1046	1050	1040	1039	1041	1043	1046	1049	1041	1040	1036	1030	1031	1035	1030	1026	1026	1031	1037	1042	1045	1041	1038	1051	1041	1039
16 D	1041	1044	1045	1050	1051	1047	1048	1046	1044	1037	1024	1023	1021	1009	1001	999	1023	1022	1062	988	975	1013	1009	1010	1009	1026
17 D	1009	1016	1007	1009	1014	1016	1024	1030	1035	1030	1031	1030	1030	1027	1026	1022	1025	1029	1013	978	993	1020	1003	1010	1010	1017
18	1010	1017	1021	1026	1015	1027	1025	1025	1027	1022	1014	1014	1016	1013	1011	1017	1025	1029	1021	1019	1025	1030	1045	1031	1025	1022
19 Q	1025	1030	1030	1029	1028	1030	1032	1034	1031	1029	1030	1029	1031	1036	1038	1035	1036	1035	1034	1038	1039	1038	1038	1038	1033	1033
20 Q	1033	1040	1033	1034	1038	1040	1041	1043	1043	1034	1024	1020	1021	1023	1027	1029	1032	1037	1039	1038	1040	1041	1041	1039	1038	1035
21 Q	1038	1039	1038	1038	1039	1040	1043	1044	1042	1038	1029	1025	1023	1027	1029	1033	1035	1039	1043	1046	1048	1048	1045	1045	1052	1038
22 D	1052	1046	1049	1040	1039	1056	1056	1054	1054	1055	1059	1036	1002	1012	1016	1007	1025	1018	999	1009	1024	1055	1049	1050	1029	1035
23	1029	1020	1025	1020	1024	1043	1034	1025	1025	1024	1024	1019	1017	1023	1027	1033	1033	1024	1039	1031	1026	1024	1037	1034	1033	1028
24	1033	1032	1034	1033	1034	1034	1037	1034	1034	1033	1033	1030	1028	1029	1029	1035	1039	1036	1038	1044	1044	1037	1038	1060	1025	1036
25	1025	1030	1028	1029	1040	1045	1035	1035	1034	1036	1037	1033	1028	1027	1027	1038	1043	1039	1032	1039	1035	1048	1042	1048	1033	1036
26	1033	1035	1033	1033	1040	1039	1048	1047	1041	1037	1033	1029	1026	1028	1038	1044	1043	1042	1043	1042	1048	1050	1042	1043	1043	1039
27	1043	1044	1041	1039	1039	1043	1048	1048	1046	1037	1029	1028	1029	1023	1031	1036	1040	1038	1037	1038	1039	1043	1047	1045	1045	1039
28	1045	1044	1043	1042	1043	1045	1047	1048	1045	1040	1034	1033	1033	1034	1038	1038	1038	1032	1034	1042	1042	1046	1041	1043	1047	1041
29	1047	1043	1041	1048	1048	1049	1048	1048	1044	1038	1031	1036	1036	1037	1038	1039	1046	1048	1047	1038	1038	1037	1043	1043	1039	1042
30	1039	1043	1055	1037	1039	1046	1047	1052	1042	1026	1028	1032	1028	1028	1035	1032	1032	1039	1042	1044	1046	1048	1045	1044	1043	1040
31	1043	1043	1052	1039	1042	1044	1048	1048	1047	1033	1038	1045	1033	1039	1035	1019	1042	1047	1015	1018	1030	1031	1033	1029	1030	1037
Mean	1035	1035	1037	1035	1036	1038	1039	1037	1032	1026	1024	1022	1022	1023	1025	1026	1031	1030	1031	1029	1030	1033	1035	1037	1034	1031

TERRESTRIAL MAGNETIC FORCE : WEST COMPONENT.

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

314. Eskdalemuir. (-Y.)

4,000 γ (·04 C.G.S. unit) +

December, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mean.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.
Day.	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	$\gamma$	γ
1 Q	261	267	270	271	269	268	267	266	262	260	263	274	278	282	279	276	275	270	265	268	269	268	268	268	271	270
2 Q	271	275	270	272	270	270	268	268	264	266	272	278	282	288	282	282	282	276	272	266	268	267	267	267	268	272
3	268	269	268	269	271	270	268	266	262	262	268	275	283	294	286	300	303	301	276	275	256	137	200	257	194	264
4 D	194	215	276	275	311	286	288	288	289	284	275	288	274	289	293	250	270	260	268	215	202	200	186	174	189	256
5 D	189	218	228	275	288	299	303	302	275	274	254	262	284	275	289	263	256	241	254	248	228	212	227	230	209	258
6	209	215	237	228	290	299	311	282	288	282	268	282	282	288	288	274	272	274	248	262	247	245	255	249	252	267
7	252	262	250	252	254	262	262	264	262	266	275	268	279	268	275	262	260	271	270	270	268	264	262	260	257	264
8	257	262	262	276	274	279	284	275	258	256	262	265	276	271	276	275	275	233	268	268	266	261	230	235	252	264
9																										

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

315. Eskdalemuir. (Z.)

44,000 γ (44 C.G.S. unit) +

December, 1929.

Hour. G.M.T.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	
Day.	γ																										
1 Q	875	876	877	879	879	878	876	876	876	876	876	874	872	875	879	880	879	879	879	876	876	876	876	877	877	877	877
2 Q	877	875	874	875	875	872	872	872	872	874	872	872	872	875	879	882	883	883	881	881	879	877	878	878	878	878	876
3	878	879	879	879	879	877	876	877	877	878	877	877	877	877	882	888	892	901	897	889	893	897	891	847	844	881	
4 D	844	819	808	802	810	824	852	863	872	884	901	921	928	928	940	973	957	941	945	947	908	896	897	882	854	889	
5 D	854	830	795	797	797	801	832	852	873	883	892	909	933	948	941	956	947	936	924	919	908	898	886	883	870	883	
6	870	843	819	810	804	810	832	845	861	872	880	886	893	906	921	940	941	937	926	921	914	888	893	893	891	880	
7	891	870	869	873	874	870	878	880	883	886	889	888	890	901	915	917	911	899	893	891	890	889	889	889	890	889	
8	890	888	882	879	859	861	860	867	877	879	879	878	878	886	894	896	903	918	904	890	890	894	891	883	885	885	
9	883	883	887	886	885	878	876	879	881	881	882	883	884	887	889	891	894	896	897	895	895	899	890	880	876	887	
10	876	876	876	879	879	880	883	883	884	885	885	880	874	877	889	899	906	908	906	899	894	891	886	880	880	887	
11	880	880	856	860	867	867	854	866	871	876	879	879	879	880	884	889	891	897	918	921	911	908	900	888	873	883	
12	873	817	820	858	841	825	850	867	877	884	886	886	886	888	892	892	889	891	889	894	903	906	892	889	887	875	
13	887	881	880	877	874	873	870	876	873	876	881	883	883	884	888	888	888	887	884	884	884	884	884	884	884	881	
14	884	884	884	883	881	881	881	882	884	881	884	881	877	881	888	888	887	885	890	896	892	888	885	881	885	885	
15	881	875	877	878	877	879	879	877	880	880	882	881	880	881	887	890	892	892	890	888	885	886	887	888	885	883	
16 D	885	885	885	882	880	881	881	881	881	881	882	882	881	893	914	948	992	1028	1068	1019	978	938	924	917	912	921	
17 D	912	899	898	897	894	893	891	890	889	887	886	885	882	885	888	890	892	891	897	919	968	956	915	917	917	901	
18	917	912	904	894	881	863	876	882	883	883	887	887	884	889	893	893	895	893	896	901	900	897	897	895	895	891	
19 Q	895	894	894	894	892	891	890	890	890	890	890	890	891	894	894	894	894	893	891	890	890	889	888	890	889	891	
20 Q	889	883	886	886	886	886	886	885	883	883	883	880	875	875	879	883	885	885	885	886	884	884	884	883	883	883	
21 Q	883	882	881	881	881	880	880	879	879	878	878	878	874	875	878	882	882	882	882	881	880	879	879	879	879	880	
22 D	877	875	871	871	870	858	860	862	864	865	863	862	865	870	886	899	899	909	946	938	924	903	890	855	851	882	
23	851	871	878	876	870	865	872	880	883	884	887	884	882	880	883	887	887	891	891	893	905	908	895	891	889	884	
24	889	887	886	884	884	884	884	885	884	883	880	880	876	875	879	884	883	884	887	886	884	889	895	882	884	884	
25	884	882	884	884	884	881	881	883	883	883	881	884	885	884	884	885	883	882	885	888	890	892	886	885	887	884	
26	887	884	882	881	879	880	880	880	881	881	881	881	881	881	884	884	882	883	884	885	888	885	886	886	885	883	
27	885	884	881	881	881	880	880	880	881	880	881	883	883	881	881	884	885	886	887	888	890	888	885	885	885	883	
28	885	885	884	882	882	881	881	881	882	882	879	881	881	881	882	886	885	885	886	886	886	889	889	886	886	884	
29	886	884	882	879	877	876	877	878	879	880	878	878	879	879	881	884	883	880	881	885	886	891	892	890	889	882	
30	889	887	880	878	875	877	874	870	877	880	878	878	879	881	881	886	889	885	885	883	882	882	882	882	883	881	
31	883	883	877	879	878	878	878	878	878	879	874	870	870	871	877	887	888	883	896	902	895	892	892	889	884	882	
Mean	882	876	872	872	870	869	872	876	879	880	882	883	883	886	891	898	899	900	902	902	898	894	891	885	882	885	

DAILY EXTREMES OF EACH COMPONENT OF TERRESTRIAL MAGNETIC FORCE :

316. Eskdalemuir.

MAGNETIC CHARACTER FIGURES : TEMPERATURE IN MAGNET HOUSE.

December, 1929.

Day.	Terrestrial Magnetic Force.										Character Figure $\frac{\Sigma R^2}{100\gamma^2}$	Magnetic Character of Day (0-2)	Temperature in Magnet House $200 +$					
	North Component.					West Component.								Vertical Component.				
	Maximum $15000 \gamma +$		Minimum $15000 \gamma +$		Range.	Maximum $4000 \gamma +$		Minimum $4000 \gamma +$		Range.				Maximum $44000 \gamma +$		Minimum $44000 \gamma +$		Range.
1 Q	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ	h. m.	γ	γ	h. m.	γ			
2 Q	18 40	1056	1025	11 10	31	13 0	285	256	0 1	29	14 40	880	872	12 2	8	19	0	84.4
3	19 23	1067	1020	13 39	47	12 42	288	254	19 21	34	16 59	883	871	11 5	12	35	0	84.3
4 D	22 43	1072	950	21 48	122	16 20	321	87	20 48	234	20 52	903	824	23 38	79	759	2	84.3
5 D	2 18	1070	943	7 58	127	4 5	348	168	23 3	180	15 21	987	795	1 4	192	854	2	84.3
6	3 14	1060	924	8 48	136	6 28	319	188	0 4	131	15 8	963	786	2 12	177	670	1	84.3
7	20 25	1085	938	20 44	147	4 15	323	198	2 40	125	15 12	952	794	4 30	158	622	1	84.3
8	0 35	1056	986	13 24	70	0 36	304	236	1 15	68	14 32	921	863	1 9	58	129	1	84.2
9	4 7	1064	983	17 2	81	5 9	294	202	17 10	92	17 10	930	855	4 2	75	207	1	84.1
10	22 53	1097	1008	22 32	89	12 52	280	200	23 19	80	21 12	899	875	24 0	24	149	1	84.1
11	22 38	1073	993	14 58	80	14 40	288	227	22 19	61	16 30	913	874	12 9	39	116	1	84.1
12	1 59	1068	996	19 20 & 20 58	72	5 27	301	260	21 27	141	19 22	927	847	2 14	80	315	1	84.1
13	4 43	1062	987	8 59	75	4 19	301	206	1 28	95	19 53	904	813	4 43	91	229	1	84.1
14	5 41	1051	1023	11 12	28	11 27	288	246	2 10	42	14 33	889	869	5 31	20	29	1	84.1
15	18 52	1057	1011	18 21	46	18 6	281	212	18 40	69	18 40	904	877	12 10	27	76	1	84.1
16 D	22 54	1067	1021	16 5	46	13 27	293	234	22 51	59	16 30	893	873	1 0	20	60	1	84.0
17 D	18 10	1185	803	18 34	382													

(Not corrected for the effect of the North Force on the West Magnetograph, or *vice versa*, or for the effect of the Horizontal Force on the V.F. Balance).

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

317. Eskdalemuir. **1929.**

NORTH COMPONENT (all days except Aug. 1, 2, 3 and 10).

Month and Season.	Hour.	GMT.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
	1.	2.																						
Jan. ...	+0.8	+3.4	+3.5	+5.9	+7.2	+7.4	+7.5	+4.4	+0.8	-8.1	-13.5	-15.0	-11.0	-6.0	-3.6	-2.6	+0.3	+1.9	+3.9	+3.6	+2.4	+3.5	+3.0	+1.7
Feb. ...	-5.5	+3.2	+5.1	+9.8	+9.6	+11.7	+11.5	+6.7	-2.8	-11.7	-19.0	-22.4	-17.2	-7.5	-2.6	+1.1	+5.1	+5.8	+6.1	+7.0	+4.3	+1.4	+0.5	+2.5
Mar. ...	+6.2	+6.3	-0.9	+5.0	+3.1	+2.9	+0.7	-4.1	-12.2	-20.7	-25.1	-28.3	-20.3	-6.5	+2.9	+6.0	+8.2	+9.5	+11.7	+10.5	+10.3	+11.1	+12.7	+11.0
Apr. ...	+9.5	+7.1	+7.3	+8.3	+9.3	+7.8	+6.6	-2.7	-14.9	-27.2	-33.7	-34.2	-28.3	-16.8	-5.7	+3.1	+10.2	+11.6	+14.9	+14.7	+13.8	+13.1	+13.9	+12.4
May ...	+7.2	+4.9	+2.7	+4.9	+6.5	+3.7	-2.4	-9.0	-17.9	-27.4	-30.5	-32.4	-27.4	-16.0	-1.5	+3.3	+16.3	+24.2	+22.7	+21.4	+17.9	+10.5	+8.4	+9.8
June ...	+3.0	+0.5	+2.7	+3.6	+3.4	+1.6	-4.9	-11.1	-18.5	-26.4	-31.0	-30.0	-20.6	-11.6	+2.0	+12.0	+19.3	+25.1	+25.8	+20.6	+14.7	+10.3	+6.2	+3.5
July ...	+5.5	+4.6	+6.3	+6.8	+7.5	+1.9	-4.8	-12.8	-24.6	-32.3	-34.2	-29.3	-26.5	-12.9	-0.4	+10.5	+20.0	+25.8	+29.8	+21.9	+16.3	+10.6	+6.4	+4.1
Aug. ...	+5.6	+5.5	+6.0	+6.3	+5.0	+1.9	-4.5	-11.9	-21.2	-33.1	-35.0	-28.2	-17.6	-9.4	+2.8	+13.6	+18.7	+18.2	+16.6	+17.3	+13.3	+11.7	+11.7	+6.5
Sept. ...	+7.1	+10.4	+11.0	+7.8	+9.7	+7.5	+2.5	-5.9	-17.9	-31.9	-35.9	-31.4	-21.9	-13.4	-6.2	+2.7	+9.6	+12.2	+11.8	+16.4	+15.3	+14.4	+14.4	+11.9
Oct. ...	+7.5	+5.0	+9.0	+10.1	+11.0	+9.0	+8.8	+3.0	-7.5	-21.4	-27.2	-28.3	-22.3	-17.6	-6.5	+0.2	+3.2	+7.4	+7.4	+8.2	+8.2	+11.1	+11.1	+9.5
Nov. ...	+4.8	+4.3	+5.4	+5.8	+6.9	+7.1	+5.0	+2.1	-3.5	-13.8	-16.7	-16.4	-11.6	-7.1	-5.4	-1.6	+3.3	+4.4	+3.9	+2.7	+5.5	+5.7	+3.9	+6.1
Dec. ...	+3.8	+5.7	+3.7	+4.6	+6.6	+8.1	+6.0	+0.3	-4.8	-6.8	-8.9	-9.6	-8.5	-6.1	-5.6	+0.1	-0.9	-0.2	-2.4	-0.8	+2.3	+4.0	+6.0	+3.2
Year ...	+4.6	+5.1	+5.1	+6.6	+7.1	+5.9	+2.7	-3.4	-12.2	-21.8	-25.9	-25.5	-19.4	-10.9	-2.5	+4.0	+9.4	+12.2	+12.7	+12.0	+10.4	+8.7	+8.2	+6.9
Winter...	+1.0	+4.1	+4.4	+6.5	+7.6	+8.6	+7.5	+3.4	-3.0	-10.1	-14.5	-15.9	-12.1	-6.7	-4.3	-0.7	+1.9	+3.0	+2.8	+3.0	+3.6	+2.9	+3.3	+3.4
Equinox ...	+7.6	+7.2	+6.6	+7.8	+8.3	+6.8	+4.7	-2.4	-13.1	-25.3	-30.5	-30.5	-23.2	-13.6	-3.9	+3.0	+7.8	+10.2	+11.6	+12.6	+11.9	+12.4	+13.0	+11.2
Summer ...	+5.3	+3.9	+4.4	+5.4	+5.6	+2.3	-4.1	-11.2	-20.5	-29.8	-32.7	-30.0	-23.0	-12.5	+0.7	+9.9	+18.6	+23.3	+23.7	+20.3	+15.5	+10.8	+8.2	+6.0

318. Eskdalemuir. **1929.**

WEST COMPONENT (all days except Aug. 1, 2, 3 and 5).

Jan. ...	-8.9	-5.3	-4.6	-2.2	-1.5	-1.3	-3.2	-4.4	-6.6	-5.1	-1.2	+9.7	+17.6	+16.5	+15.2	+7.3	+7.2	+7.1	+2.6	-2.0	-8.6	-8.0	-10.0	-18.5
Feb. ...	-17.6	-13.7	-11.8	-8.6	-3.3	-1.9	-1.9	-4.5	-7.8	-5.2	+2.9	+14.0	+22.7	+25.7	+26.0	+18.0	+11.1	+7.1	+10.4	+1.2	-11.7	-13.7	-19.0	-18.5
Mar. ...	-9.2	-9.9	-11.2	-8.5	-6.7	-4.7	-9.0	-15.6	-14.0	-10.0	+3.3	+20.4	+29.3	+33.1	+31.6	+19.7	+7.9	+1.1	-1.9	-5.1	-8.0	-9.3	-11.5	-12.0
Apr. ...	-4.7	-8.2	-10.2	-9.8	-11.5	-14.0	-26.7	-26.7	-25.8	-16.0	-0.7	+17.3	+30.1	+34.7	+28.4	+22.7	+15.4	+7.9	+4.4	+2.2	+0.1	-3.8	-3.3	-5.8
May ...	-3.0	-5.3	-5.6	-7.1	-13.5	-21.8	-22.3	-28.2	-23.9	-11.7	+3.5	+17.3	+25.2	+36.7	+24.5	+17.9	+15.0	+10.6	+7.1	+3.8	-2.5	-1.9	+0.5	-1.2
June ...	-3.9	-4.0	-7.0	-13.9	-20.8	-28.4	-30.5	-30.7	-26.8	-16.8	-2.8	+14.8	+26.9	+31.3	+32.3	+27.4	+19.1	+13.8	+10.8	+7.1	+6.0	+0.4	-1.8	-2.4
July ...	-9.0	-11.8	-10.1	-14.0	-19.3	-24.5	-27.8	-30.9	-27.9	-15.1	-1.9	+14.7	+25.8	+33.1	+32.5	+28.9	+21.3	+16.2	+10.4	+6.5	+5.2	+2.7	-0.5	-4.6
Aug. ...	-1.7	-5.0	-6.9	-11.9	-14.9	-19.4	-24.8	-26.2	-23.2	-11.4	+3.0	+19.8	+30.3	+30.9	+26.1	+16.5	+9.5	+5.9	+3.2	+2.7	+3.0	-0.5	-1.7	-3.2
Sept. ...	-3.7	-4.9	-13.5	-10.0	-7.6	-8.1	-8.5	-17.2	-16.3	-5.9	+10.1	+22.9	+30.9	+28.2	+21.2	+7.6	+1.9	+0.2	-1.6	-2.6	-4.1	-3.6	-6.2	-8.8
Oct. ...	-8.6	-4.8	-3.1	-3.0	-0.3	+0.5	-2.6	-8.0	-12.7	-8.9	+3.0	+18.9	+27.2	+29.5	+22.2	+16.3	+6.7	+0.2	-9.7	-12.7	-15.1	-12.6	-10.0	-12.3
Nov. ...	-7.8	-7.5	-6.7	-3.7	-0.5	+1.0	+2.2	-0.6	-4.7	+1.7	+6.9	+14.6	+17.6	+17.8	+10.6	+6.5	+3.9	+1.5	-1.9	-5.3	-11.4	-12.2	-10.5	-8.1
Dec. ...	-10.5	-7.8	-5.7	+2.1	+2.2	+4.3	+2.1	-0.4	-2.0	+1.4	+6.5	+13.2	+17.8	+18.5	+11.4	+10.8	+9.2	+6.1	-4.1	-6.1	-16.9	-18.6	-18.3	-15.2
Year ...	-7.4	-7.3	-8.1	-7.6	-8.2	-9.9	-12.7	-16.1	-15.9	-8.9	+2.7	+16.5	+25.1	+27.2	+23.5	+16.7	+10.7	+6.5	+2.5	-0.6	-5.1	-6.5	-7.6	-8.6
Winter...	-11.2	-8.6	-7.2	-3.1	-0.8	+0.5	-0.2	-2.5	-5.3	-2.7	+3.8	+12.9	+18.9	+19.6	+15.8	+10.7	+7.9	+5.5	+1.7	-3.1	-12.1	-13.1	-14.5	-13.0
Equinox ...	-6.5	-6.9	-9.5	-7.8	-6.5	-6.6	-10.7	-16.9	-17.2	-10.2	+3.9	+19.9	+29.4	+31.4	+25.9	+16.6	+8.0	+2.3	-2.2	-4.5	-6.8	-7.3	-7.7	-9.7
Summer ...	-4.4	-6.5	-7.4	-11.7	-17.1	-23.5	-27.3	-29.0	-25.5	-13.7	+0.5	+16.7	+27.1	+30.5	+28.9	+22.7	+16.2	+11.6	+7.9	+5.0	+2.9	+0.2	-0.9	-2.9

319. Eskdalemuir. **1929.**

VERTICAL COMPONENT (all days except Aug. 1, 2, 3 and 5).

Jan. ...	-3.5	-3.8	-3.9	-4.5	-4.4	-3.9	-3.2	-2.3	-1.7	-1.8	-3.0	-3.6	-2.7	+0.5	+2.9	+4.4	+4.7	+4.7	+5.6	+5.5	+5.7	+4.9	+3.1	+0.3
Feb. ...	-18.9	-16.0	-16.8	-14.8	-12.0	-9.0	-6.0	-2.9	-0.0	-0.2	-1.7	-1.7	+0.8	+7.0	+11.0	+20.1	+21.6	+19.9	+20.6	+22.1	+6.5	+4.3	+10.8	-14.5
Mar. ...	-11.8	-16.4	-23.7	-23.9	-21.4	-18.6	-12.6	-4.3	-2.2	-2.9	-4.5	-3.4	+0.9	+8.1	+15.4	+24.7	+29.9	+26.1	+20.8	+16.3	+9.9	+4.8	-3.1	-8.1
Apr. ...	-3.8	-4.4	-4.0	-5.1	-4.0	-2.5	-0.8	-1.2	-3.8	-7.6	-10.0	-12.6	-11.2	-5.2	+1.8	+6.5	+11.6	+14.5	+13.8	+11.6	+9.2	+6.6	+2.1	-1.8
May ...	-1.6	-2.2	-3.1	-5.5	-5.2	-3.3	-2.6	-3.7	-6.7	-11.5	-14.2	-15.0	-10.6	-4.3	+3.5	+8.7	+12.1	+14.8	+14.3	+13.4	+10.2	+6.9	+4.6	+1.2
June ...	-3.1	-3.3	-2.9	-2.0	-1.6	-1.8	-2.7	-3.4	-6.1	-11.3	-14.3	-14.4	-10.2	-5.0	+1.1	+8.1	+13.7	+16.6	+16.0	+12.5	+8.3	+5.8	+1.9	-1.6
July ...	-7.1	-6.5	-6.8	-5.9	-4.7	-4.3	-3.8	-2.7	-3.4	-6.5	-10.1	-12.1	-8.2	-3.6	+3.4	+9.1	+15.1	+17.5	+18.5	+15.0	+10.2	+5.1	-2.8	-5.4
Aug. ...	-7.1	-6.9	-4.9	-3.0	-0.6	+0.1	+1.4	+0.5	-2.7	-8.0	-11.7	-12.8	-10.8	-4.1	+3.8	+10.7	+13.2	+15.6	+14.6	+10.2	+5.8	+1.3	+0.5	-4.9
Sept. ...	-11.1	-13.8	-10.7	-8.6	-7.8	-5.8	-3.8	-2.1	-3.3	-4.5	-6.8	-7.5	-4.5	+2.5	+9.4	+16.3	+19.0	+18.6	+16.0	+10.8	+5.8	+1.8	-3.4	-6.4
Oct. ...	-11.3	-15.2	-14.6	-12.6	-10.6	-9.1	-5.7	-2.4	-0.1	-2.4	-4.2	-3.5	-0.7	+4.6	+11.1	+15.8	+19.4	+18.8	+16.4	+12.5	+3.8	+0.3	-3.7	-6.3
Nov. ...	-6.5	-7.5	-8.7	-7.9	-7.7	-8.3	-7.4	-6.0	-4.6	-4.0	-5.0	-2.6	+1.6	+5.6	+11.0	+14.4	+13.4	+13.0	+13.6	+9.2	+4.3	+1.3	-3.5	-7.7
Dec. ...	-9.1	-12.8	-12.6	-14.8	-16.3	-12.7	-9.3	-6.4	-5.0	-3.3	-2.5	-2.1	+1.0	+6.3	+12.5	+13.7	+14.6	+17.1	+16.7	+13.3	+9.1	+5.6	+0.1	-3.0
Year ...	-7.9	-9.1	-9.4	-9.1	-8.0	-6.6	-4.7	-3.1	-3.3	-5.3	-7.3	-7.6	-4.5	+1.0	+7.2	+12.7	+15.7	+16.4	+15.6	+12.7	+7.4	+3.3	-1.3	-4.9
Winter...	-9.5	-10.0	-10.5	-10.5	-10.1	-8.5	-6.5	-4.4	-2.8	-2.4	-3.1	-2.5	+0.2	+4.9	+9.3	+13.1	+13.6	+13.7	+14.1	+12.5	+6.4	+1.9	-2.8	-6.2
Equinox ...	-9.5	-12.5	-13.3	-12.5	-10.9	-9.0	-5.7	-2.5	-2.3	-4.3	-6.4	-6.7	-3.9	+2.5	+9.4	+15.8	+20.0	+19.5	+16.7	+12.8	+7.2	+3.4	-2.0	-5.7
Summer ...	-4.7	-4.7	-4.4	-4.1	-3.0	-2.4	-1.9	-2.3	-4.7	-9.3	-12.6	-13.6	-9.9	-4.3	+2.9	+9.1	+13.5	+16.0	+15.9	+12.8	+8.6	+4.8	+1.0	-2.7

DIURNAL INEQUALITIES OF THE MAGNETIC COMPONENTS, DECLINATION, INCLINATION, AND HORIZONTAL FORCE. "ALL" DAYS.

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

Table 320: Declination (measured positive towards the West) for Eskdalemuir, 1929. Columns include Month and Season, Hour G.M.T. (1-24), and declination values for each hour.

INCLINATION (all days except Aug. 1, 2, 3, 5 and 10).

Table 321: Inclination for Eskdalemuir, 1929. Columns include Month and Season, Hour G.M.T. (1-24), and inclination values for each hour.

HORIZONTAL FORCE (all days except Aug. 1, 2, 3, 5 and 10).

Table 322: Horizontal Force for Eskdalemuir, 1929. Columns include Month and Season, Hour G.M.T. (1-24), and horizontal force values for each hour.

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE.— INTERNATIONAL QUIET DAYS.

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

Table 323: Eskdalemuir. NORTH COMPONENT (Quiet Days). 1929. Columns: Hour.G.M.T. (1-24), Month and Season, and 24 columns of magnetic data.

Table 324: Eskdalemuir. WEST COMPONENT (Quiet Days). 1929. Columns: Month and Season, and 24 columns of magnetic data.

Table 325: Eskdalemuir. VERTICAL COMPONENT (Quiet Days). 1929. Columns: Month and Season, and 24 columns of magnetic data.

DIURNAL INEQUALITIES OF THE MAGNETIC COMPONENTS, DECLINATION, INCLINATION, AND HORIZONTAL FORCE.—INTERNATIONAL QUIET DAYS.

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

Table 326: Eskdalemuir. DECLINATION (measured positive towards the West) (Quiet Days). 1929. Columns: Month and Season, Hour G.M.T. (1-24), and values for each hour.

Table 327: Eskdalemuir. INCLINATION (Quiet Days). 1929. Columns: Month and Season, Hour G.M.T. (1-24), and values for each hour.

Table 328: Eskdalemuir. HORIZONTAL FORCE (Quiet Days). 1929. Columns: Month and Season, Hour G.M.T. (1-24), and values for each hour.

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF MAGNETIC FORCE.—SELECTED DISTURBED DAYS.

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

Table for NORTH COMPONENT (Disturbed Days) at Eskdalemuir, 1929. Columns include months (Jan-Dec), year, winter, equinox, and summer. Rows show magnetic force deviations for hours 1-24.

Table for WEST COMPONENT (Disturbed Days) at Eskdalemuir, 1929. Columns include months (Jan-Dec), year, winter, equinox, and summer. Rows show magnetic force deviations for hours 1-24.

Table for VERTICAL COMPONENT (Disturbed Days) at Eskdalemuir, 1929. Columns include months (Jan-Dec), year, winter, equinox, and summer. Rows show magnetic force deviations for hours 1-24.

DIURNAL INEQUALITIES OF THE MAGNETIC COMPONENTS, DECLINATION, INCLINATION AND HORIZONTAL FORCE.— SELECTED DISTURBED DAYS.

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

Table 332: Eskdalemuir. 1929. Declination (measured positive towards the West) (Disturbed Days). Columns: Hour, GMT (1-24), Month and Season, Declination values for each hour, Year, Winter, Equinox, Summer.

INCLINATION (Disturbed Days).

333. Eskdalemuir.

1929.

Table 333: Eskdalemuir. 1929. Inclination (Disturbed Days). Columns: Month and Season, Inclination values for each hour, Year, Winter, Equinox, Summer.

HORIZONTAL FORCE (Disturbed Days).

334. Eskdalemuir.

1929.

Table 334: Eskdalemuir. 1929. Horizontal Force (Disturbed Days). Columns: Month and Season, Horizontal Force values for each hour, Year, Winter, Equinox, Summer.

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS, YEAR, AND SEASONS OF 1929.

NOTE.—The ranges are those shown in Tables 317 to 334, in the preparation of which the non-cyclic change has been eliminated.

335. Eskdalemuir.

1929.

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 ...	22.5	27.9	10.2	22.5	19.0	5.2	25.5	61.2	38.8	6.27	1.36	20.1	4.45	1.34	20.5	12.62	1.86	25.8
February ...	34.1	45.0	41.0	36.0	32.8	6.8	96.6	107.7	153.2	9.38	2.11	28.8	6.97	2.26	33.2	18.82	5.70	118.8
March ...	41.0	48.7	53.8	39.4	45.2	15.3	51.9	83.2	141.7	9.96	2.24	34.4	10.07	2.49	37.5	15.84	3.44	42.2
April ...	49.1	61.4	26.4	43.5	57.2	25.7	59.8	75.3	62.1	13.02	2.73	48.2	12.10	2.50	44.6	16.51	3.26	55.2
May ...	56.6	54.9	29.6	52.7	58.8	20.1	65.7	58.8	46.6	11.65	3.08	55.7	12.52	3.16	53.3	12.37	3.66	69.9
June ...	56.8	63.0	30.7	42.8	60.3	21.4	83.1	75.4	50.2	12.72	3.18	58.4	12.24	2.60	45.3	14.66	4.46	83.1
July ...	64.0	64.0	30.6	51.8	62.8	20.6	99.5	90.7	85.4	12.80	3.88	65.1	12.78	3.30	54.1	15.74	5.62	97.6
August ...	53.7	57.1	28.4	49.5	55.4	23.4	101.3	68.5	95.4	11.70	3.20	55.4	12.18	2.93	48.6	13.20	6.03	105.2
September ...	52.3	48.1	32.8	45.2	50.8	14.5	91.8	71.0	109.6	10.63	3.00	47.5	10.54	2.86	44.5	17.18	6.75	83.5
October ...	39.4	42.2	34.6	38.3	37.5	8.7	36.4	86.2	87.2	10.29	2.62	36.1	8.07	2.27	35.0	17.85	3.56	38.8
November ...	23.8	30.0	23.1	25.6	22.2	5.5	58.3	54.8	73.7	6.88	1.54	21.5	4.84	1.60	24.1	12.22	3.99	48.2
December ...	17.7	37.1	33.4	20.2	21.5	8.4	41.6	71.4	102.2	8.00	1.56	15.9	4.89	1.18	17.9	14.73	5.33	48.5
Year ...	38.6	43.3	25.8	36.5	40.9	13.4	51.5	56.9	77.5	9.10	1.97	37.7	8.99	2.16	36.5	12.14	2.81	50.8
Winter ...	24.5	34.1	24.6	25.2	23.2	5.6	31.7	65.5	82.0	7.50	1.56	21.5	5.23	1.54	22.9	13.26	2.90	35.4
Equinox ...	43.5	48.6	33.3	40.5	45.9	13.9	54.0	64.2	96.0	10.36	2.52	39.4	10.13	2.33	38.7	13.98	3.21	47.1
Summer ...	56.0	59.5	29.6	48.8	58.0	21.0	77.2	66.9	62.7	12.00	3.26	57.8	12.05	2.91	49.5	12.61	4.46	83.0

NON-CYCLIC CHANGE (24h.—0h.).

MEAN VALUE OF THE SQUARES OF THE ABSOLUTE DAILY RANGES. (Unit, 100 γ^2 .)

336. Eskdalemuir.

1929.

337. Eskdalemuir.

1929.

Month.	" All " Days.			Quiet Days.			Disturbed Days.			R_N^2	R_W^2	R_V^2	$R_N^2 + R_W^2$	$R_N^2 + R_W^2 + R_V^2$	Mean Character Figure.
	N.	W.	V.	N.	W.	V.	N.	W.	V.						
January ...	+0.1	0.0	+0.6	+2.0	+8.0	-2.0	-2.8	-9.4	+2.2	35	54	14	89	103	0.61
February ...	-0.5	-0.5	+0.3	+1.8	0.0	-1.2	-5.8	+8.8	+23.4	637	305	378	942	1320	0.86
March ...	+1.1	+0.6	-0.9	+8.6	+1.2	-0.2	-3.2	+2.2	+2.4	247	162	210	409	619	0.94
April ...	+0.1	-0.4	-0.2	+5.4	+1.6	-1.0	-2.4	+1.8	-1.2	68	73	25	140	165	0.70
May ...	-0.1	-0.1	-0.4	-2.8	-6.6	+2.8	-1.0	-5.8	-1.6	95	66	24	161	185	0.65
June ...	-0.3	-1.0	-0.2	+3.0	-0.8	-2.2	-5.8	-5.6	-1.2	94	78	20	172	192	0.73
July ...	+0.8	+0.5	+0.3	+4.0	+0.8	-0.6	-2.2	+2.2	+1.8	170	111	57	280	337	0.90
August ...	+0.7	-1.9	+0.1	+4.0	+0.6	-0.4	-14.0	-3.7	+1.5	*124	*75	†42	*200	†246	0.71
September ...	-0.2	-0.9	-0.4	+2.0	0.0	+0.8	-9.4	+3.4	0.0	119	93	53	212	265	0.80
October ...	-0.5	-0.3	-0.3	+2.2	+0.6	+1.6	-12.8	-15.8	-14.4	171	141	105	312	417	0.84
November ...	+0.3	-0.4	+0.7	+5.4	+1.4	-4.0	-5.8	+1.4	+5.2	108	112	48	220	268	0.67
December ...	-0.5	-0.9	+0.3	+6.2	+0.4	-3.0	+0.6	-13.4	+6.4	109	125	69	235	304	0.84
Year, 1929 ...	—	—	—	—	—	—	—	—	—	165	116	87	281	368	0.75

* Mean of 29 days. † Mean of 27 days.

MEAN MONTHLY AND ANNUAL VALUES OF TERRESTRIAL MAGNETIC ELEMENTS.

(All days except those noted in monthly tables.)

338. Eskdalemuir.

1929.

Month.	North.	West.	Vertical.	Total.	Declination. (West).	Inclination. (North).	Horizontal Force.
January ...	16037	4318	44893	47867	15 4.2	69 41.9	16608
February ...	16031	4310	44894	47865	15 2.9	69 42.5	16600
March ...	16028	4307	44895	47864	15 2.5	69 42.7	16597
April ...	16040	4303	44885	47859	15 1.0	69 41.8	16607
May ...	16046	4300	44867	47844	15 0.1	69 41.0	16612
June ...	16053	4299	44865	47844	14 59.5	69 40.5	16619
July ...	16046	4292	44875	47850	14 58.5	69 41.3	16610
August ...	16042	4286	44875	47848	14 57.6	69 41.7	16605
September ...	16035	4280	44864	47835	14 56.6	69 42.0	16596
October ...	16033	4276	44863	47834	14 56.0	69 42.1	16594
November ...	16035	4271	44876	47846	14 54.8	69 42.4	16594
December ...	16031	4263	44885	47852	14 53.5	69 43.0	16588
Year, 1929 ...	16038	4292	44878	47851	14 58.9	69 41.9	16603

Values of a_n, b_n in the series $\Sigma (a_n \cos 15nt^\circ + b_n \sin 15nt^\circ)$, t being reckoned in hours from midnight G.M.T.

(Longitude of Eskdalemuir Observatory, $3^\circ 12' W.$)

339. Eskdalemuir.

1929.

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>																								
January	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
February	+6.2	+2.0	-5.6	-0.5	+1.7	-1.3	-0.7	+0.8	-8.0	-5.0	-1.1	+5.9	-1.7	-2.2	+1.1	+2.0	+0.9	-4.8	+1.1	-1.5	+0.7	-0.4	-0.7	-0.5
March ...	+7.3	+1.8	-10.3	+0.2	+2.4	-1.5	-1.3	+0.8	-14.6	-8.9	-3.4	+6.9	-2.1	-3.4	+0.8	+3.0	-7.2	-14.7	-7.9	-2.8	-0.3	+1.8	-1.3	+0.7
April ...	+13.5	-5.6	-7.3	+1.2	+4.6	-2.3	-0.9	+0.3	-13.1	-10.3	+3.1	+10.7	-1.8	-6.3	+0.9	+2.0	-5.7	-20.3	-5.0	-3.0	+4.0	+2.3	-0.7	-0.2
May ...	+19.0	-3.8	-11.3	+0.5	+4.3	-2.0	-0.1	+0.6	-8.1	-17.4	+4.9	+12.0	-3.2	-5.4	+1.7	+1.2	+4.0	-7.4	-6.3	-2.5	+1.6	+0.7	-0.6	-0.1
June ...	+17.7	-9.3	-12.5	+0.4	+2.0	+0.2	+0.7	+0.7	-5.8	-17.2	+6.4	+10.6	-3.8	-1.7	+1.7	-0.2	+5.8	-8.8	-6.1	-1.2	+2.2	+0.2	-0.8	+0.5
July ...	+14.5	-11.9	-13.0	+1.9	+1.6	-0.1	+0.1	+0.3	-5.7	-23.0	+6.1	+11.7	-2.7	-2.3	-0.8	+1.2	+5.2	-8.2	-7.5	-0.8	+1.2	+0.6	-0.2	0.0
August...	+17.6	-11.8	-14.2	+3.2	+0.4	+0.1	+0.7	+0.7	-7.1	-23.5	+4.5	+10.8	-2.5	-3.9	+0.2	-0.4	+2.3	-9.7	-7.6	-2.4	+0.5	+1.3	-1.0	+0.2
Sept. ...	+16.2	-10.4	-10.8	+4.7	+2.6	-2.4	-0.2	+0.2	-7.0	-16.5	+8.1	+10.0	-4.0	-3.9	+0.7	+1.6	+2.2	-6.9	-8.5	-1.3	+2.0	+0.4	-0.4	-0.4
October..	+19.4	-4.7	-10.2	+2.2	+2.5	-3.2	-0.3	+1.2	-10.5	-9.0	+6.8	+7.2	-4.0	-5.3	+2.7	+2.6	-2.2	-11.4	-7.1	-1.3	+2.0	+0.6	-0.2	-0.9
Nov. ...	+15.3	+0.5	-9.4	-0.2	+3.7	-2.0	-0.5	+0.2	-12.2	-4.1	+2.2	+11.7	-1.0	-5.4	+1.8	+1.4	-4.3	-12.6	-5.6	-2.0	+2.1	+1.1	-0.1	-0.3
Dec. ...	+8.7	+0.8	-5.5	+0.5	+2.2	-1.4	0.0	+0.7	-10.2	-1.9	+0.5	+4.8	-1.3	-2.3	+2.6	+1.9	-2.5	-10.6	-3.7	+0.6	+0.4	+0.5	-0.9	+0.1
Year ...	+6.0	+2.5	-2.7	+0.6	+1.5	-1.6	+0.6	-0.5	-12.8	-0.9	-2.6	+6.9	-1.7	-0.7	+2.1	+1.1	-2.5	-14.3	-2.4	-2.2	+1.2	+0.5	-0.7	+0.2
Winter...	+13.4	-4.1	-9.4	+1.2	+2.5	-1.4	-0.2	+0.5	-9.6	-11.4	+2.9	+9.1	-2.5	-3.6	+1.3	+1.5	-0.3	-10.8	-5.8	-1.7	+1.4	+0.8	-0.6	-0.1
Equinox.	+7.0	+1.8	-6.1	+0.2	+1.9	-1.4	-0.3	+0.4	-11.4	-4.2	-1.6	+6.1	-1.7	-2.1	+1.6	+2.0	-2.8	-11.1	-3.7	-1.4	+0.5	+0.6	-0.9	+0.1
Summer	-16.8	-3.4	-9.5	+0.9	+3.8	-2.4	-0.4	+0.6	-10.9	-10.2	+4.2	+10.4	-2.5	-5.6	+1.8	+1.8	-2.0	-12.9	-6.1	-2.2	+2.5	+1.1	-0.4	-0.4
Year ...	+16.5	-10.9	-12.7	+2.5	+1.6	-0.5	+0.3	+0.5	-6.4	-20.0	+6.2	+10.6	-3.2	-2.9	+0.5	+0.5	+3.9	-8.3	-7.5	-1.5	+1.4	+0.6	-0.6	+0.1
<i>Quiet Days.</i>																								
Year ...	+13.6	-2.2	-8.7	+0.3	+2.4	-1.6	-0.2	+1.0	-3.6	-11.5	+4.8	+7.9	-3.2	-3.2	+1.0	+1.5	+3.2	-1.3	-3.6	-0.5	+1.5	+0.2	-0.6	-0.1
Winter...	+8.6	+1.4	-6.3	-1.3	+1.8	-1.3	-0.4	+1.3	-3.0	-4.2	+0.6	+5.2	-1.8	-2.2	+1.3	+1.6	+0.2	-1.5	-0.8	0.0	+0.8	+0.4	-0.7	-0.3
Equinox.	+15.3	-1.7	-8.9	+1.0	+3.4	-2.5	-0.7	+1.6	-4.6	-10.7	+5.8	+8.6	-4.0	-4.5	+1.8	+2.4	+3.3	-1.1	-3.9	-1.1	+2.2	+0.2	-0.8	-0.3
Summer	+16.9	-6.4	-10.9	+1.3	+1.7	-0.9	+0.4	+0.3	-3.2	-19.6	+7.7	+9.9	-3.8	-2.9	+0.1	+0.3	+6.1	-1.2	-6.1	-0.5	+1.6	0.0	-0.4	+0.2
<i>Disturbed Days.</i>																								
Year ...	+13.0	-8.2	-12.8	+4.8	+1.8	-0.3	-0.3	-0.9	-19.7	-11.1	+0.8	+10.5	-0.1	-4.1	+1.8	+1.2	-10.3	-30.3	-13.1	-2.9	+1.0	+3.1	+0.7	+0.4
Winter...	+4.6	+1.3	-9.6	+4.9	+0.4	-1.1	-0.2	-1.0	-25.7	-0.9	-5.4	+6.2	-1.8	-3.4	+1.8	+1.7	-18.4	-32.2	-13.3	-1.1	-0.3	+3.1	-0.2	+2.1
Equinox.	+18.0	-5.6	-10.5	+3.4	+5.1	-2.2	+0.6	-1.0	-21.4	-7.6	+6.3	+12.2	+2.4	-6.7	+3.0	+1.4	-11.8	-33.6	-13.0	-4.2	+3.8	+3.0	+2.6	-1.5
Summer	+16.4	-20.4	-18.5	+6.2	+0.1	+2.3	-1.5	-0.8	-11.9	-24.6	+1.7	+13.0	-0.8	-2.4	+0.4	+0.6	-0.8	-25.0	-13.3	-3.6	-0.4	+3.0	-0.4	+0.5

HARMONIC COMPONENTS OF THE DIURNAL INEQUALITY OF MAGNETIC FORCE.

Values of c_n, α_n in the series $\Sigma c_n \sin (15nT^\circ + \alpha_n)$, T being Mean Local Time reckoned in hours from midnight.

340. Eskdalemuir.

1929.

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>																								
January	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
February	6.5	75	5.6	271	2.1	139	1.1	331	9.4	241	6.0	356	2.8	229	2.3	41	4.9	172	1.9	224	0.8	128	0.9	247
March ...	7.6	79	10.3	258	2.8	131	1.3	315	17.1	242	7.7	340	4.0	221	3.1	28	16.3	209	8.4	257	1.8	1	1.5	311
April ...	14.6	116	7.4	286	5.2	127	1.0	302	16.7	235	11.2	23	6.6	205	2.2	37	21.0	199	5.8	245	4.6	71	0.7	265
May ...	19.4	104	11.3	279	4.7	125	0.6	1	19.2	208	12.9	29	6.3	220	2.1	67	8.4	155	6.8	255	1.8	75	0.7	275
June ...	20.0	121	12.6	278	2.0	93	1.0	58	18.1	202	12.4	38	4.2	256	1.7	109	10.5	150	6.2	265	2.2	95	0.9	317
July ...	18.7	132	13.1	285	1.6	102	0.3	28	23.6	197	13.2	34	3.5	239	1.4	341	9.7	151	7.6	270	1.3	72	0.2	293
August...	21.2	127	14.6	289	0.4	79	1.0	59	24.5	200	11.7	29	4.6	222	0.5	172	10.0	170	8.0	259	1.4	29	1.0	293
Sept. ...	19.2	126	11.8	300	3.5	142	0.3	327	17.9	206	12.8	147	5.6	236	1.7	37	7.2	165	8.6	268	2.1	89	0.6	242
October	20.0	107	10.4	289	4.1	151	1.3	359	13.8	233	9.9	50	6.6	227	3.7	59	11.6	194	7.2	266	2.1	83	0.9	206
Nov. ...	15.3	91	9.4	275	4.3	128	0.5	308	12.9	255	11.9	17	5.5	200	2.3	65	13.3	202	6.0	257	2.4	71	0.3	207
December	8.7	88	5.5	282	2.6	132	0.7	13	10.3	263	4.8	12	2.6	219	3.2	66	10.9	196	3.8	286	0.7	53	0.9	290
Year ...	6.5	71	2.8	289	2.2	147	0.7	145	12.8	269	7.4	346	1.8	257	2.4	76	14.5	193	3.3	234	1.3	79	0.7	298
Winter...	14.0	110	9.5	284	2.9	130	0.5	356	14.9	223	9.6	25	4.3	225	1.8	55	10.8	185	6.0	260	1.6	71	0.6	278
Equinox.	7.2	79	6.1	279	2.5	136	0.5	335	12.1	253	6.3	351	2.7	228	2.6	52	11.4	197	4.0	255	0.8	51	0.9	290
Summer	17.1	105	9.5	282	4.5	132	0.7	337	14.9	230	11.2	29	6.2	214	2.5	57	13.1	192	6.5	256	2.7	74	0.6	241
Year ...	19.8	127	12.9	288	1.7	117	0.6	48	21.0	201	12.4	37	4.4	238	0.7	53	9.2	158	7.7	265	1.5	76	0.6	293
<i>Quiet Days.</i>																								
Year ...	13.8	102	8.7	279	2.9	134	1.0	1	12.0	201	9.2	37	4.5	235	1.8	48	3.4	115	3.6	268	1.5	93	0.6	292
Winter...	8.7	84	6.4	262	2.2	137	1.4	353	5.2	219	5.2	13	2.9	230	2.0	51	1.5	176	0.8	278	0.9	77	0.8	260
Equinox.	15.4	100	9.0	283	4.2	136	1.8	348	11.6	206	10.3	40	6.1	231	3.0	50	3.5	111	4.1	261	2.2	95	0.9	265
Summer	18.1	114	11.0	294	5.5	122	1.3	162	22.7	253	13.8	33	7.1	170	3.4	78	35.6	203	13.8	258	4.8	61	3.0	132
Year ...	26.2	144	10.5	295	2.3	85	1.7	242	27.3	209	13.2	14	2.5	208	0.7	51	25.0	185	13.8	261	3.0	2	0.6	334
<i>Disturbed Days.</i>																								
Year ...	15.4	125	13.7	297	1.8	109	0.9	212	22.6	244	10.5	11	4.1	191	2.1	68	32.0	202	13.5	264	3.3	28	0.8	72
Winter...	4.8	77	10.7	303	1.2	171	1.0	205	25.7	271	8.2	325	3.8	217	2.5	59	37.0	213	13.3	272	3.1	4	2.1	7
Equinox.	18.9	111	11.0	294	5.5	122	1.3	162	22.7	253	13.8	33	7.1	170	3.4	78	35.6	203	13.8	258	4.8	61	3.0	132
Summer	26.2	144	10.5	295	2.3	85	1.7	242	27.3	209	13.2	14	2.5	208	0.7	51	25.0	185	13.8	261	3.0	2	0.6	334

341. MEAN VALUES, FOR THE YEARS SPECIFIED, OF THE MAGNETIC ELEMENTS AT OBSERVATORIES
IN COMMUNICATION WITH THE ROYAL OBSERVATORY, GREENWICH.

Place.	Latitude.	Longitude.	1929.				1928.				1927.			
			Declina- tion.	Inclina- tion.	Hori- zontal Force.	Vertical Force.	Declina- tion.	Inclina- tion.	Hori- zontal Force.	Vertical Force.	Declina- tion.	Inclina- tion.	Hori- zontal Force.	Vertical Force.
			° ' /	° ' /	γ	γ	° ' /	° ' /	γ	γ	° ' /	° ' /	γ	γ
Godhavn, Greenland ...	69 15	53 30W.	...	...	...	...	...	...	...	58 28.4W.	81 34.7	08259	55788	
Sodankylä, Finland ...	67 22	26 39E.	...	...	...	...	...	...	...	2 10.5E.	75 54.7	12357	49239	
Lerwick, Shetland Islands ...	60 8	1 11W.	14 23.7W.	72 40.3	14556	46651	14 37.1W.	72 39.4	14585	46702	14 49.9W.	72 38.1	14607	46713
Pavlovsk, Leningrad, U.S.S.R.	59 41	30 29E.	...	...	...	...	...	...	...	3 50.2E.	71 38.6	15630	47106	
Sitka, Alaska ...	57 3	135 20W.	30 17.7E.	74 22.7	15465	55307	30 21.2E.	74 22.8	15476	55352	30 23.5E.	74 22.6	15491	55394
†Swerdlovsk, U.S.S.R. ...	56 50	60 38E.	10 57.2E.	72 20.3	16285	51175	10 58.5E.	72 16.7	16335	51117	10 59.5E.	72 12.2	16389	51053
Copenhagen (in Rude Skov), Denmark.	55 51	12 27E.	6 11.0W.	69 16.2	16924	44718	6 22.0W.	69 13.9	16948	44691	6 33.4W.	69 11.6	16974	44670
Kasan (Sajmistsche), U.S.S.R.	55 50	48 51E.	...	...	...	...	9 4.5E.	70 27.4	17091	48148	9 1.9E.	70 22.5	17146	48086
Eskdalemuir, Scotland ...	55 19	3 12W.	14 58.9W.	69 41.9	16603	44878	15 10.5W.	69 41.2	16619	44894	15 22.7W.	69 40.2	16631	44887
Meanook, Alberta, Canada ...	54 37	113 21W.	26 42.9E.	*77 55.1	12781	*59709	26 48.5E.	*77 54.6	12790	*59719	26 56.3E.	77 53.7	12817	59760
Stonyhurst, Lancs., England	53 51	2 28W.	14 3.1W.	*68 46.2	17201	*44275	14 14.5W.	*68 46.5	17209	*44310	14 26.5W.	*68 43.5	17231	*44251
†Irkutsk (Zouy), Siberia ...	52 28	104 2E.	0 20.2E.	71 19.2	19038	56310	0 30.6E.	71 17.8	19061	56303	...	...	19088	...
Potsdam, Prussia ...	52 23	13 4E.	...	...	...	...	5 58.3W.	66 45.8	18466	43010	6 9.1W.	66 44.0	18489	43002
Seddin, Prussia ...	52 17	13 1E.	5 49.1W.	66 45.6	18480	43934	5 59.5W.	66 42.8	18504	42995	6 10.9W.	66 41.1	18526	42987
Swider, Poland ...	52 7	21 15E.	2 6.3W.	66 57.6	18507	43517	2 15.3W.	66 54.2	18536	43464	2 25.2W.	66 50.3	18563	43390
De Bilt, Utrecht, Holland ...	52 6	5 11E.	9 37.3W.	66 58.6	18300	43063	9 48.8W.	66 57.4	18313	43053	10 1.0W.	66 55.9	18330	43041
Valentia, Cahirciveen, Ireland	51 56	10 15W.	*17 37.3W.	*67 59.6	*17821	*47559	*17 48.0W.	*67 59.3	*17826	*44096	*17 59.5W.	*67 59.3	*17833	*44112
Bochum, Prussia ...	51 29	7 14E.	...	...	...	...	*8 57.4W.	...	...	...	*9 8.5W.	...	...	...
Abinger, Surrey, England ...	51 11	0 23W.	12 35.8W.	66 37.2	18555	42918	12 47.0W.	66 37.3	18564	42941	12 58.4W.	66 36.2	18575	42932
Uccle, Belgium ...	50 48	4 21E.	10 5.4W.	...	*19234	...	*10 13.4W.	...	...	...	10 26.9W.	...	...	...
Val Joyeux, near Paris, France	48 49	2 1E.	11 10.1W.	64 41.0	19641	41519	11 20.4W.	64 39.9	19648	41500	11 32.3W.	64 39.8	19656	41515
Maisach, Bavaria ...	48 12	11 15E.	*6 29.9W.	*63 35.8	*20292	*40872	*6 41.6W.	*63 35.2	*20298	*40867	*6 52.5W.	*63 32.5	*20314	*40817
Stará Dala, Czecho-Slovakia	47 53	18 11E.	3 27.4W.	...	...	...	3 36.7W.	...	...	...	3 47.0W.	...	...	...
Nantes, France ...	47 15	1 34W.	12 13.5W.	63 43.1	20222	40950	12 23.6W.	63 41.2	20220	40886	12 35.6W.	63 41.0	20237	40917
Agincourt, Ontario, Canada ...	43 47	79 16W.	7 24.0W.	74 45.4	15586	57196	7 20.3W.	74 44.9	15628	57315	7 16.4W.	74 44.3	15664	57412
Karsani, U.S.S.R. ...	41 50	44 42E.	4 19.7E.	58 19.0	24627	39901	4 18.8E.	58 13.5	24646	39788	4 15.5E.	58 8.1	24673	39693
Ebro, Tortosa, Spain ...	40 49	0 30E.	10 28.0W.	57 25.8	23383	36605	10 37.7W.	57 26.8	23386	36633	10 48.8W.	57 26.5	23380	36617
Coimbra, Portugal ...	40 12	8 25W.	13 59.7W.	*57 57.9	23176	*37026	*14 10.3W.	*58 2.5	*23172	*37142	*14 18.8W.	*58 8.1	*23166	*37273
Cheltenham, Maryland, U.S.A.	38 44	76 50W.	6 52.0W.	71 6.5	18646	54485	6 49.0W.	71 4.4	18706	54551	6 45.6W.	71 2.9	18765	54646
†San Miguel, Azores Is. ...	37 46	25 39W.	18 35.0W.	*59 48.0	*23309	*40046	18 40.5W.	*59 52.6	*23324	*40197	18 44.1W.	*59 57.4	*23278	*40245
*San Fernando, Spain ...	36 28	6 12W.	12 40.7W.	*53 29.8	25035	*33829	12 48.8W.	*53 32.2	25039	33882	12 57.1W.	*53 37.7	25051	34013
Kakioka, Japan ...	36 14	140 11E.	...	...	...	...	5 40.5W.	49 27.0	29707	34721	5 39.6W.	49 27.6	29702	34727
Tsingtao, China ...	36 4	120 19E.	4 33.0W.	52 6.6	30870	39669	4 26.1W.	52 6.7	30839	39713	4 29.8W.	52 7.7	30824	39627
Tucson, Arizona, U.S.A. ...	32 15	110 50W.	13 45.7E.	59 34.7	26491	45114	13 44.7E.	59 33.5	26536	45153	13 44.1E.	59 32.5	26585	45210
Lukiapang, Shanghai, China	31 19	121 2E.	*3 37.2W.	*45 24.9	*33278	*33763	*3 37.4W.	*45 25.4	*33243	*33737	*3 34.8W.	*45 26.9	*33265	*33790
Dehra Dun, United Provinces, India.	30 19	78 3E.	1 15.5E.	45 33.9	32950	33606	1 18.5E.	45 31.8	32940	33554	1 22.1E.	45 29.2	32931	33494
Helwan, Egypt ...	29 52	31 21E.	*0 19.3W.	*41 39.1	*30067	*26743	*0 24.0W.	*41 36.3	*30039	*26675	*0 29.8W.	*41 33.6	*30006	*26603
Au Tau, Hong Kong, China	22 27	114 3E.	*0 43.5W.	*30 38.7	*37481	*22206	*0 43.1W.	*30 38.9	*37478	*22207	...	...	...	...
Honolulu, Hawaii ...	21 19	158 4W.	10 4.6E.	39 30.2	28569	23553	10 4.7E.	39 30.1	28601	23578	10 4.2E.	39 28.9	28634	23589
Teoloyucan, Mexico ...	19 45	99 11W.	9 23.5E.	46 47.6	31301	33324	9 20.8E.	46 43.4	31339	33294	9 18.5E.	46 40.7	31386	33281
Alibag, Bombay, India ...	18 38	72 52E.	*0 6.1W.	*25 29.6	*37220	*17732	*0 4.3W.	*25 27.6	*37158	*17692	*0 2.2W.	*25 25.3	*37123	*17645
San Juan, Porto Rico ...	18 23	66 7W.	4 41.9W.	52 24.8	27551	35795	4 35.6W.	52 20.6	27644	35824	4 26.0W.	52 14.2	27698	35755
Antipolo, Philippine Is. S.	14 36	121 10E.	*0 26.5E.	*15 47.9	*38231	*10817	*0 26.9E.	*15 50.4	*38228	*10846	*0 27.7E.	*15 54.5	*38205	*10889
Batavia (Kuyper), Java ...	6 2	106 44E.	*0 54.0E.	*32 16.6	*36815	*23352	*0 53.4E.	*32 15.0	*36832	*23240	*0 52.4E.	*32 12.8	*36858	*23223
Huancayo, Peru ...	12 3	75 20W.	*7 42.3E.	*1 33.9	*29675	*00811	*7 47.2E.	*1 25.8	*29667	*00741	*7 50.7E.	*1 17.3	*29737	*00669
Apia, Samoa ...	13 48	171 46W.	10 33.5E.	30 6.7	35209	20418	10 32.1E.	30 5.7	35225	*20408	10 29.5E.	*30 7.0	35223	*20432
Mauritius ...	20 6	57 33E.	11 53.9W.	52 45.0	22732	29893	11 42.7W.	52 44.6	22768	29934	11 32.0W.	[52 29]	22804	[29701]
La Quiaca, Jujuy, Argentina	22 6	65 36W.	4 49.0E.	12 24.0	26295	05781	4 57.3E.	12 26.6	05338	05812	5 5.5E.	12 25.7	26353	05808
Vassouras, Brazil ...	22 24	43 39W.	...	...	...	...	12 27.7W.	16 46.9	24221	07304	12 19.6W.	16 37.8	24269	07265
Watheroo, West Australia ...	30 19	115 52E.	4 12.1W.	64 15.5	24645	51115	4 15.0W.	64 13.8	24656	51070	4 16.3W.	64 11.9	24671	51028
Pilar, Cordova, Argentina ...	31 40	63 53W.	6 34.4E.	25 48.2	24763	11973	6 42.0E.	25 46.8	24818	11987	6 49.6E.	25 45.5	24877	12004
Toolangi, Victoria, Australia	37 32	145 28E.	8 16.6E.	67 50.8	22891	56223	8 14.7E.	67 49.4	22891	56159	8 12.1E.	67 47.8	22904	56116
Christchurch, New Zealand ...	43 32	172 37E.	17 42.4E.	68 17.6	22123	55575	17 37.4E.	68 17.3	22126	55566	17 31.6E.	68 16.2	22136	55538

NOTES.—*Results derived from absolute observations only.

† A local anomaly is known to exist at the site of the Observatory.

Sitka.—A change of magnetometer was made in 1929 which affected declination observations. The systematic difference is -1.2 E.

Potsdam.—Magnetic Observation at Potsdam Observatory ceased after the middle of 1928 on account of electrification of Berlin railways.

Abinger.—The values of Inclination and Vertical Force for 1929 depend upon direct measurement of the vertical component of the earth's field with a coil-magnetometer. The change of method involves a discontinuity in the observed secular change of mean values of these elements.

San Juan, Porto Rico.—The results for 1927 are from the months January to May only.

Batavia (Kuyper), Java.—Observations in 1927 were made at Buitenzorg Lat. $6^{\circ} 11' S.$, Long. $106^{\circ} 49' E.$

Apia, Samoa.—The results for 1928 are for five months only. For 1929 the results in Inclination and Vertical Force are for six months only.

La Quiaca, Argentina.—Results for 1928 are from hourly values January–April, combined with absolute observations May–December.

342.

ADDITIONAL VALUES FOR EARLIER YEARS.

Place.	Latitude	Longitude.	1921.				1922.				1923.			
			Declina- tion.	Inclina- tion.	Hori- zontal Force.	Vertical Force.	Declina- tion.	Inclina- tion.	Hori- zontal Force.	Vertical Force.	Declina- tion.	Inclina- tion.	Hori- zontal Force.	Vertical Force.
			° ' /	° ' /	γ	γ	° ' /	° ' /	γ	γ	° ' /	° ' /	γ	γ
Swider, Poland ...	52 7N.	21 15E.	3 30.3W.	66 34.4	18712	43185	3 20.7W.	66 36.7	18690	43215	3 9.6W.	66 39.4	18674	43269
			1924.				1925.				1926.			
			2 58.0W.	66 41.9	18649	43300	2 46.6W.	66 45.0	18620	43339	2 35.1W.	66 48.3	18584	43369

M.O. 330
(Cahirciveen)

Air Ministry
METEOROLOGICAL OFFICE

THE
OBSERVATORIES' YEAR BOOK
1929

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.

CAHIRCIVEEN (VALENTIA OBSERVATORY)

Published by the authority of the
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LONDON :
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

1931

CAHIRCIVEEN (VALENTIA OBSERVATORY).

Latitude	..	..	..	..	..	51°	56'	N.
Longitude	..	..	..	..	..	10°	15'	W.
G.M.T. of Local Mean Noon	..	..	..	..	..	12h	41m.	

Heights in metres above Sea Level.

Barometer	..	..	..	..	..	..	13·7
Rain-gauge	..	..	..	..	..	..	9·1
Robinson Cup Anemograph	..	..	..	..	..	..	26
Dines Tube Anemograph	..	..	..	..	..	..	30

Heights in metres above Ground.

Thermometer Bulbs	..	..	..	..	..	..	1·3
Sunshine Recorder	..	..	..	..	..	..	12·8
Robinson Cup Anemograph	..	..	..	..	..	..	14
Dines Tube Anemograph	..	..	..	..	..	..	13
Beckley Rain-gauge Rim	..	..	..	..	..	..	0·5

INTRODUCTION.

SITE.

Valentia Observatory derives its name from the fact that it was originally established on Valentia Island in 1867. It was removed to the mainland in March, 1892, and now lies in a direct line between the old site on Valentia Island and the town of Cahirciveen, about $2\frac{1}{2}$ miles (4 km.) north-east from the former, and three-quarters of a mile (1 km.) south-west of the latter. It is quite remote from any other buildings. The general character of the country surrounding the Observatory is hilly. The eastern bank of the Cahir river is about 150 metres to the westward, and in that direction there is no very high ground between the Observatory and the open sea, some $3\frac{1}{2}$ miles (6 km.) away. To the north-west, however, are hills varying in height from 400 (120 m.) to 900 feet (275 m.), the highest being less than 3 miles (5 km.) distant. These are only separated by a narrow gully running in a N N W direction from other hills equally high, which stretch away to the northward: the nearest of these is but little more than a mile ($1\frac{1}{2}$ km.) from the Observatory. Beyond the town of Cahirciveen to the north-east the river opens out considerably, and the country in this direction becomes an open boggy basin, rising by only a gentle gradient. Southward of this, however, it soon rises again, and at about a mile south-east of the Observatory it culminates in the hill Bente upwards of 1,245 feet (380 m.) in height. Still further south it opens out once more to a distance of nearly 5 miles (8 km.) from the Observatory, where there is a range of hills running east and west, and varying in height from 400 (120 m.) to 1,300 feet (400 m.). To the south-west there is an opening to the sea, between Valentia Island and the mainland; and the circle of hills is completed by those on the island itself, the highest of which is about 800 feet (240 m.) high, and bears about west-south-west from the Observatory. Photographs of the Observatory building, together with a site plan, showing the disposition of the various instruments were reproduced in the introduction to the 1928 volume.

METEOROLOGY.

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

Pressure and Temperature.—The photographic barograph and thermograph are installed in a room on the ground floor of the Observatory tower. The standard Fortin barometer, from which the control readings at 9h, 15h and 21h are taken, is mounted in the same room beside a window which faces the north-east. The stems of the dry and wet bulb thermometers pass out into the screen placed against the north wall of the tower. Close to the bulbs of these thermometers are the bulbs of the standard thermometers from which the control readings at 9h, 15h and 21h are taken.

Rainfall.—The Beckley raingauge and the 8-inch (20.3 cm.) check gauge are placed in a railed-off enclosure about 40 metres to the north of the tower.

Sunshine.—The recorder is cemented to a wooden rail on the roof of the tower. The exposure of the sunshine recorder is such that there is no appreciable loss of record due to obstructions in the months of May, June, July and August. During the remainder of the year the hill Benteo lying to the south-east cuts off early morning sunshine. The reduction in possible record, assuming that the recorder becomes sensitive to sunshine only when the sun is at an altitude of more than three degrees, is shown in the following table for the 1st and 15th of each month :—

Reduction in Possible Record in Tenths of an Hour.								
Month.	Jan.	Feb.	Mar.	Apr.	Sept.	Oct.	Nov.	Dec.
1st.	.5	.5	.7	.5	.3	.7	.5	.6
15th.	.6	.5	.7	.3	.5	.7	.5	.5

Wind, Speed and Direction.—Up to 1925 the measurements of Wind Speed and Direction as given in Tables 413-424, were obtained from the Robinson Cup Anemograph on the roof of the Observatory tower. Commencing with the 1926 values, measurements of Wind Speed and Direction published in the Observatories' Year Book are taken from the records of the Dines Pressure-tube Anemograph. This instrument stands in an open field, about 250 metres S E by E of the Observatory tower. The field slopes northwards and downwards to the river Cahir. About 1 mile (1½ km.) to the south-east is the highest point (1,245 feet) of the hill Benteo which extends for some little distance in a northerly and south-westerly direction. A description of the surrounding country has already been given.

In a few instances where records of the Pressure-tube Anemograph have been defective, the required values have been obtained from the records of the Cup Anemograph, a suitable adjustment of such values having been made in accordance with the table in the General Introduction showing the effect of exposure on the two instruments. Values thus obtained are entered as interpolated values.

Minimum Temperature on the Grass.—The grass minimum thermometer is of the type described in the General Introduction. It is exposed over short grass in the field enclosure. It is set at 18h and read at 7h on the succeeding day, the observation being entered to the day of reading.

Visibility.—Lists of the objects used for visibility observations and their distances and bearings from the point of observation are given in the following tables.

LANDWARDS VISIBILITY OBJECTS AT VALENTIA OBSERVATORY.

Indication letter of object.	Standard distance of object.	Actual distance of object.	Bearing of object in degrees from N.	Description of object.
A	Metres. 25	Metres. 25	350°	Gate near workshop.
B	50	50	345°	North fence of enclosure.
C	100	100	125°	Hedge at S. end of vegetable garden.
D	200	200	330°	Notice board on beach.
E	500	500	360°	Hulk on shore.
F	1,000	1,100	50°	Parsonage.
G	2,000	1,910	55°	Wireless school
Intermediate object	—	3,500	20°	Top of Castlequin Mountain.
h	4,000	—	—	No object available. (Top of Castlequin well visible.)
I	7,000	7,600	40°	Top of Knockadober Mountain.
J	10,000	10,000	220°	Kilkeaveragh Mountain.
Intermediate object	—	17,000	55°	Drung Hill.
k	20,000	—	—	No object available. (Drung Hill well visible.)
l	30,000	—	—	No object available.
m	50,000	—	—	No object available.

SEAWARDS VISIBILITY OBJECTS AT VALENTIA OBSERVATORY.

Indication letter of object.	Standard distance of object.	Actual distance of object.	Bearing of object in degrees from N.	Description of object.
F	Metres. 1,000	Metres. 1,000	205°	Farmhouse on skyline.
G	2,000	2,200	265°	Laght Point.
H	4,000	3,760	280°	Black Rock.
I	7,000	6,500	250°	Ridge between two hills on Valentia.
J	10,000	10,000	220°	Kilkeaveragh mountain.
k	20,000	—	—	No object available.
Intermediate objects	— —	23,500 25,500	320° 325°	Mount Eagle. Croaghmarhin Mountain.
l	30,000	—	—	No object available. (Croaghmarhin well visible.)
m	50,000	—	—	No object available. (Croaghmarhin exceptionally visible.)

Two observations, one in a landwards direction, the other in a seawards direction, are made at each hour of observation. The position of the Observatory is such that a distinction between visibility landwards and seawards cannot be made when the range of visibility is less than 1,000 yards. Objects corresponding with the letters A to E have therefore been included in the table of landwards objects only. Kilkeaveragh Mountain is used as both a landwards and seawards object corresponding with J.

Entries of "l" and "m" for visibility in a landwards direction are made:—

(a) When Croaghmarhin Mountain (see table of seawards objects) is clearly visible and there is reason to believe that the range of visibility in a landwards direction is as good as, or nearly as good as, visibility seawards.

(b) When Croaghmarhin Mountain is invisible but there is reason to believe from the appearance of Drung Hill that the range of visibility landwards is greater than the range seawards and is sufficiently good to justify the entry made.

When the mountains used as objects at 3,500 metres and beyond are cloud capped the appropriate entries for the range of visibility are determined by the clearness or otherwise with which the lower parts of the mountains can be seen.

There is a complete absence of industrial activity within a radius of about a hundred miles from the Observatory; the observations are therefore not much affected by smoke pollution of the atmosphere.

Notes on the Meteorological Summaries.

The Weather of 1929.—An outstanding feature of the year was the persistence of rain and high winds in December. No less than 292 millimetres fell during this month and there were only two days on which no rain was measured. Wind reached or exceeded force 6 on the Beaufort scale on 22 days and gales were experienced on 6 days.

Another feature of the year was the unusually fine weather for the time of year experienced in March: sunshine was 59 per cent. and temperature 1.6a (2.9°F.) in excess of normal: there were only 5 days in the month with measurable rainfall.

Pressure.—No change in the values used for reducing pressure at station level to pressure at mean sea level was made at Valentia Observatory by the introduction in 1928 of the revised scheme as set out in the General Introduction.

The mean pressure for the year was approximately normal. Of the monthly mean pressures seven were higher and five lower than normal. The departures ranged from an excess of about eleven millibars in March to a deficiency of twelve millibars in November.

Details of the Fourier analysis of the diurnal inequalities of pressure for the year are given in Table A. For the year considered as a whole the amplitude of the 24-hour term is less than for the period 1871–1915; the arithmetic mean for the twelve months is considerably higher than that of the period, which points apparently to an abnormal amount of variation in the 24-hour term phase angles throughout the year. The normal monthly phase angles for the 24-hour term vary between 203° and 149°. In 1929 there were only two months (July and August) with phase angles within this range: wide deviations from normal are shown in most of the remaining months.

For the year considered as a whole the amplitude of the 12-hour term is lower than average. For the seasons the amplitude of the 12-hour term is lower than normal in winter and summer : at the equinoxes the amplitude is normal. For the individual months with the exception of November which is markedly low 12-hour phase angles do not show very marked departures from normal.

There are no very remarkable deviations from normal in the amplitudes of the 8-hour and 6-hour terms. The phase of the 8-hour term has a seasonal variation, changing somewhat rapidly at the equinoxes by approximately two right angles, which is normal.

Temperature.—The mean temperature for the year 1929 was 0.18a (0.32° F.) above normal. For the individual months mean temperatures did not differ greatly from normal. March, with an excess of 1.63a (2.93° F.) showed the greatest departure.

The harmonic analysis of the monthly and seasonal diurnal inequalities of temperature is given in Table B. For the year considered as a whole the amplitude of the 24-hour term is normal. The highest of the seasonal amplitudes for the 24-hour term is found in summer, as is usual. The amplitude at equinox is above normal, and the winter and summer amplitudes below normal. The seasonal variations in phase angle of the 24-hour term are normal. Of the individual monthly values March is remarkably high being the highest of any month in the year, whereas normally each of the six months April to September is higher.

For the 12-hour term the amplitude is low for the year considered as a whole ; the seasonal values follow the normal sequence in amplitude, but the values at all seasons except equinox are low. Of the individual monthly values January and March are remarkably high. Phase angles for equinox and winter are normal, the summer value is rather high.

There is nothing very noteworthy as compared with normal in the 8-hour and 6-hour amplitudes and phase angles. The amplitudes for March in both terms are decidedly high. The approximate opposition in phase as between winter and summer in the 8-hour term is normal.

Rainfall.—The total rainfall for the year was 8 per cent. above normal, the actual excess being 115 millimetres. The month with the highest rainfall was December, with 292 millimetres, this amount being 73 per cent. more than normal. The lowest monthly total was that for March, the 34 millimetres which fell during that month being only 30 per cent. of the normal amount.

Bright Sunshine.—The total amount of bright sunshine for the year 1929 was about 3 per cent. less than the normal. Five months had more than average sunshine, the greatest excess being about 59 per cent. for March. The most notable deficiency was for October, the total sunshine for this month being 67 per cent. of normal.

Cloud and Weather.—The mean amount of cloud at all observation hours was 7.2. The most cloudy month was October, with a mean cloud amount of 8.0. The month with least cloud was March with a mean of 5.0.

Visibility.—The observations of visibility in tables 428–439 refer to visibility in a landwards direction. The observations, when the range of visibility seawards differs from the range landwards, are shown in the following table :—

Date.	Hour.	Visibility Landwards	Visibility Seawards.
Jan. 6	13	J	k
" 11	15	J	k
" 11	18	J	k
" 11	21	J	k
" 12	13	J	k
" 13	9	J	k
" 17	18	J	k
" 26	9	J	k
" 26	18	J	k
" 28	13	J	k
" 30	13	J	k
" 30	18	J	k
Feb. 2	9	J	k
" 2	21	J	k
" 8	9	J	k
" 27	18	J	k
Mar. 3	18	l h	k
" 4	13	I	J
" 4	15	I	J
" 4	18	I	J
" 7	7	J	k
" 7	13	J	k
" 8	7	l	k
" 9	7	l	k
" 12	18	J	k
" 15	13	J	k
" 21	15	k	l
" 22	15	J	k
" 28	18	J	k
April 14	18	J	k
" 15	15	k	l
" 28	9	J	k
" 28	15	J	k
" 30	7	k	l
May 10	15	I	H
" 11	13	l	k
" 21	7	I	J
" 25	21	I	J
" 28	7	J	k
" 29	7	J	k

Date.	Hour.	Visibility Landwards	Visibility Seawards.
June 3	15	J	k
" 5	13	J	k
" 12	7	J	I
" 12	13	k	J
" 12	15	k	J
" 23	13	k	J
" 29	13	J	k
July 5	13	J	k
" 5	15	J	k
" 18	9	J	k
" 18	15	k	J
" 18	18	k	J
" 20	9	k	J
" 24	18	l	k
" 25	7	J	k
" 27	13	l	k
" 31	13	J	k
" 31	15	J	k
Aug 9	7	J	l
" 10	9	k	J
" 14	9	J	k
" 21	7	J	k
" 30	7	h	I
Sept 5	7	k	J
" 8	7	k	J
" 16	7	l	J
" 21	9	I	J
" 21	13	J	k
" 26	15	J	k
" 28	9	I	J
Oct. 1	13	h	G
" 7	18	J	k
" 16	15	k	J
Nov. 16	21	J	k
" 19	18	J	k
" 29	15	l	k
" 30	13	J	k
Dec. 12	15	J	k
" 24	13	J	k

IDENTIFICATION NUMBERS OF INSTRUMENTS IN USE IN 1929.

- Standard Fortin Barometer .. M.O. 463
 Standard Dry Bulb Thermometer M.O. 1701 Corrections Nil.
 Standard Wet Bulb Thermometer .. M.O. 1702 Corrections $\left\{ \begin{array}{l} 255^{\circ} - 266^{\circ} + .2^{\circ} \\ 267^{\circ} - 268^{\circ} + .1^{\circ} \\ 269^{\circ} - 272^{\circ} \text{ Nil.} \\ 273^{\circ} \text{ and above, } - .1^{\circ} \end{array} \right.$
 Recording Beckley Rain-gauge .. —
 Control Rain-gauge M.O. 402
 Glass for Control Rain-gauge .. M.O. 1662 and 1627
 Campbell Stokes Sunshine Recorder M.O. 5
 Robinson Cup Anemograph Beck 46
 Dines Tube Anemograph —
 Grass Minimum Thermometer .. M.O. 17947/27 Corrections $\left\{ \begin{array}{l} 2.0^{\circ} \text{ F. } - .2^{\circ} \text{ F.} \\ 12.0^{\circ} \text{ F. } - .1^{\circ} \text{ F.} \\ 32.0^{\circ} \text{ F. } \text{ Nil.} \\ 52.0^{\circ} \text{ F. } \text{ Nil.} \\ 72.0^{\circ} \text{ F. } \text{ Nil.} \end{array} \right.$

All thermometer corrections are applied at the Observatory before tabulation.

TABLE A.

Diurnal Variation of Barometric Pressure, 1929. Fourier Coefficients.

Cahirciveen (Valentia Observatory), Longitude 10° 15' W.

Values of c_n , α_n in the series $\Sigma c_n \sin (15nt^0 + \alpha_n)$, t being Local Mean Time reckoned in hours from midnight.

Month or Season.	c_1	α_1	c_2	α_2	c_3	α_3	c_4	α_4
	mb.	°	mb.	°	mb.	°	mb.	°
January .. .. .	.261	15	.312	155	.174	355	.106	210
February .. .. .	.376	294	.204	149	.099	345	.040	90
March .. .. .	.044	8	.379	157	.055	360	.047	30
April .. .. .	.183	86	.353	141	.032	180	.034	345
May .. .. .	.153	297	.254	149	.055	140	.011	350
June .. .. .	.278	211	.192	137	.098	165	.017	145
July .. .. .	.281	174	.242	140	.107	155	.019	35
August .. .. .	.407	197	.313	145	.098	145	.030	5
September .. .. .	.341	218	.338	156	.022	310	.040	340
October .. .. .	.410	303	.292	161	.085	10	.020	90
November.. .. .	.736	10	.349	122	.070	10	.067	130
December.. .. .	.734	317	.060	150	.178	355	.110	230
Arithmetic Mean.. .. .	.350	..	.274	..	.089	..	.045	..
Year .. .. .	.134	301	.270	147	.027	20	.004	195
Winter .. .. .	.452	339	.226	141	.130	355	.055	195
Equinox .. .. .	.091	270	.335	153	.030	360	.030	15
Summer .. .. .	.230	204	.251	144	.091	150	.013	30

TABLE B.

Diurnal Variation of Temperature, 1929. Fourier Coefficients.

Cahirciveen (Valentia Observatory), Longitude 10° 15' W.

Values of c_n , α_n in the series $\Sigma c_n \sin (15nt^0 + \alpha_n)$, t being Local Mean Time reckoned in hours from midnight.

Month or Season.	c_1	α_1	c_2	α_2	c_3	α_3	c_4	α_4
	a.	°	a.	°	a.	°	a.	°
January .. .. .	.809	213	.402	46	.186	220	.073	40
February .. .. .	.707	231	.291	50	.102	255	.066	140
March	2.316	233	.763	62	.110	310	.131	180
April	1.921	237	.341	76	.177	45	.076	295
May	1.903	245	.236	122	.271	90	.083	360
June	2.043	244	.273	128	.210	75	.086	360
July	1.816	243	.189	116	.205	70	.092	355
August	1.378	243	.235	76	.111	50	.046	275
September	1.657	246	.487	69	.108	10	.105	235
October .. .. .	.735	239	.341	65	.085	255	.042	105
November.. .. .	.689	252	.313	55	.083	250	.034	250
December .. .. .	.341	214	.228	56	.128	255	.033	50
Arithmetic Mean	1.360	..	.342	..	.148	..	.072	..
Year	1.348	239	.296	69	.030	50	.011	315
Winter .. .. .	.609	228	.308	51	.120	240	.022	75
Equinox	1.650	238	.482	67	.017	355	.052	215
Summer	1.781	244	.159	111	.192	75	.070	350

NOTE.—The seasonal means are derived from the following grouping of months:—*Winter*: January, February, November and December; *Equinox*: March, April, September and October; *Summer*: May to August, inclusive.

TERRESTRIAL MAGNETISM.

Notes on the Magnetic Observations for the year 1929.

Absolute observations of declination, horizontal force and inclination were made weekly at the Valentia Observatory during the year 1929. 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, 11.44 for the horizontal force and 14.30 for the inclination, all according to Greenwich Mean Time. In the individual observations the greatest departure from the mean time in any element was 3 minutes. The deflection of the mirror magnet was measured for two distances of the collimator magnet, namely, 30cm. and 40cm. The complete deflection observation consisted of eight readings of the mirror magnet. The distribution constant, P, used for 1929 was computed from the mean deflections for 30cm. and 40cm. for the seven years 1922-1928 inclusive. The mean P so obtained was 7.63. The moment of the collimator magnet has decreased at the rate of about 1 unit per annum.

The values of the declination, horizontal force and inclination obtained in the absolute observations are given in detail in Table C. All the observations made are included in this table, but in Table D the mean monthly values are computed from only such of the absolute observations as were taken at times subsequently found, by reference to the Eskdalemuir magnetograph curves, to be free from serious disturbance. Observations in Table C taken at disturbed times, and not, therefore, utilised for the mean values in Table D, are marked with an asterisk. The north, west and vertical components and the total force for each month and the year are computed from the corresponding mean values of the observed elements.

Westerly declination has diminished by 10'.7 as compared with 1928. From 1927 to 1928 the decrease was 11'.5 and in the previous 12 months 11'.3. The average annual decrease for the five years 1920-1925 was 11'.1, for the five years 1915-1920 it was 9'.2, and for the five years 1910-1915 it was 8'.2. During the five years ending in 1929 the average annual decrement is 11'.5 so that the rate of the eastward movement of the magnetic needle appears to have increased slowly.

Northerly inclination increased 0'.3 from 1928 to 1929. The corresponding change for the preceding year was +0'.1, and for the year previous to that -0'.9. From 1910 to 1915 the average yearly decrease was 1'.0, from 1915 to 1920 0'.5, and from 1920 to 1925 1'.1. For the five years 1924-1929 the average change per year is -0'.2. Inclination, therefore, is apparently diminishing at a slow rate, but the change in the opposite direction for the past two years makes it uncertain whether the decrease will be maintained.

Up to 1920 the mean annual values of horizontal force had shown a steady decline from year to year. In the years 1921 to 1924 and in 1927 the change was in the opposite direction, each year having a mean value higher than that of the preceding year. It would appear that the increase was temporary since a decline was in evidence from 1924 to 1926 and again from 1927 to 1929. The amount of annual change is shown in the following table:—

Period.	Annual Change.
1910-15	5γ decrease (mean value).
1915-20	6γ " (mean value).
1920-21	8γ increase.
1921-22	1γ "
1922-23	3γ "
1923-24	2γ "
1924-25	5γ decrease.
1925-26	14γ "
1926-27	2γ increase.
1927-28	11γ decrease.
1928-29	5γ "

The reversal of the annual change in the horizontal force from 1920 to 1924 and from 1926 to 1927 was not accompanied by any such reversal in the total force. From 1910 to 1915 the average yearly change in the total force was -49γ , from 1915 to 1920 it was -33γ and from 1920 to 1925 it was -32γ . From 1924 to 1929 the mean annual change is -25γ , so that the total force has continued to decrease, but at a rate which is apparently diminishing gradually. The individual changes from year to year as shown in Table D are somewhat irregular, but this may be due in considerable measure to instrumental uncertainties. The total force is computed from the horizontal force and the inclination, using the formula $T = H \sec I$, so that an error of 0.1 in I would give an error approximately 4γ 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 35γ per annum in the total force obtained from the values in Table D is probably a close approximation to the true change. This continued decrease in the total force indicates that the rise in the value of the horizontal force observed from 1920 to 1924 and from 1926 to 1927 was not a true increase in the magnetic field but merely a component increase arising from the fall in the inclination, which becomes proportionally more effective in the horizontal component as the actual inclination angle itself becomes smaller. The magnetic field in the Valentia district continues to become less year by year, therefore, although without observations of inclination the opposite would have appeared to be the case in some recent years.

TABLE C.

Cahirciveen (Valentia Observatory). Absolute Magnetic Observations, 1929.

Latitude 51° 56' N. Longitude 10° 15' W.

Date.	Westerly Declination	Horizontal Force	Northerly Inclination	Date.	Westerly Declination	Horizontal Force	Northerly Inclination
January 4 ..	17 44.9	17836	67 59.0	July 6 ..	17 38.8	17827	67 59.9
" 11 ..	17 44.3	..	67 59.4	" 11 ..	17 35.4	17802	68 0.5
" 12 ..	17 43.8	17828	..	" 19 ..	17 37.1	17815	67 59.8
" 18 ..	17 42.5	17827	67 59.9	" 26 ..	17 35.3	17834	67 59.5
" 25 ..	17 41.5	17837	67 58.4	August 2 ..	17 37.1	17807	68 1.2
February 1 ..	17 41.9	17827	67 59.5	" 9	17 36.6	17825	67 59.9
" 8 ..	17 41.3	17827	67 59.1	" 16 ..	17 36.4*	17811	68 0.7
" 15 ..	17 39.8	17834	67 59.2	" 23 ..	17 34.7	17834	67 59.1
" 22 ..	17 42.3	17809	68 0.5	" 30 ..	17 37.5	17834	67 58.4
March 1 ..	17 41.0	17798	68 1.2	September 6 ..	17 36.3	17839	67 58.0
" 8 ..	..	17816	67 59.6	" 13 ..	17 37.2*	17803*	67 59.5
" 15 ..	17 40.9	17827	67 59.3	" 20 ..	17 35.7	17830	67 59.2
" 22 ..	17 41.1	17816	68 1.2	" 27 ..	17 34.5	17785	68 0.7
" 28 ..	17 39.8	17818	67 59.1	October 4 ..	17 33.7	17813	67 59.3
April 5 ..	17 38.8	17812	67 59.6	" 11 ..	17 33.2	17799	67 59.9
" 11 ..	17 34.9	17822	67 59.6	" 18 ..	17 38.2	17786	68 1.0
" 19 ..	17 38.2	17825	67 59.7	" 25 ..	17 34.1	17819	67 59.1
" 26 ..	17 34.5	17828	67 59.8	November 1 ..	17 32.5	17837*	68 0.4
May 3 ..	17 37.4	17826	67 57.4	" 8 ..	17 35.1	17818	68 0.3
" 10 ..	17 37.3	17826	67 58.9	" 16 ..	17 37.9*	17789*	68 1.5*
" 17 ..	17 36.7	17800	67 59.8	" 22 ..	17 34.1	17828	67 59.3
" 24 ..	17 36.5	17812	67 59.3	" 29 ..	17 33.5	17823	68 0.0
" 31 ..	17 40.4	17835	67 58.6	December 7 ..	17 37.0	17813	68 2.2
June 7 ..	17 37.8	17832	67 58.7	" 13 ..	17 37.1	17822	68 1.4
" 14 ..	17 35.4	17835	67 58.8	" 21 ..	17 32.2	17824	67 59.0
" 21 ..	17 36.2	17833	67 58.3	" 30 ..	..	..	67 59.7
" 28 ..	17 38.7	17810	67 57.5	" 31 ..	17 30.5	17835	..

* Disturbance at these times. Values not utilised in computing means given in Table D.

TABLE D.

Valentia Observatory, Cahirciveen.
Magnetic Data for the Year 1929.

1929.			Declination (West).		Inclination (North).		Horizon- tal Force.	North.	West.	Vertical.	Total.
			°	'	°	'	γ	γ	γ	γ	γ
January	..	..	17	43·4	67	59·2	17832	16986	5428	44105	47574
February	..	..	17	41·3	67	59·6	17824	16982	5416	44100	47566
March	..	..	17	40·7	68	0·1	17815	16974	5410	44097	47560
April	..	..	17	36·6	67	59·7	17822	16987	5392	44100	47565
May	..	..	17	37·7	67	58·8	17820	16983	5397	44062	47529
June	..	..	17	37·0	67	58·3	17827	16991	5395	44061	47531
July	..	..	17	36·7	67	59·9	17819	16984	5391	44100	47564
August	..	..	17	36·5	67	59·9	17822	16987	5391	44106	47571
September	..	..	17	35·5	67	59·4	17818	16985	5385	44078	47543
October	..	..	17	34·8	67	59·8	17804	16973	5377	44061	47522
November	..	..	17	33·8	68	0·0	17823	16992	5378	44114	47578
December	..	..	17	34·2	68	0·6	17823	16991	5380	44136	47598
Year, 1929	..	..	17	37·3	67	59·6	17821	16985	5395	44093	47559
Year, 1928	..	..	17	48·0	67	59·3	17826	16973	5449	44096	47563
Year, 1927	..	..	17	59·5	67	59·2	17837	16965	5509	44119	47588
Year, 1926	..	..	18	10·8	68	0·1	17835	16945	5565	44147	47612
Year, 1925	..	..	18	22·4	68	0·0	17849	16939	5626	44177	47646
Year, 1920	..	..	19	17·9	68	5·3	17840	16837	5896	44353	47806
Year, 1915	..	..	20	3·8	68	7·9*	17869	16785	6130	44519*	47972*
Year, 1910	..	..	20	44·6	68	13·0	17892	16732	6337	44771	48215

* Mean of 11 months only.

Readings in millibars, at exact hours, Greenwich Mean Time.

343. Cahirciveen (Valentia Observatory) : H_b (height of barometer cistern above M.S.L.) = 13.7 metres. January, 1929.

Table with 25 columns (Hour, G.M.T., 1-24, Mean) and 31 rows (Day 1-31). Includes 'Station Level' and 'Mean (Sea Level)' rows. Data values are in millibars.

344. Cahirciveen (Valentia Observatory) : H_b = 13.7 metres.

February, 1929.

Table with 25 columns (Hour, G.M.T., 1-24, Mean) and 28 rows (Day 1-28). Includes 'Station Level' and 'Mean (Sea Level)' rows. Data values are in millibars.

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

Readings in millibars at exact hours, Greenwich Mean Time.

345. Cahirciveen (Valentia Observatory) : H_b (height of barometer cistern above M.S.L.) = 13.7 metres. March, 1929.

Table with 26 columns (Hour, G.M.T., 1-24, Mean) and 31 rows (Station Level 1-31). Includes mean values for station and sea levels.

346. Cahirciveen (Valentia Observatory) : H_b = 13.7 metres.

April, 1929.

Table with 26 columns (Hour, G.M.T., 1-24, Mean) and 31 rows (Station Level 1-31). Includes mean values for station and sea levels.

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

Readings in millibars at exact hours, Greenwich Mean Time.

347. Cahirciveen (Valentia Observatory) : H_b (height of barometer cistern above M.S.L.) = 13.7 metres.

May, 1929.

Table with 25 columns (Hour G.M.T. 1-24, Mean) and 31 rows (Station Level 1-31). Data includes barometric readings in millibars for each hour and station level, with mean values at the bottom.

348. Cahirciveen (Valentia Observatory) : H_b = 13.7 metres.

June, 1929.

Table with 25 columns (Hour G.M.T. 1-24, Mean) and 31 rows (Station Level 1-31). Data includes barometric readings in millibars for each hour and station level, with mean values at the bottom.

NOTE.—When pressure exceeds 1000 mb. the leading figure 1 is not printed, i.e., 1001.7 mb. is written 001.7. This rule does not, however, apply to monthly means.

Readings in millibars at exact hours, Greenwich Mean Time.

349. Cahirciveen (Valentia Observatory) : H_b (height of barometer cistern above M.S.L.) = 13.7 metres.

July, 1929.

Table for Cahirciveen (Valentia Observatory) in July 1929. Columns include Hour, G.M.T., Station Level (1-31), and Mean (Station Level). Rows show hourly pressure readings in millibars.

350. Cahirciveen (Valentia Observatory) : H_b = 13.7 metres.

August, 1929.

Table for Cahirciveen (Valentia Observatory) in August 1929. Columns include Hour, G.M.T., 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., 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.

351. Cahirciveen (Valentia Observatory) : H_b (height of barometer cistern above M.S.L.) = 13.7 metres. September, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-30 hours + Mean). Includes 'Station Level' and 'Mean (Sea Level)' sub-headers.

352. Cahirciveen (Valentia Observatory) : H_b = 13.7 metres.

October, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-30 hours + Mean). Includes 'Station Level' and 'Mean (Sea Level)' sub-headers.

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

Readings in millibars at exact hours, Greenwich Mean Time.

353. Cahirciveen (Valentia Observatory) : H_b (height of barometer cistern above M.S.L.) = 13.7 metres. November, 1929.

Table with 25 columns (Hour, G.M.T. 1-24, Mean) and 31 rows (Station Level 1-30, Mean). Data includes hourly pressure readings in millibars for November 1929 at Cahirciveen.

354. Cahirciveen (Valentia Observatory) : H_b = 13.7 metres.

December, 1929.

Table with 25 columns (Hour, G.M.T. 1-24, Mean) and 31 rows (Station Level 1-30, Mean). Data includes hourly pressure readings in millibars for December 1929 at Cahirciveen.

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

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

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

355. Cahirciveen (Valentia Observatory) : $H_b = 13.7$ metres.

1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Station Level.	mb. 012.29	mb. 012.19	mb. 012.08	mb. 012.02	mb. 012.02	mb. 012.09	mb. 012.23	mb. 012.40	mb. 012.59	mb. 012.68	mb. 012.72	mb. 012.63	mb. 012.47	mb. 012.30	mb. 012.16	mb. 012.04	mb. 012.01	mb. 012.05	mb. 012.10	mb. 012.20	mb. 012.30	mb. 012.37	mb. 012.37	mb. 012.37	mb. 012.28
Sea Level.	013.96	013.86	013.75	013.69	013.69	013.76	013.90	014.07	014.26	014.35	014.39	014.30	014.13	013.96	013.82	013.70	013.67	013.71	013.76	013.86	013.97	014.04	014.04	014.04	013.95

PRESSURE AT STATION LEVEL: MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

356. Cahirciveen (Valentia Observatory) : $H_b = 13.7$ metres.

1929.

Month	Mean.	Hour 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.	mb. 1021.08	+0.11	+0.06	+0.16	+0.13	+0.03	-0.10	-0.08	+0.08	+0.44	+0.59	+0.62	+0.35	-0.11	-0.50	-0.60	-0.54	-0.44	-0.33	-0.25	-0.12	+0.04	+0.09	+0.17	+0.20
Feb.	1009.33	-0.26	-0.21	-0.25	-0.27	-0.18	-0.11	-0.02	+0.23	+0.52	+0.54	+0.58	+0.69	+0.49	+0.13	-0.05	-0.19	-0.21	-0.17	-0.07	-0.16	-0.20	-0.24	-0.27	-0.23
Mar.	1022.71	+0.11	+0.04	-0.18	-0.35	-0.39	-0.24	-0.10	+0.17	+0.33	+0.42	+0.37	+0.28	+0.11	-0.13	-0.35	-0.46	-0.44	-0.28	-0.04	+0.16	+0.20	+0.25	+0.28	+0.24
April	1015.55	+0.36	+0.16	-0.02	-0.18	-0.32	-0.27	-0.10	0.00	+0.06	+0.19	+0.14	+0.05	+0.01	-0.10	-0.29	-0.46	-0.44	-0.36	-0.27	+0.06	+0.38	+0.45	+0.48	+0.49
May	1010.80	+0.01	-0.13	-0.27	-0.34	-0.30	-0.14	+0.09	+0.18	+0.31	+0.36	+0.36	+0.32	+0.16	+0.08	+0.01	-0.17	-0.25	-0.24	-0.25	-0.15	+0.06	+0.12	+0.11	+0.07
June	1014.79	-0.06	-0.25	-0.46	-0.51	-0.48	-0.35	-0.21	-0.12	-0.04	+0.03	+0.12	+0.24	+0.27	+0.26	+0.26	+0.15	+0.14	+0.05	+0.01	+0.05	+0.20	+0.29	+0.27	+0.14
July	1014.53	+0.18	-0.08	-0.38	-0.53	-0.51	-0.39	-0.28	-0.20	-0.09	-0.08	-0.03	+0.06	+0.10	+0.12	+0.15	+0.07	-0.04	+0.01	+0.09	+0.16	+0.37	+0.50	+0.44	+0.36
Aug.	1013.43	+0.04	-0.27	-0.60	-0.74	-0.77	-0.67	-0.41	-0.19	-0.02	+0.11	+0.14	+0.14	+0.26	+0.34	+0.25	+0.17	+0.07	+0.13	+0.12	+0.28	+0.48	+0.45	+0.40	+0.29
Sept.	1018.32	-0.13	-0.35	-0.54	-0.66	-0.65	-0.57	-0.35	-0.09	+0.14	+0.35	+0.38	+0.38	+0.31	+0.24	+0.11	-0.01	-0.04	+0.05	+0.12	+0.39	+0.41	+0.30	+0.17	+0.04
Oct.	1008.99	-0.22	-0.23	-0.36	-0.37	-0.19	-0.07	+0.08	+0.39	+0.69	+0.69	+0.77	+0.65	+0.30	+0.08	-0.12	-0.27	-0.34	-0.26	-0.18	-0.18	-0.22	-0.21	-0.22	-0.21
Nov.	999.49	+0.50	+0.45	+0.48	+0.47	+0.34	+0.33	+0.45	+0.50	+0.60	+0.56	+0.63	+0.44	+0.10	-0.33	-0.76	-0.94	-0.99	-0.92	-0.84	-0.77	-0.64	-0.14	+0.10	+0.38
Dec.	998.01	-0.52	-0.29	+0.11	+0.22	+0.20	+0.28	+0.31	+0.47	+0.75	+1.04	+1.16	+0.60	+0.30	+0.11	-0.05	-0.16	-0.26	-0.33	-0.51	-0.63	-0.72	-0.75	-0.71	-0.62
Year	1012.28	+0.01	-0.09	-0.20	-0.26	-0.27	-0.19	-0.05	+0.11	+0.31	+0.40	+0.44	+0.35	+0.19	+0.02	-0.12	-0.23	-0.27	-0.22	-0.17	-0.08	+0.03	+0.09	+0.10	+0.10

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY.

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

357. Cahirciveen (Valentia Observatory) : $H_b = 13.7$ metres.

1929.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	mb. 030.4	025.4	003.1	994.1	033.3	031.8	023.9	018.9	007.9	004.1	017.6	011.0	011.7	010.4	017.0	002.0	016.7	003.2	014.3	997.4	025.7	021.6	997.9	981.6
2	030.2	028.6	999.0	997.6	032.2	027.9	024.0	020.6	012.6	004.7	011.0	010.1	010.9	006.3	018.4	006.0	016.5	014.2	000.9	997.3	026.2	020.6	987.5	972.4
3	032.6	028.6	016.5	999.0	027.9	022.8	024.0	020.8	013.2	007.1	010.4	008.5	006.4	001.9	006.0	999.2	014.8	009.9	002.8	996.7	031.4	026.2	987.7	979.1
4	032.2	024.7	023.7	016.5	022.8	016.6	021.2	013.5	007.8	998.6	010.0	007.1	004.5	999.4	013.1	997.8	014.5	010.7	002.7	998.5	030.5	009.6	990.6	962.6
5	024.7	013.9	023.5	016.1	021.3	016.4	016.2	011.2	998.6	995.4	008.8	997.3	013.9	004.5	013.4	000.6	021.3	014.4	998.5	985.3	009.6	999.3	984.3	955.4
6	019.0	012.6	021.9	016.5	022.6	021.2	021.0	016.2	995.4	990.1	998.6	995.2	019.5	013.9	010.7	999.1	026.6	021.2	001.5	985.7	010.8	001.6	987.8	947.8
7	032.6	019.0	019.3	013.1	022.2	018.4	020.4	017.3	003.6	989.3	005.4	998.4	024.0	019.0	018.8	010.7	026.8	024.5	002.0	987.5	008.2	999.5	993.8	966.8
8	034.5	031.9	018.5	014.1	018.4	014.5	019.7	017.7	019.1	003.6	014.9	005.0	024.0	019.2	018.9	015.0	024.5	019.5	018.0	988.4	012.4	000.7	998.9	972.7
9	032.0	030.2	018.3	013.2	019.2	015.9	024.0	019.6	021.9	017.7	022.1	014.9	019.2	010.4	017.2	013.7	020.9	018.1	020.1	018.0	012.0	998.0	000.5	986.4
10	031.4	029.0	017.1	005.9	018.8	016.3	024.5	022.2	017.7	012.4	022.9	020.7	013.9	008.7	017.3	014.8	021.9	019.1	028.7	023.1	015.0	003.8	003.0	985.6
11	035.4	028.4	005.9	997.5	027.0	018.8	024.6	023.5	014.5	011.0	020.7	015.3	023.6	013.4	023.1	014.8	019.1	010.2	027.1	022.4	012.1	988.7	006.9	985.8
12	038.5	034.9	010.6	001.9	030.3	027.0	023.9	017.2	016.3	009.9	015.3	003.2	028.7	023.5	023.1	020.8	022.0	010.1	027.3	023.4	999.9	994.5	021.2	006.9
13	038.7	036.2	005.2	000.0	030.2	028.4	017.3	009.1	009.9	994.1	003.3	997.1	028.8	027.3	020.8	013.8	021.6	013.3	023.4	020.7	003.5	999.8	021.4	013.7
14	036.2	031.4	006.2	994.6	029.0	024.1	009.1	995.9	008.1	996.2	010.0	996.1	027.4	022.4	022.1	020.0	017.6	012.1	025.3	021.7	005.4	997.6	025.6	013.8
15	031.4	020.6	999.8	997.2	025.1	021.9	007.4	996.4	018.4	008.1	009.8	002.8	022.4	010.0	021.5	012.8	025.3	017.6	025.3	010.1	005.2	970.3	034.4	025.5
16	021.2	016.4	011.1	999.7	022.3	019.0	016.0	007.4	019.9	018.2	022.8	005.9	010.2	007.7	012.8	007.1	026.7	024.3	018.1	009.3	002.1	984.5	038.8	034.1
17	016.4	010.2	011.8	006.0	019.0	017.7	020.8	016.0	020.7	018.1	023.5	019.0	012.5	009.3	018.3	009.1	024.3	014.9	017.6	014.8	014.3	001.8	038.6	034.2
18	013.3	011.1	008.4	005.2	019.9	017.0	021.1	017.5	019.7	017.0	019.4	018.6	016.7	012.5	025.4	018.3	016.8	011.3	016.7	012.9	013.6	991.0	034.2	022.4
19	015.3	012.5	009.3	007.3	017.0	013.3	017.7	012.3	021.8	018.5	023.3	018.0	015.5	012.4	025.0	020.0	016.6	011.4	012.9	005.9	992.1	979.4	022.4	009.5
20	013.8	010.6	015.1	008.5	013.6	006.1	023.4	017.7	021.2	016.6	033.7	023.3	016.9	013.5	021.4	017.4	021.2	011.0	006.7	001.3	995.2	987.2	011.9	985.1
21	012.0	009.8	020.5	015.1	011.3	007.4	024.0	021.2	016.6	000.2	035.2	031.2	016.9	010.6	020.9	016.7	024.0	018.8	014.6	005.5	994.5	982.6	988.2	977.6
22	016.7	010.3	018.2	002.1	020.8	011.3	022.1	018.4	002.1	995.1	031.2	024.8	012.1	006.7	016.8	013.8	025.4	024.0	012.5	007.6	982.6	972.4	987.8	976.2
23	026.9	016.7	002.1	997.9	023.7	020.8	019.3	016.7	008.6	999.5	024.8	020.7	019.4	011.4	015.6	013.2	024.1	022.8	007.7	987.7	982.5	976.6	982.9	976.4
24	027.6	026.4	022.3	999.1	022.2	017.6	021.8	019.3	013.5	008.6	020.7	017.8	019.5	018.6	021.9	014.5	025.3	023.1	988.6	985.6	99			

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

358. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres.

January, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	74.0	73.9	73.9	74.0	74.1	73.7	73.2	73.0	72.1	72.0	73.0	74.2	75.2	75.9	75.9	76.1	74.3	73.8	72.1	71.4	71.8	71.2	70.5	70.5	73.4
2	71.0	71.0	70.2	71.0	71.0	70.1	70.0	70.2	70.2	70.9	71.9	74.0	78.4	79.0	78.4	78.1	78.0	77.9	78.0	78.0	77.3	77.4	77.4	76.2	74.3
3	77.1	77.2	77.2	77.8	77.5	76.6	77.4	77.4	77.2	77.3	77.1	77.0	77.0	77.0	77.0	76.8	76.5	76.0	75.0	76.0	75.4	76.1	76.1	76.3	76.7
4	75.9	76.1	75.4	76.4	76.9	76.6	76.4	76.3	76.2	76.9	76.9	77.1	77.0	77.2	77.3	77.0	77.0	77.0	77.1	76.7	76.7	76.4	76.9	77.0	76.7
5	77.1	77.0	76.9	76.5	76.6	76.5	76.2	76.0	76.3	76.3	76.2	76.0	76.1	76.3	75.6	75.8	75.2	75.1	75.0	75.9	76.0	75.2	75.4	76.0	76.1
6	76.0	76.0	75.3	76.0	75.8	75.4	75.6	75.3	75.2	75.5	75.5	75.1	75.4	75.4	75.1	75.0	74.6	75.0	74.9	74.5	74.0	73.1	72.6	72.0	75.0
7	72.0	71.4	71.5	72.0	70.7	71.4	72.0	71.0	70.4	71.0	73.2	74.3	75.4	76.5	76.8	76.1	75.6	74.2	74.0	75.0	77.2	77.9	78.0	78.5	73.9
8	78.5	78.7	78.9	79.0	79.4	79.6	80.1	80.1	80.4	80.6	80.9	81.0	81.1	81.5	81.5	81.4	81.4	81.4	81.4	81.4	81.5	81.5	81.1	81.7	81.9
9	82.0	82.1	82.1	81.9	82.0	81.8	81.9	81.6	81.7	81.8	82.0	82.0	82.1	82.2	82.4	82.5	82.8	82.9	82.9	83.0	82.9	82.7	82.2	82.1	82.2
10	81.4	80.4	80.7	80.9	81.0	80.9	80.2	80.2	80.3	81.0	81.1	81.3	81.4	81.4	81.3	81.1	80.8	80.8	80.9	80.4	79.8	79.6	79.4	79.4	80.7
11	79.2	78.8	79.2	78.7	79.4	79.0	78.8	78.7	78.6	79.1	79.9	80.9	80.9	81.0	80.2	79.6	79.1	78.8	78.2	77.9	77.4	77.0	75.8	76.0	78.9
12	76.0	76.0	76.0	76.0	76.0	76.0	75.7	75.4	75.1	75.0	75.4	75.9	75.9	76.1	76.1	76.0	76.0	75.9	75.8	75.8	76.0	75.9	76.0	76.0	75.8
13	76.0	76.0	76.0	75.6	75.9	75.6	75.8	75.8	75.3	75.4	75.8	76.4	76.9	76.9	77.0	76.9	76.0	76.0	75.8	75.8	75.3	75.0	75.0	74.5	75.9
14	73.7	74.1	75.0	74.9	75.2	75.0	75.4	75.4	75.3	75.3	76.0	77.0	78.0	78.4	78.0	78.0	77.4	76.9	76.3	76.4	77.1	75.8	76.3	76.0	76.1
15	75.5	74.8	74.8	74.0	73.6	72.9	73.4	73.6	73.4	74.2	77.0	79.3	80.3	81.0	80.9	80.9	80.4	80.8	80.3	80.7	80.9	80.8	80.8	80.5	77.6
16	80.3	78.8	78.4	77.9	77.6	77.4	77.1	76.6	76.1	75.1	76.8	77.7	78.2	78.7	78.5	78.0	76.7	76.7	76.1	77.0	77.1	77.1	77.4	77.6	77.5
17	77.9	78.0	78.0	78.0	78.0	78.1	78.5	78.2	78.1	78.4	79.0	79.8	80.4	81.0	80.9	80.9	80.4	80.4	80.4	80.4	81.0	81.0	81.1	81.5	79.5
18	82.0	82.0	81.9	81.1	81.0	81.0	81.3	81.2	81.3	82.0	82.4	82.4	82.9	82.9	82.8	82.8	82.5	82.4	82.5	82.4	82.8	82.9	82.9	82.9	82.2
19	83.0	82.9	82.3	82.0	82.4	82.1	82.0	82.1	82.3	82.6	83.0	83.4	83.6	83.4	83.4	83.2	82.5	82.9	82.9	82.9	83.0	83.0	83.0	83.0	82.8
20	82.9	82.8	82.8	82.4	82.3	82.1	82.0	82.1	82.5	82.9	83.1	83.0	83.0	82.9	82.8	82.8	82.4	82.0	81.6	81.4	81.4	81.3	81.9	81.8	82.3
21	81.9	81.5	81.3	81.6	81.9	81.8	82.1	82.0	82.0	82.7	83.1	83.1	83.9	83.9	83.7	83.6	83.1	83.1	83.0	83.0	83.2	83.1	83.3	83.3	82.7
22	83.9	84.0	84.0	84.4	84.4	84.4	84.4	84.2	84.0	84.1	84.1	84.0	84.1	84.4	83.9	83.7	82.4	82.2	82.2	82.1	81.9	82.0	82.0	82.1	83.5
23	81.8	81.2	81.0	80.9	81.2	81.9	81.9	81.9	82.0	82.2	82.6	82.2	82.6	82.4	82.2	82.0	81.9	81.6	81.6	81.1	81.0	80.9	80.8	80.7	81.6
24	80.5	80.4	80.0	79.6	78.4	77.6	77.1	77.1	77.2	77.9	78.1	78.9	79.0	79.0	78.5	77.9	76.9	76.4	76.0	76.8	76.8	76.3	76.0	75.6	77.9
25	75.4	75.9	75.4	75.3	73.3	73.0	72.9	72.8	73.0	73.4	74.8	76.1	77.1	77.9	78.0	77.4	76.4	75.2	73.3	73.2	72.9	72.4	72.4	73.3	74.7
26	73.1	72.6	72.3	72.0	72.0	72.5	73.3	73.7	74.0	74.9	75.3	76.4	77.4	77.9	78.1	78.7	78.9	78.6	78.1	78.4	78.3	77.3	76.5	76.6	75.6
27	75.9	74.9	74.2	73.9	73.4	73.1	73.5	74.1	74.0	75.0	75.9	78.0	78.4	79.0	79.0	79.0	77.9	78.0	78.0	77.7	76.9	76.3	76.1	75.6	76.2
28	75.4	75.9	75.7	75.9	76.0	78.1	78.1	78.4	78.3	78.4	78.9	79.0	79.0	79.0	79.2	79.8	80.4	81.0	83.0	83.0	83.0	82.9	82.8	82.8	79.3
29	83.0	83.0	83.1	83.3	83.4	83.3	83.2	83.1	83.5	83.4	84.0	84.0	84.1	84.1	84.4	84.4	84.4	84.2	84.4	84.2	84.1	84.3	84.4	84.5	83.8
30	84.4	84.4	84.4	84.4	84.2	84.2	84.3	84.6	84.6	85.0	85.1	85.4	85.4	85.4	85.1	85.0	84.9	84.6	84.4	84.2	84.0	84.1	84.0	84.0	84.6
31	84.0	84.0	83.9	83.2	83.1	83.0	83.1	83.1	83.1	83.4	83.9	83.9	83.9	84.0	84.0	84.3	84.1	84.0	84.3	84.0	83.9	83.3	83.0	83.0	83.7
Mean ...	78.4	78.3	78.1	78.1	78.0	77.9	78.0	77.9	77.8	78.1	78.7	79.3	79.8	80.1	79.9	79.8	79.4	79.3	79.0	79.1	79.1	78.8	78.7	78.7	78.8

359. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

February, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	83.0	82.9	83.0	82.9	82.8	82.9	82.9	82.8	82.1	82.4	83.1	83.9	84.2	84.5	84.0	84.0	83.5	83.4	83.4	83.5	83.7	83.7	83.6	83.5	83.3
2	83.5	83.4	83.2	83.4	83.6	83.3	83.9	83.7	83.3	83.3	83.9	84.0	84.1	84.0	84.1	84.4	84.1	83.8	83.2	83.4	82.0	82.0	81.7	81.7	83.5
3	81.9	81.5	81.8	81.8	80.9	80.7	81.0	80.8	80.8	81.2	82.0	82.6	83.0	83.0	83.2	83.4	82.9	82.4	81.9	81.7	81.1	80.8	81.0	81.1	81.8
4	81.1	81.0	80.9	80.9	80.9	80.6	80.3	80.4	80.1	80.5	81.0	81.9	81.7	82.0	82.0	81.8	81.4	81.0	80.4	80.1	80.1	80.0	80.0	80.1	80.9
5	80.1	80.6	80.6	80.9	80.4	80.4	80.9	80.9	81.0	81.8	82.3	82.3	82.7	82.9	82.9	82.4	82.1	82.0	82.0	82.1	82.2	82.4	82.7	82.4	81.7
6	82.0	81.8	81.9	82.0	82.0	82.0	81.9	81.4	81.2	81.5	82.0	82.4	82.3	82.4	82.2	82.0	81.4	80.0	79.4	78.5	77.7	79.0	80.0	80.4	81.2
7	81.0	81.4	81.4	82.0	82.0	81.9	82.0	82.3	82.5	82.6	82.2	81.9	81.9	81.9	82.1	82.4	82.4	82.4	82.2	82.1	81.9	81.8	81.5	81.4	81.9
8	81.4	81.0	80.6	80.8	80.6	80.6	80.3	80.0	79.4	79.1	79.2	79.9	80.1	80.8	80.6	80.3	80.1	79.0	78.9	78.5	77.2	77.1	78.3	78.4	79.8
9	78.8	77.5	77.7	76.4	76.3	76.7	77.0	76.8	77.1	78.3	79.5	80.1	81.0	80.0	79.4	79.0	78.0	78.2	79.4	79.3	79.0	78.1	78.4	78.4	78.4
10	79.1	78.6	79.1	79.0	79.4	79.0	78.2	79.0	79.4	80.3	80.5	81.0	81.0	81.1	81.3	80.5	80.4	80.4	80.6	81.0	82.1	82.4	82.5	82.5	80.2
11	82.7	82.8	82.8	83.1	82.0	82.0	82.0	81.5	81.0	81.3	81.8	81.1	81.1	81.1	80.0	80.0	79.4	80.0	80.0	79.9	79.2	79.3	79.5		

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

360. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres.

March, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	a.																									
1	80.4	80.4	80.1	79.9	79.7	79.6	79.5	79.6	79.9	80.0	80.2	80.0	80.2	80.3	80.6	80.4	80.1	79.8	79.6	79.4	79.0	79.0	79.4	79.0	79.0	79.9
2	79.0	78.9	78.4	78.2	78.0	77.8	77.8	77.8	78.8	79.8	80.6	81.1	81.4	81.5	81.5	81.2	81.0	80.0	79.0	78.6	77.1	76.1	75.4	75.0	79.0	79.0
3	74.5	74.1	74.8	76.0	76.0	76.1	76.4	76.3	79.1	80.0	82.0	82.5	83.1	82.9	83.0	83.1	82.4	81.6	81.1	80.5	80.0	78.5	77.5	77.4	79.1	79.3
4	77.5	77.1	77.1	76.0	76.3	75.0	74.3	74.0	75.6	78.2	82.9	83.9	83.4	83.2	83.6	83.1	82.4	81.9	81.2	80.4	79.4	79.4	79.1	78.9	78.9	78.0
5	77.9	77.3	77.6	77.3	76.4	76.0	75.5	76.6	77.3	78.3	79.6	80.4	80.9	81.2	81.8	81.5	80.6	79.4	77.5	76.4	75.7	75.3	75.1	75.9	78.0	78.0
6	75.0	74.4	73.2	73.7	72.4	74.0	73.4	72.9	73.5	79.1	80.8	81.5	82.1	82.7	82.9	82.9	82.1	81.0	80.1	80.9	80.0	80.1	79.5	80.1	78.2	81.7
7	80.0	80.4	80.4	80.8	80.6	80.9	81.0	81.0	81.8	82.0	82.7	83.0	83.4	83.3	83.0	82.5	82.1	82.0	81.8	81.7	81.7	81.3	81.6	81.3	81.7	81.7
8	81.0	80.9	80.5	80.1	80.1	80.1	80.1	80.4	80.9	81.5	82.4	83.4	83.9	83.4	83.1	83.3	83.8	83.1	83.0	82.6	82.4	82.1	81.9	81.8	81.9	81.9
9	81.6	81.8	81.1	81.1	81.2	80.5	81.1	81.0	81.6	83.9	85.9	86.8	88.0	87.7	88.0	87.9	86.4	85.0	84.6	85.2	85.6	84.9	83.8	83.1	84.0	84.0
10	83.0	82.7	82.5	82.1	83.0	82.2	82.1	81.9	81.7	83.5	86.0	86.1	87.0	87.3	87.1	86.4	85.9	85.1	84.0	83.6	83.1	81.7	81.0	79.6	83.8	83.8
11	79.3	78.5	78.4	77.2	77.4	77.6	78.1	76.4	78.4	81.0	82.8	84.2	86.0	84.9	85.0	85.0	84.9	84.3	82.5	81.9	80.5	80.3	80.1	82.0	81.1	81.5
12	80.4	79.0	78.9	78.4	79.1	78.3	77.4	78.6	79.7	82.0	84.0	85.2	86.0	85.8	85.4	85.0	84.7	84.5	82.9	81.4	80.0	79.0	78.4	78.9	80.1	81.5
13	78.3	78.2	76.9	76.7	76.8	77.2	76.9	76.9	78.7	80.1	81.7	83.5	84.0	84.0	83.5	83.1	82.7	82.1	81.1	80.2	79.9	80.1	80.1	80.0	80.1	80.1
14	80.0	80.0	79.9	80.0	79.8	79.7	79.4	79.2	79.3	79.5	80.0	80.2	81.0	81.1	81.2	81.3	81.0	80.8	80.1	79.9	79.6	79.7	80.0	80.0	80.1	80.1
15	80.0	80.0	79.9	79.8	79.9	80.0	80.1	80.2	81.0	81.3	82.0	82.6	83.0	83.4	84.0	84.2	83.4	83.0	82.0	81.0	80.5	80.3	80.6	80.0	80.0	81.3
16	80.2	80.1	80.1	79.5	80.0	80.0	80.9	80.6	80.7	80.9	81.1	82.0	83.1	83.0	83.4	82.9	82.9	82.1	81.4	81.1	80.9	80.9	81.0	81.3	81.2	81.2
17	81.6	81.1	81.3	81.0	80.4	80.4	81.0	81.2	82.2	83.4	84.9	85.5	86.4	86.9	86.4	85.8	85.0	84.1	83.2	82.5	82.6	82.6	83.0	84.0	83.9	83.2
18	84.1	84.2	84.3	84.0	84.3	84.6	84.3	84.1	85.1	86.0	86.8	87.1	88.4	88.3	88.0	88.6	88.5	86.5	84.8	84.5	84.5	84.0	84.1	84.1	84.1	85.5
19	84.0	83.1	83.0	83.0	82.0	82.3	82.1	83.0	84.9	86.4	86.1	87.0	87.0	87.3	86.7	85.9	84.9	84.3	83.2	82.6	82.9	82.9	83.0	82.7	84.2	84.2
20	82.9	83.1	83.2	83.4	83.4	83.5	83.9	83.9	84.0	84.0	84.1	84.4	84.5	84.7	84.5	84.7	84.7	84.7	84.7	84.6	84.5	84.4	84.3	84.3	83.7	84.1
21	83.3	83.1	83.1	83.0	83.1	83.0	83.0	83.1	83.5	84.0	84.5	85.0	85.3	85.5	85.6	85.5	84.9	84.1	82.9	82.7	82.1	82.0	81.2	81.0	81.0	83.6
22	81.0	80.6	80.0	80.4	79.9	80.3	80.4	80.3	82.6	83.0	84.0	83.3	84.0	84.4	83.2	81.9	82.0	82.4	82.1	81.7	81.9	82.0	81.9	82.0	81.9	81.9
23	81.0	81.9	81.3	81.2	80.4	80.6	81.9	82.1	83.0	83.6	85.0	85.7	85.9	86.4	85.8	85.1	84.8	84.1	83.6	83.4	83.4	83.5	83.6	83.4	83.3	83.3
24	83.4	83.4	83.3	83.3	83.1	83.0	83.0	83.1	83.5	84.1	84.5	84.4	84.9	84.8	84.5	84.4	84.1	84.4	84.3	84.3	84.1	84.0	84.0	84.0	84.1	83.9
25	84.0	84.0	83.5	83.1	83.0	82.6	82.8	82.9	83.0	83.4	83.4	83.9	84.0	84.4	84.8	84.6	84.3	84.0	82.9	81.9	81.9	80.3	80.1	80.0	80.0	83.1
26	79.9	79.9	80.2	80.4	80.4	80.4	80.8	81.1	83.4	84.3	85.2	86.1	86.4	86.5	86.7	86.3	85.7	84.9	83.9	83.0	82.5	82.5	82.6	82.4	83.1	
27	82.4	82.1	82.3	81.9	82.0	81.6	80.6	82.4	83.6	84.0	85.1	86.2	86.4	86.5	85.3	85.2	84.0	83.0	82.1	82.0	82.0	82.1	82.1	82.1	82.1	83.2
28	81.9	81.2	81.4	81.5	81.9	81.9	82.1	82.2	82.8	83.5	84.0	85.0	85.0	86.0	87.0	85.4	84.7	84.3	83.1	82.5	81.6	81.0	80.0	79.4	82.9	
29	79.8	79.4	79.0	78.8	78.9	78.3	78.0	79.5	82.4	84.5	86.0	86.0	87.3	89.8	89.5	89.1	88.3	87.8	87.0	85.8	83.6	82.1	81.8	80.0	83.4	
30	79.8	79.1	77.9	77.9	78.0	78.0	79.2	79.8	81.7	85.0	87.0	88.9	89.0	88.9	87.4	87.3	86.8	85.5	84.1	83.4	82.9	83.4	83.5	83.7	83.2	
31	83.4	82.6	82.3	82.0	81.9	81.3	81.4	82.1	83.0	83.2	83.1	83.7	83.7	83.6	84.0	83.1	83.2	83.1	82.4	82.0	82.0	82.4	82.1	82.0	82.7	
Mean ...	80.7	80.4	80.2	80.1	80.0	79.9	79.9	80.1	81.2	82.4	83.5	84.1	84.7	84.8	84.7	84.4	84.0	83.3	82.5	82.0	81.5	81.2	81.1	80.9	82.0	

361. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

April, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	82.4	82.9	83.0	83.0	83.1	83.3	83.9	83.6	83.4	82.9	83.9	84.0	84.0	84.0	83.9	83.3	83.0	82.8	82.3	81.9	82.0	81.4	81.3	81.0	82.9
2	81.2	81.0	80.5	80.6	80.3	80.5	80.5	81.0	81.4	81.3	82.1	82.5	82.5	82.4	82.9	82.4	82.2	81.8	81.0	80.8	80.5	80.0	79.5	79.6	81.2
3	80.4	80.1	79.6	79.5	79.6	79.1	80.1	80.1	81.6	81.9	82.1	82.8	82.9	82.9	83.0	83.0	82.9	82.2	81.4	80.4	79.9	79.1	77.9	77.5	80.9
4	76.6	77.0	77.1	77.2	76.9	77.5	78.1	79.1	80.0	81.9	84.3	84.9	84.9	84.9	85.0	84.9	84.9	84.1	83.7	82.6	82.0	81.3	81.1	80.8	81.3
5	80.9	80.9	80.9	80.4	80.6	79.3	79.9	81.3	82.9	84.1	85.0	86.0	86.8	85.4	85.8	85.4	85.1	84.6	83.9	83.1	82.6	82.8	83.0	82.9	83.0
6	82.9	82.6	82.2	82.0	81.7	82.0	82.4	83.1	85.0	84.9	85.4	85.6	86.1	86.1	86.5	85.8	85.1	85.0	83.9	83.8	84.0	84.0	84.1	84.2	84.1
7	84.1	84.0	84.0	84.0	84.0	84.4	83.6	82.5	82.3	83.9	84.0	83.9	83.9	84.5	84.8	84.8	84.0	83.5	82.0	81.8	81.8	81.9	81.9	81.9	83.4
8	81.9	81.9	81.9	81.4	81.3	81.9	82.3	83.0	83.4	84.0	84.5	84.9	84.9	84.8	85.1	84.8	84.7	83.9	83.2	82.5	81.8	81.0	80.8	81.6	82.9
9	82.0	82.1	82.5	82.4	82.4	81.1	81.0	82.6	83.0	83.4	84.0	84.6	85.1	84.8	84.9	84.9	84.4	84.8	84.0	83.3	83.0	82.5	81.9	81.2	83.2
10	80.9	80.9	81.7	81.5	80.9	81.0	82.8	82.9	83.3	83.8	83.9	84.4	85.0	85.0	85.3	85.9	86.0	85.0	83.4	82.0	81.0	80.2	79.0		

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

362. Cahirciveen (Valentia Observatory) : North Wall Screen : h₁ (height of thermometer bulbs above ground) = 1.3 metres.

May, 1929.

Table with 25 columns (1-24) and 31 rows (Day 1-31). Columns 1-12 are labeled 'Hour. G.M.T.' and 'Day'. Columns 13-24 are labeled '13.' through '24.'. Column 25 is labeled 'Mean'. Data values are in degrees absolute.

363. Cahirciveen (Valentia Observatory) : North Wall Screen : h₁ = 1.3 metres.

June, 1929.

Table with 25 columns (1-24) and 31 rows (Day 1-31). Columns 1-12 are labeled 'Hour. G.M.T.' and 'Day'. Columns 13-24 are labeled '13.' through '24.'. Column 25 is labeled 'Mean'. Data values are in degrees absolute.

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

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

364. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres.

July, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	83.7	82.8	82.5	82.3	82.4	83.6	86.0	87.9	90.0	90.0	90.1	91.0	91.0	90.7	91.0	91.2	90.9	90.0	90.4	89.0	88.1	87.4	87.5	87.4	87.7
2	87.4	87.1	86.9	86.6	86.4	87.0	87.8	89.0	89.1	89.0	88.9	88.6	89.1	89.3	88.9	89.0	89.1	88.7	87.7	87.0	86.2	85.5	85.2	84.5	87.7
3	83.9	83.9	83.4	82.0	82.0	83.0	84.9	86.4	88.0	88.0	87.9	88.4	88.2	88.5	87.5	88.4	88.0	87.9	86.9	86.4	85.9	85.4	85.8	85.9	86.0
4	85.8	85.1	84.2	84.9	84.3	84.0	84.8	84.9	85.8	86.4	84.8	85.8	86.8	87.5	88.1	88.1	86.3	84.9	85.0	85.0	85.3	84.6	85.1	85.4	85.6
5	84.9	85.5	85.6	85.9	85.0	85.0	86.0	86.1	85.9	85.8	85.5	85.7	85.9	86.0	86.0	85.9	86.0	86.2	86.0	86.1	86.2	86.3	86.4	86.5	85.8
6	86.0	86.0	85.9	85.9	86.0	86.1	86.4	86.8	86.6	87.2	88.0	87.0	87.7	87.8	87.9	87.6	87.6	87.6	87.1	86.6	86.0	85.6	85.4	85.1	86.7
7	84.8	84.0	83.1	83.3	83.2	85.0	86.0	86.3	87.0	87.4	88.0	88.1	88.8	88.9	88.6	89.0	89.0	88.0	87.3	86.7	85.4	84.9	84.3	83.1	86.3
8	82.6	82.9	83.2	84.0	85.0	85.2	85.8	86.3	88.0	89.2	89.2	90.6	90.9	91.0	91.0	90.0	89.8	89.2	88.3	87.9	87.3	86.9	86.9	87.0	87.3
9	86.8	87.0	87.0	86.8	86.8	86.9	87.0	87.4	87.4	87.9	87.4	87.6	87.8	87.8	87.9	88.0	87.9	87.6	87.4	87.1	87.1	87.1	87.1	87.1	87.2
10	87.4	87.5	87.9	88.0	87.8	88.0	88.1	88.4	88.4	88.5	89.0	89.0	89.2	89.0	89.1	89.1	89.1	89.0	88.9	88.9	88.2	88.1	88.1	88.1	88.4
11	88.1	88.1	88.0	88.0	88.1	88.4	88.9	88.9	89.0	89.0	89.0	89.1	89.0	89.4	89.4	88.2	88.5	87.6	87.9	87.9	87.4	86.8	86.4	86.5	86.5
12	86.0	86.0	86.0	85.0	84.7	85.4	86.9	87.5	88.2	89.5	89.5	89.5	89.4	89.9	89.5	90.0	90.8	89.9	89.3	88.4	87.6	86.2	84.9	84.6	87.7
13	84.1	83.0	83.0	82.4	82.1	84.0	87.7	88.6	91.1	91.3	91.1	91.0	91.0	91.2	91.3	91.9	92.3	91.4	90.9	89.9	88.0	87.0	86.3	85.3	88.1
14	85.0	83.9	82.7	83.0	82.2	83.3	86.8	89.8	91.0	94.0	94.1	94.8	95.3	95.1	96.0	95.1	95.2	95.1	94.4	93.7	92.7	91.9	91.2	91.4	90.7
15	91.1	91.9	93.2	91.9	91.9	92.0	93.4	93.8	94.5	94.6	95.4	96.0	95.9	96.1	96.5	95.6	95.0	94.1	94.1	93.0	92.1	90.1	89.4	88.3	88.4
16	88.3	88.3	88.4	88.0	87.9	88.1	88.4	89.0	89.4	89.6	90.1	90.0	89.2	89.0	89.2	89.0	89.0	89.0	88.8	87.4	87.1	86.9	86.4	86.2	88.5
17	86.0	86.1	86.3	85.6	85.0	85.4	86.9	88.0	88.0	89.2	90.1	89.3	90.0	89.0	88.9	88.9	88.1	87.9	87.8	87.5	87.7	88.0	87.8	87.9	87.7
18	87.8	87.7	87.6	87.4	87.4	87.3	87.3	87.3	87.6	87.9	88.6	89.4	90.2	89.8	89.9	90.2	89.5	89.3	88.9	88.5	88.1	88.0	88.0	88.0	88.4
19	88.0	87.1	86.9	87.3	87.8	87.9	88.0	88.6	88.7	89.0	89.0	90.0	91.0	91.0	90.6	90.4	90.1	89.8	89.0	88.5	88.4	88.1	87.9	87.9	88.8
20	87.9	87.6	87.6	87.8	87.9	88.0	88.1	88.3	88.6	88.9	89.0	89.9	89.4	90.0	90.0	89.8	89.7	89.0	88.8	88.8	88.7	87.1	87.0	86.1	88.6
21	86.0	85.1	86.6	85.4	85.3	85.0	87.0	88.5	89.8	90.6	90.8	90.1	91.2	91.5	91.3	90.6	90.0	89.6	89.5	89.0	88.9	88.6	88.2	88.0	88.6
22	87.8	87.9	87.9	88.0	87.9	87.8	87.9	88.4	88.4	89.0	89.3	90.0	89.9	89.3	89.9	89.0	88.9	88.1	87.9	87.2	87.1	87.0	86.8	86.9	88.3
23	86.4	86.6	85.9	86.0	85.5	85.0	84.4	85.0	85.9	87.0	87.3	87.9	88.1	88.3	88.8	88.9	88.1	88.0	88.0	87.4	87.4	86.8	86.1	85.6	86.9
24	85.6	85.9	84.9	84.0	84.8	85.2	86.3	87.1	87.8	87.8	87.4	88.0	88.1	88.0	88.7	87.8	87.5	87.6	86.3	86.1	86.1	86.0	85.6	85.7	86.6
25	85.5	85.7	85.8	86.0	85.4	85.3	85.7	86.0	86.3	86.9	87.6	88.0	88.6	88.5	88.4	87.9	88.0	88.0	87.8	87.2	87.1	87.0	86.5	86.8	86.9
26	86.3	86.5	86.0	86.1	85.6	85.0	86.4	87.0	87.1	88.0	88.5	89.1	90.0	90.4	90.4	90.1	91.0	90.6	89.9	89.0	87.9	86.0	85.6	84.9	87.8
27	84.5	84.0	84.3	84.0	84.1	84.3	86.1	88.0	88.9	88.9	89.4	89.0	90.2	90.0	89.4	89.2	89.0	88.6	87.9	88.0	87.6	87.9	88.0	88.4	87.4
28	88.5	88.3	88.4	88.4	88.5	88.8	88.9	89.0	89.2	89.4	89.6	89.4	90.0	89.9	90.0	89.9	89.3	89.0	88.5	88.1	88.4	88.0	87.9	87.9	88.9
29	87.9	87.8	87.4	87.0	87.1	87.1	87.8	87.0	88.1	88.1	88.0	88.9	89.4	89.5	90.0	89.9	88.0	88.4	87.7	87.4	87.2	87.8	87.4	87.4	88.0
30	86.7	86.1	86.6	86.4	86.2	86.6	86.9	87.1	87.7	88.2	88.0	88.4	88.2	88.2	88.0	87.7	87.2	87.0	87.0	87.0	87.6	87.7	88.0	88.0	87.3
31	88.1	88.4	88.0	88.1	87.0	87.0	86.8	87.9	88.1	88.5	87.1	86.9	88.5	88.7	88.9	87.4	88.1	87.9	88.0	86.4	87.4	87.2	87.0	87.0	87.7
Mean ...	86.4	86.3	86.2	86.0	85.9	86.1	87.1	87.7	88.4	88.8	89.0	89.3	89.6	89.7	89.6	89.5	89.3	88.9	88.5	87.9	87.5	87.1	86.9	86.7	87.8

365. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

August, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	86.6	86.4	86.5	86.4	86.1	86.3	86.4	86.9	86.5	87.0	87.1	87.6	86.9	87.6	87.9	87.4	87.1	87.2	86.9	86.5	86.0	85.9	85.9	85.4	86.7
2	85.0	85.6	85.3	85.0	84.9	85.0	86.0	87.3	87.8	89.0	88.1	89.8	89.2	89.0	88.5	88.0	88.0	88.1	87.1	87.1	86.5	86.7	86.3	86.1	87.8
3	86.5	87.1	87.9	88.0	88.0	87.8	88.0	88.2	88.1	88.9	88.8	89.0	89.2	88.4	88.2	88.0	88.0	88.1	87.1	87.1	86.5	86.7	86.3	86.1	87.8
4	85.5	85.9	85.9	86.0	86.1	86.6	86.3	87.0	87.9	87.4	87.9	88.1	88.5	88.5	88.5	88.1	89.0	87.9	87.1	86.5	86.1	85.5	85.2	85.0	87.0
5	84.1	83.6	83.4	83.0	83.0	83.1	85.0	86.0	86.4	86.3	86.4	86.6	86.9	87.4	88.3	88.2	88.0	88.0	88.0	87.9	87.9	88.0	88.0	88.0	87.9
6	87.2	87.2	87.2	87.0	86.5	86.5	86.5	87.0	87.1	88.2	89.2	89.1	89.5	89.0	89.0	88.7	89.0	87.9	87.4	87.1	86.8	86.4	86.2	86.4	87.6
7	86.4	86.2	86.1	85.4	85.8	85.1	86.1	86.6	87.2	86.1	88.0	88.0	87.9	88.3	88.0	87.8	88.0	88.0	87.1	86.5	86.1	85.9	85.2	85.9	86.7
8	85.7	85.1	85.0	84.9	85.0	85.0	86.0	86.1	87.3	87.4	88.0	88.0	88.0	88.2	88.5	88.5	88.4	87.9	87.1	86.9	86.6	86.4	86.4	86.6	86.8
9	86.4	86.4	86.0	85.5	86.0	86.1	86.9	88.0	88.9	88.5	88.5	90.0	90.6	89.0	89.0	88.1	88.0	87.5	87.4	87.9	88.1	87.8	87.9	87.5	87.7
10	87.1	87.1	87.0	87.0	87.0	87.0	87.3	88.0	89.0	88.9	89.4	90.0	90.0	90.1	89.8	89.4	89.0	89.0	88.9	88.5	88.5	88.5	88.5	88.4	88.5
11	88.4	88.0	87.5	87.1	87.1	86.9	87.0	87.1	88.0	88.1	89.1	89.6	89.9	89.5	89.4	89.9	89.1	88.9	88.3	87.8	87.2	87.0			

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

366. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres.

September, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	87.6	87.4	87.5	87.3	87.1	86.9	86.7	87.0	87.5	88.1	88.7	88.9	89.0	89.0	89.0	89.0	89.0	88.4	88.0	87.1	87.0	87.0	87.0	87.0	87.8
2	87.4	87.0	86.8	86.5	87.1	87.5	88.4	88.4	89.6	90.1	91.0	91.7	91.8	91.4	91.6	91.7	91.4	91.0	90.5	90.3	90.2	90.0	90.4	90.1	89.6
3	90.2	90.2	90.0	90.1	90.0	89.2	88.0	88.0	89.2	91.3	92.5	92.8	93.0	93.0	92.0	91.0	91.0	90.8	90.4	89.0	89.1	89.3	89.3	89.2	88.8
4	88.4	88.1	88.0	88.0	88.0	88.0	88.2	88.0	89.1	89.9	91.0	91.8	92.0	91.0	91.0	91.0	90.8	89.9	89.7	89.4	89.3	89.3	89.2	89.2	88.8
5	88.2	88.0	87.8	87.6	87.0	87.0	88.0	88.9	90.0	91.1	91.7	91.9	92.0	92.1	92.2	92.0	91.3	91.0	90.1	89.3	89.3	89.0	89.3	89.3	89.7
6	89.1	89.1	89.2	89.1	89.1	88.4	88.1	89.9	90.8	90.8	92.0	92.4	93.1	93.1	92.9	92.1	91.7	90.9	89.9	88.9	88.1	87.5	86.2	86.3	90.0
7	85.6	85.0	85.1	86.0	86.4	86.6	87.0	87.8	89.1	90.4	91.9	92.1	92.7	92.5	92.4	92.6	91.9	90.0	89.0	87.9	87.1	87.0	86.0	85.8	88.7
8	86.4	87.0	86.7	86.1	86.6	86.6	86.6	88.1	90.0	93.3	94.0	94.0	93.6	94.0	93.9	93.4	93.0	92.0	89.8	88.0	88.1	87.4	87.8	87.8	89.0
9	89.2	89.0	89.0	89.0	89.0	88.9	88.4	88.5	88.7	89.0	89.1	89.9	90.4	90.9	90.0	90.4	89.3	89.0	88.5	88.1	88.0	87.8	87.8	87.8	89.0
10	87.8	87.1	86.5	86.7	86.7	86.4	86.5	86.9	88.0	88.3	89.0	89.0	89.9	90.2	90.1	90.0	89.4	89.0	87.9	86.6	87.0	86.0	86.0	86.0	87.8
11	87.1	88.4	88.4	88.3	88.6	89.0	89.0	89.1	89.8	90.8	90.5	91.0	91.4	91.1	91.9	91.0	90.8	90.0	89.2	89.4	89.6	89.7	89.4	89.3	89.6
12	89.0	88.0	87.9	88.0	87.4	87.3	87.1	87.4	87.5	88.0	88.1	88.4	88.6	88.4	88.3	88.2	88.0	87.3	86.2	85.4	84.4	83.4	82.1	81.2	87.1
13	81.4	81.2	80.6	80.8	81.3	81.3	82.0	85.8	87.0	88.5	88.5	89.0	89.9	89.0	90.0	89.2	89.0	88.6	88.3	88.1	88.2	88.4	88.4	88.4	86.3
14	87.8	87.9	88.0	87.0	86.9	86.9	86.3	86.9	88.0	88.7	88.7	89.1	89.4	89.4	89.5	89.4	89.0	88.8	88.8	88.0	87.4	86.0	86.0	86.0	87.9
15	86.5	86.7	86.7	86.8	86.5	86.4	86.3	86.9	87.1	87.5	88.0	88.7	89.0	89.0	89.1	88.8	88.4	88.0	87.0	86.0	84.4	84.0	82.6	82.5	86.9
16	82.2	81.9	81.3	80.6	81.0	80.8	81.0	82.9	85.4	87.1	88.8	88.7	88.9	89.0	89.0	89.0	88.5	88.0	86.8	86.0	84.9	83.1	82.9	82.0	85.0
17	81.9	81.4	81.0	80.4	80.4	80.0	80.0	81.9	84.9	87.3	88.1	88.9	89.1	89.4	89.0	89.0	88.1	87.1	87.0	86.9	86.7	86.4	87.1	85.4	87.4
18	87.4	87.7	87.4	87.4	87.1	87.4	87.5	87.0	87.5	87.9	88.0	88.1	88.4	88.4	88.4	87.6	87.1	86.9	86.4	86.1	86.6	86.4	86.4	85.4	87.3
19	85.5	85.2	86.5	86.9	86.9	87.0	87.0	87.3	87.3	87.7	88.0	88.6	87.6	87.6	87.9	88.1	88.1	88.0	88.0	88.0	88.0	88.0	88.0	88.0	87.4
20	88.0	88.0	88.0	88.0	87.9	87.4	87.4	87.3	87.3	87.7	87.9	88.0	88.0	88.0	87.9	87.5	87.0	86.5	86.3	86.4	86.3	87.0	87.0	87.0	87.5
21	87.4	87.7	88.0	88.0	88.0	88.0	87.9	88.0	88.1	88.4	88.0	89.0	89.0	88.4	88.9	88.7	88.0	87.9	87.4	87.1	87.1	87.0	87.1	87.1	87.9
22	87.1	87.1	87.3	87.0	87.0	87.1	87.3	87.9	88.0	88.1	88.7	89.5	89.2	89.8	89.4	89.0	88.6	88.0	88.0	87.4	87.4	87.1	87.0	87.0	87.9
23	86.9	86.9	86.9	86.6	86.8	86.8	87.0	87.3	88.1	88.6	88.3	88.2	89.0	89.3	89.3	88.9	88.9	88.0	87.7	87.8	87.9	87.9	87.9	87.9	87.9
24	87.9	87.5	87.3	87.0	87.0	87.3	87.4	88.0	88.4	88.9	88.9	89.8	89.5	89.4	89.5	89.1	88.5	88.1	88.0	87.9	87.6	87.4	87.4	87.4	88.1
25	87.1	87.3	87.3	87.4	87.4	88.0	88.1	88.4	88.9	89.1	89.6	89.9	90.1	90.5	90.0	89.6	89.0	88.9	88.0	88.0	87.9	88.0	88.1	87.9	88.5
26	87.9	87.4	87.4	87.0	87.0	86.3	86.4	87.3	88.5	89.1	89.7	89.9	90.1	90.1	90.0	89.7	89.3	88.2	87.8	87.8	87.6	87.5	87.0	87.7	88.2
27	88.1	88.2	88.0	88.4	88.4	88.4	88.5	88.6	89.0	89.8	90.0	90.1	90.6	90.2	90.4	90.0	89.3	89.0	88.6	88.4	88.4	88.7	88.9	89.0	89.0
28	89.1	89.3	89.3	89.1	89.0	88.4	88.9	87.1	87.3	87.8	88.2	88.4	88.4	88.0	87.7	87.8	87.4	86.8	85.8	85.3	85.4	85.1	84.9	84.6	87.6
29	84.3	84.4	84.6	84.5	84.9	85.0	85.1	85.0	85.0	85.0	86.2	87.0	87.5	87.6	87.5	87.1	86.2	86.0	85.0	85.0	85.0	86.0	86.0	86.0	85.5
30	86.3	87.0	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9
Mean ...	87.0	86.9	86.9	86.7	86.7	86.6	86.7	87.3	88.1	88.8	89.3	89.7	89.9	89.9	89.8	89.5	89.2	88.6	87.9	87.5	87.3	87.1	86.9	86.7	88.0

367. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

October, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	81.7	81.8	80.8	81.0	80.5	80.4	83.0	84.2	84.0	85.0	85.1	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	85.8
2	85.9	86.0	83.6	83.6	83.2	83.0	83.0	83.2	83.0	83.0	82.2	84.4	84.8	84.9	84.8	83.9	84.2	83.1	83.0	82.0	82.4	82.4	81.3	80.6	83.3
3	83.6	83.6	83.6	83.2	83.0	83.0	83.2	83.0	83.0	82.2	84.4	84.8	84.8	84.8	83.9	84.2	83.1	83.0	82.0	82.4	82.4	81.3	80.6	83.3	83.3
4	81.0	81.2	80.1	80.2	80.4	81.0	81.2	81.8	82.9	83.9	83.3	84.8	84.8	83.8	84.1	84.0	83.0	83.2	83.0	82.0	81.0	81.3	81.3	81.7	82.1
5	81.1	81.0	82.0	82.1	82.4	82.0	82.5	81.5	81.3	83.0	82.7	83.0	83.0	82.2	82.6	82.9	83.0	82.4	81.8	82.4	82.4	81.0	81.7	81.7	82.2
6	82.7	83.1	82.6	83.1	83.8	83.0	83.9	84.2	83.9	83.1	84.9	84.0	85.0	85.0	85.0	84.6	84.2	83.5	83.4	83.6	83.2	83.0	83.0	82.4	83.7
7	82.2	82.0	81.0	81.0	79.8	79.8	78.2	78.7	80.4	82.9	83.9	84.0	83.9	83.4	83.3	83.8	83.0	82.3	82.9	82.0	83.0	82.0	83.0	83.0	82.8
8	82.5	82.9	82.7	82.2	82.0	82.5	83.4	83.4	82.3	83.3	83.3	84.0	83.9	84.0	84.0	83.8	83.0	82.3	82.9	82.0	83.0	82.0	83.0	83.0	83.0
9	83.0	83.1	82.4	82.9	83.1	83.4	83.6	84.0	83.8	84.5	84.2	84.3	85.0	85.6	84.3	85.0	84.9	84.9	84.8	85.0	84.5	84.3	84.5	84.5	84.1
10	84.3	84.6	84.1	84.6	84.4	84.9	84.9	85.0	85.0	86.0	86.0	86.5	86.7	87.0	86.6	86.4	86.4	86.6	86.7	86.9	86.9	86.9	87.0	87.0	85.8
11	87.0	87.0	86.9	86.7	86.8	86.8	86.9	86.9	86.9	87.0	87.1	87.1	87.5	87.9	87.5	87.4	87.4	87.0	87.0	87.0	87.0	86.9	86.4	86.0	87.0
12	86.0	85.9	86.0	86.0	85.9	85.8	85.8	85.8	85.6	86.0	86.3	86.5	86.8	86.6	86.3	86.0	85.8	85.4	85.1	85.0	85.0	85.0	85.0		

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

368. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres.

November, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	84.1	84.1	84.0	83.8	83.9	84.0	84.0	84.1	84.6	85.0	85.1	85.6	85.9	86.0	86.0	85.8	85.5	85.5	85.4	85.4	85.2	85.2	85.4	85.6	84.9
2	85.8	85.5	85.9	85.9	85.1	84.8	84.3	84.1	84.9	84.4	84.6	84.9	85.0	84.9	84.6	84.1	83.8	83.1	83.2	83.1	83.1	82.8	83.0	83.0	84.4
3	83.1	83.0	83.2	83.1	83.3	83.0	83.4	82.5	83.0	83.0	84.0	84.3	84.4	84.4	84.3	83.9	83.3	82.9	82.0	82.1	82.0	82.0	82.0	81.9	83.1
4	82.6	82.7	82.7	83.5	83.5	82.7	82.9	83.2	84.0	84.8	85.0	85.3	84.4	85.8	85.7	85.7	85.6	85.4	85.3	85.4	85.5	85.7	85.6	85.6	84.5
5	85.7	85.9	86.0	86.1	86.1	86.4	85.6	85.0	85.1	85.0	85.0	85.4	85.0	85.9	85.0	84.0	83.5	82.2	82.1	81.9	81.7	81.5	81.4	82.5	84.4
6	82.3	82.3	82.8	83.0	82.1	82.8	82.5	82.3	82.6	83.1	83.2	83.4	83.9	83.4	83.4	83.2	83.0	83.1	83.1	82.5	82.7	82.7	82.9	82.9	82.9
7	83.2	83.6	85.0	85.0	85.1	85.1	85.5	85.8	85.9	86.0	86.2	86.5	87.0	86.9	86.9	86.7	86.6	86.5	86.5	86.8	86.7	86.6	86.8	86.1	85.9
8	85.4	84.4	84.4	84.0	83.3	83.7	83.1	83.1	83.0	82.8	83.1	81.9	82.7	82.6	82.7	82.3	82.0	81.2	80.3	81.8	82.8	81.2	82.9	82.8	82.9
9	82.7	82.4	82.2	81.0	81.7	81.0	81.1	81.5	82.0	83.0	83.2	83.9	83.0	82.1	83.3	83.9	83.9	83.9	81.8	81.0	79.8	80.2	80.6	80.8	82.1
10	80.8	80.6	80.6	80.1	80.2	80.2	80.8	80.9	80.7	79.5	80.8	81.4	79.9	81.2	80.6	80.8	80.0	80.6	81.6	81.5	82.0	81.8	81.6	82.3	80.8
11	82.6	82.2	82.9	83.2	83.3	83.0	83.6	84.6	85.9	86.2	86.6	86.7	85.0	84.0	83.9	83.3	82.5	81.6	81.0	80.6	80.8	81.2	81.2	81.0	83.2
12	80.0	80.4	80.8	80.4	79.8	79.2	79.9	80.3	80.4	80.8	81.2	81.9	80.4	80.4	81.0	80.8	79.0	79.2	80.2	80.2	78.2	78.1	80.1	79.4	80.1
13	79.4	79.2	79.8	78.2	78.3	79.9	79.2	79.9	79.9	78.2	78.6	80.1	80.4	80.8	79.6	79.3	78.8	79.9	78.9	79.0	77.7	77.2	77.0	76.4	79.0
14	76.8	77.0	77.1	77.4	77.9	78.0	78.0	78.1	78.2	78.5	79.0	79.4	79.9	79.9	79.8	79.9	78.3	77.4	76.0	75.8	75.1	75.0	75.0	74.8	79.0
15	74.9	75.0	77.9	79.0	79.3	79.6	80.2	80.9	81.0	81.4	82.0	83.0	82.8	82.5	82.0	82.4	82.9	82.8	82.1	82.1	82.0	81.5	80.4	79.5	80.6
16	79.2	79.0	78.7	78.8	78.6	78.5	78.6	78.7	78.5	78.4	79.0	79.8	80.4	80.1	80.7	79.8	79.1	77.1	75.7	76.2	77.0	77.0	77.3	78.0	78.5
17	77.8	77.7	78.0	77.8	78.0	76.4	76.2	75.9	76.2	77.1	77.9	79.0	79.6	80.0	79.6	78.8	77.7	76.5	77.0	75.4	74.9	74.8	75.0	76.2	77.8
18	78.7	79.2	79.8	80.3	80.6	81.0	80.2	79.5	80.3	80.9	81.6	82.0	82.1	82.9	84.1	85.1	85.1	84.1	83.4	83.6	83.7	83.9	84.3	81.9	81.9
19	84.1	82.7	81.5	81.6	82.2	82.9	83.5	83.8	84.2	84.8	84.6	84.6	84.2	84.4	84.3	84.2	83.8	82.9	82.1	82.0	81.4	80.8	80.0	79.9	83.0
20	80.8	80.9	80.6	80.8	81.0	80.9	80.8	80.8	81.0	81.9	82.1	82.1	82.2	82.9	82.6	82.1	81.8	82.7	82.1	82.6	82.5	82.8	82.0	82.3	81.7
21	82.4	82.4	82.5	82.5	82.5	82.3	82.1	82.7	82.9	83.1	83.9	84.1	84.0	84.1	84.1	84.0	83.9	84.0	84.0	84.0	84.3	84.3	83.7	83.8	83.4
22	83.9	83.8	83.9	84.0	83.5	83.2	83.9	84.2	84.2	84.0	84.6	84.5	84.0	84.1	83.9	83.5	83.3	83.2	83.0	82.9	82.7	82.3	81.7	81.3	83.5
23	80.8	80.4	80.0	79.8	80.1	80.1	80.1	79.7	80.0	81.0	80.4	81.5	81.1	81.8	82.2	81.0	80.9	80.0	81.1	81.6	81.7	81.3	80.9	81.2	80.8
24	81.0	80.3	80.5	81.0	80.9	80.6	80.9	80.8	81.1	81.6	82.2	83.0	83.4	83.6	83.3	83.8	83.0	82.5	82.6	84.8	85.3	82.9	83.0	82.3	80.9
25	81.9	81.4	81.5	81.0	81.5	80.8	81.2	81.7	81.4	80.3	80.6	80.4	80.6	81.0	81.5	81.8	79.5	79.2	79.9	80.0	80.3	80.9	80.4	80.2	80.9
26	80.1	80.9	81.3	81.5	81.4	81.4	81.4	81.3	81.1	81.6	81.9	81.5	81.8	81.6	81.3	81.0	80.9	80.2	79.5	79.2	78.5	79.0	79.0	79.0	80.7
27	79.3	79.0	78.6	78.3	78.1	78.0	77.7	79.6	80.9	81.4	82.0	82.5	83.0	82.6	82.5	83.7	84.0	84.0	84.6	84.1	84.4	84.7	84.7	84.5	81.6
28	84.2	84.1	83.9	83.8	83.4	83.5	83.1	82.9	83.0	83.0	83.4	83.7	83.9	83.8	83.6	83.8	83.7	83.5	83.0	83.5	83.4	83.7	83.9	83.6	83.6
29	83.9	83.3	83.6	83.7	83.8	83.7	83.7	83.7	83.4	83.6	83.8	84.4	84.7	84.1	84.0	83.5	83.2	83.5	83.0	83.0	82.8	83.0	83.0	81.7	83.5
30	81.9	81.6	81.7	81.4	81.4	80.6	80.7	80.0	80.5	81.2	82.2	82.4	82.9	82.7	83.1	82.7	82.8	82.6	82.6	82.6	82.2	82.3	82.1	81.8	81.9
Mean ...	81.6	81.5	81.7	81.7	81.7	81.6	81.6	81.7	81.9	82.1	82.6	83.0	83.0	83.0	83.0	82.8	82.4	82.0	81.8	81.8	81.7	81.5	81.5	81.5	82.0

369. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

December, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	81.4	82.4	83.0	82.8	82.3	81.0	82.0	82.1	81.5	82.0	82.9	83.0	83.2	83.0	82.7	82.7	82.9	83.0	83.0	83.0	83.0	83.0	83.2	84.0	84.7
2	85.0	85.2	85.9	85.7	85.9	84.4	83.5	82.4	81.2	81.2	81.4	82.1	82.0	80.1	80.0	80.0	79.6	80.0	80.6	80.2	80.1	81.0	80.2	79.9	82.1
3	79.4	80.7	81.0	81.1	81.2	81.1	81.9	82.4	82.6	83.0	83.1	83.7	83.9	83.4	83.3	81.4	81.0	81.0	80.3	80.0	80.4	80.0	79.3	79.2	81.4
4	79.9	79.5	80.2	80.0	80.1	80.0	80.1	79.5	79.9	80.5	82.1	82.3	82.4	81.8	81.8	82.1	82.3	82.8	82.1	82.4	83.0	83.1	82.0	81.7	81.3
5	81.8	81.0	81.0	80.4	81.0	81.0	81.4	81.4	81.9	81.9	81.9	82.0	82.2	82.1	82.3	81.8	82.1	81.1	81.9	82.0	81.7	80.9	81.0	81.1	81.5
6	80.4	81.0	80.7	80.0	80.0	79.2	79.0	79.1	80.4	80.6	80.2	80.2	81.1	81.6	82.0	81.0	81.6	82.0	82.0	81.6	82.1	82.4	81.5	80.5	80.9
7	80.6	80.9	80.7	79.9	78.6	80.2	80.9	80.9	80.8	80.7	80.9	79.0	80.0	79.6	79.3	79.6	79.6	79.2	79.0	78.8	79.6	80.4	81.5	82.5	80.1
8	82.1	80.8	79.1	79.7	78.8	79.1	79.0	77.9	77.9	78.1	77.6	79.6	80.3	80.1	80.7	80.9	79.0	79.1	80.3	80.4	80.1	80.4	80.2	80.1	79.7
9	79.4	79.0	78.4	79.0	79.4	79.4	79.7	80.5	80.0	79.1	79.0	78.9	79.3	80.0	79.3	79.2	79.1	79.5	78.9	79.0	78.9	77.9	77.9	77.1	79.2
10	79.0	79.2	79.0	78.9	79.9	77.6	77.3	77.0	77.8	77.3	78.0	79.1	79.3	79.0	79.0	79.9	81.1	82.3	83.7	83.9	84.0	83.9	83.4	83.4	80.0
11	83.3	83.4	83.1	83.0	83.0	82.9	83.0	83.0	83.0	83.0	83.0	83.6	83.7	83.7	84.0	83.4	84.0	82.4	82.3	82.0	81.9	81.0	81.2	81.6	82.8
12	79.9	80.2	81.4	82.0	81.2	79.7	80.3	81.1	81.8	82.0	82.4	82.8	83.0	82.9	83.5	83.4	83.4	83.1	83.1	83.1	83.2	83.0	83.1		

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

370. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

1929.

Table with 25 columns (Hour GMT 1-24) and 2 rows of data. Values range from 82.80 to 84.91.

TEMPERATURE : MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

371. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

1929.

Table with 25 columns (Month, Hour GMT 1-24) and 12 rows of data (Jan to Dec, Year). Values range from 278.76 to 287.96.

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

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

372. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

1929.

Large table with 25 columns (Month, Day, Max, Min) and 31 rows of data (Jan to Dec, Mean). Values range from 76.2 to 85.6.

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

Percentages at exact hours, Greenwich Mean Time.

373. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres.

January, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-31). Columns 1-11 are % values, 12-24 are % values, and 25 is Mean. Includes Vapour Pressure* column.

374. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

February, 1929.

Table with 25 columns (1-24 hours + Mean) and 28 rows (Day 1-28). Columns 1-11 are % values, 12-24 are % values, and 25 is Mean. Includes Vapour Pressure* column.

* 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.

375. Cahirciveen (Valentia Observatory) : North Wall Screen : h_1 (height of thermometer bulbs above ground) = 1.3 metres.

March, 1929.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*		
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	73	68	70	72	74	71	70	68	69	71	72	71	70	69	68	68	70	71	71	72	70	70	72	70	70	70	70.6	7.0
2	71	71	71	69	69	70	68	70	67	67	64	66	66	64	65	66	60	69	70	61	68	73	74	66	70	70	67.8	6.3
3	72	77	61	51	51	61	58	61	39	36	36	43	38	30	41	45	43	42	46	27	30	53	56	53	48.2	4.5		
4	47	50	50	61	59	65	63	72	65	57	28	31	42	58	56	60	63	63	67	68	66	64	68	69	57.7	5.5		
5	69	70	71	65	71	73	74	70	66	68	62	59	60	62	60	66	70	79	79	85	84	84	82	80	71.0	6.2		
6	82	82	85	84	84	79	81	80	82	68	61	59	58	61	61	61	65	63	68	45	59	58	65	69	69.4	6.1		
7	69	65	67	62	68	67	69	71	64	67	64	58	54	55	61	52	59	61	62	64	65	69	65	69	63.6	7.2		
8	69	68	72	74	73	73	71	70	65	66	61	53	52	57	56	53	46	56	55	55	56	61	62	64	62.1	7.1		
9	66	64	71	71	74	80	83	79	84	72	67	68	64	64	64	69	73	76	80	72	61	71	77	79	71.7	9.4		
10	80	82	82	86	79	84	86	87	89	82	66	64	62	61	66	71	67	72	71	69	72	77	81	86	75.8	9.8		
11	84	85	87	89	85	89	88	90	87	85	78	78	69	74	67	68	68	73	80	78	85	83	84	74	80.6	8.7		
12	80	85	84	86	84	87	87	89	88	75	76	82	65	74	72	72	69	68	73	81	85	85	85	83	79.6	8.8		
13	86	89	85	88	87	89	90	87	90	86	84	81	80	80	81	79	83	86	85	84	86	86	86	84	85.1	8.6		
14	85	84	86	81	83	81	86	82	79	78	72	70	71	68	69	70	72	73	73	72	71	70	71	71	76.0	7.7		
15	71	71	73	71	70	72	73	72	68	69	63	67	70	68	70	72	70	69	74	75	77	74	73	75	71.0	7.8		
16	73	74	74	77	71	77	73	77	76	75	77	73	67	68	69	67	67	72	74	72	73	73	74	74	72.8	7.9		
17	71	72	69	71	72	70	63	62	58	57	54	51	51	47	50	51	54	55	59	65	62	57	50	51	59.7	7.4		
18	50	49	48	51	48	43	45	46	49	45	44	47	40	46	49	35	32	50	45	45	37	34	30	29	43.7	6.3		
19	29	37	39	45	49	46	47	45	41	34	49	48	48	54	63	73	79	84	86	86	88	87	86	89	58.4	7.8		
20	89	91	93	94	95	94	89	89	93	94	95	96	95	94	95	95	95	95	95	96	96	96	97	93	93.8	12.4		
21	95	98	96	95	94	95	94	98	95	95	95	90	89	83	81	79	77	81	86	89	88	89	89	88	90.1	11.5		
22	86	90	85	86	84	85	86	83	79	75	75	76	76	72	83	88	78	82	80	84	87	88	87	88	82.6	9.4		
23	90	89	94	92	94	91	89	95	92	93	89	86	81	83	80	87	84	85	90	91	92	92	92	89	89.1	11.2		
24	89	89	90	90	92	88	92	94	94	97	95	96	91	93	95	95	97	93	92	91	93	92	94	94	92.6	12.1		
25	95	98	95	96	92	94	94	88	87	82	80	74	68	59	76	76	79	79	84	87	87	89	91	90	85.1	10.5		
26	88	88	91	93	91	93	90	91	88	84	80	76	75	75	74	76	81	81	84	87	91	92	92	89	85.4	10.6		
27	89	88	88	89	88	87	86	80	74	74	74	71	67	72	78	79	80	84	87	88	88	88	88	88	82.3	10.2		
28	87	85	81	81	78	80	81	83	76	76	74	76	75	89	91	80	81	82	87	92	92	91	94	94	83.4	10.2		
29	91	94	91	93	91	96	94	93	76	77	73	83	75	57	56	58	59	54	56	66	74	86	77	78	77.3	9.8		
30	76	83	81	84	81	76	82	77	76	61	61	51	51	60	75	74	77	83	90	93	89	89	88	90	76.7	9.5		
31	88	79	78	80	74	71	76	72	70	68	71	62	57	60	63	67	64	68	72	81	80	75	79	78	72.5	8.7		
Mean ...	77.1	77.9	77.7	78.3	77.6	78.3	78.4	78.1	75.0	72.1	69.0	67.9	65.4	66.3	68.9	69.4	69.7	72.5	74.9	75.9	77.3	77.6	77.2	74.1	74.1	78.6		
Vapour Pressure*	mb. 8.1	mb. 8.0	mb. 7.9	mb. 7.9	mb. 7.8	mb. 7.8	mb. 7.8	mb. 7.9	mb. 8.2	mb. 8.5	mb. 8.8	mb. 9.0	mb. 9.0	mb. 9.2	mb. 9.5	mb. 9.4	mb. 9.2	mb. 9.1	mb. 8.9	mb. 8.6	mb. 8.4	mb. 8.4	mb. 8.4	mb. 8.2	78.5	18.5		

376. Cahirciveen (Valentia Observatory) : North Wall Screen : h_1 = 1.3 metres.

April, 1929.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean.	Vapour Pressure*	
1	% 82	% 80	% 83	% 88	% 94	% 96	% 92	% 93	% 91	% 88	% 72	% 67	% 62	% 60	% 64	% 71	% 62	% 65	% 69	% 63	% 67	% 70	% 69	% 69	% 69	% 75.9	mb. 9.3
2	67	71	73	74	79	67	67	60	61	62	60	49	54	54	51	59	58	62	64	61	67	71	77	78	64.2	7.0	
3	73	80	78	78	65	74	69	70	63	54	60	62	59	62	61	63	66	70	79	77	86	86	87	87	70.0	7.5	
4	88	85	88	89	88	90	90	88	78	62	68	67	72	76	75	76	79	81	84	86	87	91	92	89	82.4	9.0	
5	92	90	90	94	91	96	93	94	87	72	72	69	68	85	78	79	80	84	89	92	92	91	94	92	86.0	10.6	
6	95	94	96	92	92	93	91	79	76	72	69	66	66	65	67	72	72	76	75	75	77	79	81	79.9	10.6		
7	84	87	87	87	89	93	95	95	94	91	89	76	72	76	75	74	74	73	76	74	76	74	74	68	81.6	10.3	
8	73	74	68	68	73	74	70	69	63	69	63	69	66	67	64	66	68	64	66	72	77	83	83	79	70.1	8.6	
9	81	84	82	87	82	83	78	76	73	70	63	62	61	69	67	68	77	67	70	72	75	76	83	83	73.8	9.2	
10	86	88	87	81	81	81	82	75	73	71	64	60	58	55	53	50	52	63	70	77	86	82	75	79	72.1	8.6	
11	87	85	88	90	88	78	72	68	65	65	55	58	55	50	51	47	45	50	49	50	56	55	60	59	64.0	6.6	
12	60	54	59	54	58	53	64	59	56	46	44	51	47	45	45	54	52	55	61	62	59	56	58	61	54.7	5.2	
13	61	61	59	64	64	63	68	62	66	70	71	70	65	63	59	60	59	61	70	71	71	66	63	65	64.6	6.2	
14	65	66	70	68	70	67	77	72	71	77	74	73	72	73	76	81	83	79	81	80	80	79	74	73	74.0	8.1	
15	74	74	74	73	73	80	79	75	67	75	75	83	82	79	75	68	74	83	84	86	87	84	84	83	77.7	10.1	
16	84	80	81	84	83	78	82	82	79	80	78	75	74	75	71	76	77	82	86	87	93	95	94	96	81.9	11.0	
17	97	96	96	95																							

Percentages at exact hours, Greenwich Mean Time.

377. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres. May, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	83	80	83	83	75	70	65	66	61	60	61	54	62	62	57	78	71	70	79	81	89	86	90	88	88	73.0	7.8
2	92	89	88	90	80	79	79	73	68	65	61	64	63	63	59	58	60	65	75	82	86	85	90	89	89	75.1	8.3
3	90	90	86	86	87	79	75	74	80	81	76	85	83	88	94	94	95	90	86	86	82	83	89	86	86	85.6	9.6
4	84	81	78	81	81	85	79	86	84	82	85	92	94	88	88	92	94	92	92	93	92	92	87	88	88	87.0	10.3
5	88	88	90	91	90	92	87	86	88	84	72	73	73	61	62	67	60	64	63	69	74	74	74	74	74	77.1	9.2
6	73	70	71	71	72	65	71	80	85	76	77	64	61	63	62	62	67	81	86	82	82	87	87	87	87	74.0	8.1
7	89	88	84	84	85	79	83	77	78	82	84	70	67	56	59	61	63	66	69	68	71	81	82	73	73	75.3	8.1
8	74	65	65	68	65	79	82	80	74	68	62	64	68	74	67	65	59	65	62	66	66	70	70	63	63	68.6	7.8
9	72	73	77	85	92	87	81	69	66	65	62	69	69	66	70	70	71	75	72	81	81	78	78	81	81	74.2	9.0
10	82	82	91	95	95	95	93	97	98	95	97	95	93	94	97	98	97	98	98	96	97	98	96	96	96	94.4	12.9
11	93	94	92	91	93	89	88	81	73	75	76	74	76	76	78	88	92	89	89	89	89	89	89	87	87	85.6	11.5
12	89	88	87	83	83	83	76	72	72	69	69	66	70	67	67	66	69	72	69	75	77	76	80	79	79	75.3	9.7
13	87	88	87	82	96	90	90	89	73	70	72	78	65	59	63	86	93	83	83	79	83	83	76	76	76	80.4	9.8
14	82	82	83	83	87	86	79	80	82	88	81	74	76	76	74	75	82	90	93	94	94	95	95	94	95	84.0	10.7
15	92	92	93	91	83	84	82	83	84	80	84	81	78	77	78	78	80	78	85	86	86	92	92	93	93	84.7	11.7
16	95	96	96	94	94	93	87	75	75	77	75	76	76	77	76	75	79	81	82	85	85	79	82	85	85	83.3	12.3
17	84	84	87	87	87	88	88	89	83	85	87	91	87	83	87	85	88	88	89	90	90	89	90	89	89	87.2	12.2
18	89	93	94	92	88	80	83	80	76	74	67	67	66	67	65	69	68	74	75	78	79	78	80	77	77	77.7	11.3
19	74	76	77	74	78	76	71	60	63	64	66	62	67	68	66	73	65	74	74	79	82	84	87	88	88	72.6	9.8
20	93	88	87	97	97	91	87	86	75	76	75	73	71	77	72	73	73	78	85	84	87	89	89	92	92	83.0	10.9
21	92	92	93	94	91	93	92	81	77	75	68	70	72	78	76	77	83	89	89	93	93	94	95	94	94	85.4	11.7
22	91	91	94	96	93	95	86	84	80	87	92	89	93	87	91	93	93	89	89	87	88	88	88	87	87	89.8	11.1
23	91	86	86	86	86	87	81	80	76	75	72	71	70	72	70	83	76	79	79	83	87	83	88	89	89	80.6	10.6
24	91	92	92	92	92	83	80	75	73	79	73	69	75	74	72	68	63	73	77	82	83	82	81	83	83	79.5	11.2
25	83	95	96	95	94	97	96	95	91	91	92	91	93	94	95	94	96	97	98	98	97	97	95	96	96	94.1	14.1
26	95	94	93	93	94	91	91	95	93	87	90	87	90	87	83	70	67	76	77	77	77	82	83	93	93	86.1	13.1
27	88	89	82	83	77	84	80	74	68	69	67	74	69	71	83	80	80	74	82	83	90	90	74	80	80	79.1	11.4
28	74	66	70	71	72	71	74	73	72	69	65	57	56	52	56	59	55	65	69	73	73	70	71	75	75	67.1	14.6
29	76	78	79	76	74	76	77	68	64	65	60	62	62	62	57	61	63	73	67	68	68	66	66	69	69	68.5	12.5
30	69	73	81	81	81	77	73	64	64	58	57	59	62	60	62	62	64	70	77	81	81	82	83	87	87	70.8	11.5
31	89	89	90	91	93	90	90	89	86	83	81	83	82	73	71	72	74	66	71	78	82	82	78	79	81	81.9	13.3
Mean ...	85.3	84.9	85.7	86.3	85.7	84.3	82.1	79.4	76.8	75.9	74.4	73.7	73.8	72.7	72.8	75.2	75.5	78.2	80.1	82.1	83.7	84.1	84.0	84.4	80.0	†10.8	
Vapour Pressure* ...	mb. 10.3	mb. 10.1	mb. 10.0	mb. 10.0	mb. 10.0	mb. 10.1	mb. 10.5	mb. 10.7	mb. 10.8	mb. 10.9	mb. 10.8	mb. 10.9	mb. 11.1	mb. 11.1	mb. 11.1	mb. 11.3	mb. 11.2	mb. 11.2	mb. 11.2	mb. 11.1	mb. 10.9	mb. 10.8	mb. 10.7	mb. 10.6	†10.7		

378. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres. June, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*		
1	85	87	88	90	90	93	93	93	95	94	93	95	95	95	95	96	96	96	96	97	97	97	97	97	97	97	93.3	14.9
2	98	96	96	96	97	99	98	97	96	97	98	93	98	93	89	80	80	80	85	88	90	94	94	91	91	92.7	14.5	
3	91	97	95	96	96	95	90	90	91	91	86	85	83	85	84	83	80	86	85	88	90	89	90	90	90	89.0	13.6	
4	90	90	90	91	91	91	93	90	90	83	81	81	79	69	79	80	80	86	85	89	89	90	95	85	85	85.8	12.6	
5	95	94	94	95	97	97	98	94	97	87	95	94	95	95	94	96	94	91	91	94	97	95	95	95	95	94.5	13.3	
6	97	95	92	93	92	91	89	85	75	81	84	81	82	78	74	78	76	81	87	82	83	85	86	87	87	84.9	12.1	
7	90	93	92	91	89	89	82	82	72	76	75	77	76	77	74	77	78	75	76	81	85	89	89	91	91	82.3	12.2	
8	91	88	92	93	94	94	93	94	83	81	78	78	76	74	77	72	68	68	68	69	72	77	79	85	81	81.1	11.6	
9	86	85	84	84	83	79	70	65	61	62	65	66	65	66	64	65	68	68	73	73	74	75	76	81	72	72.5	10.7	
10	81	88	85	83	80	87	83	79	74	88	76	67	66	71	65	69	68	71	69	70	76	82	81	81	81	76.7	11.8	
11	83	78	76	75	74	74	73	75	74	74	68	69	69	74	68	76	75	87	93	95	97	97	99	98	98	79.7	11.9	
12	99	98	98	98	98	98	96	91	93	86	88	85	90	90	83	86	88	89	91	90	91	94	94	94	94	92.1	14.0	
13	90	88	90	89	87	85	87	85	86	83	79	78	76	72	72	76	78	72	78	84	87	87	89	85	85	82.8	11.9	
14	84	86	86	79	87	81	80	74	77	75	74	73	73	74	77	76	76	78	81	85	88	90	91	90	90	80.5	11.7	
15	90	90	90	89	86	90	93	93	95	95	96	96	85	81	86	84	87	83	82	88	90	89	89	91	91	89.1		

Percentages at exact hours, Greenwich Mean Time.

379. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres.

July, 1929.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	90	89	92	91	91	92	81	72	64	67	66	61	62	63	62	60	63	70	69	71	76	83	82	84	84	75.1	12.6
2	81	81	85	83	86	82	80	75	68	69	68	66	66	66	67	64	65	66	67	76	82	79	82	82	82	73.7	12.3
3	82	84	84	87	87	87	89	85	72	85	80	72	71	74	76	73	68	73	81	83	83	85	80	82	80.1	12.0	
4	88	93	85	85	88	89	80	89	83	83	80	77	70	63	64	67	67	75	89	89	89	89	87	93	81.5	11.9	
5	90	93	91	89	90	89	88	88	90	91	94	91	87	89	89	90	90	89	93	93	90	89	93	88	90.3	13.4	
6	91	89	90	91	89	93	87	86	85	83	80	81	81	80	78	82	81	82	79	83	87	93	89	93	85.4	13.4	
7	91	89	96	95	96	89	75	74	67	65	58	57	53	60	59	59	59	68	70	82	87	85	87	87	87	74.3	11.4
8	91	88	90	87	90	91	90	91	86	84	80	76	76	75	79	76	76	78	85	85	87	90	91	90	90	84.6	13.8
9	91	88	87	90	90	91	90	86	88	84	92	92	90	89	90	89	89	93	95	97	97	98	98	98	98	91.2	14.9
10	96	96	97	99	96	96	97	99	96	96	97	97	97	96	96	98	98	98	96	94	94	97	99	98	98	98.9	17.0
11	99	99	99	99	99	97	96	97	98	99	99	98	99	96	96	90	93	85	81	86	90	93	88	79	94.4	16.2	
12	88	81	89	88	88	89	80	74	66	62	65	69	73	81	82	81	78	73	76	76	80	89	90	94	77.3	12.9	
13	90	89	89	93	99	90	86	88	79	78	79	80	81	82	81	78	73	76	76	80	89	90	93	94	84.7	14.5	
14	94	94	93	94	96	93	84	81	75	53	55	52	53	56	50	50	48	50	54	48	50	50	45	38	66.0	13.4	
15	44	47	45	47	48	49	37	43	44	48	52	53	47	45	52	54	57	65	72	82	89	89	86	86	58.5	13.2	
16	87	87	90	90	90	89	91	89	86	86	86	83	87	89	88	89	89	89	89	93	91	90	93	91	88.7	15.6	
17	94	96	95	93	91	94	90	85	80	77	79	75	72	78	78	79	84	87	90	93	91	88	91	90	86.3	14.4	
18	91	91	91	91	91	90	91	91	90	83	84	83	81	81	84	88	84	85	89	90	93	93	96	94	88.5	15.5	
19	90	88	94	96	92	94	98	94	96	96	99	93	90	89	87	87	89	83	89	89	89	91	93	91	91.6	16.4	
20	90	93	93	91	90	90	89	88	91	90	91	91	96	90	97	91	89	93	89	91	91	94	95	98	91.6	16.2	
21	98	98	94	95	95	96	90	84	81	78	76	80	75	76	78	81	83	84	85	89	89	91	90	91	86.7	15.4	
22	91	93	94	94	94	93	94	93	94	93	94	90	87	89	82	89	90	90	93	92	91	92	92	92	91.4	15.9	
23	95	93	90	89	90	93	88	83	78	70	70	64	67	65	60	60	67	69	69	74	73	73	77	81	76.8	12.2	
24	81	77	80	87	80	80	73	66	60	66	74	67	73	72	70	70	81	74	87	87	89	88	93	88	77.5	12.1	
25	94	91	87	83	87	90	87	86	86	77	72	68	62	66	70	73	68	66	69	76	77	73	65	68	77.1	12.2	
26	74	82	83	88	82	88	85	81	78	75	72	68	70	76	76	72	76	79	81	87	89	89	93	91	80.1	13.5	
27	95	94	96	94	94	94	95	89	84	82	84	88	87	89	92	94	92	94	90	98	94	96	99	97	92.0	15.1	
28	96	97	97	97	96	96	97	98	97	98	96	97	96	95	95	95	97	95	96	99	96	93	96	93	96.2	17.4	
29	96	93	96	93	88	87	78	92	88	87	89	80	82	82	81	81	90	86	89	85	90	84	80	83	86.9	14.8	
30	86	93	93	89	94	82	79	87	86	81	89	85	89	88	89	91	95	94	91	93	91	92	91	89	88.9	14.5	
31	89	87	94	96	91	84	91	82	78	82	94	94	85	81	80	90	82	81	78	95	81	77	80	78	85.6	14.3	
Mean ...	88.8	88.8	88.9	88.9	88.9	88.8	85.6	84.3	81.1	79.5	80.5	78.3	77.6	77.7	77.7	78.2	78.9	79.9	82.2	85.2	86.5	87.3	87.4	87.1	83.8	†14.1	
Vapour Pressure* ...	mb. 13.7	mb. 13.6	mb. 13.6	mb. 13.4	mb. 13.3	mb. 13.4	mb. 13.8	mb. 14.1	mb. 14.2	mb. 14.3	mb. 14.6	mb. 14.5	mb. 14.7	mb. 14.8	mb. 14.7	mb. 14.6	mb. 14.4	mb. 14.5	mb. 14.4	mb. 14.4	mb. 14.3	mb. 14.0	mb. 13.9	mb. 13.7	†14.1		

380. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

August, 1929.

Hour, G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
1	81	85	85	88	93	91	91	85	88	82	86	82	88	77	77	80	79	77	78	80	78	81	77	77	82.8	13.0	
2	76	75	77	83	85	89	89	85	81	80	78	76	74	76	77	74	78	80	83	85	85	91	95	97	81.6	13.1	
3	96	99	96	97	99	96	98	98	93	91	90	91	91	94	97	92	93	98	93	97	95	94	96	96	95.3	16.0	
4	94	91	90	90	91	90	93	90	81	88	78	77	74	74	72	72	67	72	76	75	77	82	79	80	81.7	13.1	
5	85	89	89	88	88	88	89	89	90	89	94	94	92	96	96	97	94	93	94	94	94	94	97	94	91.7	13.9	
6	96	97	97	92	95	95	93	94	97	91	87	88	84	80	79	78	79	80	80	77	74	75	77	75	86.2	14.3	
7	69	73	69	77	74	88	76	71	71	68	68	68	69	66	68	70	67	68	74	74	81	80	87	80	73.4	11.5	
8	88	89	90	89	90	89	95	87	86	87	88	88	89	91	92	94	96	91	98	93	94	96	96	95	91.0	14.4	
9	96	91	91	94	94	93	94	90	88	88	87	81	84	83	84	88	92	94	96	93	98	97	96	97	91.2	15.3	
10	99	99	99	98	96	99	97	96	93	91	97	99	98	98	96	97	99	97	93	96	94	96	96	96	96	98.6	17.0
11	97	98	94	97	96	93	94	88	80	84	84	69	72	75	80	81	82	80	87	86	87	84	88	88	86.2	14.9	
12	85	86	90	95	94	95	88	88	88	77	80	80	74	71	74	81	80	87	90	90	93	93	92	93	85.9	14.6	
13	93	91	89	92	96	96	97	99	97	99	98	97	89	81	81	82	78	80	78	80	77	79	81	83	88.3	15.0	
14	78	83	82	88	86	82	86	84	77	80	77	70	77	79	74	70	69	78	79	81	84	87	87	89	80.2	13.2	
15	90	92	93	89	95	92	93	89	83	79	78	77	77	78	79	71	79	80	86	88	92	93	94	96	85.8	13.7	
16	95	94	97	93	93	94	96	94	89	89	85	79	84	80	81	73	78	76	82	78	82	79	83	90	86.1	14.	

Percentages at exact hours, Greenwich Mean Time.

381. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres. September, 1929.

Table with 25 columns for hours (1-24) and Mean, and 2 rows for % and Vapour Pressure*.

382. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres. October, 1929.

Table with 25 columns for hours (1-24) and Mean, and 2 rows for % and 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.

383. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t (height of thermometer bulbs above ground) = 1.3 metres.

November, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.	
1	87	89	92	93	93	94	97	98	95	95	98	95	94	94	96	94	96	94	95	95	98	97	95	96	96	94.4	13.2
2	95	97	96	96	99	95	97	98	93	95	92	83	76	84	88	87	80	89	84	69	72	76	73	74	74	87.0	11.7
3	73	67	72	73	67	68	69	72	73	74	73	64	71	65	67	75	82	83	87	86	80	81	80	80	80	74.1	9.2
4	82	77	79	80	82	91	92	97	95	93	96	97	95	94	94	94	95	95	97	95	96	94	95	95	95	91.4	12.4
5	95	95	96	98	99	96	93	97	97	94	93	89	89	86	86	87	81	84	87	88	89	88	87	82	82	90.9	12.3
6	82	79	75	76	83	75	74	74	66	68	65	65	64	70	71	72	80	83	84	84	88	89	91	92	92	77.7	9.5
7	96	94	98	97	97	98	96	97	97	97	98	97	95	97	97	97	98	98	98	97	98	98	97	98	97	97.0	14.4
8	88	88	77	75	82	67	61	63	67	66	72	78	70	70	65	69	68	71	76	74	75	89	74	68	68	73.6	9.0
9	66	69	71	85	77	85	82	84	84	76	83	83	87	91	83	82	83	89	89	75	84	84	79	71	71	80.9	9.4
10	62	65	65	68	69	64	58	60	64	75	78	71	90	81	85	82	84	77	76	79	77	84	91	95	95	74.5	7.9
11	94	96	92	89	90	91	94	96	97	98	98	97	93	98	97	97	96	92	88	89	81	70	67	69	69	90.9	11.3
12	71	67	65	65	68	78	70	68	65	61	61	63	80	79	75	76	85	84	77	69	81	85	70	68	68	72.1	7.3
13	69	76	63	81	82	73	76	70	76	84	79	68	61	60	68	71	84	70	78	75	87	85	87	88	88	75.0	7.0
14	85	85	85	85	89	87	90	90	92	85	85	84	74	76	77	70	80	84	83	82	87	82	84	85	85	83.6	7.1
15	82	85	62	67	72	77	77	81	86	87	88	89	89	89	89	95	96	95	89	88	92	89	89	91	91	85.0	8.9
16	82	84	88	87	88	91	86	83	85	83	79	74	64	69	68	74	83	82	85	87	90	87	87	84	84	82.2	7.4
17	86	87	84	87	81	82	58	69	78	71	73	70	65	63	68	75	74	78	70	84	84	84	85	80	85	76.6	6.4
18	74	75	74	76	77	79	89	86	90	88	92	95	95	94	98	98	99	95	95	95	95	94	94	94	94	88.9	10.1
19	90	86	93	92	87	87	85	90	90	94	97	96	93	96	96	93	94	94	93	89	94	91	94	91	91	91.9	11.3
20	89	86	88	89	89	88	89	86	89	89	86	87	89	88	84	88	89	89	91	84	89	89	87	82	82	87.9	9.9
21	83	86	88	89	89	89	89	88	88	86	82	78	79	80	75	76	76	75	74	74	72	73	79	75	75	81.1	10.2
22	75	77	79	80	82	83	76	75	79	84	77	81	87	83	84	90	90	91	88	87	83	83	81	84	84	82.3	10.5
23	82	86	88	88	87	87	88	90	85	85	83	79	89	80	76	83	79	81	82	78	77	82	86	79	83	83.4	8.8
24	83	88	83	85	88	83	78	78	82	89	80	79	82	83	83	77	84	82	80	87	82	86	80	80	80	82.6	9.7
25	73	76	79	76	84	81	82	84	89	88	88	88	89	89	87	81	93	90	86	81	90	87	82	86	86	84.4	9.0
26	84	89	87	91	89	89	88	89	89	87	78	79	76	74	70	76	73	76	78	90	86	85	84	84	84	83.0	8.7
27	88	88	85	89	85	84	82	78	75	76	73	74	79	84	79	77	81	82	90	95	95	95	95	95	95	83.4	9.3
28	97	95	94	94	95	94	95	95	96	95	95	95	94	92	93	92	94	94	94	94	94	94	94	94	94	94.4	12.1
29	95	95	93	92	90	92	91	92	92	92	90	93	86	92	84	82	83	81	84	84	86	80	79	89	88	88.3	11.2
30	88	92	92	93	94	94	93	94	93	94	89	89	88	91	89	91	89	91	91	91	87	89	88	91	91	90.8	10.3
Mean ...	83.2	84.0	82.8	84.5	85.1	84.7	83.2	84.0	84.9	85.0	84.0	82.7	82.8	83.1	82.4	83.4	85.8	85.6	84.7	84.7	86.3	86.6	85.1	84.7	84.3	84.3	19.8
Vapour Pressure*	9.3	9.3	9.3	9.5	9.6	9.5	9.3	9.5	9.7	9.8	10.0	10.2	10.2	10.2	10.1	10.1	10.1	9.8	9.6	9.6	9.7	9.6	9.5	9.4	19.7		

384. Cahirciveen (Valentia Observatory) : North Wall Screen : h_t = 1.3 metres.

December, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*
1	93	87	87	87	89	92	92	93	93	93	89	88	90	88	89	89	87	87	88	89	92	96	95	94	90.2	10.8
2	97	98	95	96	97	93	93	82	75	71	69	72	72	84	81	81	74	72	70	82	83	81	79	86	82.8	9.6
3	86	82	81	85	83	85	86	82	80	83	86	83	82	84	80	86	84	80	87	88	87	88	89	81	85.6	9.4
4	86	83	87	85	86	85	90	91	87	88	86	84	82	84	80	86	84	80	87	88	87	88	89	81	85.7	9.4
5	83	86	73	80	82	83	84	89	88	88	88	88	83	80	78	77	72	82	73	70	70	79	71	72	80.1	8.9
6	72	69	75	72	78	82	84	84	80	80	89	86	92	87	77	89	92	92	88	92	87	82	79	85	82.8	8.8
7	83	75	76	81	83	69	60	60	62	65	57	70	69	65	66	72	76	76	79	85	80	82	81	76	78.0	7.4
8	72	85	87	83	75	71	78	84	81	83	89	78	79	76	67	61	65	72	65	59	69	65	69	70	74.0	7.3
9	81	85	91	90	93	90	86	79	86	85	85	78	79	71	69	76	81	78	74	70	74	75	79	84	80.7	7.6
10	69	74	75	72	63	78	85	85	86	92	94	93	83	87	93	91	98	95	92	89	89	80	76	76	84.1	8.4
11	75	70	74	74	74	75	74	74	74	69	73	79	77	82	77	82	88	79	70	63	70	73	69	66	74.4	9.0
12	86	83	74	67	70	87	82	77	64	68	67	69	74	83	84	84	82	86	86	84	83	83	86	84	78.5	9.1
13	87	82	81	87	90	93	95	96	94	95	95	97	98	98	98	98	94	96	98	99	95	94	94	94	93.5	12.7
14	98	96	96	94	96	96	97	95	96	96	93	86	96	90	89	90	89	92	93	93	93	95	96	96	98.8	11.0
15	93	88	79	86	86	84	79	73	78	78	72	71	66	70	72	76	81	84	82	75	81	84	88	85	79.9	7.8
16	85	85	91	87	83	85	87	85	87	81	82	81	82	83	74	78	85	82	83	84	69	76	80	83	82.5	5.9
17	78	72	71	67	70	69	70	72	73	83	84	81	82	82	83	91	94	94								

For exact hours, Greenwich Mean Time.

385. Cahirciveen (Valentia Observatory) : North Wall Screen : $h_t = 1.3$ metres.

1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Relative Humidity ...	% 84.5	% 84.5	% 84.6	% 84.8	% 84.6	% 84.6	% 83.7	% 82.8	% 81.3	% 80.1	% 78.8	% 77.7	% 76.6	% 76.6	% 76.9	% 77.6	% 78.5	% 79.7	% 81.3	% 82.3	% 83.4	% 84.2	% 84.2	% 84.2	% 81.5
Vapour Pressure in millibars* ...	mb. 10.2	mb. 10.1	mb. 10.1	mb. 10.1	mb. 10.0	mb. 10.0	mb. 10.2	mb. 10.3	mb. 10.4	mb. 10.6	mb. 10.7	mb. 10.8	mb. 10.9	mb. 10.9	mb. 10.9	mb. 10.9	mb. 10.8	mb. 10.7	mb. 10.7	mb. 10.6	mb. 10.5	mb. 10.5	mb. 10.4	mb. 10.3	mb. 10.5

* Computed from the mean temperatures and mean relative humidity.

RELATIVE HUMIDITY : MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

386. Cahirciveen (Valentia Observatory) : North Wall Screen : $h_t = 1.3$ metres.

1929.

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.	% 80.8	% +0.5	% +0.7	% +1.0	% +0.3	% +0.3	% +1.4	% +1.2	% +2.5	% +2.4	% +1.8	% +0.8	% -0.4	% -1.9	% -2.3	% -2.5	% -2.5	% -1.4	% -1.1	% +0.6	% -0.4	% -1.0	% +0.4	% -0.6	% +0.1	% +0.1
Feb.	% 84.4	% +2.5	% +2.6	% +2.0	% +0.5	% -0.7	% -1.3	% -1.8	% -1.3	% -1.0	% -0.3	% -1.7	% -1.8	% -2.8	% -3.1	% -2.2	% -2.4	% -0.7	% +0.5	% +0.7	% +1.3	% +2.7	% +3.5	% +3.3	% +1.2	% +1.2
Mar.	% 74.1	% +3.1	% +3.9	% +3.7	% +4.3	% +3.6	% +4.3	% +4.4	% +4.1	% +1.0	% -2.0	% -5.0	% -6.1	% -8.7	% -7.7	% -5.2	% -4.7	% -4.3	% -1.5	% +0.8	% +0.8	% +1.8	% +3.2	% +3.5	% +3.1	% +3.1
April	% 73.9	% +4.6	% +3.9	% +4.7	% +5.7	% +5.7	% +6.5	% +6.2	% +3.7	% -0.5	% -2.1	% -5.2	% -6.5	% -8.1	% -6.9	% -7.8	% -7.1	% -6.1	% -3.5	% -1.0	% +0.8	% +2.6	% +3.5	% +3.3	% +3.7	% +3.7
May	% 80.1	% +5.1	% +4.8	% +5.6	% +6.2	% +5.5	% +4.2	% +2.0	% -0.7	% -3.2	% -4.1	% -5.7	% -6.4	% -6.2	% -7.4	% -7.2	% -4.8	% -4.5	% -1.8	% +0.1	% +2.1	% +3.7	% +4.1	% +4.1	% +4.5	% +4.5
June	% 82.2	% +6.5	% +6.8	% +6.6	% +6.4	% +5.8	% +5.3	% +2.5	% 0.0	% -2.3	% -3.1	% -4.8	% -5.3	% -6.9	% -7.4	% -7.6	% -6.6	% -6.9	% -5.0	% -2.3	% -0.7	% +2.9	% +4.1	% +5.8	% +6.2	% +6.2
July	% 83.8	% +4.8	% +4.9	% +5.7	% +5.9	% +5.7	% +5.1	% +1.8	% +0.5	% -2.7	% -4.3	% -3.4	% -5.5	% -6.2	% -6.0	% -5.9	% -5.5	% -4.8	% -3.9	% -1.5	% +1.5	% +2.8	% +3.7	% +3.8	% +3.5	% +3.5
Aug.	% 86.6	% +2.5	% +2.6	% +2.6	% +3.7	% +4.3	% +4.3	% +4.2	% +2.9	% +0.4	% -1.1	% -1.6	% -2.7	% -3.6	% -4.7	% -4.4	% -5.3	% -4.6	% -3.6	% -1.7	% -0.7	% +0.6	% +1.1	% +2.2	% +2.7	% +2.7
Sept.	% 85.5	% +5.1	% +5.2	% +5.3	% +5.7	% +4.8	% +4.3	% +4.9	% +2.9	% +1.6	% -3.0	% -4.3	% -6.2	% -7.9	% -8.2	% -8.2	% -7.4	% -6.9	% -3.5	% -0.1	% +2.1	% +2.5	% +3.4	% +3.5	% +4.4	% +4.4
Oct.	% 81.4	% +0.9	% +0.3	% +2.0	% +1.3	% +1.1	% +1.1	% +0.6	% +1.1	% +0.6	% +1.1	% -0.2	% -3.3	% -4.8	% -4.4	% -2.4	% -1.9	% -0.6	% -0.6	% +0.3	% +2.0	% +2.4	% +2.5	% +1.8	% +1.4	% +1.4
Nov.	% 84.3	% -1.0	% -0.3	% -1.5	% +0.3	% +0.9	% +0.5	% -1.1	% -0.2	% +0.6	% +0.7	% -0.3	% -1.6	% -1.5	% -1.2	% -1.9	% -0.9	% +1.5	% +1.2	% +0.4	% +0.3	% +2.0	% +2.0	% +0.8	% +0.3	% +0.3
Dec.	% 81.8	% +0.4	% -1.0	% -0.9	% -1.7	% -1.2	% +0.4	% 0.0	% -0.2	% -0.5	% +1.1	% +0.3	% -0.8	% -0.7	% +0.5	% -0.6	% +1.3	% +2.3	% +0.5	% +0.1	% 0.0	% -0.5	% -0.1	% +0.3	% +0.9	% +0.9
Year	% 81.5	% +2.9	% +3.0	% +3.1	% +3.3	% +3.0	% +3.0	% +2.1	% +1.2	% -0.2	% -1.5	% -2.8	% -3.9	% -4.9	% -4.9	% -4.7	% -4.0	% -3.1	% -1.9	% -0.3	% +0.8	% +1.9	% +2.6	% +2.6	% +2.7	% +2.7

RAINFALL : ANNUAL TOTALS OF HOURLY VALUES.

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

387. Cahirciveen (Valentia Observatory) : H_r (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h_r (height of receiving surface above ground) = 9.1 metres + 0.5 metre.

1929.

Hour. G.M.T.	0 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	21 to 22.	22 to 23.	23 to 24.	0 to 24.
Amount ...	mm. 77.0	mm. 68.6	mm. 58.7	mm. 67.3	mm. 60.7	mm. 46.3	mm. 55.1	mm. 67.0	mm. 55.3	mm. 42.5	mm. 48.2	mm. 52.7	mm. 55.9	mm. 54.9	mm. 65.6	mm. 81.4	mm. 84.6	mm. 68.1	mm. 59.5	mm. 66.0	mm. 67.8	mm. 72.1	mm. 71.9	mm. 81.5	mm. 1528.7
Duration ...	hr. 44.8	hr. 42.6	hr. 38.3	hr. 42.5	hr. 38.5	hr. 36.0	hr. 41.6	hr. 39.9	hr. 37.8	hr. 29.2	hr. 32.6	hr. 30.0	hr. 27.6	hr. 29.5	hr. 33.0	hr. 36.7	hr. 40.8	hr. 37.0	hr. 34.7	hr. 39.2	hr. 42.3	hr. 41.1	hr. 44.1	hr. 47.6	hr. 907.4

388. Cahirciveen (Valentia Observatory).

NOTES ON RAINFALL.

1929.

Notable Falls of the Year.—

Details of the greatest continuous falls are as follows :—

Amount.

Date.

Time.

mm.

39.2

37.3

30.6

28.9

18.0

November 10 to 11

July 27 to 28

December 1 to 2

November 18

October 1

23 h 40 m — 20 h 30 m

14 h 30 m — 13 h 5 m

19 h 5 m — 5 h 0 m

6 h 35 m — 16 h 20 m

10 h 30 m — 15 h 0 m

The highest fall of the year between one exact hour and the next was 7.7 mm. between 19 h and 20 h on November 9th ; the period occupied by this fall was, however, only 35 minutes, it being part of a fall of 13.3 mm. which commenced at 18 h 0 m and ceased at 19 h 35 m.

Dry Periods.—

There was a period of 20 days, from February 28th to March 19th, during which no rain fell : with one exception (20 days in 1925) this is the longest dry period since 1921.

Wet Periods.—

Between November 1st and December 31st (61 days) there were only three days (Nov. 17th, Dec. 15th and Dec. 16th) without rain. Between November 18th and December 14th (27 days) there was rain every day and on only two days was the fall less than 2.0 mm.

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

391. Cahirciveen (Valentia Observatory) : H_r (height of receiving surface above M.S.L.)=H (height of station above M.S.L.)+h, (height of receiving surface above ground)=9.1 metres+0.5 metre. March, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
5	...	...	...	...	...	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
6	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
11	(p)	(p)	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
12	(p)	(pp)	(p)	(p)	(pp)	(pp)	(pp)	(pp)	(pp)	...	...	...	...	...	...	...	...	...	...	...	...	...	(p)	(p)	...	0.0	0.0
13	(p)	(pp)	(pp)	(pp)	(pp)	(pp)	(pp)	(pp)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
14	(p)	(pp)	(pp)	(pp)	(pp)	(pp)	(pp)	(pp)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
15	(p)	(pp)	0.0	0.0						
16	...	...	...	...	...	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
20	...	(...)	2	1	2	(...)	3	1	1.6	1.4	1.8	4	2.9	2.2	(...)	4	9	7	3	6	4	4	(...)	(...)	14.9	10.8
21	...	...	(...)	(...)	(-1)	1	2	7	2.0	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.6	2.0
22	...	...	(...)	(...)	4	...	2	...	...	3	...	...	...	...	2	1.8	2	...	...	(...)	...	...	...	...	3.1	0.9
23	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.0
24	...	...	(...)	(...)	8	3	1.0	1	9	2	6	1.4	3	1.2	6	1	1.1	3	(...)	...	...	...	(p)	5	10.3	8.1
25	7	1.6	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(p)	9	2.4	1.4
26	(p)	(p)	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
27	(p)	(p)	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
28	(p)	(p)	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
29	(p)	(p)	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
30	(p)	(p)	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
31	(p)	(p)	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
Sum.	0.7	1.6	0.2	0.2	1.5	0.4	1.8	0.9	4.5	1.9	2.4	1.8	3.2	3.4	0.8	2.3	2.2	1.0	0.3	0.6	0.4	0.8	0.6	0.9	34.4	22.7
Total Duration.	hr. 0.7	hr. 0.6	hr. 0.6	hr. 0.1	hr. 1.2	hr. 0.7	hr. 1.6	hr. 1.1	hr. 2.0	hr. 1.4	hr. 1.2	hr. 1.2	hr. 1.4	hr. 1.6	hr. 0.6	hr. 1.1	hr. 1.1	hr. 1.0	hr. 0.4	hr. 0.8	hr. 0.3	hr. 0.8	hr. 0.4	hr. 0.8	hr. 22.7	

392. Cahirciveen (Valentia Observatory) : H_r = 9.1 metres + 0.5 metre. April, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	hr.	
1	...	...	...	...	(...)	1	2	1	(...)	(...)	(...)	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	0.4	0.5
2	...	...	...	...	3	2	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.4
3	...	...	...	...	...	...	...	...	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
4	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
5	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	(...)	...	...	...	...	...	...	...	...	...	...	0.0	0.0
6	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	0.5
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.5	2.7
8	...	...	...	...	...	1.1	...	6.2	2.0	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
10	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(p)	...	0.0	0.0
11	(p)	(p)	(p)	(p)	(p)	(p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
12	...	...	...	...	...	(L)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
13	...	...	...	...	...	(L)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	1.6	2.6	3	2	...	...	...	...	...	5.7	4.1
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.2	0.7
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
18	(-1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
25	...	...	...	...	...	...	...	...	...	2	4	(...)	...	...	...	...	...	...	...	5	4	...	...	...	...	2.7	2.0
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.7
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.0	0.0
28	3	2	1	1	1	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.1	6.0
29	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.8	7.5
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.4
Sum.	1.7	0.4	0.6	1.4	1.0	2.8	1.4	9.3	3.9	1.0	2.2	0.0	0.6	1.0	0.0	1.5	1.6	3.8	1.6	0.6	1.6	3.0	1.8	0.8	43.6	28.6	
Total Duration.	hr. 1.5	hr. 0.6	hr. 0.6	hr. 1.1	hr. 1.4	hr. 1.7	hr. 2.3	hr. 1.7	hr. 1.5	hr. 0.6	hr. 1.6	hr. 0.0	hr. 0.6	hr. 0.4	hr. 0.0	hr. 1.3	hr. 1.0	hr. 1.4	hr. 1.5	hr. 0.8	hr. 1.5	hr. 1.8	hr. 1.7	hr. 2.0	hr. 28.6		

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

393. Cahirciveen (Valentia Observatory) : H_r (height of receiving surface above M.S.L.)=H (height of station above M.S.L.)+h, (height of receiving surface above ground)=9.1 metres+0.5 metre. May, 1929.

Table for Cahirciveen (Valentia Observatory) in May 1929. Columns include Hour G.M.T., Day, and rainfall amounts in mm. for each hour from 0-1 to 23-24, plus a 0-24 total. Rows show daily data from Day 1 to 31, followed by a summary row (Sum.) and a total duration row (Total Duration).

394. Cahirciveen (Valentia Observatory) : H_r = 9.1 metres + 0.5 metre.

June, 1929.

Table for Cahirciveen (Valentia Observatory) in June 1929. Columns include Hour G.M.T., Day, and rainfall amounts in mm. for each hour from 0-1 to 23-24, plus a 0-24 total. Rows show daily data from Day 1 to 30, followed by a summary row (Sum.) and a total duration row (Total Duration).

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

395. Cahirciveen (Valentia Observatory) : H_r (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h_r (height of receiving surface above ground) = 9.1 metres + 0.5 metre. **July, 1929.**

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.									
1	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0									
2	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0
3	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0
4	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.8	0.4
5	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	10.0	4.5
6	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	20.5	7.8
7	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.9	0.6
8	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0
9	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0
10	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	10.2	6.3
11	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	2.7	6.1
12	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	6.3	3.6
13	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0
14	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0
15	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.5	0.3
16	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	4.0	1.9
17	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	1.7	1.9
18	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	1.6	2.6
19	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	7.8	6.8
20	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.2	0.1
21	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	3.2	4.2
22	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	15.2	12.9
23	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.9	1.4
24	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.1	0.1
25	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	1.1	0.8
26	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0
27	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	11.1	8.7
28	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	26.9	13.6
29	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.8	0.6
30	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	2.2	3.8
31	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	5.5	2.6
Sum	8.5	8.7	5.4	9.9	7.1	5.6	6.8	5.4	6.1	3.2	5.4	9.0	2.6	1.2	0.8	1.4	2.1	2.1	5.1	7.4	5.9	8.0	8.2	8.4	134.3	91.6	
Total Duration.	4.1	5.0	4.1	5.5	4.3	4.2	4.7	4.6	3.0	2.2	2.8	3.1	2.0	1.2	1.5	1.8	2.3	2.5	3.3	5.2	5.6	5.2	6.8	6.6	91.6		

396. Cahirciveen (Valentia Observatory) : H_r = 9.1 metres + 0.5 metre.

August, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration.	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.										
1	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	2.7	0.7									
2	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	8.2	2.2									
3	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	20.2	8.6									
4	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.5	0.4									
5	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	9.6	6.9									
6	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	1.7	0.5									
7	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.2	0.2									
8	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	2.5	4.0									
9	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	3.6	3.0									
10	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.9	1.6									
11	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	1.2	1.0									
12	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	1.3	1.0									
13	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	16.2	7.7									
14	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.3	0.2									
15	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0									
16	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	4.6	3.2									
17	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	1.4	0.3									
18	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.0	0.0									
19	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	3.3	1.9									
20	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	3.3	2.5									
21	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.8	0.9									
22	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.3	0.2									
23	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.7	0.8									
24	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	3.7	5.6									
25	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.1	0.0									
26	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	0.1	0.2									
27	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	1.5	0.9									
28	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	5.5	1.3									
29	(P)																										

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

397. Cahirciveen (Valentia Observatory) : H, (height of receiving surface above M.S.L.)=H (height of station above M.S.L.)+h, (height of receiving surface above ground) = 9.1 metres + 0.5 metre. September, 1929.

Table for Cahirciveen (Valentia Observatory) in September 1929. Columns include Hour G.M.T., Day, and rainfall amounts in mm. for each hour from 0-1 to 24. Summary row shows total duration of 24.3 hours and total rainfall of 40.8 mm.

398. Cahirciveen (Valentia Observatory) : H, = 9.1 metres + 0.5 metre.

October, 1929.

Table for Cahirciveen (Valentia Observatory) in October 1929. Columns include Hour G.M.T., Day, and rainfall amounts in mm. for each hour from 0-1 to 24. Summary row shows total duration of 83.5 hours and total rainfall of 158.3 mm.

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

399. Cahirciveen (Valentia Observatory): H_r (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h ,
(height of receiving surface above ground) = 9.1 metres + 0.5 metre. November, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Dura- tion. 0-24	
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.							
1	...	...	...	2	7	2	3	1.2	4	2	(...)	1	1	3	2	(...)	1	1	(...)	1	1	(...)	1	(...)	4.4	9.0
2	(...)	6	3	1	1	2	(...)	1	(...)	2	...	...	...	...	...	5	1	(...)	(...)	1	...	...	...	...	2.3	3.6
3	0.8	0.4
4	1.3	4.5	6.6
5	6	6	1.2	2.4	3	...	6	(...)	...	5	...	...	...	...	...	...	...	...	7	1	(...)	...	...	...	7.0	4.2
6	...	...	...	...	3	6	1.1	4	...	2	9	...	...	(...)	...	...	...	1	...	(...)	1	...	(...)	1	3.8	2.2
7	5	4	2	2	(...)	(...)	(1)	3	1.0	4	...	1.4	1.7	1.3	2	2	(...)	1	(...)	(...)	1	2	2.5	...	10.8	9.1	
8	2.6	2.9	0.6
9	...	...	...	4	...	7	...	2	...	...	1	...	1.0	1.5	...	(...)	6	1	5.6	7.7	(...)	6	2	1	18.8	4.5
10	...	3	...	2	1	...	...	...	...	2	(...)	2	4	6	6	4	1.2	1	...	...	...	...	7	1.6	6.6	3.3
11	3.9	5	1.7	4	2.8	4.8	4.3	1.9	8	1	4	3	8	4	1.0	1.4	1.9	3.8	2.6	2.0	1.2	1	(...)	(...)	87.1	19.0	
12	1	1	(...)	(...)	1.1	(1)	9	(...)	...	...	...	...	...	...	...	...	8	(...)	...	...	1.2	1.1	...	...	5.4	2.6
13	...	2	...	...	1.1	...	...	2	6	8	...	...	...	(...)	1	...	...	...	...	...	6	...	...	...	3.6	1.5
14	(...)	(...)	(...)	(...)	1.0	3	5	3	3	2	2	...	...	...	...	...	...	...	...	(...)	(...)	(...)	(1)	(...)	2.9	4.9
15	(...)	(...)	(...)	(...)	(...)	(...)	(1)	4	7	2.2	4.9	3.1	7	5	1.9	3.6	9	6.8	5	2	(...)	(...)	(...)	(...)	27.4	10.2	
16	...	...	3	(...)	4	4	3	2	...	...	...	...	...	...	...	...	...	...	...	...	1.1	(...)	(...)	(...)	3.1	5.9
17	(...)	(...)	(...)	(...)	(...)	(...)	1.1	3.3	1.9	1.1	1.6	3.6	2.5	4.7	2.6	4.9	1.6	...	...	...	(...)	(...)	(...)	3	0.0	0.0
18	...	...	...	...	...	...	...	7	1.4	1.9	9	1.3	...	...	6	...	4	2.8	6	8	2	9	7	...	29.2	9.6
19	...	...	...	...	...	...	...	3	3	5	3	...	5	2	...	...	...	...	...	...	(1)	...	...	...	13.2	6.1
20	...	...	...	(...)	...	...	3	3	5	3	...	...	...	...	...	...	...	...	...	...	(1)	...	...	...	2.2	2.0
21	...	...	...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	9	2.8	2.0
22	1.3	1.6	1.2	1.2	1.5	(...)	(...)	2	3	2	...	...	1.7	(...)	(...)	3	5	5	3	1	...	2	3	4	11.8	8.0
23	1.0	2	...	4	...	...	1	5	...	...	1	...	3	(...)	...	8	6	(...)	...	...	(...)	7	4	1	5.2	2.5
24	2	2.1	1.0	(...)	2.2	...	...	(...)	...	6	...	...	...	...	...	6	3.4	5.9	3.0	6	...	...	...	...	19.6	6.1
25	...	...	...	...	...	...	...	...	1	1.3	2	4	...	2	...	...	5.1	...	...	...	...	...	1	...	7.9	3.2
26	...	6	...	6	2	2	4	1.5	6	6	...	1	(...)	...	...	...	...	...	...	...	2	1.0	...	...	6.0	4.0
27	1.2	...	...	...	...	...	...	...	...	...	...	...	2	1.2	1.7	5	...	...	...	(1)	...	...	...	...	4.9	3.1
28	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	7	...	...	...	...	...	...	...	0.7	0.2
29	...	2.9	...	...	...	4	(...)	7	8	...	1	...	...	...	...	...	...	...	...	2	...	(...)	...	...	5.1	1.2
30	...	...	...	...	1	1	...	...	...	...	...	...	...	...	(...)	...	...	...	...	(...)	...	...	...	...	0.3	0.7
Sum.	8.8	10.1	5.9	6.1	11.9	7.7	11.3	13.7	9.9	11.7	10.1	10.7	10.1	11.0	8.9	12.4	15.6	18.0	16.2	15.4	7.2	6.6	6.1	4.9	250.3	136.3	
Total Duration.	hr. 5.0	hr. 5.4	hr. 3.5	hr. 5.6	hr. 7.7	hr. 5.3	hr. 7.1	hr. 10.5	hr. 8.8	hr. 7.5	hr. 5.2	hr. 5.6	hr. 4.8	hr. 6.2	hr. 5.7	hr. 5.5	hr. 6.0	hr. 5.9	hr. 4.5	hr. 5.0	hr. 5.0	hr. 2.4	hr. 3.8	hr. 4.3	hr. 136.3		

400. Cahirciveen (Valentia Observatory): $H_r = 9.1$ metres + 0.5 metre. December, 1929.

Hour. G.M.T.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.																
1	...	(...)	(...)	...	...	...	2	2	...	...	...	...	...	3	...	...	...	...	1.4	2.8	3.8	1.9	1.2	1.2	11.8	5.1
2	4.7	5.8	2.7	4.8	1.5	2	2	5	...	...	...	...	(...)	9	4	(...)	3	...	4	...	...	...	2.2	...	24.6	7.3
3	3.9	...	(...)	(...)	...	2	8	3.7	...	(...)	...	...	...	1.8	2.0	3.8	2.3	1	3.3	1	...	...	...	...	22.0	5.1
4	...	...	(...)	(...)	3	1	2.4	...	...	(...)	2	...	...	3	(...)	(...)	2	1	1.5	2.9	3.7	2.8	4.3	8	19.6	5.5
5	...	5	(...)	(...)	2	7	5	2.6	7	5	(...)	1	(...)	3	2	2.0	1	2	1	...	(...)	3	1	1	9.2	7.0	
6	...	(...)	...	2	1	7	...	...	...	(...)	1.9	3.4	4.6	9	1	3.6	1.6	2	6	(...)	5	...	6	3	19.3	7.2
7	6	2	4	2	1.9	(...)	...	...	...	...	...	(...)	...	...	...	...	(...)	(...)	3	6	...	...	...	...	4.2	3.4
8	...	3	1.1	...	...	6	1.5	2	4	4	...	(...)	...	5	8	2	...	1	...	...	...	...	...	...	6.1	2.8
9	1	1.3	1.5	1.5	(...)	6	4	2	...	5	4	(...)	(...)	4	...	(...)	4	2	2	...	2	...	...	2	8.1	5.8
10	...	...	2	...	...	1	7	(...)	...	1.9	(...)	...	...	5	1.8	3.6	4.6	4.9	5	...	...	...	...	1	18.9	6.1
11	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	1	...	...	(...)	7	...	...	...	2.4	0.6
12	3	3	...	...	2.7	(...)	1	(...)	1	(...)	(...)	1	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	2	9	1.7	8	3.9	4.9
13	...	...	...	...	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	2.1	4.0
14	1	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.0	0.0	
15	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	0.1	0.0	
16	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	6.1	5.6	
17	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	(...)	1.3	1.8	
18	7	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.3	3.9
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17.6	6.9
20	...	...	...	...	2	...	...	...	6	4	...	...	1.7	2.9	5.0	2.8	2.8	1	...	3	...	...	...	...	...	...
21	1	...	7	9	2	...	...	...	...	2	2	2	1	4	4	2.4	2.8	3	8	...	2	...	...	...	9.7	5.2
22	...	...	2	...	...	...	4	...	2	2	2	2	(...)	4	2	...	4	1	...	4	3.7	3.0	1.1	10.3	5.5	
23	...	...	...	...	...	...	...	...	2	1	2	1.6	1.9	...	2	...	3	(...)	...	2	4	3	1	5.5	3.2	
24	...	...	1.2	...	...	...	...	...	(...)	(...)	(...)	(...)	2	2.2	2.8	5.2	6.5	1.0	...	(...)	7	2.5	1.4	23.7	7.0	
25	3	1.4	1.2	4	2	(...)	3	(...)	(...)	1.0	...	...	(...)	...	3	4	...	(...)	...	(...)	...	...	...	...	5.5	3.6
26	3	...	...	2	1.4	(...)	...	...	(...)	...	...	...	5	5	5	6	1.3	7	2	3	...	...	...	3	6.8	5.7
27	3	...	...	...	...	...	...	...	1	1.9	3	1	1.0	4	5	1.0	3.5	...	2	...	...	...	7	5	10.5	4.1
28	3	...	...	5	4	2	7	1.2	1.0	1.9	7	9	1	1	(...)	(...)	3	3	1.0	8	1.2	6	(...)	2.1	14.3	12.7
29	1	...	5	...	1	2	3	3	...	(...)	...	1	(...)	7	2	...	...	...	...	4	2	2	...	1.3	4.6	2.7
30	3.8	2.0	8	3	...	...	1	...	...	...	...	...	(...)	2	1	(...)	...	...	...	...	(...)	2	2	...	8.4	4.6
31	1	1	...	...	7	...	...	1	...	...	1.0	...	(...)	...	...	...	...	...	...	...	...	...	...	...	2.0	0.7
Sum.	15.9	12.4	9.8	10.5	7.4	6.6	10.1	7.7	2.7	9.8	6.1	7.3	10.6	13.9	20.7	27.3	30.0	9.9	8.9	7.5	11.5	15.4	17.0	13.4	292.4	139.2	
Total Duration.	hr. 7.1	hr. 5.5	hr. 5.9	hr. 4.3	hr. 3.3	hr. 5.1	hr. 6.8	hr. 4.4	hr. 3.9	hr. 5.0	hr. 4.7	hr. 4.3	hr. 5.2	hr. 7.1	hr. 7.9	hr. 8.5	hr. 10.0	hr. 5.1	hr. 4.4	hr. 4.8	hr. 6.5	hr. 6.4	hr. 6.1	hr. 6.9	hr. 139.2		
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9</																		

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

401. Cahirciveen (Valentia Observatory) : h_s (height of recorder above ground) = 12.8 metres. January, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	—	—	—	...	.8	1.0	1.0	1.0	1.0	1.0	.5	—	—	—	—	—	—	6.3	81
2	—	—	—	—	—	...	.8	1.0	1.0	1.0	1.0	1.0	.2	—	—	—	—	—	—	6.0	77
3	—	—	—	—	—	...	...	...	...	1.0	.8	.4	—	—	—	—	—	—	—	2.7	35
4	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	—	—	—	—	—	...	...	.7	1.0	1.0	.6	...	...	—	—	—	—	—	—	3.3	42
7	—	—	—	—	—	...	.1	.5	1.0	1.0	1.0	.7	...	—	—	—	—	—	—	4.3	54
8	—	—	—	—	—	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
9	—	—	—	—	—	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
10	—	—	—	—	—	...	...	...	...	.3	.5	.7	...	—	—	—	—	—	—	1.5	19
11	—	—	—	—	—	...	...	...	.2	.5	.4	...	...	—	—	—	—	—	—	1.1	14
12	—	—	—	—	—	...	.3	...	.1	.1	...	...	...	—	—	—	—	—	—	0.4	5
13	—	—	—	—	...	...	.3	1.0	1.0	1.0	1.0	.4	...	—	—	—	—	—	—	4.7	58
14	—	—	—	—	...	...	...	.1	...	.2	.2	...	...	—	—	—	—	—	—	0.5	6
15	—	—	—	—	...	...	.1	.4	.5	.4	.1	...	...	—	—	—	—	—	—	1.5	18
16	—	—	—	—	...	...	1.0	1.0	1.0	1.0	...	.7	.2	...	—	—	—	—	—	4.9	60
17	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
18	—	—	—	—	...	...	...	...	.1	...	...	...	...	—	—	—	—	—	—	0.1	1
19	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
20	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
21	—	—	—	—	...	...	...	...	.1	.1	...	.2	...	—	—	—	—	—	—	0.4	5
22	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
23	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
24	—	—	—	—	...	.2	.7	1.0	1.0	1.0	1.0	1.0	.2	...	—	—	—	—	—	6.1	71
25	—	—	—	—	...	.3	.5	1.0	1.0	1.0	1.0	1.0	.5	...	—	—	—	—	—	6.3	73
26	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
27	—	—	—	—	...	.1	.3	.7	.1	.1	...	...	...	.4	—	—	—	—	—	1.7	19
28	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
29	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
30	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
31	—	—	—	—	...	...	...	...	...	...	...	...	...	—	—	—	—	—	—	...	...
Sum.	—	—	—	—	...	0.6	4.9	8.4	9.5	10.7	8.6	7.1	1.6	0.4	—	—	—	—	—	51.8	—
Mean	—	—	—	—	...	.02	.16	.27	.31	.34	.28	.23	.05	.01	—	—	—	—	—	1.67	20

402. Cahirciveen (Valentia Observatory) : h_s = 12.8 metres.

February, 1929.

1	—	—	—	—	...	.2	.6	.1	.2	...	...	...	...	...	—	—	—	—	—	1.1	12
2	—	—	—	—	...	...	.7	...	.2	...	...	...	...	...	—	—	—	—	—	0.9	10
3	—	—	—	—	...	...	...	...	.2	.1	.9	1.0	.8	...	—	—	—	—	—	3.0	33
4	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
5	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
6	—	—	—	—	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.1	—	—	—	—	—	7.8	84
7	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
8	—	—	—	—	...	...	...	...	...	.3	.3	...	...	...	—	—	—	—	—	0.6	6
9	—	—	—	—	...	.1	...	.1	.6	.1	.2	.6	.5	...	—	—	—	—	—	2.2	23
10	—	—	—	—	...	...	.2	.1	...	.2	...	...	...	...	—	—	—	—	—	0.5	5
11	—	—	—	—	...	.1	...	...	...	...	...	...	...	...	—	—	—	—	—	0.1	1
12	—	—	—	—	...	...	...	...	...	...	.9	...	...	...	—	—	—	—	—	0.9	9
13	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
14	—	—	—	—	...	.7	.6	.9	.9	.8	.5	.4	.1	...	—	—	—	—	—	4.9	50
15	—	—	—	—	...	.6	.2	.9	.5	...	.3	.4	.7	...	—	—	—	—	—	3.6	36
16	—	—	—	—	...	.4	.1	1.0	.8	.4	.9	.5	1.0	.6	—	—	—	—	—	5.7	57
17	—	—	—	—	...	...	...	...	...	...	...	.1	...	...	—	—	—	—	—	0.1	1
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
19	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
20	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	—	—	—	—	—	...	...
22	—	—	—	—	...	...	.1	...	...	...	...	...	...	...	—	—	—	—	—	0.1	1
23	—	—	—	—	...	...	...	.2	.9	.8	1.0	1.0	1.0	1.0	.7	—	—	—	—	6.6	64
24	—	—	—	—	...	.3	.5	1.0	1.0	1.0	1.0	.9	.2	.3	.6	...	—	—	—	6.8	65
25	—	—	—	—	...	.8	.4	1.0	.1	...	...	...	...	...	...	—	—	—	—	2.3	22
26	—	—	—	—	...	.3	.6	.3	...	...	...	...	...	...	—	—	—	—	—	1.2	11
27	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	—	—	—	—	0.1	1
28	—	—	—	—	...	...	...	...	.1	...	...	...	...	.1	...	—	—	—	—	0.2	2
Sum.	—	—	—	...	0.3	4.4	5.5	6.6	6.5	4.7	6.9	5.2	5.5	2.4	0.7	—	—	—	—	48.7	—
Mean	—	—	—	...	.01	.16	.20	.23	.23	.17	.25	.18	.20	.09	.02	—	—	—	—	1.74	18
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	

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

403. Cahirciveen (Valentia Observatory) : h_s (height of recorder above ground) = 12·8 metres. March, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·2	2
2	—	—	—	...	4	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	...	...	...	...	...	9·4	87
3	—	—	—	...	...	...	9	1·0	1·0	1	...	3	...	1	...	...	...	...	...	3·4	31
4	—	—	—	...	5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	7	...	...	...	...	...	...	8·2	75
5	—	—	—	...	4	1·0	1·0	1·0	1·0	1·0	1·0	1·0	7	...	...	...	...	...	...	9·1	82
6	—	—	—	...	5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	5	...	...	...	...	...	...	9·0	81
7	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	—	—	—	...	5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	7	1	...	...	...	...	...	8·3	73
10	—	—	—	...	...	5	1·0	8	1·0	9	1·0	1·0	1·0	9	...	...	...	...	...	8·1	71
11	—	—	—	...	4	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	...	...	...	...	...	9·4	82
12	—	—	—	...	3	1·0	1·0	1·0	1·0	1·0	1·0	1·0	8	...	...	...	...	...	...	9·1	79
13	—	—	—	...	6	1·0	1·0	1·0	1·0	1·0	1·0	1·0	3	...	...	...	...	...	...	7·9	68
14	—	—	—	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	0·1	1
15	—	—	—	...	2	6	1·0	8	...	5	3	1	1	...	...	...	...	...	...	3·6	31
16	—	—	—	...	...	...	...	...	1	2	4	6	7	...	...	...	...	...	...	2·0	17
17	—	—	—	...	9	1·0	1·0	8	1·0	1·0	1·0	1·0	4	...	...	...	...	...	...	9·1	77
18	—	—	—	...	1·0	1·0	9	9	1·0	9	1·0	1·0	1·0	1·0	...	...	...	...	...	9·7	81
19	—	—	—	...	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	8	...	...	...	...	...	...	9·8	82
20	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	—	—	...	...	...	...	5	9	1·0	1·0	1·0	1·0	6	...	...	...	...	...	...	7·0	58
22	—	—	...	2	7	9	8	5	3	7	7	3	1	1	...	...	...	...	...	5·3	43
23	—	—	...	...	...	...	2	4	7	9	8	1	2	...	...	...	...	...	...	3·3	27
24	—	—	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	0·1	1
25	—	—	...	...	...	7	9	9	6	9	9	9	...	...	...	...	...	...	...	5·8	47
26	—	—	...	3	1·0	5	1·0	8	8	4	1·0	1·0	1·0	8	...	...	...	...	...	9·6	77
27	—	—	...	3	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	9	...	...	...	...	...	...	10·2	81
28	—	—	...	...	...	...	6	1·0	1·0	1·0	1·0	1·0	1·0	3	...	...	...	...	...	7·9	63
29	—	—	...	4	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	8	...	...	...	...	...	...	11·2	89
30	—	—	...	5	5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	3	...	...	...	...	...	...	9·8	77
31	—	—	...	(·1)	(·8)	(1·0)	(·9)	(1·0)	(1·0)	(1·0)	(1·0)	(1·0)	(1·0)	(1·0)	(·1)	...	...	...	...	(9·9)*	(77)
Sum.	—	—	...	1·8	11·6	17·8	21·8	21·9	21·5	21·5	22·2	21·4	19·5	13·5	2·0	...	...	...	...	196·5	—
Mean	—	—	...	·06	·37	·57	·70	·71	·69	·69	·72	·69	·63	·44	·07	...	...	...	...	6·34	54

404. Cahirciveen (Valentia Observatory) : h_s = 12·8 metres.

April, 1929.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	—	...	...	...	...	1·0	9	1·0	1·0	4	2	2	...	...	...	...	...	...	...	4·7	37
2	—	—	...	2	9	7	7	1·0	7	7	3	9	4	1·0	9	...	...	...	...	...	8·4	65
3	—	—	...	...	2	3	1	2	3	...	4	1·0	1·0	8	...	...	...	...	...	...	5·3	41
4	—	—	...	...	3	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	0·7	5
5	—	—	...	...	...	...	...	4	6	1	6	7	1·0	1	...	...	...	...	...	...	3·5	27
6	—	—	...	...	7	7	1·0	7	7	1·0	9	1·0	9	9	3	...	...	...	...	...	8·8	67
7	—	—	...	...	...	...	1	6	9	9	6	1·0	1·0	8	4	7	...	...	...	...	6·0	45
8	—	—	...	...	1	1	3	7	7	6	1·0	1·0	1·0	6	5	...	...	...	...	...	6·2	47
9	—	—	...	9	1·0	1·0	10	1·0	1·0	1·0	1·0	1·0	1·0	5	6	2	...	...	...	...	11·2	84
10	—	—	...	8	4	7	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	2	...	...	...	...	11·1	83
11	—	—	...	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	9	1·0	8	6	...	...	...	...	...	11·3	84
12	—	—	...	1·0	1·0	1·0	1·0	1·0	6	1·0	9	1·0	1·0	9	1	...	...	...	...	...	10·5	77
13	—	—	...	3	...	...	...	...	...	...	7	3	5	1	...	...	...	...	...	...	1·9	14
14	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	—	—	...	1	7	5	4	6	9	7	1·0	8	4	5	2	...	...	...	...	...	6·8	49
16	—	—	...	...	4	1·0	2	2	4	...	...	2	...	...	...	...	...	...	...	...	2·4	17
17	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	—	—	...	5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	9	...	...	...	...	...	...	11·4	81
20	—	—	...	5	...	...	3	2	...	...	4	2	2	3	...	...	...	...	...	...	2·1	15
21	—	—	...	6	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	6	2	...	...	...	...	12·4	87
22	—	—	...	2	8	1·0	1·0	1·0	1·0	1·0	9	1·0	1·0	1·0	1·0	9	...	...	...	...	12·8	90
23	—	—	...	1	...	3	5	4	6	9	1·0	1·0	1·0	1·0	1·0	5	...	...	...	...	8·3	58
24	—	—	...	6	1·0	1·0	1·0	9	1·0	1·0	1·0	1·0	5	6	5	6	...	...	...	...	11·7	81
25	—	—	...	...	...	...	...	...	...	8	...	2	3	7	...	...	...	...	...	...	2·0	14
26	—	—	...	2	9	4	5	8	4	5	2	5	4	6	3	3	...	...	...	...	6·0	41
27	—	—	...	1	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	0·5	3
28	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	...	3	5	1	2	4	1·0	8	5	2	2	...	...	...	...	...	...	...	5·0	34
30	—	—	...	...	...	5	1·0	6	5	1·0	9	2	2	4	...	3	...	...	...	...	5·6	38
Sum.	—	—	...	2·5	10·3	10·9	13·0	14·1	15·6	16·1	16·7	17·6	17·4	16·2	14·2	9·1	2·9	...	...	...	176·6	—
Mean	—	—	...	·08	·34	·37	·43	·47	·52	·54	·56	·59	·58	·54	·47	·30	·10	...	...	...	5·89	43
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.		

* Record lost owing to sphere having been displaced.

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

405. Cahirciveen (Valentia Observatory) : h_s (height of recorder above ground)=12.8 metres. May, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	...	·2	·1	·8	·7	...	·1	·1	·3	·4	·5	...	...	·1	...	...	—	3·3	22
2	—	...	·7	·1	1·0	·8	·5	·6	·2	·3	·6	·9	1·0	1·0	·2	...	...	—	7·9	53
3	—	·8	·5	·1	·3	...	...	...	...	...	...	...	...	...	...	—	1·7	11
4	—	...	·1	·7	...	...	...	...	...	...	...	...	...	...	...	...	...	—	0·8	5
5	—	...	·1	·6	·4	·5	·5	·9	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·2	—	11·2	75
6	—	·3	·7	1·0	1·0	1·0	1·0	·9	·4	...	...	...	...	—	6·3	42
7	—	...	·2	·2	...	...	·4	·3	·8	1·0	1·0	1·0	1·0	1·0	·9	·6	...	—	8·4	55
8	—	·1	·2	·7	1·0	1·0	·9	·9	·1	...	·4	·8	·4	·8	...	—	7·3	48
9	—	·1	1·0	1·0	1·0	1·0	1·0	1·0	·2	...	...	...	...	...	...	...	...	—	6·3	41
10	—	—
11	—	...	·5	·6	·9	1·0	1·0	·2	·1	...	...	...	...	...	...	...	...	—	4·3	28
12	—	...	·7	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·8	...	...	...	—	11·5	75
13	—	·1	·3	...	·4	1·0	·4	...	...	·3	·1	...	...	—	2·6	17
14	—	...	·4	·2	·1	·4	...	·1	·9	1·0	·4	·1	...	...	...	...	...	—	3·6	23
15	—	·1	·9	·7	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·9	·3	...	...	—	9·9	64
16	—	...	·2	·5	1·0	·1	...	...	...	·5	·5	·7	·4	...	...	...	...	—	3·9	25
17	—	·1	...	...	...	...	...	...	...	...	...	...	...	—	0·1	1
18	—	·1	...	...	...	·2	·1	·1	·2	·8	·7	·8	·1	·4	...	—	3·5	22
19	—	·2	1·0	1·0	·7	·9	·9	·9	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	...	—	13·6	86
20	—	...	·5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·7	·2	...	—	12·4	78
21	—	...	·1	·7	·6	·6	·7	·5	·4	...	...	...	...	...	...	...	...	—	3·6	23
22	—	—
23	—	...	·8	·6	·9	1·0	·9	1·0	1·0	1·0	1·0	·9	·5	·8	·2	·7	·5	—	11·8	74
24	—	·1	1·0	1·0	·4	·4	·6	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·5	·2	—	12·2	76
25	—	·1	·2	...	...	...	...	...	...	...	...	...	...	...	...	—	0·3	2
26	—	·1	...	...	...	...	...	·5	...	...	...	·1	...	—	0·7	4
27	·9	·5	1·0	1·0	1·0	1·0	...	...	...	·3	...	...	...	—	4·9	30
28	·2	...	·3	...	·3	·6	1·0	1·0	·7	·4	...	...	...	...	...	—	4·5	28
29	·2	·9	·8	·3	1·0	·8	1·0	1·0	1·0	·9	·4	...	...	...	—	8·3	51
30	·7	·5	·3	1·0	·6	·6	...	·5	1·0	·7	·2	...	...	...	...	—	6·1	38
31	·1	...	·3	1·0	1·0	1·0	1·0	1·0	1·0	1·0	...	...	7·4	45
Sum.	...	0·4	8·4	11·2	14·0	13·8	13·7	15·0	15·2	17·2	15·3	15·4	12·5	11·8	7·2	6·4	0·9	...	178·4	—
Mean	...	·01	·27	·36	·45	·45	·44	·48	·49	·56	·49	·50	·40	·38	·23	·21	·03	...	5·75	37

406. Cahirciveen (Valentia Observatory) : h_s = 12.8 metres.

June, 1929.

Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1
2	1·3	8
3	·5	1·0	1·0	1·0	1·0	·2	...	...	4·7	29	
4	·1	...	·1	·9	1·0	1·0	·9	1·0	·8	·8	·9	·9	·5	...	...	8·9	54	
5
6	·2	·5	·6	·9	1·0	·7	·5	1·0	·9	·9	1·0	1·0	·7	·5	·1	...	10·5	64	
7	...	·3	·4	·8	·5	1·0	1·0	·4	·5	1·0	1·0	1·0	·9	·2	1·0	1·0	·2	...	11·2	68	
8	·5	...	·5	·2	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·9	·6	...	9·7	59	
9	...	·6	1·0	1·0	1·0	1·0	·9	1·0	1·0	1·0	·7	1·0	·9	·7	·8	...	...	...	12·6	76
10	·5	·3	·7	·3	...	·3	1·0	·6	1·0	·9	·1	...	...	·6	·5	...	6·8	41	
11	·2	·1	·2	·2	·9	·1	...	...	...	·3	...	...	...	...	...	...	2·0	12	
12
13	·7	·4	·8	·5	·6	1·0	·3	·4	·8	·6	·9	·6	·9	...	...	...	8·5	51	
14	·3	·7	1·0	·8	·9	·9	1·0	·9	1·0	1·0	1·0	1·0	1·0	·6	...	...	12·1	73	
15	·2	·4	·5	·5	·2	...	...	...	...	1·8	11	
16	·1	·5	·3	·6	·3	·3	·1	·2	...	·3	·1	·8	·9	1·0	·3	...	5·8	35	
17	·5	...	...	...	...	·1	...	...	·6	...	...	...	...	...	...	...	1·2	7	
18
19
20	...	·3	·6	1·0	·4	·1	...	·2	·9	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·8	...	11·3	68	
21	...	·9	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·3	...	...	...	...	12·2	73
22	·8	...	...	...	...	...	...	0·8	5	
23	·2	...	·2	...	·3	·2	...	...	0·9	5	
24	·1	·3	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·5	...	9·9	59	
25	...	·5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·8	·9	·9	1·0	·8	·1	...	14·0	84	
26	·2	·5	·9	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·4	...	13·0	78	
27	...	·5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·4	...	14·7	88	
28	...	·5	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·4	...	14·9	90	
29	...	·5	1·0	1·0	1·0	1·0	1·0	·5	·1	·2	·7	·5	...	...	·2	...	...	...	7·7	46
30	·9	1·0	·6	1·0	·4	·7	1·0	1·0	1·0	1·0	1·0	1·0	1·0	·9	·2	...	12·7	76	
Sum.	...	4·1	10·6	11·9	12·5	12·6	13·7	13·3	14·4	15·4	17·8	18·4	16·5	14·7	16·5	12·3	4·5	...	209·2	—	
Mean	...	·14	·35	·40	·42	·42	·46	·44	·48	·51	·59	·61	·55	·49	·55	·41	·15	...	6·97	42	
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	

DURATION OF BRIGHT SUNSHINE.

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

407. Cahirciveen (Valentia Observatory) : h_s (height of recorder above ground) = 12.8 metres. July, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	...	...	...	2	9	3	8	9	9	8	8	9	9	2	3	...	...	...	8.3	50
2	...	...	...	1	1.0	2	...	...	...	2	5	8	1.0	1.0	1.0	9	2	...	6.9	42
3	...	...	...	1	9	...	...	...	2	4	2	...	...	...	...	...	...	...	1.8	11
4	...	...	...	...	...	...	5	3	1	1.0	1.0	1.0	1.0	6	...	...	...	...	5.5	33
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	1	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	0.5	3
7	...	6	6	2	...	6	8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	...	12.5	76
8	...	...	...	...	...	1	5	6	1.0	1.0	1.0	...	2	...	...	...	...	...	5.4	33
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	0.1	1
12	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9	1.0	1.0	1.0	1.0	1.0	2	...	14.6	89
13	...	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	14.9	92
14	...	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4	...	14.9	92
15	...	5	1.0	1.0	1.0	9	2	2	7	1	3	8	1.0	1.0	9	...	...	...	9.6	59
16	...	...	...	1	3	...	2	1	...	...	...	...	...	...	...	...	...	...	0.7	4
17	...	...	6	6	5	6	1.0	9	6	3	...	...	...	...	...	...	...	...	5.1	32
18	—	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	0.2	1
19	—	...	...	...	...	...	...	...	...	2	1	...	2	...	...	...	...	...	0.5	3
20	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	—	...	3	1	5	3	4	...	...	...	1	...	...	...	...	...	...	...	1.7	11
22	—	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	0.1	1
23	—	...	...	...	5	1.0	1.0	1.0	6	1.0	1.0	3	5	1	5	2	...	...	7.7	48
24	—	...	5	8	7	6	...	...	1	...	...	...	...	3	8	...	...	...	3.8	24
25	—	...	...	2	...	...	...	...	...	...	1	...	...	...	4	...	...	...	0.7	4
26	—	...	...	...	...	...	1	2	...	7	1.0	8	1.0	1.0	9	1.0	3	...	7.0	44
27	—	...	...	4	5	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	6
28	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	...	...	...	2	2	...	5	1	5	7	4	1	1	...	...	...	...	2.8	18
30	—	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	0.2	1
31	—	...	...	1	2	7	6	1	4	6	1	1	2	3	...	...	...	...	3.4	22
Sum.	...	2.5	6.2	6.9	10.2	8.5	9.3	8.8	8.9	10.8	10.8	10.2	9.7	9.0	9.3	6.2	2.5	...	129.8	—
Mean	...	.08	.20	.22	.33	.28	.30	.28	.29	.85	.85	.33	.31	.29	.30	.20	.08	...	4.19	26

408. Cahirciveen (Valentia Observatory) : h_s = 12.8 metres.

August, 1929.

1	—	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	0.2	1
2	—	...	4	1.0	9	1.0	1.0	8	1.0	2	...	...	...	...	...	...	...	...	6.3	41
3	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	0.2	1
4	—	...	...	2	1	1	...	...	...	1.0	1.0	1.0	7	1.0	1.0	7	...	...	6.8	44
5	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	—	...	...	...	...	3	8	9	7	9	1.0	1.0	8	2	...	...	...	...	6.6	43
7	—	...	3	6	7	4	7	7	8	5	6	4	9	1.0	1.0	6	...	...	9.2	61
8	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	—	...	5	8	4	1	...	2	2	2	...	...	...	...	...	...	...	...	2.4	16
10	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	—	...	...	6	1.0	5	...	2	...	8	1.0	1.0	3	...	7	7	...	...	6.8	46
12	—	...	...	...	...	...	1	9	...	2	...	6	3	1	...	...	...	...	2.2	15
13	—	...	...	...	...	...	...	...	...	6	8	9	1.0	1.0	6	1	...	...	5.0	34
14	—	...	...	2	...	6	2	2	2	6	9	5	1	4	3	3	...	...	4.3	29
15	—	...	...	6	7	1.0	1.0	8	1.0	1.0	8	1.0	6	...	...	...	...	...	8.5	58
16	—	...	...	...	...	...	3	9	7	3	7	1.0	1.0	7	7	4	...	...	6.7	46
17	—	...	2	9	3	1.0	9	8	1.0	1.0	1.0	9	1.0	1.0	1.0	4	...	...	11.4	78
18	—	...	...	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5	...	...	...	11.5	79
19	—	...	2	7	7	1	4	2	...	...	3	1	5	...	...	...	...	...	3.3	23
20	—	...	...	...	...	1	4	8	3	...	4	5	3	6	...	...	...	...	3.4	24
21	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	—	...	...	...	...	...	3	1	...	...	...	1	...	...	...	...	...	...	0.5	4
24	—	...	...	...	...	...	...	...	...	1	6	1.0	1.0	1.0	1.0	6	...	...	5.3	38
25	—	...	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7	...	...	18.1	98	
26	—	...	...	1	...	1	2	7	2	...	...	...	...	...	...	...	...	...	1.3	9
27	—	...	...	...	...	...	...	3	1.0	1.0	9	1.0	1.0	1.0	3	...	...	...	6.5	47
28	—	...	...	...	6	4	7	8	1.0	7	5	2	4	2	...	...	...	...	5.5	40
29	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	—	...	...	...	...	...	...	...	...	3	1	...	3	...	2	...	...	...	0.9	7
Sum.	—	...	2.0	7.7	6.8	7.3	8.5	11.6	10.3	11.7	12.6	13.6	11.7	10.9	8.5	4.7	...	...	127.9	—
Mean	—	...	.06	.25	.22	.24	.27	.37	.33	.38	.41	.44	.38	.35	.28	.15	...	...	4.13	28
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.

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

409. Cahirciveen (Valentia Observatory): h_s (height of recorder above ground) = 12.8 metres. September, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%
1	—	—	...	...	.5	.7	.4	.9	.8	.4	.9	.7	.8	.7	...	...	—	—	—	6.8	50
2	—	—	...	...	...	...	...	.3	.2	.2	.4	.1	...	.1	...	...	—	—	—	1.3	10
3	—	—	...	...	...	...	...	.2	.6	1.0	.5	...	...	...	...	...	—	—	—	3.3	25
4	—	—	...	...	...	...	...	.2	.6	.7	.3	.2	...	...	...	...	—	—	—	2.0	15
5	—	—	...	.2	1.0	.9	.1	...	.2	.1	.2	...	...	...	...	...	—	—	—	2.7	20
6	—	—	...	.7	1.0	1.0	.4	.3	.1	.8	1.0	1.0	1.0	1.0	1.0	...	—	—	—	9.3	70
7	—	—	...	.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.8	...	—	—	—	11.1	84
8	—	—	...	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.8	...	—	—	—	11.5	87
9	—	—	...	...	...	...	...	...	.1	.2	.2	.7	.6	...	...	...	—	—	—	1.8	14
10	—	—	...	.5	.1	.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.2	...	—	—	—	10.5	81
11	—	—	...	...	...	.2	.4	.2	.6	.1	.6	.6	.1	.1	...	...	—	—	—	2.9	22
12	—	—	...	...	...	.3	.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.2	...	—	—	—	8.3	64
13	—	—	...	.6	.9	1.0	1.0	1.0	1.0	1.0	1.0	.6	.6	.1	...	...	—	—	—	8.8	69
14	—	—	...	...	1.0	.8	.5	.7	1.0	1.0	1.0	1.0	1.0	.9	.5	...	—	—	—	9.4	74
15	—	—	...	...	...	...	...	...	.7	1.0	1.0	1.0	1.0	1.0	.5	...	—	—	—	6.2	49
16	—	—	...	.4	.1	...	.5	1.0	.4	.5	.6	1.0	1.0	1.0	.7	...	—	—	—	7.2	57
17	—	—	...	.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.5	.9	1.0	.3	...	—	—	—	10.0	80
18	—	—	...	...	...	...	.5	...	.1	...	.6	1.0	.1	...	...	...	—	—	—	2.3	18
19	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
20	—	—	...	...	.1	.4	.7	1.0	1.0	1.0	1.0	1.0	1.0	.9	.1	...	—	—	—	8.2	66
21	—	—	...	...	...	...	...	.2	.3	.1	.3	.3	...	.3	.1	...	—	—	—	1.6	13
22	—	—	...	...	...	...	...	...	.8	.5	.8	.2	...	...	...	...	—	—	—	2.3	19
23	—	—	...	...	...	...	...	...	...	...	.1	...	...	...	...	...	—	—	—	0.1	1
24	—	—	...	...	...	...	...	...	...	...	...	.1	...	...	...	...	—	—	—	0.1	1
25	—	—	...	...	...	...	.5	.1	.3	.7	.4	.4	.2	...	...	...	—	—	—	2.6	22
26	—	—	...	...	...	...	.1	...	...	.2	.3	...	.2	.4	...	...	—	—	—	1.2	10
27	—	—	...	...	...	...	...	...	.1	...	...	.1	...	...	...	...	—	—	—	0.2	2
28	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...	...
29	—	—	...	...	.5	...	.2	.2	.7	.2	...	.1	.5	.5	.2	...	—	—	—	3.1	26
30	—	—	...	...	...	...	.1	.2	...	...	.5	1.0	1.0	1.0	.1	...	—	—	—	3.9	33
Sum.	—	—	...	3.7	8.2	9.0	10.6	12.3	15.1	14.3	16.4	14.9	14.1	13.6	6.3	0.2	—	—	—	138.7	—
Mean	—	—	...	.12	.27	.30	.35	.41	.50	.48	.55	.50	.47	.45	.21	.01	—	—	—	4.62	37

410. Cahirciveen (Valentia Observatory): h_s = 12.8 metres.

October, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.		
1	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1
2	—	—	...	...	.2	.1	.1	.9	1.0	.8	.4	.6	...	.3	...	...	...	...	...	...	4.4	38
3	—	—	...	...	.3	.8	.5	.8	.8	1.0	.8	1.0	.8	.4	.2	...	...	...	...	...	7.4	65
4	—	—	...	...	...	...	...	...	.3	.6	.3	.6	.2	...	.2	...	...	...	...	...	2.3	20
5	—	—	...	...	...	...	...	.3	...	...	...	...	.2	.2	...	...	...	...	...	...	0.7	6
6	—	—	...	...	.2	.2	.2	.1	...	.3	.8	.3	.4	.6	...	...	...	...	...	...	3.1	27
7	—	—	...	...	.3	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	4
8	—	—	...	...	...	...	.5	.5	.8	.8	.7	.8	.6	.3	...	...	...	...	...	...	5.0	45
9	—	—	...	...	...	...	...	...	.3	.6	.2	...	...	...	...	...	...	...	...	...	1.1	10
10	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	—	—	...	...	...	(.5)	(.7)	(.4)	(.2)	(.1)	...	(.1)	(.1)	...	...	...	...	...	...	...	(2.1)*	(19)
15	—	—	...	...	...	...	...	1.0	.8	1.0	1.0	.5	...	...	...	...	...	...	...	...	4.3	40
16	—	—	...	...	...	...	.2	.2	.7	.1	...	.1	...	.3	...	...	...	...	...	...	1.6	15
17	—	—	...	...	...	...	.5	...	.2	.1	.3	.2	.7	...	...	...	...	...	...	...	2.0	19
18	—	—	...	...	...	.4	.6	.6	.7	.9	.9	.8	.7	.3	...	...	...	...	...	...	5.9	56
19	—	—	...	...	...	...	...	.5	.1	.4	.2	...	.2	...	...	...	...	...	...	...	1.6	15
20	—	—	...	...	...	.1	.2	.5	.2	.6	.1	...	...	...	...	...	...	...	...	...	1.7	16
21	—	—	...	...	.2	.4	.7	.4	.6	.4	.3	.4	.6	...	...	...	...	...	...	...	4.0	39
22	—	—	...	...	...	...	...	.1	...	...	.1	...	...	...	...	...	...	...	...	...	0.2	2
23	—	—	...	...	...	.2	.7	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	9
24	—	—	...	...	...	...	.2	.7	.9	.9	.7	.8	.4	...	...	...	...	...	...	...	4.6	45
25	—	—	...	...	...	...	.1	.9	.5	...	...	...	...	...	...	...	...	...	...	...	1.5	15
26	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	—	—	...	...	...	.9	1.0	1.0	1.0	1.0	1.0	.3	...	...	...	...	...	...	...	...	6.2	62
28	—	—	...	...	...	.2	...	...	...	...	.4	...	...	...	...	...	...	...	...	...	0.6	6
29	—	—	...	...	...	...	.3	.2	.6	.4	.3	.1	...	...	...	...	...	...	...	...	1.9	19
30	—	—	...	...	...	...	...	.2	.8	.9	.9	.9	.7	...	...	...	...	...	...	...	4.4	45
31	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sum.	—	—	...	1.2	3.9	6.9	9.0	10.5	10.9	9.4	7.5	5.6	2.7	0.4	—	—	—	—	—	—	68.0	—
Mean	—	—	...	.04	.13	.22	.29	.34	.35	.30	.24	.18	.09	.01	—	—	—	—	—	—	2.19	21
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.		

* Record lost owing to sphere having been displaced.

DURATION OF BRIGHT SUNSHINE.

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

411. Cahirciveen (Valentia Observatory): h_s (height of recorder above ground) = 12.8 metres. November, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	3	3	7	—	3	4	8	—	—	—	—	—	2.8	30	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
5	—	—	—	—	—	—	—	—	—	2	2	8	5	1	—	—	—	—	1.8	19	
6	—	—	—	—	—	—	3	4	6	7	9	—	—	—	—	—	—	—	2.9	31	
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	—	—	—	—	—	—	3	6	9	5	8	1.0	6	3	—	—	—	—	5.0	54	
9	—	—	—	—	—	—	3	2	3	7	—	—	—	—	—	—	—	—	1.5	16	
10	—	—	—	—	—	—	5	—	5	3	—	—	—	—	—	—	—	—	1.3	14	
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12	—	—	—	—	—	—	2	4	2	6	—	6	2	—	—	—	—	—	2.2	24	
13	—	—	—	—	—	—	1	3	9	8	7	1.0	4	2	—	—	—	—	4.4	49	
14	—	—	—	—	—	—	—	—	—	2	—	1	1.0	9	—	—	—	—	2.2	25	
15	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	0.1	1	
16	—	—	—	—	—	—	—	5	1.0	1.0	6	6	4	—	—	—	—	—	4.1	47	
17	—	—	—	—	—	—	2	1.0	1.0	1.0	1.0	1.0	9	—	—	—	—	—	7.1	82	
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	4	4	—	—	—	—	—	—	—	—	—	0.8	9	
21	—	—	—	—	—	—	—	1	7	9	7	4	5	—	—	—	—	—	3.3	39	
22	—	—	—	—	—	—	—	1	—	2	1	1	—	—	—	—	—	—	0.5	6	
23	—	—	—	—	—	—	—	2	1	5	2	5	1	—	—	—	—	—	1.6	19	
24	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	0.1	1	
25	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	0.2	2	
26	—	—	—	—	—	—	—	—	—	5	6	7	7	1	—	—	—	—	2.6	31	
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
29	—	—	—	—	—	—	—	6	4	6	4	3	2	—	—	—	—	—	2.5	31	
30	—	—	—	—	—	—	—	1	—	—	—	—	3	1	—	—	—	—	0.5	6	
Sum.	—	—	—	—	—	—	2.2	5.2	7.7	8.7	6.7	7.5	6.9	2.6	—	—	—	—	47.5	—	
Mean	—	—	—	—	—	—	.07	.17	.26	.29	.22	.25	.23	.09	—	—	—	—	1.58	18	

412. Cahirciveen (Valentia Observatory) h_s = 12.8 metres.

December and Year, 1929.

	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%							
1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	1
2	—	—	—	—	—	—	6	1.0	4	—	1	2	—	—	—	—	—	—	—	—	2.3	29
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
4	—	—	—	—	—	—	—	6	1.0	9	—	—	—	—	—	—	—	—	—	—	2.5	31
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
6	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	0.2	3
7	—	—	—	—	—	—	7	4	1.0	1.0	1	—	—	—	—	—	—	—	—	—	3.2	41
8	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	0.4	5
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
11	—	—	—	—	—	—	(3)	(5)	(6)	(3)	(3)	(3)	(4)	—	—	—	—	—	—	—	(2.7)*	(35)
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
15	—	—	—	—	—	—	—	9	1.0	9	3	—	—	—	—	—	—	—	—	—	3.1	40
16	—	—	—	—	—	—	—	6	1.0	9	9	1.0	4	—	—	—	—	—	—	—	4.8	62
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
18	—	—	—	—	—	—	—	1	3	3	5	9	5	—	—	—	—	—	—	—	2.6	34
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
21	—	—	—	—	—	—	—	2	1	—	—	—	—	—	—	—	—	—	—	—	0.3	4
22	—	—	—	—	—	—	—	5	5	7	2	—	—	—	—	—	—	—	—	—	1.9	25
23	—	—	—	—	—	—	—	—	—	—	—	2	7	—	—	—	—	—	—	—	0.9	12
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
25	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	0.1	1
26	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	0.2	3
27	—	—	—	—	—	—	—	—	—	1	1	7	1	—	—	—	—	—	—	—	1.0	13
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...
29	—	—	—	—	—	—	—	1	6	7	3	3	—	—	—	—	—	—	—	—	2.0	26
30	—	—	—	—	—	—	—	1	—	—	2	6	4	1	—	—	—	—	—	—	1.4	18
31	—	—	—	—	—	—	—	6	7	1.0	9	5	3	—	—	—	—	—	—	—	4.0	52
Sum.	—	—	—	—	—	—	—	5.5	6.8	7.7	5.1	4.9	3.2	0.5	—	—	—	—	—	—	33.7	—
Mean	—	—	—	—	—	—	—	.18	.22	.25	.16	.16	.10	.02	—	—	—	—	—	—	1.09	14
Annual Total	...	7.0	29.7	53.5	75.7	93.1	119.7	137.0	144.4	145.7	150.0	141.2	116.0	93.2	60.0	32.7	7.9	...	...	...	1406.8	...
Annual Mean	...	.02	.08	.15	.21	.25	.33	.37	.39	.40	.41	.39	.32	.26	.16	.09	.02	...	...	...	3.85	32
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.		

* Record lost owing to sphere having been displaced.

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

413. Cahirciveen (Valentia Observatory):
Dines Anemograph from Jan., 1926.

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
Day.																								
1	55	4.2	65	2.1	40	2.5	65	4.5	60	3.9	30	1.7	—	0.5	—	0.5	60	2.3	—	1.1	—	0.5	—	0.5
2	—	1.0	55	1.6	55	1.9	—	0.5	—	1.2	—	0.5	—	0.5	—	1.2	55	2.6	40	1.7	—	0.5	—	1.3
3	85	4.5	80	5.0	85	5.4	85	5.4	80	4.4	75	4.1	85	3.8	85	4.4	90	4.4	90	2.5	100	5.3	100	4.2
4	80	5.4	95	5.2	95	4.5	100	4.7	90	3.7	90	3.9	90	3.7	85	3.9	90	4.5	90	4.4	90	4.3	95	4.2
5	95	5.0	80	4.6	80	3.0	70	3.5	75	3.4	75	4.2	80	5.5	70	4.8	80	4.9	65	3.5	75	3.9	70	3.5
6	90	9.7	75	6.2	75	5.5	80	5.2	80	6.2	70	7.5	75	7.4	80	6.6	80	5.1	70	2.8	65	2.3	80	3.8
7	55	1.6	50	2.0	50	2.7	—	0.5	45	3.3	—	0.5	—	0.5	—	0.5	55	2.0	50	2.4	—	0.5	45	1.6
8	145	5.6	140	4.8	135	5.2	135	5.4	130	5.1	140	5.2	125	5.2	140	7.0	150	9.2	155	9.4	155	9.4	155	9.8
9	180	10.2	180	10.1	180	10.0	180	10.0	185	10.0	180	10.4	185	10.0	185	10.0	185	9.3	185	8.9	185	9.2	190	8.9
10	—	1.1	—	0.5	180	1.7	360	2.6	360	1.7	—	0.5	—	1.4	—	0.5	—	0.5	—	1.0	355	2.1	355	2.0
11	—	0.5	—	1.2	—	1.3	55	3.3	50	4.9	55	5.8	60	5.9	55	5.9	70	5.3	70	5.7	75	5.2	70	4.9
12	65	3.4	65	4.3	65	4.1	70	5.0	65	4.9	55	3.6	65	2.7	70	3.7	75	4.6	80	2.6	185	1.9	75	3.7
13	80	4.0	80	3.8	85	4.4	80	3.8	60	3.0	60	3.1	50	2.6	50	3.4	60	2.0	75	3.1	90	3.4	105	3.2
14	65	1.6	—	0.5	—	0.5	—	0.5	—	1.2	—	1.5	—	0.5	—	0.5	—	0.5	—	1.4	—	0.5	—	0.5
15	45	3.5	45	1.6	40	1.7	—	1.5	65	1.6	—	1.0	—	0.5	—	1.0	—	1.5	—	0.5	—	0.5	360	4.0
16	30	6.6	55	5.8	50	4.5	45	2.8	30	2.9	25	2.0	40	1.8	—	1.0	—	1.4	—	1.3	—	1.2	—	1.5
17	145	6.5	145	6.7	145	6.7	145	6.7	145	6.1	145	6.6	145	7.6	150	7.7	155	7.5	155	8.3	155	7.8	160	8.0
18	195	6.1	195	6.0	190	5.2	170	5.0	165	5.0	170	5.4	165	7.0	165	6.9	160	5.6	170	6.1	175	6.7	175	7.5
19	185	8.5	185	7.0	170	6.0	170	6.5	175	5.7	170	5.2	175	4.5	175	5.2	170	5.7	170	5.1	180	6.0	180	6.2
20	170	9.0	170	8.7	160	8.8	160	7.9	155	7.5	155	7.2	150	7.5	150	7.2	155	7.3	150	7.7	150	7.8	155	8.7
21	100	6.0	85	5.3	95	5.6	105	6.5	100	5.9	90	6.4	90	5.1	90	6.5	95	6.5	120	5.2	120	4.5	100	4.9
22	125	8.6	125	7.3	130	7.9	135	8.8	145	9.0	140	9.9	140	9.6	140	9.5	125	8.1	130	8.6	125	6.9	105	8.2
23	60	6.6	55	7.3	70	9.5	65	9.0	70	6.5	80	4.4	80	3.8	75	3.2	75	4.6	75	3.8	100	2.9	—	0.5
24	—	0.5	—	0.5	65	3.4	65	4.6	75	8.7	75	8.5	75	7.7	75	6.3	75	6.1	80	4.9	70	5.1	65	5.5
25	80	5.9	80	5.5	80	5.5	80	5.1	80	4.8	75	4.5	70	4.0	25	2.8	75	2.1	55	2.5	50	2.7	45	2.4
26	—	0.5	—	0.5	—	1.2	—	1.3	—	1.3	—	0.5	—	1.5	—	1.2	30	1.6	—	0.5	—	1.1	—	0.5
27	—	0.5	—	1.2	—	1.3	30	2.0	55	2.4	50	2.4	—	1.4	50	1.8	55	1.8	—	0.5	—	0.5	180	2.7
28	50	1.9	—	1.4	55	3.0	50	2.5	120	2.1	100	4.5	100	4.5	115	5.0	105	5.2	100	5.5	125	5.9	130	9.3
29	200	7.0	200	7.5	215	6.3	220	5.2	200	4.5	190	4.0	170	4.0	160	4.5	185	4.6	170	5.2	170	5.5	175	6.8
30	180	11.6	175	11.8	175	11.1	175	11.6	170	11.1	170	10.9	160	10.8	150	11.4	155	11.3	160	12.5	160	12.6	160	13.4
31	175	7.9	170	8.0	170	7.7	175	6.8	170	7.0	170	6.9	175	6.7	175	7.0	175	7.0	175	7.4	170	7.5	165	7.7
Mean	—	5.0	—	4.6	—	4.8	—	4.8	—	4.8	—	4.6	—	4.5	—	4.6	—	4.7	—	4.4	—	4.8	—	4.8

414. Cahirciveen (Valentia Observatory): H_a = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	255	5.4	250	4.5	260	8.2	270	8.1	270	6.6	265	6.9	260	5.9	255	5.8	250	5.3	225	4.7	215	4.5	215	5.1
2	155	6.4	165	6.1	170	5.7	185	6.5	200	6.2	190	4.6	205	4.0	210	3.3	200	3.8	205	4.7	205	6.1	205	7.6
3	170	6.1	170	5.7	175	5.3	185	4.9	180	4.5	180	4.4	190	4.4	210	3.6	175	4.1	190	3.7	210	4.3	210	3.7
4	—	1.1	—	1.5	10	1.6	10	1.7	355	2.2	330	3.8	—	1.3	—	0.5	—	0.5	—	0.5	—	1.0	—	0.5
5	150	3.5	145	4.9	150	5.2	155	4.9	170	3.9	170	4.1	180	5.1	170	5.5	160	5.5	170	6.5	170	8.4	170	7.8
6	340	8.7	345	9.8	350	8.9	350	9.2	350	9.9	355	9.2	355	9.7	355	8.7	360	7.3	10	7.4	10	7.9	5	6.8
7	130	4.7	100	6.4	115	7.5	140	7.1	135	7.6	145	10.1	140	10.3	145	10.2	150	10.5	155	10.1	155	11.2	160	9.6
8	—	1.3	335	4.5	360	4.6	360	4.7	355	5.9	360	5.2	5	4.6	10	5.2	5	4.9	25	4.1	55	3.5	—	1.1
9	—	0.5	—	0.5	—	1.4	80	2.0	75	1.9	125	2.8	190	4.5	210	3.2	205	3.4	190	5.0	220	5.7	220	7.5
10	295	6.6	310	6.8	305	6.6	310	6.7	335	6.1	330	5.0	350	2.2	325	1.7	295	3.6	295	1.8	270	3.0	260	3.1
11	200	8.5	200	9.0	200	7.5	240	7.5	275	5.9	290	5.1	295	4.1	280	2.5	265	2.0	—	1.5	235	3.7	255	2.1
12	20	8.2	35	6.8	60	4.8	60	2.6	70	2.6	105	5.3	105	6.7	120	9.5	105	8.7	110	9.7	110	9.0	130	7.8
13	150	13.7	155	14.0	155	14.3	150	14.2	150	14.7	155	14.8	155	12.5	150	12.1	150	10.6	140	10.0	135	9.9	135	10.5
14	100	10.8	95	10.3	95	10.1	100	10.5	105	11.0	105	9.4	105	9.0	105	9.9	105	9.4	110	10.0	105	9.8	100	10.5
15	290	6.0	305	5.2	315	5.0	300	7.1	305	6.3	290	6.8	305	5.5	290	5.0	290	4.7	255	5.4	300	4.5	10	4.0
16	110	3.5	120	2.3	180	2.1	—	1.3	30	2.4	210	2.6	75	2.2	—	1.5	50	1.8	—	1.5	195	2.5	—	1.5
17	40	1.6	—	1.5	85	4.5	100	6.0	100	6.3	110	6.0	100	6.6	100	7.5	110	7.4	120	6.3	125	8.0	140	8.0
18	135	14.5	135	14.0	145	11.7	150	12.4	150	11.8	150	12.2	150	12.3	150	13.1	150	14.0	150	14.8	150	14.9	150	14.6
19	160	12.3	150	12.8	150	12.4	150	12.0	150	11.4	145	11.4	140	10.8	140	12.5	145	12.7	140	13.4	140	14.5	140	14.0
20	155	15.8	160	13.5	170	12.4	170	10.2	165	9.3	160	8.7	160	7.3	160	7.0	160	7.0	170	6.8	170	6.5	165	6.2
21	165	6.8	170	6.2	180	5.0	185	3.7	180	4.7	170	6.5	180	7.2	170	6.8	170	5.5	170	4.0	180	4.4	185	4.2
22	135	3.6	115	2.8	70	3.2	85	4.7	95	5.6	85	7.7	80	7.5	95	5.4	95	7.5	70	10.8	75	10.8	110	7.4
23	145	7.0	155	7.9	150	8.1	150	8.8	150	8.5	150	9.1	155	8.4	155	8.7	165	8.7	185	8.2	205	5.2	200	5.1
24	75	2.6	85	2.4	80	2.2	105	2.1	60	2.2	60	2.8	60	2.0	105	1.8	140	3.1	170	2.8	—	0.5	—	0.5
25	90	4.8	90	4.9	90	5.0	85	5.4	85	5.6	80	6.0	80	5.8										

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

M.S.L. + h_a (height of anemograph above ground) = 17 metres + 13 metres.

January, 1929.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day
°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	m/s.	
—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	55	1.8	55	1.6	—	1.0	—	1.5	55	2.2	—	0.5	1.6	1
100	5.3	95	5.1	95	4.6	95	5.4	100	5.5	95	6.3	95	6.4	90	5.5	90	4.9	95	4.5	80	3.9	80	4.0	3.0	2
70	3.3	90	3.2	100	4.6	105	5.2	110	4.3	100	3.5	85	2.6	80	2.0	75	2.6	70	2.7	75	3.6	80	5.0	4.0	3
85	5.2	90	5.2	95	6.5	95	7.2	95	6.9	95	5.7	90	4.8	80	5.0	80	5.0	90	4.9	85	4.9	75	4.0	4.9	4
70	4.7	65	5.6	60	5.2	65	7.1	70	7.4	70	6.6	70	6.9	80	7.4	80	7.6	65	5.4	80	7.3	80	8.3	5.3	5
55	3.5	55	4.5	60	4.1	60	2.7	—	1.3	85	2.6	—	0.5	—	0.5	—	0.5	—	0.5	—	1.2	—	1.5	4.0	6
—	1.2	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.4	—	1.5	150	2.3	130	4.4	130	5.2	135	5.6	1.7	7
155	10.2	155	9.9	160	9.4	165	9.5	165	8.8	165	9.1	170	9.4	170	9.8	170	10.1	165	10.3	170	10.7	175	10.9	8.2	8
195	8.8	195	7.5	200	8.2	205	7.5	220	7.5	220	7.0	225	6.5	235	6.0	250	4.3	285	1.6	—	1.5	—	0.5	7.9	9
335	3.9	345	4.1	350	3.7	350	3.6	345	1.8	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	1.5	10
75	5.4	70	5.3	90	7.4	85	6.4	90	5.2	70	5.9	80	3.5	90	7.0	110	2.7	30	3.3	75	4.1	75	3.0	4.5	11
60	3.8	35	2.6	55	3.5	65	2.6	65	2.2	75	2.8	70	2.6	60	2.9	55	2.7	70	3.0	75	2.4	80	3.1	3.3	12
—	1.3	—	0.5	60	3.4	50	3.7	60	3.0	60	2.9	55	3.8	70	2.9	60	4.0	75	4.1	75	3.9	80	3.1	3.2	13
20	1.7	360	4.9	15	5.4	55	4.0	55	4.6	85	4.6	60	4.4	65	5.1	35	5.9	35	3.0	40	5.0	45	3.2	2.6	14
355	5.8	355	7.8	360	6.7	360	6.2	360	9.5	355	8.4	5	6.2	355	5.1	360	5.5	360	6.9	360	7.6	5	6.7	4.1	15
110	1.6	145	1.7	125	1.6	135	2.2	145	2.5	145	2.2	145	2.5	140	4.1	125	2.7	140	4.1	135	4.6	145	5.7	2.9	16
165	7.4	170	6.1	180	5.1	195	4.5	195	4.3	175	5.2	175	5.8	175	5.5	185	5.7	185	5.2	180	4.6	180	5.1	6.3	17
175	7.7	170	8.0	170	8.0	170	8.1	170	8.0	170	8.1	170	8.5	170	8.0	170	8.2	175	8.7	175	9.2	180	8.1	7.1	18
175	7.9	180	6.4	170	5.5	175	5.7	160	5.6	170	7.7	175	8.4	175	7.8	175	8.9	175	9.4	175	9.3	175	9.0	6.8	19
155	8.0	150	7.4	140	6.2	140	6.6	130	7.0	120	7.2	105	6.3	120	5.8	105	5.8	95	6.1	115	7.0	100	5.9	7.3	20
100	5.0	120	5.6	135	7.0	145	6.6	125	6.4	125	5.2	115	5.5	125	6.5	130	6.1	120	6.6	105	6.1	125	7.2	5.9	21
105	8.7	110	9.8	105	8.3	140	5.4	350	2.0	360	2.4	360	3.0	60	2.7	170	2.2	100	2.3	—	1.1	90	3.0	6.5	22
105	2.0	95	4.3	90	4.9	90	4.0	95	4.5	90	4.0	—	1.4	—	1.2	—	0.5	—	0.5	—	0.5	—	0.5	3.8	23
60	5.5	60	5.5	65	5.6	70	5.9	75	6.7	75	6.9	80	6.0	90	5.5	90	5.8	80	5.2	75	4.9	75	5.5	5.3	24
55	1.7	75	1.8	60	2.8	80	2.2	—	0.5	—	0.5	60	2.0	—	0.5	55	1.6	—	1.2	—	1.0	45	2.2	2.8	25
—	0.5	—	0.5	—	0.5	325	2.9	350	3.2	345	2.9	—	1.2	—	1.0	—	1.1	—	0.5	—	1.4	—	1.3	1.2	26
195	2.4	240	2.9	295	1.9	270	1.8	240	1.8	—	1.4	345	1.6	—	1.1	55	1.6	50	1.8	—	1.4	50	1.9	1.7	27
130	10.5	130	13.1	135	13.3	140	13.0	160	10.2	200	7.9	200	6.8	210	7.0	210	6.7	220	6.3	220	5.8	205	6.1	6.5	28
180	7.1	180	8.4	185	10.2	190	10.3	185	9.4	185	8.5	180	8.6	180	9.4	175	9.6	175	9.3	175	9.2	175	10.9	7.2	29
165	13.8	170	12.9	170	11.4	175	10.4	175	10.0	170	9.4	170	9.3	170	10.0	170	9.7	175	8.5	180	8.2	175	7.7	6.8	30
150	8.0	150	8.6	135	9.3	120	8.4	100	8.2	75	6.0	90	6.5	105	4.6	150	3.8	170	4.6	205	3.5	230	3.7	6.9	31
—	5.2	—	5.5	—	5.7	—	5.5	—	5.1	—	4.9	—	4.7	—	4.6	—	4.5	—	4.4	—	4.6	—	4.6	4.7	

February, 1929.

210	5.7	200	5.7	175	6.3	170	7.0	165	7.0	170	6.6	170	7.0	170	6.7	160	6.7	160	6.8	155	7.1	155	6.4	6.2	1
185	6.0	180	6.7	190	7.1	190	7.4	190	7.1	195	6.4	190	5.1	185	5.5	185	6.0	195	5.6	180	4.4	175	5.3	5.8	2
240	4.4	260	3.5	260	3.1	290	4.4	305	4.8	310	4.8	325	1.9	—	1.2	—	1.0	360	2.2	—	1.4	—	1.1	3.8	3
—	1.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.0	155	1.7	150	2.6	145	3.0	1.2	4
170	9.0	170	9.9	175	8.9	175	7.6	180	6.8	175	7.8	170	8.3	165	7.9	160	8.6	160	7.4	150	6.8	175	4.1	6.6	5
10	6.4	10	6.2	5	6.0	10	5.3	20	4.1	70	2.5	40	1.8	—	0.5	—	0.5	115	3.0	95	6.0	110	5.7	6.3	6
165	8.5	155	9.7	155	9.2	155	8.7	160	6.6	170	3.5	—	1.2	—	0.5	—	0.5	—	0.5	—	0.5	—	1.0	6.6	7
—	0.5	—	1.4	320	2.1	290	1.8	300	2.7	315	1.7	—	0.5	—	0.5	—	0.5	—	0.5	—	1.4	—	0.5	2.7	8
230	9.5	235	7.5	275	6.3	295	7.0	295	7.8	280	5.3	285	7.5	300	7.2	305	6.9	300	6.2	305	7.1	290	6.7	5.0	9
250	2.6	225	3.5	205	3.9	180	4.6	180	5.3	175	6.5	170	7.9	170	8.0	210	6.3	220	6.3	205	6.0	205	7.5	5.1	10
235	2.7	275	7.0	300	5.2	315	6.6	320	9.5	330	9.1	350	8.6	350	9.2	345	9.9	350	10.3	10	9.4	10	8.8	6.5	11
135	9.1	135	11.0	135	9.6	145	9.2	150	10.6	150	12.0	155	13.0	150	12.5	155	13.0	155	13.2	150	12.2	150	14.9	9.1	12
135	9.4	130	7.9	115	6.3	105	6.7	105	8.5	105	9.8	105	10.8	105	12.4	105	12.6	100	11.2	95	10.8	100	11.7	11.3	13
105	11.0	105	9.8	100	9.5	105	11.3	125	9.2	155	10.0	150	11.9	140	13.0	145	13.4	175	10.6	260	6.2	305	4.9	10.2	14
320	4.8	240	1.6	315	3.2	20	4.8	355	2.4	—	0.5	345	2.5	40	4.3	—	1.2	60	2.2	55	1.9	165	3.1	4.1	15
310	4.8	315	1.7	—	1.0	290	2.0	—	1.5	—	0.5	—	0.5	30	2.8	—	1.3	—	1.5	—	0.5	—	1.5	1.9	16
140	9.9	140	11.0	140	10.3	145	10.7	145	13.0	140	13.8	140	12.7	140	12.9	140	13.4	135	14.0	140	14.6	135	14.6	8.9	17
150	13.6	145	13.3	145	13.2	145	13.5	150	13.5	150	13.9	150	13.3	150	14.0	150	13.8	150	13.7	150	14.7	155	11.7	13.5	18
140	14.6	145	14.5	145	15.0	145	14.9	140	15.4	140	15.5	145	14.8	140	15.4	140	14.8	145	14.5	145	14.9	150	15.1	18.7	19
165	5.5	170	4.0	160	4.2	160	4.4	160	4.7	170	4.2	170	4.5	160	4.6	155	5.0	150	6.2	155	6.8	160	7.5	7.3	20
175	5.6	185	4.4	190	4.0	180	4.0	180	2.2	—	0.5	—	1.4	—	0.5	—	1.1	—	1.1	115	2.0	135	3.6	4.1	21
115	8.9	95	8.9	80	9.0	75	7.0	85	10.4	90	8.8	90	8.5	90	6.9	100	5.6	140	5.6	155	6.3	150	5.8	7.0	22
225	4.7	230	4.2	220	4.9	220	4.9	205	3.8	200	2.5	170	2.5	170	2.1	170	2.0	115	2.0	55	2.8	55	3.1	5.6	23
—	1.4	220	2.2	—	1.2	—	1.0	—	1.5	—	1.2	—	0.5	—	0.5	—	1.2	—	1.4	70	2.4	90			

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

415. Cahirciveen (Valentia Observatory) :
Dines Anemograph from Jan., 1926.

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	155	9.7	155	9.0	155	10.3	155	10.9	155	10.4	155	9.8	150	8.0	145	8.1	155	8.7	155	10.3	155	10.1	155	10.1
2	155	8.2	150	8.9	145	8.2	140	6.0	130	4.8	125	4.0	100	4.0	75	4.6	115	6.0	150	4.9	145	5.4	155	5.5
3	80	1.7	—	0.5	80	3.4	55	1.7	100	3.1	100	4.4	115	1.6	115	2.7	85	4.5	95	5.4	90	5.3	125	5.9
4	20	1.9	—	1.1	—	1.4	—	1.3	80	2.0	60	2.3	125	2.3	115	1.7	—	1.4	75	2.2	100	6.0	85	5.0
5	110	4.2	110	4.3	120	5.5	105	5.3	100	3.6	110	3.5	95	3.9	100	4.4	100	3.1	110	3.4	100	3.3	100	4.4
6	60	1.9	90	2.0	—	1.5	—	1.3	—	1.5	55	3.4	30	2.5	60	2.5	80	3.2	90	3.1	110	3.3	105	3.5
7	100	6.7	100	7.0	100	7.5	105	7.5	140	9.1	140	10.5	120	8.2	130	8.9	115	9.1	110	7.6	120	7.0	135	7.8
8	95	8.1	80	5.5	110	8.3	110	9.4	105	10.0	100	10.0	100	12.6	100	12.7	100	10.6	110	6.4	95	5.7	100	6.0
9	120	10.3	120	5.5	65	3.5	90	5.3	90	5.1	110	4.2	100	3.7	50	3.2	—	1.5	95	2.2	130	3.6	120	3.0
10	—	0.5	—	0.5	—	0.5	85	2.0	150	2.7	—	1.5	—	1.5	—	0.5	—	0.5	—	1.1	165	4.8	170	5.7
11	—	0.5	—	0.5	80	2.0	60	2.2	55	2.3	—	1.3	185	2.5	55	2.8	60	2.2	—	0.5	—	0.5	210	3.0
12	85	3.8	—	0.5	35	2.0	55	3.4	90	3.6	—	0.5	—	0.5	—	1.3	—	1.2	—	0.5	—	0.5	—	1.5
13	—	1.0	60	1.8	60	2.1	190	1.6	50	2.2	65	1.8	95	1.8	—	1.0	—	1.0	—	0.5	—	0.5	—	1.5
14	—	1.5	—	1.3	—	1.1	—	0.5	55	1.7	75	3.4	70	4.8	55	4.4	95	3.1	115	3.8	135	4.0	80	2.9
15	110	4.0	120	3.7	95	4.6	95	5.9	95	5.3	115	3.8	95	4.8	95	4.2	100	4.1	95	3.3	100	2.9	190	2.7
16	120	5.0	125	5.2	125	4.3	115	3.9	100	5.0	95	7.5	125	6.7	125	8.2	115	7.0	110	6.0	110	5.3	125	6.3
17	115	6.1	115	7.1	115	6.2	110	5.5	95	5.3	115	5.9	125	6.0	115	5.7	110	5.8	95	4.8	115	5.1	105	4.2
18	145	8.5	145	8.9	145	8.2	155	7.4	145	8.3	150	8.0	150	6.2	145	4.7	155	4.6	160	5.5	155	4.5	155	4.8
19	100	5.2	100	3.8	130	5.5	155	6.9	155	5.4	135	3.6	120	3.8	100	3.0	100	3.6	150	7.2	165	9.8	170	9.6
20	165	7.8	165	8.1	170	8.4	170	7.6	175	8.4	170	9.6	170	9.7	170	9.5	170	10.2	175	10.6	175	10.7	175	10.8
21	210	3.0	200	2.8	205	2.4	195	2.9	185	2.5	170	3.2	170	4.1	170	4.4	185	4.5	215	5.4	220	6.1	225	6.0
22	215	3.9	205	4.2	205	4.0	200	3.5	195	4.8	205	4.2	215	4.7	200	5.0	225	6.0	225	7.2	235	7.4	250	8.4
23	265	1.7	280	2.2	255	2.2	—	1.1	—	0.5	180	2.0	195	2.2	205	2.3	215	3.2	230	3.6	225	4.8	225	6.1
24	195	6.4	195	6.6	195	7.1	195	7.4	195	7.8	190	8.6	195	9.1	190	8.6	195	9.3	205	8.9	210	9.7	225	10.6
25	210	8.2	235	6.5	265	5.1	265	3.6	260	2.4	—	1.1	260	2.2	325	2.6	325	2.4	325	2.7	325	3.7	325	4.2
26	65	2.0	—	1.5	—	1.4	160	2.5	—	1.5	—	1.0	140	2.4	—	1.0	175	3.0	175	4.0	190	4.2	185	4.5
27	—	1.1	—	1.0	—	0.5	—	1.0	—	1.3	—	1.5	135	2.0	145	2.2	155	1.9	—	1.4	170	2.5	200	2.5
28	175	2.8	160	4.0	150	2.6	140	3.9	140	3.2	145	3.2	140	3.1	—	1.4	—	1.5	—	0.5	—	1.4	320	2.2
29	—	1.2	—	0.5	—	0.5	70	2.2	70	2.0	65	2.2	—	1.2	65	3.3	70	2.0	—	0.5	—	0.5	—	0.5
30	—	1.2	—	0.5	—	1.0	—	0.5	—	1.1	—	1.5	—	0.5	—	0.5	—	0.5	—	0.5	150	2.6	185	3.7
31	345	4.9	355	6.4	355	6.1	355	4.9	360	5.6	360	4.6	360	4.4	355	3.8	335	4.0	345	5.1	325	5.3	325	6.0
Mean	—	4.3	—	3.9	—	4.1	—	4.2	—	4.3	—	4.3	—	4.3	—	4.2	—	4.2	—	4.1	—	4.7	—	5.1

416. Cahirciveen (Valentia Observatory) : H_a = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	240	6.1	255	5.7	255	6.8	250	7.7	250	7.6	265	6.4	285	8.0	310	8.1	320	7.0	350	8.7	345	9.0	345	9.4
2	345	8.4	355	6.7	10	5.6	5	5.0	10	5.5	10	7.6	10	6.0	25	5.0	20	5.2	25	6.2	25	5.9	15	6.5
3	355	2.4	355	2.8	360	2.3	360	3.4	360	3.4	360	2.2	360	3.1	25	3.1	20	3.1	320	3.0	320	3.9	320	4.5
4	70	1.7	—	0.5	—	1.5	—	0.5	55	2.6	—	1.0	—	0.5	—	0.5	—	0.5	—	1.2	—	1.5	255	2.0
5	—	0.5	50	1.8	55	1.6	—	0.5	—	0.5	50	2.4	50	2.1	—	1.5	55	2.2	135	2.1	150	3.2	160	3.5
6	175	2.2	170	1.9	—	1.0	165	2.0	170	1.7	135	2.1	150	2.0	155	2.8	155	4.7	175	5.5	180	6.1	175	5.4
7	155	7.2	165	6.3	165	8.0	165	8.0	165	7.9	165	7.8	170	7.8	230	6.5	260	4.6	220	2.9	220	4.8	250	6.5
8	230	4.7	230	5.0	235	6.0	235	5.5	230	5.1	225	5.2	225	5.5	225	6.4	235	6.7	245	6.0	250	6.7	255	5.9
9	—	1.0	330	2.0	330	4.1	355	3.8	5	3.9	30	2.5	40	2.2	40	3.6	25	3.6	40	2.9	45	3.1	35	2.8
10	—	0.5	—	0.5	90	2.1	70	3.0	70	4.5	65	3.2	65	4.7	65	3.7	50	4.8	40	5.7	45	5.9	30	5.2
11	—	1.2	60	2.0	55	2.6	50	2.7	60	2.3	65	3.7	70	5.1	55	6.0	55	5.0	45	3.9	60	3.1	45	4.8
12	335	1.6	350	4.5	60	5.2	90	5.7	80	3.2	80	3.1	70	3.0	65	3.4	55	3.4	90	5.1	80	5.5	60	5.5
13	100	2.5	80	2.5	80	3.4	75	3.5	75	4.9	75	5.0	80	5.8	85	6.0	80	6.4	85	6.6	95	6.0	100	7.3
14	105	8.6	100	7.8	105	8.4	110	9.5	105	10.3	110	11.2	110	10.1	105	10.0	110	10.3	105	10.0	105	11.2	105	11.5
15	100	7.8	115	6.5	110	5.9	125	6.7	135	8.1	145	9.5	140	8.2	150	8.8	145	7.0	150	6.3	160	6.5	175	8.2
16	125	4.1	115	3.8	120	4.0	125	5.0	130	5.1	135	4.8	145	5.1	155	5.9	160	5.8	175	5.8	180	5.9	185	6.6
17	175	6.1	175	5.8	185	6.8	185	6.5	180	6.6	180	6.1	180	6.1	180	6.5	175	6.3	170	6.7	185	6.7	185	7.1
18	175	5.5	200	5.7	200	4.9	190	5.0	170	6.3	180	6.7	185	6.5	185	6.7	195	6.3	185	6.7	190	7.0	195	7.8
19	160	5.5	155	4.5	160	4.0	155	3.9	—	1.2	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	325	2.0	340	3.3
20	55	12.3	55	12.7	60	13.3	55	13.2	60	11.5	65	9.7	60	8.5	60	7.7	65	8.1	55	10.0	45	9.1	45	9.6
21	70	10.5	75	7.6	80	6.1	80	6.0	85	6.8	90	6.9	80	6.6	75	8.1	70	7.7	60	6.8	70	6.5	65	7.0
22	70	4.9	75	4.4	70	5.4	70	5.4	75	4.2	85	2.4	—	0.5	—	0.5	—	1.5	45	3.7	55	4.8	25	5.1
23	45	2.5	—	1.5	—	1.5	—	1.4	85	1.8	—	0.5	—	1.0	—	1.4	35	2.0	355	4.6	325	4.0	335	4.4
24	—	0.5	—	1.0	60	2.0	—	1.4	—	1.5	—	0.5	—	1.1	—	1.4	345	4.0	325	5.2	330	5.8	335	6.9
25	345	1.6	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.4	280	2.1	275	3.7	280	3.1	325	4.9
26	360	7.9	15	5.7	40	4.8	65	2.1	—	0.5	—	0.5	—	1.0										

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

M.S.L. + h_a (height of anemograph above ground) = 17 metres + 13 metres.

March, 1929.

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.	
155	10.8	155	10.8	160	10.7	155	10.3	155	10.4	155	10.0	155	9.4	155	9.2	155	9.5	150	9.2	150	8.8	155	8.2	9.7	1
140	5.7	140	6.6	140	5.7	145	4.0	115	5.0	100	4.7	90	5.2	95	4.2	—	1.0	—	1.3	—	0.5	95	1.9	5.0	2
120	5.4	100	5.0	115	4.4	80	3.6	110	4.2	110	4.4	90	4.1	80	5.2	80	6.0	—	1.2	—	1.2	—	1.1	3.6	3
110	6.8	110	7.3	115	7.8	115	7.4	115	7.6	120	6.5	105	6.7	105	5.7	85	3.4	100	5.5	135	4.2	130	5.8	4.2	4
140	3.6	175	3.0	180	3.3	210	3.2	215	3.4	200	2.2	—	1.5	—	0.5	95	3.2	85	4.0	85	2.5	75	2.5	3.5	5
130	4.9	145	4.4	160	5.0	120	5.1	145	5.4	115	5.2	105	6.0	125	7.9	100	7.0	90	8.0	80	8.0	90	6.4	4.2	6
120	7.5	105	8.8	140	9.1	105	10.8	110	8.6	100	10.0	95	9.3	100	8.0	90	7.4	85	5.8	100	6.9	100	7.4	8.2	7
105	6.0	110	7.4	100	6.0	95	5.0	100	6.3	90	5.9	90	5.1	100	6.4	105	7.0	105	6.1	100	6.4	90	5.0	7.5	8
145	3.8	125	3.3	105	2.5	140	4.5	185	4.2	150	1.7	—	0.5	105	6.6	90	7.4	—	1.5	—	1.5	—	1.0	3.8	9
170	5.4	165	4.2	175	6.4	165	6.1	150	4.4	130	3.9	120	4.3	105	5.1	100	4.5	85	3.7	—	—	—	1.0	3.0	10
205	3.6	305	3.2	310	3.2	300	3.4	305	2.6	—	1.0	—	0.5	—	0.5	—	0.5	90	4.1	95	4.6	100	2.5	2.1	11
155	1.8	255	3.6	250	3.4	—	1.1	—	0.5	—	0.5	—	0.5	—	0.5	65	2.4	55	2.3	95	1.7	—	1.1	1.6	12
255	2.5	250	3.0	275	2.7	305	2.4	250	2.1	—	1.4	200	1.8	—	0.5	—	0.5	—	1.4	—	0.5	—	0.5	1.5	13
85	3.6	85	3.1	95	2.3	110	2.8	120	4.4	125	3.7	130	3.9	95	3.4	85	3.7	85	3.9	100	3.7	100	4.0	3.1	14
—	1.5	—	1.4	195	2.9	175	3.0	110	3.9	85	2.3	205	2.1	140	3.1	120	4.2	100	4.7	180	2.9	100	3.4	3.5	15
130	7.4	140	6.6	145	6.8	150	6.0	135	5.2	130	5.3	120	5.9	125	6.2	130	6.2	100	5.2	115	5.7	120	8.8	6.0	16
145	4.2	145	5.1	135	6.7	125	5.3	140	5.7	110	5.4	100	5.9	95	5.9	95	5.1	120	6.6	140	7.8	140	7.9	5.8	17
155	4.9	165	5.8	160	5.9	160	6.7	145	6.8	180	4.0	130	3.8	120	7.4	110	7.6	100	6.8	100	6.0	100	4.9	6.3	18
170	9.8	170	9.5	185	10.0	180	11.4	175	10.0	185	6.9	175	7.8	175	7.4	180	8.9	170	8.8	170	8.7	170	8.3	7.2	19
175	10.4	175	10.3	180	9.7	185	9.2	170	9.9	190	10.1	190	9.0	190	8.5	190	7.9	200	7.4	225	4.5	205	2.2	8.9	20
225	6.5	220	7.3	220	7.1	210	8.0	210	7.3	205	6.6	190	5.0	200	5.5	200	4.8	185	5.1	185	4.7	200	4.1	4.9	21
255	7.9	270	6.6	270	5.0	260	4.6	270	4.6	275	2.8	285	3.1	290	4.0	300	2.1	280	3.0	265	2.5	270	1.8	4.7	22
225	6.6	230	6.9	225	6.6	225	6.5	225	6.0	215	5.1	205	4.8	205	5.0	210	5.8	210	6.6	210	6.8	200	5.7	4.3	23
225	10.7	225	10.4	215	8.8	215	9.5	215	9.4	225	9.9	225	9.1	220	8.9	215	8.0	210	8.6	210	9.0	205	9.4	8.7	24
325	3.7	305	2.0	280	2.4	—	1.5	275	1.7	—	1.2	205	1.8	170	3.0	170	2.7	—	1.1	—	1.2	—	1.1	3.0	25
200	3.8	200	2.7	205	3.0	185	3.8	180	4.4	180	4.1	165	4.3	165	4.9	155	5.0	175	3.1	—	1.5	150	1.6	3.0	26
195	3.5	230	3.4	270	3.0	215	3.7	195	4.0	195	4.1	190	3.1	185	2.0	185	1.9	—	1.5	—	1.2	—	1.2	2.2	27
300	2.3	295	2.5	295	2.8	270	2.8	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	60	2.0	—	1.1	1.9	28
200	3.1	180	5.4	170	5.7	160	4.9	160	4.1	160	6.4	135	3.4	—	0.5	—	0.5	—	0.5	—	1.0	80	1.8	2.2	29
175	3.8	220	3.1	250	3.5	225	4.1	235	1.6	—	0.5	270	2.1	—	0.5	—	0.5	340	2.8	360	2.6	350	2.7	1.7	30
325	4.9	325	4.5	310	4.8	315	4.1	310	3.4	310	2.5	—	0.5	—	1.0	265	3.0	255	4.2	240	4.2	235	4.9	4.3	31
—	5.4	—	5.4	—	5.4	—	5.3	—	5.1	—	4.4	—	4.2	—	4.5	—	4.5	—	4.3	—	4.0	—	3.8	4.5	

April, 1929.

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.	
345	10.1	340	10.0	340	8.9	340	9.4	345	8.8	345	8.9	350	9.1	350	8.5	355	8.8	355	8.1	355	8.9	355	7.8	8.2	1
30	6.0	5	5.1	335	8.0	335	7.6	340	6.5	345	6.4	5	5.5	20	5.0	5	4.8	10	3.2	35	1.6	25	1.7	5.8	2
320	5.0	315	5.4	310	5.6	310	5.4	310	5.0	325	4.6	345	3.2	—	0.5	—	0.5	55	1.8	—	1.2	—	0.5	3.2	3
270	3.2	260	2.8	270	2.0	—	1.4	250	2.2	215	2.4	—	1.4	165	2.3	—	0.5	—	1.1	—	0.5	—	0.5	1.4	4
170	4.8	180	7.3	180	6.5	175	5.8	185	3.5	190	2.5	175	2.9	170	3.6	165	4.0	170	2.4	170	2.5	170	2.5	2.9	5
175	6.3	175	6.5	175	8.1	175	7.9	175	7.0	175	6.3	160	5.0	150	3.4	145	5.4	150	6.0	150	7.1	150	7.0	4.6	6
250	6.9	250	6.9	255	5.5	250	5.2	250	5.5	250	5.7	225	4.0	235	4.8	225	4.5	215	4.3	225	5.1	230	5.0	5.9	7
260	5.8	270	4.9	265	5.2	265	4.4	280	3.7	295	3.7	300	3.0	300	1.6	—	0.5	—	0.5	—	0.5	—	1.0	4.4	8
10	3.0	325	6.2	325	6.2	320	6.8	335	6.5	360	5.8	15	5.5	25	4.5	45	2.9	55	2.8	70	1.7	—	1.1	3.7	9
40	4.5	45	4.5	40	5.0	45	5.3	45	4.6	110	4.5	160	4.8	150	3.0	140	1.6	—	0.5	85	2.4	—	1.0	3.6	10
45	5.0	50	5.6	50	5.5	65	5.9	60	5.5	70	4.5	85	4.4	90	4.3	95	3.3	95	2.8	65	2.1	—	1.0	3.8	11
100	5.0	90	4.7	120	5.1	135	6.5	135	4.4	125	3.5	130	4.1	125	3.3	120	3.2	115	3.2	95	1.6	105	2.2	4.0	12
100	7.7	100	7.3	100	7.2	100	6.5	100	6.7	105	6.5	100	6.3	100	6.5	105	6.1	105	6.1	90	6.2	95	6.6	5.7	13
110	10.9	110	12.2	115	12.4	110	11.8	110	11.8	105	13.7	120	12.8	120	8.0	95	6.7	105	7.2	105	7.6	100	7.5	10.0	14
175	7.5	190	8.0	190	7.7	175	6.5	175	6.7	175	5.9	170	4.9	160	5.2	155	5.0	140	4.7	140	4.8	135	4.8	6.8	15
185	6.4	180	6.8	165	7.3	150	6.5	150	6.3	160	6.5	180	5.8	175	5.0	180	4.8	180	4.8	175	5.1	175	6.2	5.5	16
190	7.0	190	6.4	185	6.3	180	6.6	185	7.4	190	7.4	185	7.7	185	7.2	185	6.2	180	6.3	180	5.7	170	6.6	6.6	17
190	7.0	185	7.1	185	7.6	185	6.9	180	6.7	175	7.6	170	6.8	165	5.6	160	5.2	155	5.3	165	4.1	190	2.4	6.2	18
335	5.5	350	5.5	5	6.0	15	5.9	10	6.7	25	4.6	20	8.8	35	10.2	40	10.2	45	10.9	50	12.1	50	13.1	5.0	19
45	9.8	50	10.1	45	10.0	45	8.9	55	8.0	50	7.1	50	5.4	70	5.9	75	6.3	70	7.5	70	10.1	65	5.1	9.3	20
365	6.0	45	6.5	40	7.5	45	7.5	50	6.3	35	6.2	25	6.5	55	3.7	65	3.8	90	3.4	60	3.0	55	4.2	6.3	21
360	5.3	360	6.0	355	6.0	360	6.1	10	5.8	20	7.1	15	6.9	25	6.5	25	5.5	35	4.4	40	3.2	50	2.7	4.5	22
330	5.1	325	6.4	325	6.8	330	6.8	330	6.9	340	6.5	355	5.0	40	2.0	—	1.0	—	0.5						

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

417. Cahirciveen (Valentia Observatory) :
Dines Anemograph from Jan., 1926.

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	50	2.4	—	0.5	80	1.7	60	2.3	95	3.8	85	3.3	85	3.1	80	2.6	85	2.9	70	2.0	360	4.0	345	5.8
2	—	0.5	—	0.5	—	1.3	—	0.5	110	3.5	100	3.0	100	3.2	120	3.2	120	3.6	110	3.8	120	3.8	110	5.5
3	50	2.0	—	0.5	45	1.9	90	2.4	150	5.0	140	5.0	150	6.5	150	7.3	155	8.2	170	8.8	175	9.1	175	9.2
4	255	6.5	250	7.1	250	6.4	245	6.5	230	5.7	220	6.0	225	6.1	225	7.5	215	7.0	210	8.3	205	8.6	190	9.7
5	255	2.4	230	2.8	205	2.9	205	2.8	235	3.1	235	2.9	255	2.4	265	2.5	270	2.4	265	3.5	300	3.6	325	5.0
6	5	9.1	5	9.7	10	7.9	360	6.2	360	5.9	360	5.6	(350)	(5.9)	(330)	(6.3)	(335)	(4.3)	335	3.5	300	4.4	270	5.6
7	85	4.7	85	4.7	80	4.6	80	3.8	70	1.6	45	3.4	25	3.8	25	4.8	10	5.3	350	7.5	355	6.3	350	7.8
8	350	7.6	350	8.6	355	6.3	360	5.6	320	5.7	310	4.5	355	2.3	330	5.2	320	6.0	325	7.1	325	8.5	315	7.9
9	360	3.7	5	3.0	25	2.0	—	0.5	—	0.5	—	0.5	—	1.3	—	0.5	220	2.3	220	4.6	220	4.8	220	5.5
10	190	8.3	195	8.8	195	8.4	195	7.9	190	7.0	185	7.2	185	6.3	185	6.3	210	5.8	220	5.5	215	5.9	215	6.0
11	260	3.1	255	3.5	265	3.0	245	2.1	225	2.9	200	2.5	195	1.7	210	3.6	225	3.8	220	3.9	215	5.1	185	5.4
12	265	4.2	275	3.2	285	3.0	285	3.2	285	3.0	285	3.4	295	3.2	285	3.7	275	4.0	270	4.9	275	5.4	275	5.5
13	170	8.8	165	10.1	160	11.5	160	12.0	185	10.6	195	7.8	215	8.9	225	8.1	220	8.9	215	10.0	200	11.5	220	12.3
14	255	12.2	260	12.0	260	11.0	260	10.8	270	9.6	275	9.0	275	9.0	260	10.7	280	11.5	280	10.2	275	10.0	270	10.8
15	260	6.9	275	6.1	280	6.4	280	6.8	285	6.7	290	6.4	290	7.0	290	6.4	295	6.0	290	6.1	290	5.5	285	5.3
16	170	3.4	170	3.0	175	2.9	210	3.9	200	3.7	165	4.8	145	4.5	150	4.8	150	5.7	160	5.9	165	6.7	175	7.2
17	165	6.0	170	5.7	175	5.9	165	6.4	170	6.4	165	6.5	170	7.4	165	7.8	170	7.5	170	6.5	175	6.0	175	6.5
18	170	2.9	—	1.0	—	0.5	—	0.5	135	1.7	140	2.9	170	2.3	165	5.0	160	6.0	165	5.7	165	6.4	165	5.4
19	100	4.5	120	3.4	110	3.7	105	3.5	70	1.7	65	1.7	55	2.1	85	2.0	135	1.6	—	1.3	280	3.2	325	4.8
20	—	1.1	—	1.0	—	0.5	—	1.3	—	1.7	—	1.0	—	0.5	255	2.4	350	2.6	345	3.3	315	4.2	320	3.1
21	—	0.5	—	0.5	—	1.3	—	0.5	—	1.0	75	1.8	175	3.0	175	5.0	180	6.5	180	7.8	180	8.2	180	9.1
22	255	3.5	230	2.8	—	1.2	—	1.5	—	1.1	55	1.6	75	2.3	85	3.0	95	2.6	70	3.0	50	2.9	—	1.2
23	185	4.4	175	5.0	175	4.9	175	4.8	175	4.9	170	4.7	180	4.9	180	5.9	180	6.5	175	6.9	175	8.2	175	8.8
24	170	4.2	170	3.6	170	3.3	170	3.9	170	3.8	170	4.0	180	4.5	200	5.8	200	6.2	200	7.3	200	7.1	210	7.6
25	175	10.9	175	11.0	175	11.7	185	10.9	185	9.6	185	8.0	190	7.9	180	7.3	185	7.7	185	8.1	180	8.6	180	8.4
26	170	7.0	165	7.4	160	7.2	155	6.9	165	5.1	155	5.3	140	6.3	155	7.0	150	7.5	145	7.9	140	6.2	140	8.0
27	150	5.3	150	4.2	145	3.2	130	2.8	110	3.0	100	2.9	90	2.3	130	1.8	—	1.4	350	3.5	345	5.2	325	5.8
28	55	5.2	70	6.4	80	5.3	70	8.1	75	8.8	80	5.6	70	5.5	75	5.8	70	7.2	65	5.3	55	7.2	55	7.5
29	55	5.7	50	5.7	60	3.3	80	5.2	90	5.7	100	4.2	75	5.5	85	6.9	90	5.6	100	5.6	100	6.0	115	5.8
30	120	3.5	110	4.1	295	2.4	80	4.0	80	2.1	50	1.7	125	2.8	75	5.7	95	5.1	100	7.1	95	9.3	100	12.0
31	70	3.6	340	2.0	175	2.0	—	1.5	195	1.6	—	1.3	—	0.5	—	0.5	—	0.5	115	3.3	150	2.8	175	3.8
Mean	—	5.0	—	4.8	—	4.4	—	4.5	—	4.4	—	4.1	—	4.3	—	5.0	—	5.2	—	5.7	—	6.3	—	6.8

418. Cahirciveen (Valentia Observatory) : H_a = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	145	8.1	150	8.0	150	8.5	155	9.4	155	8.7	160	8.7	170	9.1	165	9.9	165	9.6	165	9.8	165	9.9	165	10.0
2	195	10.7	200	11.1	200	9.9	205	8.7	205	7.7	205	7.7	205	7.8	205	7.5	205	6.5	205	6.4	205	6.0	215	5.3
3	225	4.3	220	4.5	230	5.3	240	5.8	245	5.8	250	5.7	250	5.6	250	6.5	250	7.0	250	7.2	250	8.0	255	7.7
4	265	4.5	270	3.9	260	4.2	260	4.3	270	4.0	285	3.4	295	3.7	310	3.3	315	3.9	340	4.2	295	4.0	295	4.3
5	190	2.0	185	2.0	175	2.1	155	2.9	155	3.9	155	4.9	170	5.3	175	5.4	170	5.7	215	6.2	270	7.0	270	6.1
6	—	0.5	360	2.7	345	5.0	20	2.5	—	1.1	285	2.2	270	5.0	270	5.5	270	5.7	255	6.4	255	7.1	255	7.0
7	235	4.2	220	4.4	210	3.4	230	3.1	260	3.7	—	1.5	265	1.8	270	2.2	270	2.2	270	2.3	270	3.2	275	3.4
8	—	1.4	—	1.3	—	1.5	—	1.0	—	0.5	—	0.5	—	1.1	—	0.5	—	1.0	265	3.1	275	3.8	310	4.3
9	350	2.7	360	2.3	350	2.1	350	2.3	360	2.5	360	3.0	350	3.7	335	4.0	325	4.0	330	3.9	295	3.6	275	4.6
10	240	4.7	225	3.5	240	4.5	240	4.0	245	5.1	230	3.9	235	5.0	230	4.7	225	5.0	230	4.5	260	5.0	235	6.1
11	185	8.2	185	8.6	185	9.5	185	9.3	180	9.9	185	9.6	180	9.9	180	10.2	180	10.0	185	10.4	180	10.9	180	11.0
12	170	6.6	170	6.5	170	6.1	165	6.1	165	5.5	160	5.9	155	6.5	160	6.1	155	6.2	155	7.5	155	6.7	160	7.1
13	205	5.5	185	5.7	185	7.0	190	6.6	195	7.1	200	7.6	200	8.0	200	9.8	205	9.9	200	10.1	200	9.9	200	9.2
14	55	2.8	30	4.1	25	6.7	5	7.0	5	7.1	10	5.4	360	3.9	355	5.4	340	6.9	335	7.0	325	6.2	320	6.1
15	180	4.2	200	4.4	185	5.2	185	6.5	180	7.9	175	8.4	170	10.0	165	10.6	175	10.4	195	10.5	205	10.0	225	8.7
16	270	9.0	270	8.6	270	8.3	275	8.4	280	8.3	285	7.5	280	7.5	280	7.4	275	7.2	270	6.8	275	6.6	275	5.6
17	195	1.7	195	2.1	190	2.5	185	2.0	180	2.9	175	3.0	155	3.2	170	3.8	175	5.5	180	5.7	180	6.5	180	7.3
18	180	8.5	195	8.6	195	7.4	195	5.8	190	5.0	195	5.8	195	5.3	195	5.2	180	5.2	175	5.9	175	6.5	180	6.4
19	180	7.7	180	7.8	190	7.9	195	7.6	200	8.0	200	7.7	200	7.1	205	6.5	210	6.5	210	7.0	220	5.5	225	5.1
20	325	2.7	350	4.5	345	5.0	350	4.2	350	4.6	350	4.9	355	5.2	355	5.5	350	4.5	335	5.1	335	6.6	340	6.7
21	30	2.2	25	2.0	25	2.1	25	2.5	25	2.0	—	1.3	—	1.1	360	2.0	325	2.7	320	3.0	290	3.3	270	4.8
22	300	2.2	295	2.3	290	2.2	280	3.6	295	3.2	300	4.2	295	4.5	305	3.7	300	3.3	300	3.6	300	3.1	300	3.7
23	335	2.6	325	5.3	325	2.8	—	1.0	—	0.5	320	2.2	330	3.0	325	2.9	335	4.8	320	6.0	315	5.0	315	4.7
24	310	3.7	320	4.1	330	3.5	330	4.2	345	4.9	345	4.4	325	4.2	310	4.3	345	7.0	360	5.8	5	5.5	360	6.1
25	70	4.3	70	5.1	80	5.5	80	5.0																

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

419. Cahirciveen (Valentia Observatory) :
Dines Anemograph from Jan., 1926.

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.5	—	1.4	—	1.5	—	0.5	—	0.5	—	0.5	—	1.0	50	2.0	40	2.2	30	2.0	25	3.9	40	4.3
2	45	1.2	45	1.2	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.5	5	2.9	360	4.3	5	3.6	360	4.9
3	—	0.5	—	0.5	—	0.5	—	1.0	35	2.0	—	1.1	—	1.0	125	1.6	—	1.5	190	2.1	230	1.6	275	3.0
4	180	4.9	170	3.8	140	4.4	145	4.0	165	3.6	145	2.9	140	4.2	145	4.2	145	3.7	—	1.4	55	3.6	360	3.5
5	295	4.9	290	6.8	300	7.3	280	8.0	305	6.7	295	6.3	325	8.0	315	8.6	325	9.8	320	10.1	320	10.3	320	9.7
6	330	5.2	325	6.4	330	6.0	350	7.3	345	6.4	345	5.0	350	4.5	350	5.2	345	5.1	330	5.4	320	4.5	325	4.7
7	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.4	15	2.8	45	3.7	20	3.0	5	4.0	5	4.3	335	4.6
8	—	0.5	—	0.5	—	1.0	—	1.0	170	2.4	175	2.3	180	2.3	210	2.9	220	4.4	225	4.8	230	5.3	235	5.5
9	185	6.9	195	7.6	190	7.5	190	7.9	185	8.3	180	7.9	190	8.9	190	9.9	190	10.4	190	10.1	190	9.9	190	10.0
10	185	10.2	185	9.9	190	9.0	190	8.9	180	8.9	180	9.5	185	10.0	185	10.5	185	10.6	195	10.6	200	12.6	200	12.4
11	175	8.0	180	8.6	180	8.0	180	8.1	190	8.1	190	7.4	195	8.7	200	9.8	200	9.5	195	7.9	200	8.4	205	8.2
12	5	2.2	—	1.0	25	1.7	—	0.5	—	1.1	5	1.6	—	1.5	10	3.1	345	2.0	30	2.5	340	4.6	325	5.7
13	—	0.5	—	1.5	—	1.0	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	280	2.1	270	2.3	270	2.5	270	2.7
14	—	0.5	—	0.5	—	0.5	—	0.5	100	1.9	95	2.4	—	1.4	—	0.5	—	0.5	165	2.2	155	3.4	160	4.3
15	85	5.5	90	5.8	95	6.6	95	6.3	95	6.1	75	4.8	95	7.5	80	7.9	80	6.5	95	10.0	100	7.8	100	5.1
16	180	3.9	170	3.9	170	4.8	170	4.4	155	5.7	170	5.8	175	6.5	175	7.6	175	8.8	(180)	(9.2)	180	10.7	185	10.3
17	180	3.8	180	3.8	180	3.9	185	4.3	180	4.7	180	3.7	185	4.5	195	6.4	195	6.8	180	8.7	185	9.2	200	9.2
18	210	8.5	210	9.0	210	8.3	205	7.8	200	7.4	200	8.1	205	7.2	210	6.8	205	6.2	210	6.8	220	7.3	215	7.3
19	175	8.3	175	8.4	175	9.0	170	9.2	175	9.2	175	10.5	180	11.0	185	11.0	190	11.2	185	9.9	190	10.2	185	9.6
20	190	6.0	190	5.4	195	6.5	200	6.8	200	7.0	200	6.7	205	6.9	205	7.0	200	7.4	205	7.6	215	7.4	225	7.0
21	—	1.2	120	2.6	120	2.1	—	1.4	—	1.1	95	1.9	90	1.6	130	1.8	180	2.6	200	2.3	190	3.3	180	4.4
22	95	3.6	65	2.5	65	4.3	60	4.7	50	4.7	55	4.7	60	5.9	65	6.1	60	6.2	65	4.2	65	3.5	60	3.2
23	65	5.9	50	4.9	70	5.2	50	5.6	25	7.8	40	7.2	20	10.1	45	8.3	50	9.6	50	9.0	45	8.7	30	7.8
24	25	4.6	20	3.5	20	1.8	40	2.3	20	3.2	5	3.9	10	5.0	5	5.6	360	6.3	350	6.8	360	5.9	350	7.1
25	355	5.5	355	6.0	360	5.9	360	5.6	360	5.4	355	6.1	355	7.8	355	7.3	360	7.0	5	6.6	160	6.5	5	6.5
26	5	3.8	5	3.6	360	3.5	360	3.8	360	4.1	10	3.1	5	2.0	350	3.0	350	4.8	10	3.6	10	3.3	5	3.5
27	50	1.7	—	1.5	—	1.4	—	1.5	—	1.3	50	1.6	130	2.0	175	4.1	180	4.3	185	4.8	190	5.6	200	5.7
28	220	5.6	220	4.4	220	4.0	220	3.7	200	4.9	210	6.3	215	6.9	205	6.5	200	6.6	200	8.2	205	8.3	210	9.6
29	320	6.2	320	7.2	320	7.5	320	7.4	325	6.5	325	4.9	330	4.4	330	5.0	310	4.2	330	4.8	330	4.9	300	5.0
30	290	3.5	275	2.0	260	4.8	250	4.2	230	4.4	250	5.7	270	5.7	235	3.9	220	5.4	245	6.6	235	6.9	225	7.0
31	215	12.1	220	12.9	225	13.0	230	12.5	255	9.2	260	9.6	260	9.9	255	10.4	260	10.9	255	11.5	250	12.2	250	13.1
Mean	—	4.4	—	4.4	—	4.6	—	4.5	—	4.6	—	4.6	—	5.2	—	5.6	—	5.9	—	6.1	—	6.5	—	6.6

420. Cahirciveen (Valentia Observatory) : H_a = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	310	8.7	315	9.1	310	8.2	310	8.7	320	8.5	330	8.7	335	8.7	340	9.2	345	9.7	330	10.0	340	9.3	335	8.8
2	355	4.8	355	4.0	355	3.7	340	2.6	—	1.0	315	2.1	300	2.7	280	3.2	270	3.3	270	3.1	265	3.9	240	5.2
3	185	12.9	190	12.1	200	12.0	220	9.9	235	7.5	225	5.5	220	5.0	240	5.6	240	4.8	225	5.0	225	4.8	215	5.1
4	195	3.6	175	3.1	—	0.5	80	2.8	45	2.2	360	3.2	355	4.1	340	4.2	345	6.5	345	7.0	350	8.0	345	8.5
5	—	0.5	—	1.0	210	1.6	—	1.2	—	1.3	90	2.1	160	4.0	175	4.7	195	5.8	185	6.7	175	8.6	170	11.2
6	235	5.3	220	4.9	230	5.9	260	5.3	255	2.8	255	2.1	275	1.8	270	1.7	265	2.6	265	2.9	270	4.6	270	4.5
7	360	8.0	360	7.5	350	7.4	350	7.1	345	5.8	345	4.4	345	5.7	335	7.0	325	7.2	345	6.2	330	7.5	330	7.6
8	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	90	1.7	160	3.1	195	3.9	200	5.1	205	5.1	205	6.1	195	6.2
9	285	2.6	320	2.3	330	2.1	360	1.7	5	2.1	—	1.5	—	0.5	—	0.5	265	1.9	270	2.8	265	2.2	230	4.3
10	300	2.2	265	2.3	270	2.2	255	2.0	255	1.9	—	0.5	—	1.0	200	2.4	195	3.0	185	4.0	220	4.9	230	5.0
11	255	7.2	290	4.4	325	5.5	320	3.2	310	4.4	330	4.0	325	4.4	325	5.2	315	3.6	290	4.1	285	4.1	295	4.4
12	280	2.9	280	2.4	280	1.8	260	1.8	225	2.0	225	3.2	250	2.6	255	2.7	255	2.8	260	2.9	260	4.1	275	4.3
13	170	5.8	155	7.3	150	8.6	155	9.1	160	9.7	175	9.5	190	8.9	205	9.0	210	6.7	220	6.9	230	6.7	295	6.9
14	300	4.0	290	3.9	300	4.4	295	3.0	280	2.7	295	3.1	290	1.7	275	3.4	305	4.5	275	4.4	265	4.7	260	4.8
15	190	1.7	—	0.5	—	0.5	65	1.6	65	2.0	65	1.6	—	1.3	—	1.5	190	3.1	215	3.5	225	4.0	220	5.1
16	190	6.1	190	6.6	190	7.4	195	7.2	205	6.6	220	6.1	220	5.4	220	4.6	225	5.2	245	6.4	260	7.6	260	8.9
17	315	8.5	300	7.9	310	8.1	320	7.7	320	7.4	330	7.5	325	7.1	325	6.5	325	7.3	325	8.3	320	8.5	320	8.6
18	350	5.5	350	5.9	350	5.1	360	4.3	355	4.0	350	5.8	5	4.3	355	4.4	345	5.1	340	5.4	330	5.1	320	4.9
19	—	1.0	—	1.5	170	3.4	185	2.2	205	3.2	155	3.0	—	1.5	—	1.1	230	3.7	225	5.2	250	2.5	225	7.2
20	185	6.3	210	6.5	225	6.0	245	5.6	255	2.6	245	3.1	300	4.9	325	4.4	310	4.0	310	4.3	310	5.0	305	4.9
21	240	2.7	245	3.9	255	4.9	230	3.8	245	4.0	240	4.6	235	4.5	230	5.1	225	5.6	225	6.3	220	6.3	225	6.8
22	225	5.8	230	6.3	245	5.7	255	4.8	245	4.4	250	4.3	250	5.5	250	4.8	245	4.4	225	4.4	245	6.5	230	6.0
23	225	9.9	225	10.1	225	9.3	225	9.0	225	8.3	225	8.0	225	8.0	220	8.0	220	9.5	225	10.0	225	10.2	225	10.5
24	220	7.4	220	7.4	225	7.5	225	7.4	225	7.7	225	7.8	225	7.0	245	8.3	270	6.3	270	4.8	285	4.9	295	4.7
25	—	1.1	—	1.2	—	1.1	15	1.6	25	2.0	—	1.5	30	1.6	—	1.2	—	1.4						

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

M.S.L. + h_a (height of anemograph above ground) = 17 metres + 13 metres.

July, 1929.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day	
°	m/s.	m/s.																								
30	4.7	15	5.1	25	4.9	25	5.0	15	5.0	100	4.0	—	1.1	—	0.5	—	0.5	—	0.5	65	1.6	—	0.5	2.2	1	
350	4.5	325	6.1	330	7.6	335	6.6	335	6.5	340	6.6	345	6.3	345	5.7	350	3.8	—	1.0	—	1.0	—	1.0	3.3	2	
275	4.0	275	4.3	275	3.1	270	2.3	265	3.4	245	3.3	230	1.8	185	2.3	160	2.7	150	3.7	145	4.4	145	5.1	2.3	3	
360	3.3	325	4.2	325	4.2	320	5.5	315	6.3	320	6.0	295	4.9	295	4.2	310	4.3	315	4.2	315	5.7	290	5.7	4.3	4	
310	7.9	300	7.6	295	7.8	300	8.0	305	8.5	310	8.6	320	9.4	325	8.6	325	7.8	330	5.4	325	5.8	335	6.7	7.8	5	
310	3.5	310	4.9	310	4.5	310	4.1	310	3.6	315	3.5	320	3.1	330	2.5	—	1.5	—	0.5	—	0.5	—	0.5	4.2	6	
355	4.6	320	3.7	325	4.7	330	5.8	330	6.2	330	5.2	340	5.1	340	4.3	—	0.5	—	0.5	—	0.5	—	0.5	2.9	7	
230	5.5	230	5.5	225	5.6	215	5.9	205	6.0	205	6.9	205	6.0	200	5.7	195	5.7	180	5.1	190	5.1	190	6.5	4.1	8	
190	10.9	190	10.2	195	9.9	195	10.2	190	10.0	190	9.3	185	10.0	185	10.0	185	10.1	185	10.0	185	10.1	185	10.2	9.3	9	
200	11.1	200	11.0	200	10.5	200	8.6	200	7.9	200	7.4	195	7.3	190	6.6	170	7.0	175	6.7	180	6.3	180	7.3	9.3	10	
210	7.3	235	6.6	300	4.1	305	4.9	340	5.4	345	5.0	340	3.9	325	3.5	345	3.9	350	1.9	360	2.4	360	3.4	6.5	11	
325	4.7	325	4.8	330	5.1	315	4.9	320	4.6	320	4.0	320	3.3	340	2.0	—	0.5	—	0.5	—	0.5	—	0.5	2.7	12	
270	2.3	290	2.0	300	2.0	280	2.0	290	1.7	—	1.2	—	0.5	—	0.5	—	0.5	—	0.5	—	1.5	—	1.1	1.8	13	
160	5.9	155	4.9	125	4.2	130	5.2	125	4.6	120	4.4	105	4.4	95	5.3	95	6.0	90	5.1	80	5.2	80	5.4	3.2	14	
95	6.8	100	7.8	100	9.5	100	10.8	110	10.6	135	7.3	155	7.3	145	6.6	160	6.4	180	2.8	185	3.2	185	2.6	6.8	15	
185	9.2	190	8.6	190	7.7	190	6.9	190	6.3	185	6.6	220	4.8	225	3.3	190	2.6	180	2.9	150	3.4	150	3.0	6.1	16	
190	9.2	190	9.1	195	10.2	200	9.9	200	10.0	200	10.1	200	10.1	205	9.9	205	9.9	210	10.2	210	10.1	210	8.1	7.6	17	
225	7.6	225	7.1	215	7.3	210	7.6	205	7.8	195	6.6	190	6.1	185	6.3	175	5.9	175	6.5	175	6.5	180	6.4	7.2	18	
190	9.8	195	9.8	195	9.7	195	8.5	195	7.9	200	8.4	200	6.7	200	6.8	185	5.9	195	6.4	205	6.3	190	5.8	8.7	19	
255	5.3	270	4.3	265	4.4	270	4.1	260	3.7	245	2.8	—	0.5	—	0.5	—	0.5	—	0.5	190	2.7	170	3.4	4.9	20	
175	3.6	185	4.0	190	4.8	185	4.6	175	4.7	155	4.0	140	3.2	115	2.8	115	2.4	110	2.7	100	3.7	95	3.6	2.9	21	
5	5.5	15	4.1	15	4.2	75	2.9	—	1.5	25	5.1	65	4.5	70	5.1	70	5.7	65	6.6	60	4.0	60	3.7	4.4	22	
20	7.9	10	8.5	10	7.6	5	7.3	15	7.5	20	6.7	20	6.6	30	5.6	5	7.3	30	4.8	55	2.7	45	3.1	6.9	23	
345	6.7	350	7.2	350	6.6	345	7.2	335	7.5	345	6.7	350	6.1	360	6.0	360	5.4	350	5.5	355	6.6	355	5.4	5.5	24	
350	6.9	345	7.6	350	6.9	345	7.4	345	7.0	350	6.8	355	6.5	355	5.9	360	5.1	360	5.1	360	5.1	360	4.0	6.3	25	
310	3.1	280	3.9	275	4.3	285	3.3	260	3.8	250	3.7	270	2.9	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	1.8	3.0	26
215	6.5	210	7.2	210	6.4	205	6.7	200	7.0	200	7.2	195	6.6	190	6.5	180	7.4	180	7.7	180	7.2	205	6.9	4.8	27	
225	10.2	235	9.6	245	9.9	250	9.9	255	8.4	255	7.0	270	5.8	280	6.2	300	7.1	315	6.9	325	6.4	330	7.1	7.1	28	
280	5.2	285	5.4	280	5.2	275	5.5	275	5.0	275	5.1	300	5.0	300	4.5	285	3.9	285	4.7	295	4.1	295	4.3	5.3	29	
225	7.1	225	6.6	225	6.6	210	7.2	205	8.0	200	9.0	195	9.1	190	9.2	195	10.5	200	10.0	210	11.2	210	11.5	6.8	30	
255	13.2	260	13.0	270	12.6	280	11.7	285	12.8	295	13.3	305	10.8	320	11.4	320	11.5	320	10.1	315	10.0	315	9.9	11.6	31	
—	6.6	—	6.6	—	6.5	—	6.5	—	6.4	—	6.2	—	5.5	—	5.1	—	4.9	—	4.6	—	4.7	—	4.7	5.5		

August, 1929.

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.	
340	8.0	350	9.9	345	9.8	345	9.5	345	9.8	345	10.3	345	10.0	350	9.1	355	8.7	355	7.3	350	6.8	345	6.8	9.0	1
220	6.7	210	6.9	200	8.1	205	8.6	190	7.9	190	8.8	190	9.5	185	10.0	185	9.8	185	10.4	185	11.8	180	12.5	6.2	2
215	4.8	215	5.3	200	3.9	190	4.0	210	3.4	250	3.8	285	3.5	250	1.8	—	1.4	250	3.9	225	3.1	200	3.6	5.7	3
350	9.5	350	9.7	350	9.4	345	8.5	335	8.7	340	8.1	340	8.2	345	7.0	350	5.0	355	3.4	5	2.1	—	1.1	5.7	4
170	10.9	185	8.5	220	6.4	225	5.9	215	4.3	185	3.9	175	4.5	170	4.2	170	4.2	185	4.2	220	5.2	235	5.9	4.8	5
270	4.8	290	4.4	305	6.1	330	8.3	345	8.5	350	10.2	350	10.9	355	10.0	355	9.7	360	8.2	360	8.0	360	8.2	5.9	6
330	7.4	345	8.2	350	8.4	345	8.0	340	7.9	335	7.1	350	6.8	350	5.0	355	2.8	350	2.7	—	1.5	350	1.6	6.3	7
200	7.3	200	6.1	190	6.5	210	5.7	255	4.7	270	3.8	280	3.4	300	3.4	300	2.1	260	2.9	265	2.4	260	2.8	3.5	8
225	5.2	220	5.3	210	5.8	200	5.9	185	6.6	180	7.6	175	7.5	175	4.6	230	2.1	270	2.6	270	2.3	290	2.6	3.4	9
230	4.9	225	5.7	225	5.4	230	5.6	225	5.3	220	5.5	220	7.2	220	6.8	220	6.9	220	6.4	220	6.8	225	7.1	4.3	10
270	4.6	270	5.4	275	5.4	270	5.2	265	4.8	265	4.7	270	4.1	280	3.9	285	3.8	290	3.9	285	3.4	280	3.7	4.5	11
270	2.6	270	2.2	260	3.5	230	4.1	230	3.5	220	3.2	190	2.3	180	3.0	175	3.8	170	4.1	185	4.1	190	4.3	3.1	12
320	9.0	325	8.2	325	7.9	320	6.2	310	5.6	300	5.0	295	4.6	300	4.0	295	4.6	300	5.1	295	4.7	295	4.8	6.9	13
265	5.6	265	5.2	270	4.7	280	5.1	275	4.8	270	4.0	275	3.6	275	3.6	270	3.5	250	2.6	215	2.3	190	1.6	3.9	14
225	5.5	220	6.0	220	5.6	190	6.0	185	5.7	190	4.9	185	4.6	185	5.1	180	5.4	190	5.0	190	6.0	185	5.3	3.7	15
270	7.9	275	7.4	275	7.7	280	7.2	280	6.6	280	7.4	275	7.2	280	7.8	290	8.0	310	7.5	305	8.0	325	8.8	7.0	16
320	8.6	315	8.9	315	9.1	335	9.0	335	10.0	340	10.4	345	9.6	350	7.4	360	6.6	360	7.6	360	6.6	355	6.2	8.1	17
320	5.2	310	4.8	310	5.0	310	5.0	315	4.5	315	3.7	—	1.5	—	0.5	—	0.5	—	0.5	—	1.4	35	1.6	4.0	18
245	5.5	235	6.2	225	6.3	220	6.6	220	6.8	220	6.1	220	5.9	210	5.5	200	5.0	205	5.4	210	5.6	180	5.9	4.3	19
290	4.9	295	4.9	295	4.8	295	4.9	305	4.8	300	4.1	300	3.6	295	3.0	320	3.2	300	2.1	270	4.7	250	2.5	4.5	20
220	6.9	225	7.6	225	7.2	245	8.2	235	6.9	230	7.0	225	5.2	230	5.2	250	6.8	230	5.0	220	5.1	225	5.7	5.6	21
235	6.4	225	7.7	225	7.																				

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

421. Cahirciveen (Valentia Observatory) :
Dines Anemograph from Jan., 1926.

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	225	4.3	230	3.5	280	3.4	300	4.1	305	3.7	340	4.0	335	4.1	345	3.4	350	3.2	330	2.5	325	3.4	330	3.8
2	80	3.5	80	2.7	75	4.0	70	4.9	75	4.5	95	5.2	95	5.8	95	5.0	140	6.5	150	6.9	165	7.1	175	7.5
3	95	5.4	95	4.4	85	5.4	105	4.1	110	3.9	170	2.0	—	1.5	145	3.8	170	3.7	175	5.5	175	5.6	195	4.5
4	230	1.9	180	1.9	160	1.6	180	2.0	185	2.3	—	1.5	—	0.5	160	2.0	165	3.2	155	3.6	155	4.8	170	5.4
5	175	3.5	180	3.4	180	3.4	—	1.5	—	1.4	—	1.4	—	1.4	150	3.5	170	3.5	160	3.1	180	3.6	210	4.8
6	175	2.1	160	2.9	180	2.7	165	2.9	155	2.4	—	1.4	175	2.3	170	2.4	175	3.6	175	3.2	195	2.8	230	2.3
7	—	1.0	—	0.5	—	1.0	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	185	3.4
8	—	1.4	170	2.9	175	1.6	—	1.0	—	0.5	50	1.7	—	1.5	45	1.6	225	2.5	150	4.3	160	4.9	180	5.3
9	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	310	2.1	340	2.0	335	2.1	320	2.1	330	2.2	325	2.8
10	10	1.6	340	4.5	350	2.8	350	3.6	355	2.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	320	2.5
11	130	3.7	135	4.9	145	5.0	150	5.3	150	5.8	155	4.1	170	4.7	170	5.4	170	7.0	165	7.7	170	9.0	175	8.5
12	220	5.5	225	5.5	215	4.4	270	6.0	300	6.9	320	7.4	325	8.1	340	8.5	345	8.4	350	9.0	345	8.7	345	9.1
13	35	2.1	40	2.6	45	2.8	45	2.5	—	1.2	50	1.7	160	3.4	170	5.0	185	6.2	200	7.0	205	8.5	205	8.6
14	200	7.7	200	8.5	220	6.5	255	3.8	205	1.8	195	1.8	—	1.2	200	2.1	230	3.0	255	4.0	255	4.3	275	4.1
15	—	0.5	—	1.0	345	1.9	355	2.1	360	2.5	350	3.7	350	4.6	350	5.6	345	5.8	345	6.2	350	6.6	340	6.2
16	—	1.5	55	2.3	—	1.3	50	1.7	—	1.3	—	1.5	70	1.7	—	1.0	—	1.2	—	0.5	260	1.8	305	3.6
17	—	1.0	—	0.5	—	1.4	50	2.6	—	0.5	65	2.5	65	2.1	65	2.0	85	1.9	175	4.0	180	5.0	195	4.8
18	185	5.0	195	5.8	205	5.5	200	5.0	195	5.2	190	4.9	300	4.9	345	7.0	350	6.3	350	8.3	350	7.6	350	8.1
19	—	0.5	—	0.5	275	3.4	275	3.7	270	3.3	250	5.1	250	5.8	250	5.7	250	6.0	250	6.6	255	6.4	255	7.0
20	290	7.0	290	6.5	300	6.9	305	7.3	310	7.1	325	8.9	330	8.3	335	9.7	340	10.2	345	10.3	350	10.5	345	10.0
21	245	5.9	250	5.4	260	7.6	270	7.0	270	7.6	280	7.3	280	8.4	290	9.4	300	8.0	300	7.3	300	8.8	300	7.7
22	295	4.5	260	2.6	265	3.6	270	3.3	265	3.5	270	3.0	275	2.3	265	2.1	260	1.8	280	4.4	275	2.8	270	3.9
23	215	3.1	215	2.7	200	4.5	195	3.7	195	4.2	190	4.0	195	5.4	195	5.0	190	5.1	200	7.9	195	7.1	195	8.4
24	180	4.5	175	4.3	165	4.1	160	4.0	165	3.5	170	4.0	170	3.9	170	4.1	175	5.4	175	5.5	180	6.0	185	7.8
25	175	3.4	165	4.4	160	4.8	180	3.0	175	2.7	170	4.8	170	5.4	170	6.2	170	6.7	175	7.5	170	7.1	170	7.1
26	170	3.3	170	4.0	175	3.1	180	1.7	—	1.0	—	0.5	200	1.6	170	3.0	180	4.0	180	4.9	180	5.3	180	5.1
27	165	5.1	170	4.8	170	4.5	160	5.1	165	4.5	165	5.0	165	5.3	175	4.7	180	4.0	190	4.6	180	5.4	175	6.0
28	195	10.5	200	11.0	200	10.8	200	10.3	205	9.0	205	6.8	230	6.2	270	2.1	—	0.5	—	1.5	225	2.0	275	2.6
29	—	0.5	—	1.1	320	1.7	—	0.5	290	1.9	270	2.3	205	2.3	—	1.1	180	1.7	195	3.0	225	2.8	185	2.8
30	195	9.9	205	11.1	275	6.1	350	5.4	355	6.0	—	4.6	15	4.0	—	5.0	25	4.7	360	5.1	345	6.0	345	5.5
Mean	—	3.7	—	3.9	—	3.9	—	3.6	—	3.4	—	3.5	—	3.7	—	4.0	—	4.2	—	4.9	—	5.4	—	5.7

422. Cahirciveen (Valentia Observatory) : H_a = 17 metres + 13 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	1.1	—	0.5	65	1.7	55	1.9	55	2.5	100	2.9	155	4.8	160	6.4	165	6.2	175	7.9	180	8.7	170	11.7
2	265	10.0	260	10.8	270	10.5	270	10.3	270	10.0	270	9.6	265	10.2	265	9.1	245	9.2	235	7.5	250	10.0	255	10.3
3	270	11.4	275	10.6	265	10.9	270	9.0	260	9.0	260	9.4	260	10.5	255	8.6	250	9.4	250	8.2	250	7.2	255	9.1
4	220	4.7	230	5.2	210	4.5	195	5.4	225	5.9	210	6.4	205	7.6	205	7.9	220	6.7	245	7.0	270	7.9	270	9.1
5	180	7.4	180	5.6	205	5.7	200	4.1	225	2.1	165	3.0	175	5.3	170	4.9	155	5.2	160	5.8	175	5.2	205	5.7
6	335	12.8	330	11.9	340	11.7	330	11.6	340	11.8	345	11.9	330	11.1	340	10.4	330	10.1	330	10.1	325	9.8	340	9.7
7	290	5.2	275	(4.6)	230	(4.0)	230	(5.2)	180	(3.7)	50	(2.6)	55	(3.6)	55	(3.2)	70	(2.9)	135	4.0	130	5.3	110	6.3
8	30	11.6	25	11.5	30	12.1	15	15.0	15	13.4	15	12.4	10	14.4	360	14.5	360	12.0	5	11.5	360	12.2	350	13.3
9	325	8.5	330	9.1	345	9.5	350	8.3	330	9.8	335	8.5	335	7.9	340	7.2	350	6.4	345	6.1	320	6.4	325	6.2
10	255	6.9	245	8.1	240	6.6	250	7.1	235	7.1	240	7.4	225	6.7	225	7.1	235	7.9	220	6.8	220	8.7	220	9.7
11	240	8.5	245	10.0	245	9.8	240	9.9	245	9.7	250	8.9	250	9.5	250	9.4	250	7.8	250	6.9	250	7.3	245	7.0
12	205	4.1	205	4.2	205	4.3	200	4.1	185	3.7	185	3.5	195	3.7	195	3.4	200	3.2	200	3.5	200	5.9	205	5.9
13	170	6.0	170	6.2	175	6.8	170	6.7	165	6.7	165	6.8	165	7.0	175	6.9	180	8.0	180	8.1	185	7.6	195	8.2
14	185	7.0	185	7.4	190	6.9	180	7.2	185	7.0	200	8.5	185	6.5	180	7.4	180	8.3	185	8.3	180	7.7	175	8.2
15	170	6.8	155	5.2	170	4.7	165	4.9	170	5.0	160	6.4	165	4.8	150	6.0	160	7.0	140	6.7	150	6.1	155	7.2
16	205	10.1	220	10.1	225	9.3	235	9.8	240	10.0	245	10.2	255	8.8	270	8.4	280	8.6	280	8.5	280	8.5	285	7.6
17	220	6.4	220	6.2	225	6.3	225	6.0	215	5.5	250	4.7	315	4.5	300	3.5	290	5.1	300	4.8	310	5.7	310	5.2
18	295	5.7	290	7.1	285	8.7	325	6.7	345	5.6	360	7.2	355	7.6	360	7.7	360	7.6	355	7.9	350	8.0	345	8.9
19	360	4.6	360	3.2	360	1.6	—	1.0	—	1.0	—	1.4	—	1.5	120	2.5	135	3.2	145	3.2	150	4.3	155	5.0
20	250	5.3	305	5.0	300	5.7	295	6.2	295	6.5	290	6.1	305	8.6	330	11.6	345	10.9	345	13.3	345	13.1	345	13.7
21	10	14.1	15	14.7	15	16.7	20	11.8	10	7.2	15	8.5	10	8.0	25	8.4	10	9.2	10	8.5	10	6.3	5	6.7
22	340	6.2	355	6.7	345	6.9	355	5.0	350	4.5	330	4.7	325	6.0	345	3.7	325	2.4	320	4.8	330	4.7	325	3.5
23	210	4.0	200	4.8	210	4.9	235	6.2	245	5.4	225	4.9	245	4.9	210	4.4	210	5.6	205	7.2	200	8.4	200	9.3
24	270	3.7	270	2.9	280	5.0	285	5.8	290	6.8	290	5.7	280	7.1	290	7.0	285	7.3	290	5.4	290	5.0	270	7.1
25	280	8.5	305	6.5	305	6.3	305	5.8	320	4.9	280	2.9	170	5.2	220	5.8	225	7.0	200	6.8	250	8.8	285	6.5
26	355	6.8	350	6.1	335																			

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

M.S.L. + h_a (height of anemograph above ground) = 17 metres + 13 metres.

September, 1929.

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.	
340	4.2	325	4.0	325	2.8	330	3.5	325	3.0	315	2.1	—	1.0	60	2.1	75	3.4	75	2.4	—	1.4	75	2.5	3.2	1
175	7.4	165	7.5	155	7.1	160	5.9	155	6.6	150	5.8	120	2.9	100	4.1	105	5.7	95	7.1	140	5.1	115	5.0	5.5	2
195	4.4	210	4.5	265	3.7	275	3.5	—	1.4	—	1.2	—	1.0	—	1.0	255	1.7	260	2.1	255	2.7	245	2.2	3.4	3
190	5.5	190	5.6	180	6.3	180	5.5	175	5.8	175	4.9	175	5.8	185	5.0	180	5.2	185	4.1	180	3.2	180	3.6	3.8	4
205	4.4	225	4.8	225	4.9	220	4.4	220	3.6	225	2.6	205	1.6	170	2.8	165	2.7	160	2.9	165	2.4	205	2.4	3.2	5
195	3.4	185	3.6	180	4.3	175	4.4	175	4.0	170	3.7	160	3.9	160	3.6	—	0.5	—	0.5	70	1.6	—	0.5	2.7	6
180	4.8	180	4.9	180	4.9	175	3.5	—	1.0	—	1.2	—	0.5	—	0.5	—	0.5	—	1.0	—	1.3	—	0.5	1.6	7
180	5.2	175	3.2	180	6.6	185	5.4	175	5.8	175	5.5	170	5.5	160	4.9	160	4.3	175	2.3	—	1.4	—	0.5	3.3	8
325	3.4	325	4.2	335	6.0	340	5.3	330	6.3	340	5.9	360	5.2	10	2.2	350	2.3	5	2.1	—	0.5	—	0.5	2.6	9
265	2.0	270	1.6	265	2.6	265	2.8	270	2.0	—	1.1	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	1.5	10
165	7.9	165	7.6	175	7.8	170	8.3	170	8.0	175	7.4	170	6.4	165	6.8	165	6.8	165	6.5	170	6.0	170	7.1	6.4	11
345	9.0	345	8.4	340	7.8	340	7.0	335	6.3	345	4.6	350	2.5	—	1.0	—	0.5	—	0.5	—	1.5	—	1.5	5.9	12
205	8.0	200	8.0	200	8.5	205	9.6	205	7.5	200	7.4	200	5.8	195	6.0	190	6.3	190	7.2	190	8.0	190	7.4	5.8	13
270	3.7	275	3.1	275	3.2	275	2.9	270	2.3	270	1.7	—	1.2	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	3.0	14
340	5.9	335	5.7	340	6.1	325	6.1	330	5.1	335	4.4	350	3.0	—	1.1	—	1.0	—	1.4	—	1.5	60	1.8	3.7	15
320	3.6	320	2.6	320	4.0	310	3.4	310	2.6	315	2.8	—	1.1	—	0.5	—	0.5	—	1.1	—	1.0	—	0.5	1.8	16
195	5.1	210	5.8	205	5.3	210	5.0	210	4.9	205	4.8	190	3.8	180	4.4	175	4.6	175	4.8	175	4.8	180	5.2	3.5	17
350	7.6	350	8.7	345	8.6	350	7.9	355	7.0	350	6.4	355	6.4	360	5.1	360	4.8	330	4.4	325	2.2	335	3.3	6.1	18
250	6.9	250	6.9	250	6.5	255	6.2	265	4.9	275	5.5	270	3.5	270	3.4	275	4.9	290	6.2	295	5.7	290	6.4	5.0	19
340	9.2	335	9.7	340	9.3	345	8.6	325	7.7	325	7.1	325	6.0	310	4.4	285	3.6	270	2.6	260	5.2	245	4.4	7.6	20
300	7.4	300	7.6	305	8.0	320	7.1	320	7.3	325	7.0	315	5.5	320	5.3	320	5.0	320	4.8	305	4.6	290	5.2	6.9	21
260	4.2	260	3.5	255	4.1	250	4.5	245	3.4	240	3.0	240	3.3	230	2.6	205	3.0	220	3.7	215	3.4	215	3.2	3.4	22
195	8.7	195	8.8	200	8.6	200	7.6	195	6.7	175	6.1	170	4.4	170	5.0	175	4.1	175	4.5	175	4.6	180	4.8	5.6	23
185	8.5	190	7.9	180	7.8	180	7.5	180	6.4	180	5.3	180	5.1	180	5.2	175	4.9	175	5.1	170	5.2	165	4.5	5.4	24
170	7.6	175	7.0	180	6.0	175	5.6	160	5.4	160	4.4	160	3.0	160	4.0	165	3.5	165	3.6	165	3.7	160	4.0	5.0	25
180	5.6	175	5.5	180	5.2	180	6.0	180	5.3	175	4.8	175	5.0	175	4.9	170	5.5	175	5.0	175	4.3	170	4.2	4.1	26
175	6.1	180	5.9	190	5.7	180	5.4	185	5.2	180	4.7	175	4.5	175	5.5	180	7.0	180	8.1	185	8.6	185	9.3	5.5	27
285	2.1	300	3.0	300	1.8	—	1.1	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	3.7	28
205	4.2	205	5.0	220	5.8	210	5.0	215	5.0	200	4.5	195	4.8	180	4.5	185	5.6	180	6.9	190	7.9	195	9.5	3.6	29
330	6.2	345	4.7	330	4.3	320	4.7	295	3.8	290	2.7	230	3.0	—	1.0	—	1.7	195	2.3	335	2.2	105	1.8	4.8	30
—	5.7	—	5.6	—	5.8	—	5.5	—	4.8	—	4.3	—	3.6	—	3.3	—	3.4	—	3.5	—	3.4	—	3.4	4.3	

October, 1929.

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.	
165	13.4	165	12.7	195	10.9	245	9.6	255	10.0	250	9.0	240	8.8	240	10.4	255	10.7	255	10.2	270	10.3	270	10.1	7.4	1
250	9.8	240	10.2	240	10.1	245	10.8	255	10.2	260	10.8	250	9.1	245	9.7	255	10.5	255	10.8	260	11.8	275	10.8	10.1	2
245	9.5	250	10.1	280	8.6	290	6.8	295	6.0	250	5.2	290	4.1	250	3.7	255	4.3	245	6.2	240	5.5	225	3.6	7.9	3
275	8.3	290	8.6	285	7.6	300	6.2	280	6.5	290	5.8	270	6.1	240	4.4	195	4.0	190	4.1	210	6.4	195	8.1	6.3	4
275	4.0	305	6.2	300	5.1	300	7.1	295	8.4	300	8.7	295	7.2	305	6.2	310	4.0	305	8.5	315	10.1	325	12.8	6.1	5
335	9.8	325	9.2	325	9.3	325	7.8	315	7.1	320	8.6	320	7.4	320	6.4	300	7.0	295	6.4	295	6.4	295	5.5	9.5	6
105	7.2	95	7.6	90	5.6	80	6.6	75	6.8	70	6.9	70	9.9	65	10.6	65	9.7	60	10.5	60	8.4	35	9.5	6.2	7
355	12.4	350	12.4	340	11.6	340	11.1	345	10.6	350	8.4	335	9.5	325	10.0	325	10.6	335	9.4	335	8.5	330	9.0	11.8	8
310	6.1	310	5.4	305	5.0	300	5.6	290	5.2	285	5.9	290	5.0	280	5.3	270	5.1	260	5.0	255	5.9	270	5.8	6.7	9
220	9.5	220	9.4	225	8.7	230	9.5	235	10.2	240	9.9	240	9.9	240	9.5	235	8.7	235	8.4	235	8.6	240	8.7	8.3	10
245	5.8	245	5.9	245	6.3	245	5.7	235	5.2	240	5.0	240	4.9	195	4.2	185	5.5	180	5.1	180	5.9	170	5.7	4.6	12
195	4.7	190	5.2	190	5.7	190	5.0	190	4.7	180	4.6	195	4.2	195	4.7	195	6.8	190	6.5	185	6.6	185	7.0	7.2	13
195	7.0	200	9.5	205	8.4	205	8.0	200	7.2	195	6.5	200	7.0	195	6.9	195	6.8	165	6.4	200	3.5	175	6.4	7.0	14
180	7.5	190	7.3	185	6.9	200	6.8	205	5.7	175	5.7	160	6.7	155	6.9	165	6.4	165	6.5	200	3.5	175	6.4	7.0	14
150	9.0	155	9.5	155	10.3	160	10.4	165	9.7	170	8.6	170	7.9	170	9.2	180	10.1	200	9.6	200	7.7	200	9.1	7.5	15
280	7.2	275	6.0	270	5.3	270	5.4	270	4.7	255	5.3	255	7.3	250	7.8	245	7.0	230	5.7	220	6.5	220	6.6	7.7	16
295	5.3	305	6.1	305	6.1	305	5.8	320	6.1	320	5.8	325	5.8	330	5.6	335	5.8	315	5.5	315	4.9	305	5.5	5.5	17
345	9.2	335	9.4	345	9.0	340	10.0	340	10.0	350	8.7	360	7.8	5	6.1	345	5.4	345	6.4	335	5.1	330	6.5	7.6	18
165	5.2	185	4.5	185	3.7	180	4.4	175	3.8	155	3.9	165	3.7	165	4.2	175	4.1	170	5.2	180	5.3	185	5.1	8.6	19
345	15.1	345	13.7	345	13.2	345	13.0	350	14.6	350	15.6	360	14.9	360	14.9	360	14.9	360	14.7	5	13.3	5	12.8	11.4	20
350	7.0	340	7.7	335	7.7	340	6.2	330	5.4	320	3.9	300	2.8	—	1.3	190	2.1	210	3.6	345	5.2	325	5.2	7.6	21
275	3.0	260	3.6	265	2.8	265	4.5	245	3.8	255	4.1	255	4.3	190	3.0	270	3.6	240	4.1	220	5.1	240	5.4	4.4	22
215	11.6	220	13.0	210	11.8	205	12.5																		

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

423. Cahirciveen (Valentia Observatory) :
Dines Anemograph from Jan., 1926.

H_a (height of anemograph above M.S.L.) = Height of ground above

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	175	7.0	175	8.2	175	7.6	175	6.8	170	7.3	170	7.5	165	8.5	160	9.6	160	9.9	170	9.4	170	7.7	170	8.0
2	180	6.5	190	7.4	210	7.5	220	6.6	225	5.9	245	5.8	250	5.8	250	5.0	245	5.0	275	5.8	280	4.4	280	4.6
3	300	6.4	305	5.6	300	6.3	300	5.8	305	6.5	310	6.1	320	6.2	320	6.3	320	4.9	335	4.8	330	5.1	325	5.1
4	205	5.8	200	5.5	200	6.0	200	6.8	200	7.5	200	7.2	195	7.6	195	8.0	200	9.5	205	9.5	205	9.9	205	10.0
5	195	13.6	195	14.7	200	14.2	200	13.7	205	12.4	210	12.1	230	9.0	225	7.0	230	6.5	230	6.4	225	5.2	230	5.8
6	285	3.8	290	4.1	290	4.6	280	6.0	295	7.3	320	7.9	320	8.9	325	9.0	325	8.7	320	7.7	315	6.3	295	6.9
7	180	9.0	195	7.7	255	5.5	280	6.7	280	3.4	250	3.9	255	5.5	245	4.7	225	5.5	210	7.0	210	7.8	210	9.9
8	285	8.3	305	8.1	320	8.6	325	7.7	325	7.8	320	9.1	305	6.5	300	6.2	305	6.4	295	6.2	300	6.2	305	7.3
9	260	9.4	245	9.0	250	9.7	235	8.3	235	9.0	240	10.4	235	8.2	230	8.0	225	7.3	230	8.1	225	8.7	220	7.3
10	305	7.6	295	8.4	300	7.3	310	6.1	290	7.1	300	7.6	285	8.8	285	8.9	280	7.8	295	6.4	270	7.6	270	9.7
11	235	10.7	230	8.9	225	10.7	215	12.2	205	16.1	200	15.6	200	17.7	210	16.7	220	16.2	220	13.3	225	12.8	230	11.8
12	290	12.1	290	11.5	295	11.9	295	11.1	295	10.8	295	10.5	300	8.8	295	10.2	295	9.1	290	8.7	280	7.5	265	8.5
13	345	5.9	330	6.0	325	4.8	25	5.0	20	2.0	295	6.9	290	6.5	305	6.4	345	6.0	335	7.4	335	5.2	335	6.5
14	55	2.0	—	1.5	75	1.7	—	1.4	120	1.6	55	2.6	55	3.0	55	2.7	90	2.7	95	2.8	95	1.7	—	0.5
15	150	1.7	155	3.4	120	6.6	145	6.7	125	7.3	145	10.2	145	10.8	150	12.6	150	14.5	155	14.8	160	13.7	195	8.2
16	20	7.6	20	7.3	15	7.1	15	6.9	20	6.6	25	5.2	15	6.3	10	7.1	15	6.0	25	4.3	5	2.9	350	2.9
17	—	1.4	—	1.2	70	2.3	40	1.9	55	2.2	75	1.6	75	5.1	70	5.3	70	4.7	70	4.0	100	1.6	60	3.8
18	135	4.4	145	5.9	150	7.5	145	8.9	150	9.9	155	9.5	175	9.6	150	11.6	160	14.3	155	15.4	160	15.1	160	14.4
19	220	10.9	230	6.4	215	3.7	190	3.0	170	5.2	155	6.1	155	6.7	150	6.4	150	7.3	165	10.1	190	10.5	205	8.8
20	205	6.6	210	6.5	200	5.5	200	5.2	195	6.2	190	6.2	195	6.9	190	7.5	175	8.0	175	7.4	180	7.4	180	8.0
21	160	6.9	160	7.0	160	6.5	160	6.9	165	7.0	170	7.0	170	7.6	170	8.4	170	8.9	170	8.9	170	9.5	170	9.7
22	140	14.9	140	13.5	135	12.4	130	12.0	145	8.9	155	10.1	150	11.1	145	13.3	140	12.5	150	11.0	155	12.0	165	12.5
23	195	8.0	195	6.5	205	4.9	200	4.0	175	4.9	180	5.0	200	5.2	195	4.4	195	5.5	200	6.6	195	6.9	200	7.6
24	225	11.2	230	10.9	230	11.1	235	11.2	235	9.9	230	9.6	230	8.9	220	7.4	200	6.4	200	8.0	195	7.9	195	9.6
25	225	13.3	220	10.7	205	10.2	210	9.2	195	6.8	180	4.8	180	4.0	170	4.4	180	4.1	150	5.9	150	5.1	155	3.5
26	195	5.1	190	6.5	215	7.4	220	7.6	220	8.6	245	9.9	250	9.9	250	12.0	265	9.6	255	10.5	250	11.2	260	10.7
27	225	5.8	220	5.0	195	4.4	195	3.8	180	3.7	180	3.6	180	(4.0)	160	(4.5)	150	(6.2)	145	8.0	135	7.8	130	9.0
28	170	4.6	170	4.1	170	4.1	170	2.6	165	2.6	—	0.5	—	0.5	—	0.5	—	1.0	—	0.5	—	0.5	200	1.6
29	160	4.6	160	4.5	155	5.4	150	5.0	145	4.5	135	4.0	135	3.7	145	4.8	140	3.9	150	4.3	150	4.5	155	4.7
30	—	0.5	—	0.5	170	2.1	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	0.5	—	1.0	325	2.9
Mean	—	7.2	—	6.9	—	6.9	—	6.6	—	6.7	—	6.9	—	7.1	—	7.3	—	7.3	—	7.5	—	7.1	—	7.3

424. Cahirciveen (Valentia Observatory) : H_a = 17 metres + 13 metres.

1	°		°		°		°		°		°		°		°		°		°		°		°	
	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.	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	305	2.7	295	4.3	290	3.6	—	1.1	290	1.6	270	3.1	260	4.3	205	2.5	190	3.2	205	3.7	205	5.3
2	180	14.4	185	14.3	190	14.7	190	15.0	210	14.4	225	10.2	225	12.9	245	12.1	240	11.5	245	13.2	235	10.2	220	10.7
3	185	9.8	200	10.2	200	8.9	190	7.7	185	7.9	185	9.5	180	8.4	175	10.8	170	11.2	165	12.8	170	13.1	170	14.3
4	180	5.4	180	5.6	185	6.2	180	5.4	195	5.6	190	5.5	195	5.2	185	4.8	195	5.5	200	6.0	200	6.7	190	8.5
5	195	11.8	195	11.9	200	15.5	200	15.5	200	17.0	200	18.2	200	18.3	205	19.6	215	18.0	225	17.1	230	17.3	240	18.0
6	250	12.5	250	10.8	245	10.0	235	9.2	245	8.3	225	7.4	200	6.3	175	5.4	180	8.1	170	9.0	160	12.9	145	14.0
7	290	16.7	290	13.7	285	15.0	295	16.4	290	14.3	290	14.1	290	13.4	285	13.1	280	12.6	280	11.5	260	12.2	245	8.7
8	220	12.5	225	9.8	240	10.8	235	8.4	225	6.8	210	7.0	210	7.8	210	13.3	235	10.7	225	9.5	225	7.2	265	14.8
9	235	4.7	210	6.2	165	3.9	160	5.7	170	6.4	170	5.0	195	6.6	250	10.0	260	9.4	255	9.8	255	9.6	255	13.7
10	270	9.4	260	10.6	275	9.1	275	7.0	270	8.9	230	9.8	205	5.2	175	4.8	175	3.1	—	1.5	175	2.3	210	4.4
11	240	16.2	245	16.4	245	17.1	245	16.7	240	15.3	245	17.1	250	16.7	250	16.5	250	15.7	260	15.6	255	13.2	245	11.5
12	240	13.8	235	12.4	240	15.8	240	15.0	250	14.0	260	12.9	265	13.4	265	13.0	265	13.5	265	12.0	265	11.5	255	10.5
13	225	10.3	230	9.3	220	8.3	205	6.9	200	7.5	200	8.2	200	8.0	190	7.5	205	9.5	210	9.6	210	9.7	210	10.4
14	230	9.0	230	9.2	230	9.8	230	9.9	230	9.2	230	7.7	255	6.0	255	5.9	255	3.4	295	5.0	350	3.7	335	3.5
15	—	0.5	—	0.5	—	0.5	—	1.0	—	1.5	15	2.2	15	3.1	5	2.8	—	1.2	5	2.5	15	3.5	20	3.0
16	—	0.5	—	0.5	—	1.0	—	1.1	—	1.5	—	1.0	20	1.6	20	1.8	40	1.9	45	2.1	—	1.0	—	0.5
17	(120)	(3.5)	(140)	(5.6)	(145)	(4.6)	(140)	(5.0)	(145)	(5.3)	(160)	(6.3)	(160)	(6.1)	(165)	(7.1)	(165)	(7.1)	165	6.6	170	6.3	175	7.2
18	180	5.8	175	5.2	175	5.2	165	5.5	165	5.2	170	4.5	175	4.9	165	5.5	175	6.6	175	7.4	180	7.7	180	8.1
19	185	10.8	185	10.8	180	11.0	175	11.8	175	12.5	180	12.5	175	12.6	175	12.7	180	12.5	180	12.3	180	13.3	180	13.3
20	250	5.0	230	5.2	200	4.6	210	6.5	210	7.2	210	7.0	205	7.5	200	8.2	200	9.9	200	11.6	195	13.1	190	14.1
21	330	9.3	315	9.0	305	6.5	290	6.4	260	5.9	200	4.5	210	4.3	185	3.8	180	5.1	180	5.3	185	6.5	175	8.8
22	300	4.0	340	3.2	290	5.4	290	4.9	290	5.0	285	3.2	225	3.0	240	3.3	160	2.4	—	1.5	—	1.4	185	4.0
23	220	8.0	235	5.2	210	4.6	230	6.2	245	7.4	235	6.4	235	5.9	230	4.9	220	5.7	190	5.3	200	5.6	225	6.9
24	245	9.5	245	9.6	245	8.8	240	8.2	235	7.1	235	6.0	220	5.4	200	5.2	180	5.5	170	6.3	165	7.6	145	9.8
25	215	24.0	225	20.2	235	17.1	245	16.0	255	15.7														

425. Cahirciveen (Valentia Observatory) : H_a = 17 metres + 13 metres.

1929.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.
Day.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.
1	7	0 40	13	3 35	19	12 15	14	7 55	9	12 15	15	12 40	10	15 30	17	0 10	9	0 10	21	12 30	14	9 10	22	23 25
2	9	16 25	13	15 35	14	2 25	13	0 25	11	12 25	18	2 00	10	14 55	20	23 45	12	22 05	20	15 55	15	21 25	26	7 20
3	9	3 25	9	18 00	10	12 30	9	14 35	15	14 45	11	14 25	7	14 20	21	1 25	11	0 25	19	4 00	14	7 30	23	12 45
4	10	15 45	7	6 20	13	15 30	5	13 25	19	14 20	8	14 25	10	22 50	14	13 15	9	19 05	20	7 25	18	15 45	31	21 45
5	15	19 10	14	14 10	9	2 50	10	13 50	12	23 55	13	16 10	16	11 05	17	12 25	7	13 45	20	21 55	21	2 35	29	6 40
6	16	0 55	15	5 20	15	20 15	14	22 50	13	17 05	13	14 55	13	3 30	16	19 15	7	14 10	21	3 50	18	6 05	27	23 20
7	9	23 10	18	10 40	19	14 00	12	5 35	14	23 15	7	0 45	8	16 00	13	14 15	7	14 30	17	21 50	15	1 30	30	0 20
8	16	23 30	9	4 20	19	7 45	9	8 50	18	15 15	10	16 45	9	23 55	11	12 30	11	14 00	22	3 50	20	21 15	33	14 05
9	17	5 45	17	16 50	16	1 15	10	16 20	13	23 00	8	22 00	17	19 30	12	18 10	9	16 45	14	3 15	22	5 45	26	17 05
10	5	14 05	17	1 35	9	15 50	10	11 05	15	2 25	12	23 00	18	11 05	11	21 00	8	1 50	16	18 30	25	15 10	25	23 10
11	12	15 10	16	16 50	7	12 30	11	14 30	10	19 50	17	13 00	14	6 40	12	0 45	13	10 35	15	4 35	26	5 20	33	2 40
12	9	4 35	26	23 55	6	0 45	13	3 35	13	23 50	12	9 50	9	12 20	9	22 50	13	10 15	10	20 35	24	4 50	29	?
13	7	11 10	25	0 35	5	15 00	13	13 10	26	18 50	16	14 45	5	14 55	14	4 30	13	16 20	13	14 05	16	9 55	17	1 00
14	10	20 55	22	20 25	7	12 55	21	18 10	20	0 10	11	4 40	10	21 00	9	15 50	12	0 15	13	13 50	7	12 45	15	3 30
15	14	16 00	14	1 05	10	21 45	16	7 55	12	6 15	17	19 00	18	16 20	10	24 00	9	15 10	18	14 40	27	9 40	7	11 25
16	9	1 20	9	12 55	12	6 05	11	16 35	11	23 35	15	0 25	16	11 10	15	22 15	7	15 20	17	0 55	12	0 55	?	?
17	12	10 30	25	21 10	13	0 10	11	16 35	11	7 25	15	19 30	16	15 30	14	0 25	9	13 35	12	16 20	8	7 45	11	?
18	14	22 40	28	15 30	14	2 10	11	12 25	11	17 25	13	16 30	13	1 35	9	0 30	13	14 40	18	14 55	23	10 00	19	21 55
19	14	22 55	31	17 20	15	15 50	20	23 55	9	0 20	13	3 10	17	7 35	11	22 45	11	11 45	9	0 20	16	22 30	21	12 25
20	14	12 05	27	0 55	16	11 55	21	1 50	7	14 10	10	12 10	11	10 05	11	4 05	15	10 05	25	17 45	14	8 50	28	14 15
21	14	23 55	11	0 05	11	15 45	15	1 00	22	21 30	8	21 40	7	14 35	12	15 55	17	8 25	25	3 30	24	23 45	21	16 35
22	17	4 40	17	9 35	14	15 30	10	17 55	11	0 15	9	6 30	10	19 35	17	19 40	9	0 10	14	6 40	25	0 25	18	23 15
23	14	3 40	15	6 50	10	23 35	10	17 00	14	11 15	9	16 00	15	7 20	16	14 05	13	13 10	21	18 45	22	15 05	18	23 00
24	13	5 15	6	8 40	16	12 15	11	14 55	15	23 10	14	15 45	11	15 55	12	4 25	12	12 55	19	13 10	31	1 20	39	21 40
25	8	0 35	22	21 55	12	0 20	13	19 55	17	2 50	9	5 00	12	4 30	10	15 25	11	12 40	18	8 50	26	0 10	37	0 05
26	7	16 50	15	0 05	7	12 20	13	20 25	15	13 40	7	14 25	8	14 25	17	23 35	9	16 00	15	23 35	20	7 25	19	17 35
27	6	19 05	9	0 05	7	16 15	9	11 00	10	23 25	8	13 45	12	21 45	16	0 25	14	23 55	15	23 05	21	14 05	18	0 10
28	24	14 55	16	20 35	8	4 25	18	20 40	13	22 05	10	20 50	15	12 25	15	6 05	16	2 10	20	20 20	8	1 40	28	21 15
29	17	23 50	—	—	9	14 40	17	7 25	12	17 05	12	12 50	11	3 35	12	12 00	13	23 35	22	15 35	9	7 30	28	13 10
30	22	13 10	—	—	7	15 25	11	0 35	23	11 25	10	14 40	16	23 05	16	4 15	18	1 45	15	3 00	7	15 10	17	11 20
31	18	15 00	—	—	9	2 30	—	—	11	23 55	—	—	28	14 30	14	16 00	—	—	13	23 25	—	—	18	3 05

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

426. Cahirciveen (Valentia Observatory) : H_a = 17 metres + 13 metres.

1929.

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. ...	—	hr.	4	hr.	279	314	131	0	165	m/s.	day. hour.	24	day. h. m.
Feb. ...	—	—	10	98	269	219	86	0	155	14	30 13	31	28 14 55
Mar. ...	—	—	5	8	239	364	133	0	100	16	20 1	19	19 17 20
April ...	—	—	4	22	327	291	80	0	105	13	8 8	21	7 14 00
May ...	—	—	6	39	349	298	58	0	220	14	14 18	26	14 18 10
June ...	—	—	3	8	278	360	74	0	180	17	13 19	18	13 18 50
July ...	—	—	6	28	338	285	93	0	295	12	11 13	23	2 2 00
Aug. ...	—	—	6	12	391	300	41	0	185	13	3 1	21	31 14 30
Sept. ...	—	—	2	3	210	392	115	0	205	13	3 1	18	3 1 25
Oct. ...	—	—	11	72	450	201	21	0	15	11	30 2	25	30 1 45
Nov. ...	11th, 24th	2	16	87	371	212	48	0	185	17	21 3	31	20 17 45
Dec. ...	4th, 5th, 8th, 24th, 25th, 28th	31	22	216	301	145	51	0	205	19	24 21	39	24 1 20
Year ...	8 days	33	95	613	3802	3381	931	0	205	25	Dec. 24 23	39	Dec. 24 21 40

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

Readings in degrees absolute.

427. Cahirciveen (Valentia Observatory).

1929.

Month.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	68.5	81.4	78.5	78.9	74.7	83.0	77.5	84.7	84.6	77.3	81.8	75.8
2	67.4	82.7	75.0	78.0	72.8	85.9	83.2	80.2	84.8	82.4	82.9	81.8
3	72.9	78.3	70.4	76.2	74.2	82.5	76.2	85.4	85.7	79.0	78.7	77.3
4	72.9	77.7	71.7	73.4	78.6	82.7	80.1	83.6	87.4	77.4	79.6	76.8
5	75.1	78.7	72.0	76.6	77.4	82.7	82.7	79.8	82.9	78.6	84.6	78.1
6	73.3	80.3	69.8	79.8	78.7	80.3	84.6	86.2	83.7	78.3	77.2	76.9
7	67.9	73.4	76.9	82.3	77.2	81.1	77.6	82.7	81.4	75.1	80.9	75.8
8	71.6	79.1	79.1	77.8	77.4	79.6	78.7	81.2	82.1	79.8	79.6	76.8
9	79.9	71.3	77.0	74.9	73.1	78.1	84.8	81.4	85.6	78.4	76.2	77.3
10	75.7	75.3	79.2	74.2	82.1	81.7	86.8	86.3	83.6	82.4	76.7	75.1
11	76.8	79.9	74.4	73.3	78.6	81.3	85.7	85.9	81.5	85.6	79.6	80.9
12	72.4	74.6	72.9	72.0	79.2	84.6	75.2	84.2	86.0	82.9	75.7	77.2
13	73.8	74.4	73.3	75.4	80.1	80.0	76.3	84.9	77.4	83.5	74.7	81.4
14	69.9	74.1	76.4	76.8	80.2	80.8	77.4	82.9	81.4	85.3	72.7	83.6
15	69.3	75.9	79.1	78.0	82.2	80.3	84.6	77.9	80.8	84.2	70.1	74.9
16	74.5	72.2	76.7	78.8	80.5	84.2	83.8	84.3	76.9	83.5	77.6	71.6
17	75.2	69.4	78.1	82.9	82.7	79.4	81.3	82.8	76.8	83.1	71.6	70.4
18	79.1	77.9	80.8	84.1	80.5	85.1	86.2	79.2	85.1	78.9	69.7	80.0
19	80.9	81.4	78.2	74.2	75.7	85.9	85.7	81.3	84.1	76.2	77.3	80.8
20	80.8	81.9	80.9	74.2	75.6	81.2	86.3	85.3	85.2	78.6	77.3	74.1
21	79.1	80.1	82.2	72.4	77.4	76.9	80.4	84.2	83.0	80.2	78.8	72.9
22	80.9	78.2	77.8	74.2	80.4	84.9	87.3	87.1	85.1	80.6	80.7	72.7
23	79.7	78.7	77.9	73.9	77.8	85.8	84.0	88.7	85.8	80.1	76.6	77.1
24	76.4	71.2	81.8	72.2	77.1	84.2	75.8	88.9	86.2	79.1	77.6	75.8
25	70.9	74.6	81.0	78.0	81.9	80.1	83.6	77.8	85.1	71.7	77.9	79.2
26	68.1	75.7	76.8	74.1	84.7	77.0	81.9	82.4	81.3	74.9	76.8	76.0
27	71.3	77.5	77.9	77.6	77.4	78.1	82.1	87.2	84.4	71.8	73.5	78.3
28	73.3	73.5	79.1	77.9	84.7	75.4	86.9	84.4	86.7	80.4	80.4	75.9
29	82.1	—	75.2	77.9	84.8	81.2	85.6	84.8	78.7	80.1	80.7	78.4
30	83.7	—	74.9	78.1	81.5	78.0	85.0	87.2	81.3	80.2	77.4	77.3
31	82.2	—	79.1	—	80.6	—	85.8	87.9	—	72.1	—	74.6
Mean	75.0	76.9	76.9	76.6	77.4	81.4	82.4	83.9	83.1	79.4	77.5	76.9

NOTES:—(1) The initial 2 of the readings is omitted, *i.e.*, 275.0 degrees absolute is written 75.0.

(2) The minimum refers to the interval from 18h. the previous day to 7h. on the day to which it is entered.

(3) Annual Mean 278.9.

428. Cahirciveen (Valentia Observatory).

Table for Cahirciveen (Valentia Observatory) in January 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows are numbered 1 to 31.

429. Cahirciveen (Valentia Observatory).

Table for Cahirciveen (Valentia Observatory) in February 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows are numbered 1 to 28.

NOTE.—Visibility in these tables refers to a landwards direction; visibility seawards, when it differs from visibility landwards, is given on p. 281.

430. Cahirciveen (Valentia Observatory).

Table for March 1929 at Cahirciveen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

431. Cahirciveen (Valentia Observatory).

Table for April 1929 at Cahirciveen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

NOTE.—Visibility in these tables refers to a landwards direction: visibility seawards, when it differs from visibility landwards, is given on p. 281.

432. Cahirciveen (Valentia Observatory).

Table for Cahirciveen (Valentia Observatory) in May 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

433. Cahirciveen (Valentia Observatory).

Table for Cahirciveen (Valentia Observatory) in June 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

NOTE.—Visibility in these tables refers to a landwards direction; visibility seawards, when it differs from visibility landwards, is given on p. 281.

434. Cahirciveen (Valentia Observatory).

Table for Cahirciveen (Valentia Observatory) for July 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

435. Cahirciveen (Valentia Observatory).

August, 1929.

Table for Cahirciveen (Valentia Observatory) for August 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

NOTE.—Visibility in these tables refers to a landwards direction : visibility seawards, when it differs from visibility landwards, is given on p. 281.

436. Cahirciveen (Valentia Observatory).

Table for Cahirciveen (Valentia Observatory) in September 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

437. Cahirciveen (Valentia Observatory).

Table for Cahirciveen (Valentia Observatory) in October 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

NOTE.—Visibility in these tables refers to a landwards direction; visibility seawards, when it differs from visibility landwards, is given on p. 281.

Table for November 1929 at Cahirciveen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Rows 1-30 show daily observations with various cloud codes and weather notes.

Table for December 1929 at Cahirciveen. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h-21h), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Rows 1-31 show daily observations with various cloud codes and weather notes.



Air Ministry
METEOROLOGICAL OFFICE

THE
OBSERVATORIES' YEAR BOOK
1929

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

RICHMOND (KEW OBSERVATORY)

Published by the authority of the
METEOROLOGICAL COMMITTEE



LONDON:

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1931

RICHMOND (KEW OBSERVATORY).

Latitude	51° 28' N.
Longitude	0° 19' W.
G.M.T. of Local Mean Noon	12h 1m.

Heights in Metres above Sea Level.

Barometer .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	10·4
Raingauge Site .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	5·5
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
Beckley Raingauge Rim .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	0·53

INTRODUCTION.

The Observatory was built in 1769 as the private observatory of King George III. Since 1842 it has been devoted to physics and meteorology. The meteorological records are continuous from 1854. The Observatory is in the Old Deer Park Richmond (Surrey), about 10 miles (16 km.) to the west of the City of London. The Observatory stands on a low artificial mound whose level is about $1\frac{1}{2}$ metres higher than that of the surrounding park. Round the Observatory a golf course has been laid out. The river Thames is distant about 300 metres on the north and west. Kew Gardens, which are extensively wooded, lie to the east-north-east, the nearest point of the Gardens being about 600 metres away. The town of Richmond, to the south-east, is about 1,100 metres distant. On the east side of the Park is the main road from Richmond to Kew; on the south side the railway from Richmond to Twickenham. An open area partly wooded, Syon Park, lies to the north-north-east across the river. Richmond Park is about $1\frac{1}{2}$ 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 1928 volume. The photographs were taken in 1925, but the only changes (before the end of 1929) which need be noted are the substitution of other experimental screens for the small marine screens which were being tested in 1925, and the removal in 1929 of the hedge near the North-wall screen. For the early history of the Observatory reference may be made to papers by S. P. Rigaud (The Observatory 1882, p. 279), R. H. Scott (Royal Society's Proceedings, Vol. 39 (1885), pp. 37-86), C. Chree (The Record of the Royal Society, 1897), and R. S. Whipple (Proceedings of the Optical Convention, 1926).

METEOROLOGY.

The elements dealt with in the following tables are: atmospheric pressure, temperature, humidity, rainfall, sunshine, solar radiation, wind speed and direction, earth temperature, minimum temperature on the grass, level of underground water; there is also a diary of cloud and weather.

For brief descriptions of most of the instruments from which values of the above elements have been obtained and of the methods of tabulating the records, reference should be made to the General Introduction. The following notes supplement, where necessary, the information contained therein.

Notes on Instruments.

Pressure.—The barograph* is mounted in the basement of the Observatory, where the diurnal variation of temperature is very small. The normal position of the instrument has been in the north room occupied by the magnetographs. When the magnetographs were removed and the preparations for the installation of the seismographs were commenced, the barograph was placed in the photographic dark-room (June 16th, 1925). The instrument remained in that position until May 21st, 1928, when it was restored to its original site and electric lighting installed. The barograph magnifies barometric changes in the ratio 1.553:1, i.e., the change of ordinate equivalent to a change of 1 mm. in the height of the barometer is 1.553 mm. "Residual corrections," obtained from the control observations taken daily with the Newman barometer at 9h, 15h and 21h, are applied to the hourly measurements. The same correction is applied to all the readings on the same photographic sheet, i.e., generally for forty-eight hours. The individual entries published for the hours of the control observations may differ by .3 mb. from those observations. The Newman barometer is compared from time to time with the two large mercury barometers, which were set up in 1855 and 1860 respectively and are still recognised as standards. A zero correction is based on these comparisons. The correction + 0.2 mb. (+ .006 mercury inch) which has been applied for many years, remained in use. Comparisons are made on the assumption that the value of the acceleration due to gravity is $g=981.199$ cm./sec². This is the value given by pendulum observations.† The departure from the value given for the latitude by Helmert's formula is insignificant. On occasions when a loss of trace occurred, the missing hourly values were derived from the Dines Float Barograph.* There were 53 hours in the year for which this was necessary.

Temperature and Humidity.—The thermograph is mounted in the West Room on the first floor of the Observatory, the thermometer bulbs being exposed in the screen attached to the north wall of the building. This screen has single louvres and the bottom is open. There is an additional flat louvred screen which shields the main screen from direct sunshine when the sun is in the West and not too low. The height of the bottom of the bulbs of the recording thermometers above the bottom of the sides of the screen containing them is 30 cm. in summer, 33 cm. in winter. The height of the bulbs above the top of the artificial mound on which the Observatory stands is approximately 3 metres; the height above the lawn where the rain-gauge is situated is approximately 5 metres. The scale values of the photographic records are not identical for the dry- and wet-bulb curves. For the dry-bulb, tube No. 4 II was in use and the scale value was 1 mm. = 0.3336a; for the wet-bulb, the old Falmouth wet-bulb tube (no number) was in use and the scale value was 1 mm. = 0.290a.

The control thermometers, which were graduated and mounted by Messrs. Negretti & Zambra in 1915, had been made and filled many years before and were therefore well seasoned. The National Physical Laboratory certificates dated 1916 give corrections to the nearest 0.05° C., the largest being 0.10°. The thermometers are tested each January in ice. According to tests made in January, 1929, there was no indication of any change of zero. The water for the wet-bulb thermometers used to be supplied from a small open tank inside the screen and it was customary to fill the tank to overflowing several times each day. In November, 1925, a tank was fitted outside the screen. A tube leads from this tank to two cups from which

* For descriptions of this instrument see *Observatories' Year Book*, 1923, p. 94, and *R. Met. Soc. Q. J.*, 1929, Vol. 55 (229), p. 37.

† 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 Kühnen and Furtwängler, is adopted as the standard of reference.

wicks are taken to the wet-bulbs. A further improvement was made in July, 1926, when a large inverted bottle was set up over the tank. Water flowing from this bottle keeps the level constant in the tank and the cups. The height of the apparatus is adjusted so that water drips slowly from the wet-bulbs. A bottleful of water lasts at least a week. It is found that the bottle survives severe frost.

Control eye-readings of the standard thermometers are taken daily at 9h, 15h and 21h. Residual corrections obtained from the control observations are applied to the hourly measurements of the curves. The same correction is applied to all the readings on the same photographic sheet, i.e., generally for forty-eight hours. The individual entries published for the hours of the control observations may differ by 0.3a from these observations. The larger departures refer to occasions when temperature is oscillating or changing rapidly.

In cases of loss of the dry-bulb record owing to the failure of the electric light or any other cause the readings of a thermograph in a second North-wall screen are adopted. There were 71 hours in the year for which this was necessary.

When the wet-bulb trace is missing or defective, the missing values are derived from the dry-bulb trace and the records of a hair hygograph. The same procedure is always adopted when the wet-bulb reading is below 273a. 978 hours had thus to be dealt with during the year. Humidity was determined from the dry- and wet-bulb readings by the procedure described in the General Introduction to this Volume.*

It may be noted that during 1929, 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 1½m. high and distant 11 metres to East and 17 metres to West. The readings of this standard gauge are at 7h and 18h. The hourly readings of the Beckley gauge are adjusted to give totals in agreement with the standard gauge.

Sunshine.—The sunshine recorder is mounted on the south parapet of the roof. The same frame has been in use since 1880 and it is believed that the ball has not been changed. The ball is now somewhat yellow. The exposure is satisfactory. The greatest elevations of the sky line in the azimuths in which the sun can rise and set are 1° and 3° respectively.

Solar Radiation.—Observations are made with an Ångström pyrhelimeter, which measures the intensity of the direct radiation received from the sun by a surface which is normal to the sun's rays. The observations are made within half an hour of noon on all days except Sundays, provided that the sun is visible and not too much obscured by cloud, fog or thick haze. The conditions of the intervening atmosphere are indicated in Tables 498–509 in the column "sky." The amount of radiation is given in milliwatts per square centimetre in the column headed "total." For conversion to the unit more ordinarily employed abroad, the following relation may be used, 1mw. per sq. cm. = 0.01435 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.

* Prior to 1926 the tables, based on Glaisher's factors, published in *The Computers' Handbook*, were used.

The Ångström instruments in use are by Rose, Stockholm. No. 24 was in use throughout the year. The ammeter is No. 68956, which was certified at the National Physical Laboratory in 1919.* The readings are evaluated according to Anström's original instructions.† To bring the readings into accordance with the scale adopted by the Smithsonian Institution, a correction of + 3·5 per cent. would be required.‡

Wind Speed and Direction.—To the end of 1925 the record of wind velocity was based on the readings from the Robinson-Beckley cup-anemograph.‡‡ From the beginning of 1926, readings of the Dines tube-anemograph have been used for all the wind data. The vane of the Dines instrument is at the same level as the cups of the other anemograph, 20 metres above the lawn. There are trees in the neighbourhood reaching greater heights. Those along the river to the west of the Observatory and about 280 metres away average 25 metres. The head of the present Dines instrument, set up at the beginning of the year 1923, is of the Mark II pattern. In the vertical tube there are 80 holes in 4 rows of 20. The diameter of each hole is 3 mm. The connecting tubes, 17 metres long, have the internal diameter 12 mm.

Wind direction is given by a twin-lever recorder attached to the vane of the Dines instrument. In accordance with an old convention, wind direction is not printed when the speed of the wind averages less than 1·6 metres per second, though the present vane is sensitive to lighter currents.

Earth Temperature.—The two thermometers in use were at 30 cm. and 122 cm. The ground in which the tubes for the thermometers are sunk is under grass. The soil is gravel. The site is well exposed. There are, however, three fruit trees about 9 metres to the east and 6 metres high. The bulb of the lower thermometer is 430 cm. above sea level.

Minimum Temperature on the Grass.—The grass minimum thermometer is set at 18h and read at 7h on the succeeding day, the reading being assigned to the day of reading.§ The thermometer is placed with the bulb about 25 mm. above the turf. The exposure is good, there being no obstruction within 76° from the zenith. The thermometer in use throughout the year was M.O. 23006. This thermometer has a spherical bulb, diameter 17 mm.

Identification Numbers of Instruments in use in 1929.

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, 1617
Campbell-Stokes Sunshine Recorder	.. .. .	M.O. 12
Dines Tube Anemograph Head	.. .. .	M.O. 1017
Dines Tube Anemograph Recorder	.. .. .	M.O. 1017
Earth Thermometer 1 ft.	.. .. .	M.O. 5
Earth Thermometer 4 ft.	.. .. .	M.O. 10
Grass Minimum Thermometer	.. .. .	M.O. 23006
Photo-thermograph	{ Dry Bulb	4 II
	{ Wet Bulb (Old Falmouth Wet Bulb)	No number
Photo-barograph	.. .. .	..

* In view of the discovery by Marten (*Preuss. Met. Inst. Ann. Rep.*, 1928, p. 64) that errors are likely to be caused by temperature changes produced in a microammeter when sunshine falls on it, it may be noted that the instrument used at Kew is always in shadow.

† Report of the International Meteorological Committee, St. Petersburg, 1899, p. 57.

‡ R. E. Watson. *Geophysical Memoir*, No. 21, 1923.

‡‡ The cup-anemograph which had been in action since 1869 was dismantled on October 21st, 1929, and a Dines P. T. anemograph of the latest type installed.

§ The hour of the readings to be published in the Year Book was changed from 9h to 7h as from January 1st, 1924.

Thermometer Corrections, 1929.

	173971. N.P.L. 1915.				173969. N.P.L. 1915.				MO 5. N.P.L. 1913.		MO 10. N.P.L. 1913.		MO 23006. N.P.L. 1918.	
Certified.	255 ^a	+0.20	285 ^a	-0.10	255 ^a	+0.15	285 ^a	-0.10	260 ^a	+0.1	260 ^a	+0.3	253 ^a	-0.1
	260	+ .15	290	- .10	260	+ .15	290	- .10	273	.0	273	+ .1	263	- .1
	265	+ .10	295	- .05	265	+ .10	295	- .05	280	.0	280	+ .2	273	- .1
	270	+ .05	300	- .10	270	+ .10	300	- .05	290	.0	290	+ .1	283	- .0
	273	- .05	305	- .05	273	.00	305	- .05	300	.0	300	.0	293	- .0
	275	.00	310	- .05	275	.00	310	- .05	310	.0	316	+ .1	303	- .0
	280	- .05	—	—	280	- .05	—	—	—	—	—	—	—	—
Applied.	260 } 270 }	+0.1	—	—	260 } 270 }	+0.1	—	—	—	—	275 } 285 }	+0.2	253 } 278 }	-0.0
	270.1 } 283.0 }	0.0	—	—	270.1 } 283.0 }	0.0	—	—	260 } 310 }	0.0	285.1 } 295 }	+0.1	278.1 } 303 }	+0.1
	283.1 } 310.0 }	-0.1	—	—	283.1 } 310.0 }	-0.1	—	—	—	—	—	—	—	—

Notes on Meteorological Tables.

The year was remarkable for the cold winter and for the prolonged droughts. January and February were the coldest experienced since 1895, ice floes appearing on the Thames for the first time since that year.

The lowest temperature was 262.2a (12.6° F) on February 15th. There were 7 "ice days" i.e., days with maximum temperature in the screen below 273a.

The first nine months of the year were remarkable for their dryness, the total rainfall for these months being 184 mm. below normal. March and September were almost without rain.* The heavy rains of November and December, however, with an excess of 122 mm. brought the annual total up to within 10 per cent. of normal.

Sunshine was considerably above normal, the excess amounting to 232 hours.

Diurnal Variation of Pressure and Temperature.—Harmonic Analysis. In accordance with the precedent of the last six years, the first four harmonic components have been computed for each month. The results are tabulated in Tables A and B.

The inequality is supposed to be given by the expression.

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

t being the time in hours since midnight. The angles α are the phases of the several sine-waves at midnight. The curves are tabulated according to Greenwich mean time but the phases in Table A have been reduced to local mean time. The difference in Longitude between Kew and Greenwich being only 19' the correction is hardly appreciable in the figures, which are rounded to the nearest degree.

* See "Notes on Rainfall" table No. 485.

TABLE A.

Diurnal Variation of Barometric Pressure. Fourier Coefficients. $\Sigma c \sin (nt + \alpha)$.
 Richmond (Kew Observatory), Longitude $0^\circ 19' W$. 1929. Local Mean Time.

Month or Season.	c_1	α_1	c_2	α_2	c_3	α_3	c_4	α_4
	mb.	°	mb.	°	mb.	°	mb.	°
January .. .. .	.038	279	.251	144	.155	348	.077	200
February .. .. .	.136	72	.313	147	.123	326	.041	116
March .. .. .	.374	350	.490	146	.072	322	.044	3
April .. .. .	.402	27	.437	150	.045	172	.031	348
May .. .. .	.396	32	.312	153	.069	158	.022	305
June .. .. .	.508	9	.319	140	.124	150	.012	291
July .. .. .	.381	23	.311	147	.101	154	.017	278
August .. .. .	.227	30	.368	146	.072	134	.027	278
September .. .. .	.534	25	.442	154	.009	36	.064	325
October .. .. .	.175	317	.449	167	.135	357	.038	16
November .. .. .	.241	160	.377	177	.102	343	.023	158
December .. .. .	.688	153	.359	147	.168	359	.148	224
Arithmetic Mean .. .. .	.342	—	.369	—	.098	—	.045	—
Year .. .. .	.194	34	.362	152	.034	360	.016	253
Winter .. .. .	.232	148	.316	155	.134	345	.059	202
Equinox .. .. .	.338	9	.449	154	.039	346	.041	346
Summer .. .. .	.374	22	.326	147	.089	151	.018	288

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

TABLE B.

Diurnal Variation of Temperature. Fourier Coefficients. $\Sigma c \sin (nt + \alpha)$.
 Richmond (Kew Observatory), Longitude $0^\circ 19' W$. 1929. Local Mean Time.

Month or Season.	c_1	α_1	c_2	α_2	c_3	α_3	c_4	α_4
	a.	°	a.	°	a.	°	a.	°
January	1.009	209	.375	29	.143	178	.057	298
February	1.777	214	.649	33	.113	214	.016	219
March	4.541	215	1.185	26	.075	171	.173	199
April	3.382	222	.416	37	.289	20	.082	234
May	4.105	225	.192	55	.339	38	.105	14
June	3.769	223	.120	243	.316	39	.123	50
July	4.525	225	.101	63	.361	25	.149	47
August	3.821	227	.445	34	.279	17	.049	39
September	4.591	224	.934	34	.183	15	.179	175
October	2.484	226	.901	54	.127	269	.154	169
November	1.238	217	.617	58	.139	226	.274	282
December .. .. .	.819	229	.522	34	.210	218	.071	32
Arithmetic Mean	3.005	—	.538	—	.215	—	.119	—
Year	2.993	222	.508	38	.088	20	.014	164
Winter	1.203	216	.531	40	.145	210	.023	327
Equinox	3.735	221	.843	37	.093	5	.140	195
Summer	4.052	225	.153	40	.320	30	.103	39

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

Level of Underground Water.—In Table 526 there is given for each day the mean height above sea level of the surface of the underground water. The level actually measured is the surface of water in a pipe which passes through the floor of the basement into the ground. The water level depends mainly on the state of the river Thames. The Observatory is close to Richmond lock, which is half-tidal, and the underground water is in summer a little below the level of low water above the lock (220 cm. above M.S.L.). The effects of the spring and neap tides are conspicuous in the fluctuations of level in summer.

Cloud Amount.—The mean cloud amounts for the six hours of observations are given month by month in the diary of cloud and weather. The following means are derived from these data:—

Mean Amount of Cloud from Six Observation Hours.

Month	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Cloud ..	7.9	7.1	4.4	6.8	5.4	6.3	5.5	6.5	4.1	6.4	6.8	6.1	6.1

Mean Amount of Cloud for the Year at the Six Observation Hours.

Hour ..	7h	9h	13h	15h	18h	21h
Cloud ..	6.6	6.6	6.4	6.5	5.5	5.1

Visibility.—The objects used for the classification of visibility are enumerated below. The Observatory is on very low ground. The view is bounded on the south-east by Richmond Hill and on the west by the trees near the river. For object H a church tower seen through trees and with high ground behind it has to be used. There is no conspicuous object at the appropriate distance to serve as I, and interpolation is necessary. The object J is in London and is therefore more affected by atmospheric pollution than the other objects.

VISIBILITY AND FOG.

LIST OF OBJECTS.

Identification Letter.	Actual Object.	View Point.	Bearing.	Actual Distance.	Standard Distance.
X	Verification House (Not Visible).	S.W. Corner of Observatory Bldg.	S.W.	<25 metres	25 metres
A	Verification House ..	" "	S.W.	25 "	25 "
B	17ft. Stevenson Screen	S.E. " Corner " Observatory Bldg.	S.W.'S.	50 "	50 "
C	New Magnetic Hut ..	S.W. Corner of Observatory Bldg.	S.'W.	110 "	100 "
D	S.W. Tree	" "	S.W.	200 "	200 "
E	Golf Club House ..	Observatory ..	S.E.'E.	500 "	500 "
F	Orange Tree Hotel ..	" ..	S.E.'E.	970 "	1,000 "
G	St. Matthias Church ..	" ..	S.E.	1,900 "	2,000 "
H	South Ealing Church	" ..	N.'W.	4,000 "	4,000 "
	Mortlake Chimney well visible.	" ..	E.	3,500 "	7,000 "
i	Chelsea Chimneys not visible.	" ..	E.	9,300 "	
J	Chelsea Chimneys ..	" ..	E.	9,300 "	10,000 "
K	Surrey Hills	" ..	S.'E.	20,000 "	20,000 "
l	Surrey Hills well visible	" ..	S.'E.	>20,000 "	30,000 "
m	Surrey Hills, exceptionally visible.	" ..	S.'E.	>20,000 "	50,000 "

ATMOSPHERIC ELECTRICITY.

The systematic observations in atmospheric electricity are devoted to potential gradient, air-earth current and ionization. In the case of potential gradient there is continuous autographic registration; the other elements are observed each afternoon when conditions are favourable.

Potential Gradient.—The Kelvin water-dropper electrograph has been housed since 1915 in a low building known as the Clinical House. The pipe carrying the jet projects through a hole in a window and is adjusted so that the point where the jet breaks into spray is 1.50 m.* from the window and 1.73 m. above the pool into which the water falls.† The electrogram is a record of the difference of potential between the ground and the point where the jet breaks. The aim is, however, to obtain the potential gradient in the open. For this purpose observations are made at a site in the Observatory garden. The apparatus for these "absolute" observations consists essentially of a long insulated rod carrying at the end a lighted fuse, which is connected to an electrostatic voltmeter. Readings are taken with the fuse at one metre and at two metres above the ground, the grass on which is kept short. The observations are taken about noon on all convenient dry days. From the observations the ratio of the potential gradient in the garden to the potential recorded by the electrograph is computed. Such a ratio is given for each month in Table 541.

The water dropper was out of action, owing to frost, from February 11th to March 3rd. For this period of inaction, however, the values of potential gradient are derived from a subsidiary electrograph consisting of a radio-active collector attached to a Dolezalek quadrant electrometer which was run in the old Magnetic Hut.

During the year‡ two electrostatic voltmeters, No. 1684 and No. 1685, were used for the absolute observations. The voltmeters and also the electrograph are calibrated at frequent intervals by means of a Cambridge and Paul potentiometer, a high tension dry battery being used as a source of potential difference.

The data appearing in Table 540 include the electrical character figure assigned to each day from the consideration of the electrograms. Of the character figures, 0 denotes the absence of negative potential, 1 implies the existence of negative potential at one or more times during the day but with a total duration of less than 3 hours, while 2 implies the existence of negative potential with a total duration of 3 hours or more. As a negative potential gradient hardly ever occurs except when rain is in the neighbourhood, character 0 occurs on dry days and character 2 on days with continuous rainfall.

* 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 present criteria for character figures were adopted as from the beginning of 1914. Correcting for missing days, the average frequency of character figures 0, 1, and 2 during the years 1914-1927 inclusive were 185 : 140 : 40. The corresponding figures for 1929 are 211 : 119 : 35. In accordance with a resolution of the International Union for Geodesy and Geophysics (Section for Terrestrial Magnetism and Atmospheric Electricity : Prague Meeting 1927) tabulations of the duration of negative potential gradient are included in the present issue of the Year Book. The total duration of negative gradient is given for each day for which the electrographic record is satisfactory.

Table 541 gives daily data derived from measurements of the electrograms. They represent means for 60-minute intervals centred at the exact hours 3h, 9h, 15h, and 21h G.M.T. On occasions when the trace was defective, either through failure of insulation or some other cause, values of potential gradient have been omitted. On some occasions the curve, though existent, is so oscillatory that no satisfactory estimate is possible of the mean value of the ordinate. Such occasions are indicated by the letter *z*. If there is no doubt as to the sign of the hourly mean value, though a numerical measure is unobtainable, the sign is indicated by a + or a - attached to the *z*. The symbol $z \pm$ indicates that there were oscillations on both sides of the zero line, and that the sign of the mean value was uncertain.

The extreme hourly mean values in Table 541 are 1215 v/m at 9h. on March 5th and -680 v/m at 15h. on November 16th. The former value is representative of foggy conditions ; on this particular occasion the fog developed in the early morning after a fine evening. The potential gradient started rising gradually at 5h., reached a maximum at 9h. and then fell gradually until 13h. The fog cleared at 10h. 30m. The extreme negative potential of November 16th was associated with continuous rain and occasional sleet. The potential was persistently negative from 10h. to 19h.

Of the two sets of mean monthly values at 3h, 9h, 15h and 21h given in Table 541 at the foot of each month's data, the first set (*a*) represents the arithmetic means of all the positive 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 541 and 542 be compared, it will be found that the quiet day mean is in excess of the means (*a*) and (*b*) in ten months out of the twelve. In four months, January, May, November, and December, the excess of the quiet day mean over the mean (*a*) is notable. For the year as a whole, allowing equal weight to the twelve months, the quiet day mean, the mean (*a*) and the mean (*b*) are respectively 338 v/m, 321 v/m and 307 v/m. The corresponding values for 1928 were 298 v/m, 301 v/m and 282 v/m.

As to comparison with earlier years it is to be noted that the present method of making the "absolute" observations was initiated at the beginning of 1910. Since then there has been no considerable change in the exposure at the control station.* The annual mean potential gradient for selected quiet days is available from that date onwards.†

1910	310 v/m	1917	354 v/m	1924	329 v/m
11	301 v/m	18	346 v/m	25	326 v/m
12	300 v/m	19	331 v/m	26	279 v/m
13	335 v/m	20	315 v/m	27	315 v/m
14	345 v/m	21	281 v/m	28	298 v/m
15	354 v/m	22	318 v/m	29	338 v/m
16	367 v/m	23	318 v/m		

The average for the 20 years is 323 volts per metre.

The mean for 1926 is a minimum. Along with the low value for 1921 it was probably to be attributed in part to the exceptional atmospheric conditions prevailing during the coal strikes of those years. Apart from these abnormalities 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 542 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 December it was necessary to include one 24-hour period which did not commence at midnight, while for six days in February the data were obtained from the subsidiary electrograph.

Except in these cases the non-cyclic change is given explicitly in Table 542, so that anyone who may desire to reproduce the figures as they were before the non-cyclic correction was applied can easily do so.

All the inequalities show a well marked double oscillation with minima in the early morning and early afternoon, maxima in the late morning as well as in the evening. The diurnal inequality for the whole year shows the higher maximum at 9h, the lower minimum at 4h. This is not the case in every year. The hours of the extremes and the range of the inequality is given for each year from 1910 in the following list.

Year.	Max. hr.	Min. hr.	Range v/m	Year.	Max. hr.	Min. hr.	Range v/m	Year.	Max. hr.	Min. hr.	Range v/m
1910	20	4	138	1917	20	4	154	1924	20	4	133
1911	9	4	154	1918	20	2	139	1925	19	3	129
1912	9	4	149	1919	8	4	124	1926	20	4	118
1913	19	3, 4	160	1920	9	3	122	1927	19	3	129
1914	20	3	169	1921	20	3, 4	132	1928	9	3	124
1915	19	5	173	1922	20	4	144	1929	9	4	137
1916	20	4	151	1923	9	4	160				

It will be seen that the range has been considerably lower in most recent years than it was in the years 1911 to 1917.

* cf. Year Book, 1926, p. 327.

† Estimates for the years 1898-1909 are given by Chree, *Phil. Trans. A* (1915) p. 141. The change of site of the electrograph in 1915 is discussed in *Hourly Values*, 1916.

‡ Washington, Carnegie Institution. Researches of the Dept. of Terr. Mag., Vol. V. (1926) pp. 361-384.

If the inequalities for the year and the seasons are compared with the corresponding inequalities for atmospheric pollution given in Table 544, the remarkably close similarity in the hours of occurrence of the principal maxima and minima noted in previous years is not borne out. There is, however, the same marked double oscillation throughout the day in both elements, a principal maximum or minimum of one falling at the same time as the secondary maximum or minimum of the other.

Conductivity and Air-earth Current.—To determine the current flowing from air to earth, the conductivity of the atmosphere at one metre above the ground is measured by means of the Wilson 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 given in Table 541) is taken as the measure of the air-earth current. The conductivity is not observed during rain nor when the potential gradient is negative. Data are available for about one-third of the days of the year 1929.

In Table 539 we have ventured to use λ_+ as the symbol for the Wilsonian conductivity, so implying that the conductivity measured is that due to positive ions. This interpretation of the observations is not accepted by all physicists.

The conditions under which the air-earth current is measured are maintained as uniform as possible, but they differ from the conditions under which the vertical current passes from the air to the earth in the absence of the apparatus. The presumption is that the results obtained would require to be multiplied by a factor to represent the true air-earth current.† The monthly mean of the observed values of the current varied from 47 in January to 109 in September in terms of the unit 1×10^{-18} ampere per square centimetre. Allowing equal weight to each month we find that the mean for the year in terms of the above unit is 82. The mean derived directly from the 140 observations is 84. There is very little difference from the corresponding values for other years.

There is some doubt as to the comparability of observations made with the Wilson apparatus and other estimates of the air-earth current. Determinations based on separate measurements of the conductivity for positive and negative electricity have yielded on the continent averages of about 2×10^{-16} amperes per square centimetre. On the hypothesis that it is only λ_+ that governs the transport of electricity from air to ground this estimate must be reduced to 1×10^{-16} amperes per square centimetre.

Ionic Charges.—Table 539 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 instruments are exposed in the open on a stone pedestal 1 metre high, and 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. The initial voltage is about 180.

* *Proceedings of the Cambridge Philosophical Society*, Vol. 13, p. 184 (1906).

† When the current passing into a metal plate at ground level is taken as the standard the factor is found to be about 1.2. A discussion of this question has been published in a memoir by Dr. R. E. Watson. —*Geophysical Memoirs*, No. 45. 1928.

‡ *Physikalische Zeitschrift*, Vol. 8, No. 8, p. 246 (1907).

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 most 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. The averages for the year were + 65 and - 48 $\times 10^{-18}$ coulomb per c.c. According to Millikan's experiments* the ionic charge is 15.9×10^{-20} coulomb, so that these averages correspond respectively with 400 positive and 300 negative ions per c.c. These averages are much lower than those obtained in clean country air. 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.

ATMOSPHERIC POLLUTION.

The Owens atmospheric pollution recorder or air filter No. 1‡ is situated in the Clinical House, and the level of the intake is about 1½ m. above that of the adjacent ground. The weight of the pollution is not obtained directly but is deduced from shade numbers 0, 1, 2, etc., assigned to the deposit left on the filter paper through which the air is drawn. The equivalents of the shade numbers are allotted in accordance with the results of an investigation carried out for the Atmospheric Pollution Committee by Mr. J. G. Clark.§ When the normal volume of air, 2 litres, is aspirated (it is drawn through a hole 3.2 mm. in diameter) shade number 1 answers to 0.32 milligrams per cubic metre. The Owens apparatus was designed in the first place for dealing with the air of cities and the amount of pollution at the Observatory is usually so small that the shade recorded when the 2 litres are aspirated is either 0 or 1.

Preliminary experiments with a spare recorder having justified the assumption that increasing the volume of air would increase the shade number in proportion an auxiliary tank was brought into use at the beginning of July, 1928. With this tank in operation each spot on the filter paper corresponds with 6.4 litres of air. The unit shade is therefore equivalent to 0.1 mg./m³. When fog prevails the auxiliary tank is put out of action and the unit shade reverts to the value 0.32 mg./m³.

This improvement in the recording system must of itself introduce a discontinuity in the published data. It is anticipated however that the results will be much more reliable.

In this connection it is to be noted that new scales of shades were taken into use on the following dates:—

June 7, 1925; July 1, 1926; and (retrospectively) January 1, 1928.

The highest estimate of pollution was 4.8 mg./m³ on November 15th at 17h. There were 43 days on which the pollution reached 1.0 mg./m³; the number of hours credited with 1.0 mg./m³ or more being 312. The months in which these days and hours occurred are given in the table in the margin.

	days	hours
Jan.	6	49
Feb.	14	100
Mar.	14	112
Nov.	6	43
Dec.	3	8
	43	312

Table 543 gives mean hourly values derived from all the days of the month for which complete records were obtained. There were 353 such days in the year. The highest and lowest of these hourly values are in heavy type.

* Phil. Mag. (6) 34 (1917) 3.

† Washington, Carnegie Institution. *Researches Dept. of Terr. Mag.*, Vol. III (1917) p. 411.

‡ 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).

Table 544 gives diurnal inequalities derived from the data in Table 543 after the application of non-cyclic corrections. The principal reason for computing the diurnal inequalities was to facilitate comparison with the corresponding diurnal variations in barometric pressure and the potential gradient of atmospheric electricity.

The mean values computed for the several years since the recorder has been in operation are given in the following table, together with the means for the summer months (May to August) for the equinoctial months (March, April, September, October) and for the winter months. The unit is 1 mg/m^3 .

	1921	1922	1923	1924	1925	1926	1927	1928	1929
Summer	·13	·27	·27	·25	·15	·08	·06	·07	·06
Equinox	·27	·45	·30	·50	·24	·25	·13	·15	·18
Winter	·53	·46	·35	·39	·39	·27	·24	·23	·30
Year	·31	·39	·31	·32	·26	·20	·14	·15	·18

In any discussion of these mean values it should be borne in mind that before the introduction of the auxiliary tank the great majority of estimates were shade 0 or shade 1. To discriminate between these two shades is difficult, and the decision depends on the "personal equation" of the observer as well as on the colour of the scale of shades. Some change in standard from year to year has been inevitable.

The nature of the diurnal variation is most easily recognised in Table 544. There is always a well defined minimum during the night and another in the early afternoon. The first maximum of the day usually occurs about 9h and the second one follows about 12 hours later. This double oscillation is apparently due to two causes, the variation in human activity in producing pollution and the variation in the wind which disperses it. In 1929 the principal maximum was in the afternoon in April and from October to December; in the forenoon in the remaining months. The principal minimum occurred in the afternoon from March to September; in the early morning in the remaining months. Curves illustrating the diurnal variation of atmospheric pollution will be found in the Annual Reports of the Advisory Committee on Atmospheric Pollution and in a paper by Dr. F. J. W. Whipple in the Quarterly Journal of the Royal Meteorological Society, Volume 55 (1929), No. 231.

SEISMOLOGY.

Notes on Instruments.—The seismographs, three Galitzin pendulums with galvanometric registration, were transferred from Eskadalmuir Observatory during the latter part of 1925 and have been in regular operation since the beginning of 1926. Earth movements in the north, east and vertical directions are recorded. The pendulums, which are in the old magnetograph room, are mounted on a massive concrete pillar, separated from the floor. The galvanometers and recording apparatus are accommodated on slate slabs in the old seismograph room, which housed the Milne instrument until it was put out of action on June 17th, 1925. To eliminate temperature variation as far as possible, the windows of the pendulum room are provided with triple glass and also shielded by louvered screens from direct sunshine which might fall on them morning and evening. The annual range of temperature variation is about 10° C . and the mean daily range about 0.2° C .

The concrete pillar rests on gravel. The underlying geological strata are shown in the diagram on this page. The diagram is based on the results obtained * in sinking a well near Richmond Bridge. The Richmond boring terminated at a depth of 440 metres in Old Red Sandstone. At Stonebridge Park, 8 km. to the north, a boring was carried down † to a depth of 600 metres, the last 280 metres being in Old Red Sandstone. There is no information as to deeper strata near Richmond. It may be noted, however, that the sandstone beds dip at about 30° and that a boring at Little Missenden, Bucks, entered Silurian rocks at a depth of 370 metres with no evidence of the presence of Old Red Sandstone.

For detailed description of the Galitzin seismograph and for particulars of interpretation of the records, reference may be made to Fürst B. Galitzin's "Vorlesungen über Seismometrie" (Leipzig, 1914), or to G. W. Walker's "Modern Seismology" (London, 1913). ††

Timing is controlled by a half-seconds clock (Morrison 8587) which is rated daily by comparison with the Greenwich wireless time-signal relayed from Daventry. Time breaks are made electro-magnetically every minute and seismometric readings can be determined to the nearest second.

The free periods of the galvanometers (T_1), were determined in November, 1925, and were found to have suffered very little change since the original determinations at Eskdalemuir were made. The lengths of the simple equivalent pendulums (l), are assumed to have remained unaltered. These constants are as follows:—

	N	E	Z
T_1	24.68 sec.	24.80 sec.	13.04 sec.
l	118 mm.	118 mm.	360 mm.

N, E, and Z indicate the north, east and vertical components respectively.

The values of the other constants which are used for deriving the scale values were determined in March and September for the vertical pendulum, and in September for the horizontal instruments. In the case of the horizontal instruments it was found that the magnifications agreed closely with those obtained from the previous tests in June, 1928. In order to diminish the sensitivity of the vertical pendulum to temperature changes the steel controlling spring was replaced in May, 1928, by one made of elinvar, an alloy which has a temperature coefficient of elasticity about one tenth that of steel. ‡ A detailed report on the behaviour of the spring has been published in a paper § by F. J. Scrase. The difficulties usually associated with the operation of the vertical pendulum have been greatly diminished. Some adjustments to the vertical pendulum were carried out on September 10th.

The table given below summarises the values of the constants obtained from the standardisation tests. T is the free period of the pendulum, μ is a damping co-efficient which vanishes when the free movement of the pendulum is just aperiodic, A is the length of the beam of light from the galvanometer mirror to the recording drum (usually about 1100 mm), and k is the "transmission" factor. The quantity $\frac{kA}{\pi l}$ may be regarded as a relative measure of the nominal magnification. $\frac{kAT}{4\pi l}$ is the magnification factor for regular earth movements with a period equal to that of the pendulum.

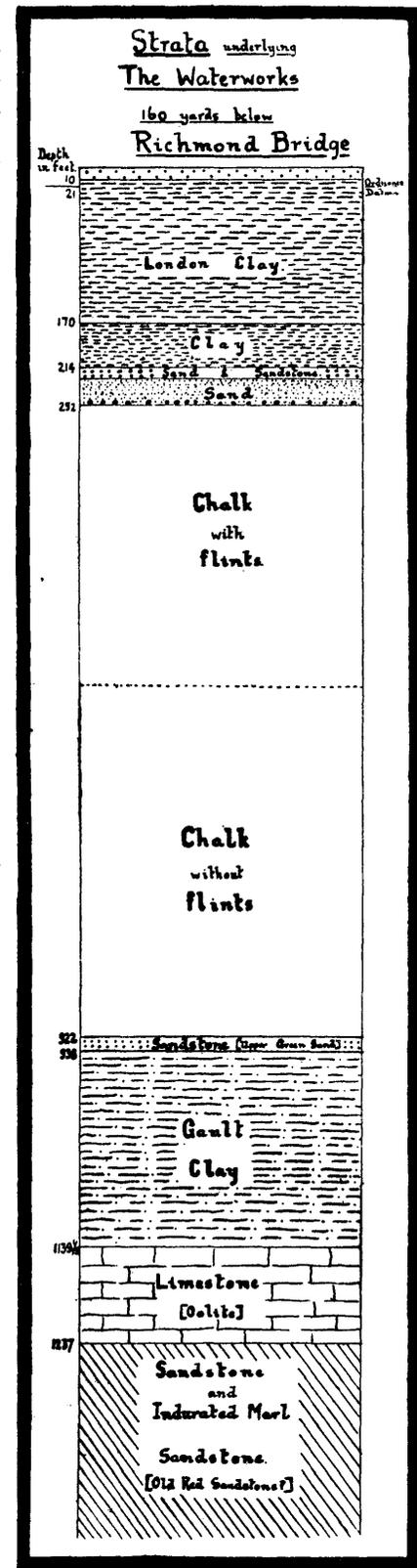
* London. J. Geological Soc., Vol. 40 (1884), Vol. 41 (1885), p. 523.

† Records of London Wells, Mem. Geol. Survey 1913.

‡† The graphical method adopted at Kew for determining the constants of the pendulums is explained in a memoir by F. J. Scrase. Geophysical Memoir No. 49. (1930).

‡ Y. Dammann, "Contribution à l'étude des propriétés élastiques de l'élinvar. Son utilisation dans les séismographes." Publications du Bureau Central Séismologique International, Série A, Fascicule No. 5, pp. 122-129, 1927.

§ J. Sci. Instruments, Vol. VI, No. 12 (1929), p. 385.



A. Strahan
Prof. Paper No. 16, Survey of India.

1929	Component	T	μ^2	$\frac{kA}{\pi l}$	$\frac{kAT}{4\pi l}$
Jan. 1 to Sept. 9 ..	N	sec. 24.8	-0.01	sec. ⁻¹ 46.9	291
Sept. 9 to Dec. 31 ..		25.5	0.00	46.8	298
Jan. 1 to Sept. 10 ..	E	24.7	+0.02	43.3	267
Sept. 10 to Dec. 31 ..		24.7	+0.09	43.5	268
Jan. 1 to Mar. 20 ..	Z	14.2	+0.08	112	398
Mar. 20 to Sept. 10 ..		12.5	+0.11	112	350
Sept. 10 to Dec. 31 ..		12.9	+0.10	113	364

In windy weather the seismographs, especially the horizontal components, are affected by slow oscillations, which are attributed to the tilting of the ground, the movement being conveyed through the foundations of the Observatory. On occasions the reading of an earthquake record is rendered very difficult, if not impossible, by these irregular disturbances.

Notes on Tables.—The *Seismological Diary*, Table 545, contains the particulars of the earthquakes recorded at the Observatory. The notation employed is as follows:—

P is the normal first phase (longitudinal waves). Special cases of P occur when the waves are reflected from (PcP) or penetrate (P') the earth's central core.

PR₁, PR₂ . . . are longitudinal waves reflected once, twice . . . near the earth's surface.

S is the normal second phase (transverse waves). ScPcS is a special case of S in which the wave penetrate the central core and pass through it as longitudinal vibrations.

PS and PPS are waves which suffer a change or changes from longitudinal to transverse oscillation or vice versa, on reflection near the surface.

SR₁, SR₂ . . . are transverse waves reflected once, twice . . . near the surface.

L indicates long waves (surface waves).

i is the sudden commencement of a phase. *e* means a gradual or indistinct commencement. These letters are used as prefixes to the phase symbols, but where the character of the phase is not assignable the letters are used as independent symbols. When the commencement of a phase is moderately clear the prefixes are not used.

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

All times entered against the above phases are the times of arrival of the phases at the station.

m₁, m₂ . . . are successive prominent maxima of sinusoidal waves occurring in the preliminary phases. M₁, M₂ . . . are successive prominent maxima occurring during the principal or surface phase.

The period is the duration of a double oscillation (to and fro movement).

A_N, A_E, A_Z are the amplitudes, in microns ($\mu=0.001$ mm.), of the components of the true displacement of the ground from the position of rest. Displacements to the north, east and upwards are regarded as being positive. When successive positive and negative displacements have the same magnitude the time of occurrence is given for the positive one. When no sign is given the measurement refers to a long group of waves the amplitudes of which are the same.

The following formulæ due to Galitzin are employed for computing the times of the maxima and the amplitudes of sinusoidal waves :—

(1) Lag of the displacement shown by the galvanometer after the maximum displacement of the ground

$$\tau + \tau_1 = \frac{T_p}{2\pi} \left[\tan^{-1} \frac{2u(1-\mu^2)^{\frac{1}{2}}}{u^2-1} + \tan^{-1} \frac{2u_1}{u_1^2-1} + \frac{\pi}{2} \right]$$

each inverse tangent being taken as between 0 and π .

(2) Magnification of record =

$$\frac{k A T_p}{\pi l} \cdot \frac{1}{(1+u^2)(1+u_1^2)\{1-\mu^2 f(u)\}^{\frac{1}{2}}}$$

where T_p is the period of the earth wave considered,

$$u = \frac{T_p}{T}, \quad u_1 = \frac{T_p}{T_1}, \quad \text{and } f(u) = \left[\frac{2u}{1+u^2} \right]$$

Δ is the distance in kilometres of the epicentre measured along the arc of the great circle passing through the station. This distance is derived from the interval between P and S, by the tables, due to Zeissig, given in Klotz's "Seismological Tables" (Publication of the Dominion Observatory, Ottawa, Vol. III, No. 2). The azimuth of the epicentre (0° to 360°) is measured from north through east. When an estimation of the azimuth is possible, it is used, together with Δ , for provisional determination of the co-ordinates of the epicentre. In other cases where co-ordinates are given, the information has been obtained from other sources; the origin of the determination is inserted in brackets.

Brackets enclosing figures or phase symbols indicate that the information is uncertain.

The Diary contains some amendments to the information which has already been issued in the Observatory Seismological Bulletin. Attention is drawn to revised readings for the disturbance on June 3rd, in which case misinterpretation of the phases led to an estimate of the epicentral distance which was quite incompatible with information received subsequently.

The total number of shocks recorded during the year was 320. The phases being sufficiently well defined, estimates of the epicentral distances were obtained for 74 shocks, whilst in 6 cases the records of the initial impulses were sufficiently sharp to allow of computations of azimuth and so of estimates of the co-ordinates of the epicentres. There were 12 earthquakes which produced a disturbance at the observatory with an amplitude exceeding 0.1 mm. in a horizontal component. These earthquakes originated in the Sea of Okhotsk (January 13th), in the Atlantic Ocean (February 22nd, June 27th, November 18th), near the Aleutian Islands (March 7th, July 7th—8th, December 17th), in Persian Turkestan (May 1st), in Asia Minor (May 18th), in the Pacific Ocean near Alaska (May 26th—27th), in New Zealand (June 16th—17th), and near the Caroline Islands (November 15th).

For comparison the statistics for all the years in which the Galitzin seismographs have been in operation at Kew Observatory are given :—

	Shocks recorded.	Epicentral distances.	Azimuths. estimated	Shocks exceeding 0.1 mm.
1926	306	55	—	10
1927	314	78	6	9
1928	339	97	19	18
1929	320	74	6	12

Microseisms.—In Table 545 are given the amplitude (A) and period (T_p) of the microseisms shown by the north component seismograph on each day at 0h, 6h, 12h, and 18h.* On a few occasions (less than 2 per cent. of the total number) when the north component record was not available measurements of the east component

* For the year under review microseisms were measured at eight hours daily (0h., 3h., 6h.—etc. with a view to investigation of diurnal variation.

record have been included. The group of waves of greatest amplitude occurring in the 30 minutes centering at the hour in question is selected, and the amplitude tabulated is the mean obtained from the three largest complete waves in that group. The period is derived from a measurement made on the same group, but the procedure adopted in 1926 and 1927 was slightly modified from January 1st, 1928, in order to diminish the tendency on the part of the tabulator to give preference to certain periods.* The total time, to the nearest second, for a number of complete consecutive waves is measured, the number of waves being chosen so that the time is between 23 and 30 seconds. The period is then derived from the following division table:—

Number of Waves.	Time interval in seconds.							
	30	29	28	27	26	25	24	23
3	10	9.7	9.3	9.0	8.7	8.3	8.0	7.7
4	7.5	7.3	7.0	6.7	6.5	6.3		
5	6	5.8	5.6	5.4	5.2			
6	5	4.8	4.7	4.5				
7	4.3	4.1	4.0	3.9				
8	3.7	3.6	3.5					
9	3.3	3.2	3.1					
10	3.0	2.9	2.8					
11	2.7	2.6						
12	2.5							

In computing the mean period occasions of zero amplitude are omitted. The mean values of amplitude and period for each month of 1929 and for the year, together with the corresponding values for 1926, 1927 and 1928 are given below:—

MICROSEISMS—MONTHLY AND ANNUAL MEANS.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1926.													
Amplitude (μ)	2.3	1.7	1.8	1.1	0.5	0.4	0.5	0.6	0.5	0.8	1.7	1.6	1.1
Period (secs.)	6.3	6.5	6.5	5.6	4.7	4.6	4.6	4.7	5.2	4.9	6.1	6.2	5.5
1927.													
Amplitude (μ)	2.8	1.6	1.7	1.1	0.5	0.6	0.5	0.8	0.9	1.1	1.9	2.5	1.3
Period (secs.)	6.6	6.1	5.8	5.5	4.5	4.6	4.0	4.7	4.8	5.1	6.1	6.3	5.3
1928.													
Amplitude (μ)	2.9	2.6	1.3	1.1	0.4	0.8	0.4	0.7	0.7	1.4	2.1	1.6	1.3
Period (secs.)	7.1	6.7	5.6	5.5	4.6	4.6	4.7	4.3	5.0	5.9	6.0	6.0	5.5
1929.													
Amplitude (μ)	1.5	2.1	1.1	0.8	0.8	0.6	0.4	0.6	0.9	1.4	2.1	3.0	1.3
Period (secs.)	6.3	5.8	6.1	5.0	5.0	4.4	3.9	4.1	5.2	5.1	6.0	6.8	5.3

* F. J. W. Whipple and F. J. Scrase, "On the Frequency of Microseisms of Different Periods at Eskdalemuir and at Kew." Mon. Not. R.A.S., Geophys. Suppl. II. No. 2 (1928).

Readings in millibars at exact hours, Greenwich Mean Time.

440. Richmond (Kew Observatory) : H_b (height of barometer cistern above M.S.L.) = 10.4 metres.

January, 1929.

Table for Richmond (Kew Observatory) in January 1929. Columns include Hour G.M.T., Station Level (1-31), and Mean (Station level). Rows show hourly pressure readings in millibars.

441. Richmond (Kew Observatory) : H_b = 10.4 metres.

February, 1929.

Table for Richmond (Kew Observatory) in February 1929. Columns include Hour G.M.T., Station Level (1-28), and Mean (Station level). Rows show hourly pressure readings in millibars.

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

Readings in millibars at exact hours, Greenwich Mean Time.

442. Richmond (Kew Observatory) : H_b (height of barometer cistern above M.S.L.) = 10.4 metres.

March, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-31). Columns 1-12 are labeled 'Station Level' and columns 13-24 are labeled 'Hour. G.M.T.'. Values are in millibars, e.g., 1026.84, 1026.68, etc.

443. Richmond (Kew Observatory) : H_b = 10.4 metres.

April, 1929.

Table with 25 columns (1-24 hours + Mean) and 30 rows (Day 1-30). Columns 1-12 are labeled 'Station Level' and columns 13-24 are labeled 'Hour. G.M.T.'. Values are in millibars, e.g., 1014.98, 1014.79, etc.

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.

444. Richmond (Kew Observatory) : H_b (height of barometer cistern above M.S.L.) = 10.4 metres.

May, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Station Level 1-31). Includes 'Hour. G.M.T.' and 'Station Level' headers. Data values are in millibars.

445. Richmond (Kew Observatory) : H_b = 10.4 metres.

June, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Station Level 1-31). Includes 'Hour. G.M.T.' and 'Station Level' headers. Data values are in millibars.

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

Readings in millibars at exact hours, Greenwich Mean Time.

446. Richmond (Kew Observatory) : H_b (height of barometer cistern above M.S.L.) = 10.4 metres.

July, 1929.

Table for Richmond (Kew Observatory) July 1929. Columns: Hour G.M.T., Station Level (1-31), Mean (Station level), Mean (Sea level). Rows: 1-31 hours.

447. Richmond (Kew Observatory) : H_b = 10.4 metres.

August, 1929.

Table for Richmond (Kew Observatory) August 1929. Columns: Hour G.M.T., Station Level (1-31), Mean (Station level), Mean (Sea level). Rows: 1-31 hours.

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

Readings in millibars at exact hours, Greenwich Mean Time.

448. Richmond (Kew Observatory) : H_b (height of barometer cistern above M.S.L.) = 10.4 metres. September, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-30 hours + Mean). Columns 1-12 are labeled 'Station Level' and columns 13-24 are labeled 'Hour. G.M.T.'. Values are in millibars, with some bolded for means.

449. Richmond (Kew Observatory) : H_b = 10.4 metres. October, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (1-30 hours + Mean). Columns 1-12 are labeled 'Station Level' and columns 13-24 are labeled 'Hour. G.M.T.'. Values are in millibars, with some bolded for means.

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

Readings in millibars at exact hours, Greenwich Mean Time.

450. Richmond (Kew Observatory) : H_b (height of barometer cistern above M.S.L.) = 10.4 metres. November, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Station Level 1-30 + Mean). Data includes hourly pressure readings in millibars for station and sea level, and mean values.

451. Richmond (Kew Observatory) : H_b = 10.4 metres.

December, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Station Level 1-30 + Mean). Data includes hourly pressure readings in millibars for station and sea level, and mean values.

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

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

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

452. Richmond (Kew Observatory) : $H_b = 10.4$ metres.

1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Station Level.	mb. 015.49	mb. 015.37	mb. 015.25	mb. 015.17	mb. 015.19	mb. 015.30	mb. 015.46	mb. 015.62	mb. 015.73	mb. 015.77	mb. 015.63	mb. 015.40	mb. 015.15	mb. 014.98	mb. 014.84	mb. 014.81	mb. 014.88	mb. 015.03	mb. 015.23	mb. 015.47	mb. 015.65	mb. 015.69	mb. 015.69	mb. 015.62	mb. 015.35
Sea Level.	016.77	016.66	016.54	016.46	016.48	016.59	016.75	016.90	017.01	017.05	016.90	016.67	016.41	016.24	016.10	016.07	016.14	016.30	016.50	016.75	016.93	016.97	016.97	016.90	016.63

PRESSURE AT STATION LEVEL: MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

453. Richmond (Kew Observatory) : $H_b = 10.4$ metres.

1929.

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.	1024.42	-0.02	-0.04	-0.06	-0.12	-0.29	-0.35	-0.19	+0.06	+0.32	+0.49	+0.47	+0.21	-0.11	-0.28	-0.27	-0.19	-0.11	-0.02	+0.01	+0.06	+0.11	+0.13	+0.13	+0.05
Feb.	1018.03	+0.18	+0.06	-0.06	-0.16	-0.16	-0.19	-0.17	+0.04	+0.19	+0.30	+0.32	+0.16	-0.14	-0.43	-0.52	-0.48	-0.33	-0.08	+0.12	+0.20	+0.25	+0.32	+0.28	+0.28
Mar.	1026.89	+0.13	+0.00	-0.14	-0.19	-0.14	+0.03	+0.29	+0.54	+0.72	+0.77	+0.63	+0.41	+0.02	-0.33	-0.68	-0.86	-0.81	-0.59	-0.32	-0.06	+0.12	+0.13	+0.15	+0.19
April	1014.57	+0.26	+0.09	+0.02	-0.10	-0.04	+0.23	+0.39	+0.42	+0.45	+0.45	+0.24	-0.01	-0.22	-0.43	-0.78	-0.82	-0.80	-0.64	-0.38	-0.07	+0.33	+0.39	+0.46	+0.43
May	1014.57	+0.27	+0.15	+0.07	+0.02	+0.12	+0.26	+0.39	+0.48	+0.32	+0.27	+0.08	-0.11	-0.29	-0.43	-0.60	-0.68	-0.64	-0.59	-0.37	-0.01	+0.28	+0.37	+0.39	+0.35
June	1015.41	+0.23	+0.13	+0.06	+0.10	+0.21	+0.40	+0.54	+0.58	+0.49	+0.41	+0.23	+0.04	-0.12	-0.30	-0.53	-0.74	-0.84	-0.80	-0.65	-0.38	+0.02	+0.25	+0.35	+0.32
July	1016.23	+0.23	+0.09	-0.01	+0.03	+0.13	+0.26	+0.38	+0.40	+0.37	+0.31	+0.12	-0.03	-0.20	-0.35	-0.49	-0.62	-0.69	-0.65	-0.44	-0.12	+0.19	+0.35	+0.38	+0.36
Aug.	1014.94	+0.20	+0.02	-0.15	-0.21	-0.15	+0.07	+0.21	+0.29	+0.35	+0.40	+0.18	+0.01	-0.17	-0.31	-0.40	-0.51	-0.54	-0.52	-0.34	+0.10	+0.31	+0.37	+0.41	+0.37
Sept.	1018.76	+0.33	+0.30	+0.14	+0.01	+0.09	+0.30	+0.45	+0.58	+0.62	+0.52	+0.21	-0.06	-0.39	-0.60	-0.84	-1.01	-0.93	-0.74	-0.37	+0.02	+0.25	+0.33	+0.40	+0.39
Oct.	1009.21	-0.05	-0.19	-0.35	-0.41	-0.29	-0.16	+0.19	+0.57	+0.69	+0.67	+0.53	+0.25	-0.12	-0.37	-0.55	-0.54	-0.35	-0.05	+0.11	+0.15	+0.17	+0.14	+0.03	-0.08
Nov.	1006.12	-0.15	-0.28	-0.41	-0.43	-0.41	-0.37	-0.18	+0.06	+0.13	+0.30	+0.20	-0.07	-0.23	-0.39	-0.38	-0.19	+0.03	+0.32	+0.47	+0.58	+0.55	+0.40	+0.27	+0.15
Dec.	1005.59	+0.09	-0.03	-0.27	-0.63	-0.93	-1.01	-0.93	-0.66	-0.15	+0.11	+0.12	-0.27	-0.45	-0.29	-0.07	+0.14	+0.31	+0.48	+0.64	+0.82	+0.86	+0.87	+0.71	+0.43
Year	1015.35	+0.14	+0.03	-0.10	-0.17	-0.16	-0.04	+0.11	+0.27	+0.37	+0.42	+0.28	+0.04	-0.20	-0.38	-0.52	-0.54	-0.47	-0.32	-0.13	+0.12	+0.29	+0.34	+0.33	+0.27

ABSOLUTE EXTREMES OF PRESSURE AT STATION LEVEL FOR EACH DAY.

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

454. Richmond (Kew Observatory) : $H_b = 10.4$ metres.

1929.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	mb. 024.5	mb. 017.2	mb. 012.7	mb. 004.3	mb. 048.1	mb. 038.8	mb. 020.2	mb. 006.4	mb. 011.0	mb. 009.2	mb. 024.6	mb. 020.9	mb. 012.2	mb. 008.9	mb. 007.6	mb. 990.2	mb. 018.5	mb. 010.1	mb. 016.0	mb. 001.9	mb. 029.3	mb. 027.4	mb. 002.8	mb. 988.4
2	028.1	024.3	012.7	009.0	038.8	031.7	017.0	009.0	010.8	007.6	020.9	011.9	012.1	005.6	016.9	007.6	020.7	018.4	003.5	999.1	028.0	021.3	002.4	987.8
3	030.2	027.6	019.2	011.2	031.7	023.4	017.2	015.4	018.4	010.8	012.1	005.4	006.5	005.1	016.4	007.5	019.4	013.1	005.0	998.7	029.9	020.8	003.7	999.8
4	030.1	025.5	024.6	019.2	023.4	019.6	017.2	008.0	018.0	007.6	007.3	004.3	011.7	003.2	007.5	001.7	013.4	011.1	008.3	005.0	081.4	024.7	003.4	996.0
5	025.5	020.8	025.7	024.5	020.3	017.4	020.8	006.1	007.6	999.3	008.4	999.0	011.8	010.0	013.6	005.0	018.8	013.3	006.7	992.8	024.7	005.9	000.2	980.3
6	021.5	018.3	026.1	023.1	027.7	020.3	026.6	020.8	001.3	991.6	999.2	991.4	015.6	009.1	012.1	004.1	027.1	018.8	999.8	985.2	009.3	001.6	996.5	974.2
7	035.5	021.5	027.9	026.1	031.4	027.7	026.4	022.1	005.8	001.2	008.5	997.7	020.6	015.4	013.5	004.9	028.6	025.5	007.3	999.8	013.7	005.4	002.2	970.2
8	042.7	035.5	027.4	021.2	029.3	023.8	022.7	016.9	014.4	005.3	010.9	008.0	022.9	020.6	016.9	013.5	025.8	019.2	004.8	994.6	012.8	000.8	001.8	987.4
9	042.6	036.9	021.2	012.1	025.7	022.9	018.7	014.5	021.5	014.3	020.3	010.9	023.4	021.9	016.7	015.3	019.2	014.2	024.0	004.8	016.2	011.1	005.4	985.4
10	036.9	030.1	013.9	009.0	024.0	021.1	018.2	014.7	022.5	019.4	025.4	020.2	023.4	020.5	019.1	016.4	022.4	017.9	026.0	022.0	016.1	003.5	007.1	994.9
11	035.4	032.4	016.0	011.7	025.4	022.0	019.5	016.7	019.8	016.8	026.6	019.8	024.5	022.7	020.2	015.8	022.4	016.7	026.4	021.3	016.5	984.7	005.8	992.2
12	038.8	035.3	020.9	012.1	032.7	025.4	019.1	013.8	016.8	013.0	019.8	004.9	027.3	022.8	023.3	020.1	016.7	012.9	028.2	026.1	998.2	981.4	023.9	005.6
13	038.4	030.1	020.1	015.7	033.4	030.5	014.7	012.4	016.9	010.4	013.9	004.6	029.1	027.2	023.2	019.0	017.8	015.0	027.5	026.1	999.7	995.7	026.1	022.7
14	030.1	025.5	017.1	011.6	030.8	027.9	015.4	007.2	010.6	006.8	013.3	006.4	029.3	026.5	019.7	017.5	017.8	015.2	029.4	026.7	003.1	999.7	023.4	020.1
15	025.5	009.6	011.6	002.8	030.6	029.2	011.6	006.3	016.6	008.3	015.4	008.9	027.2	020.3	020.1	016.7	021.7	017.7	029.5	022.0	005.4	987.3	032.7	023.4
16	017.1	011.0	016.0	003.8	029.8	025.8	024.8	011.6	022.3	016.6	021.6	011.6	020.3	013.4	016.9	008.1	023.5	021.5	022.0	013.8	999.8	980.1	039.8	032.3
17	017.8	015.1	023.5	016.0	025.9	023.4	027.6	024.5	023.7	022.1	025.3	021.6	018.6	013.6	012.3	008.0	022.3	013.7	017.5	012.1	014.7	999.8	040.7	039.0
18	023.4	017.8	027.2	023.5	024.9	022.2	026.7	022.2	024.0	019.6	024.7	022.2	021.1	018.6	022.6	012.1	013.7	009.0	012.1	006.8	019.7	011.7	039.7	036.3
19	026.2	023.4	030.8	026.6	023.9	021.7	022.2	011.4	020.7	018.6	023.0	020.3	021.6	017.8	024.9	022.6	013.5	008.7	007.5	005.8	011.7	002.1	036.4	023.0
20	025.6	021.5	032.1	030.7	022.3	018.7	023.3	012.7	020.8	017.6	028.6	022.0	019.0	013.5	022.7	019.5	015.4	003.2	007.3	986.8	004.8	002.2	023.0	001.8
21	021.5	019.6	032.2	025.3	019.0	016.7	022.9	018.9	018.5	013.9	080.2	028.0	016.1	014.0	020.2	018.4	017.8	009.2	010.9	990.2	004.5	002.8	001.8	989.3
22	023.5	020.6	025.3	009.8	019.3	016.2	021.4	013.5	014.1	010.0	028.1	016.8	016.9	014.5	018.5	016.8	024.5	017.8	010.2	007.3	002.8	996.3	992.6	988.0
23	026.3	022.8	010.0	003.7	026.1	019.3	016.2	012.0	010.8	007.5	016.9	013.3	018.7	016.7	019.0	016.2	026.9	024.4	007.6	999.1	998.6	990.5	993.2	981.2
24	026.0	021.8	005.4	002.4	027.0	024.8	017.0	011.5	015.6	007.1	014.9	011.5	017.2											

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

455. Richmond (Kew Observatory) : North Wall Screen : h_t (height of thermometer bulb above the ground) = 3.0 metres.

January, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	75.8	75.6	75.6	75.4	75.1	75.1	74.8	74.8	75.2	75.9	76.0	76.6	77.0	77.6	77.5	77.5	77.6	77.0	76.9	76.9	76.8	76.5	76.3	76.1	76.2
2	76.4	76.3	75.5	75.1	74.7	74.6	74.5	74.2	74.8	75.8	76.6	77.1	77.4	77.2	76.8	76.2	75.4	75.4	75.3	75.1	75.0	75.1	75.0	75.1	75.7
3	75.1	75.1	75.3	74.9	74.7	75.0	75.1	75.5	74.9	75.4	75.6	75.7	75.8	75.7	75.2	75.0	75.1	74.9	74.9	75.0	74.7	74.7	74.8	74.6	75.1
4	74.5	74.7	74.8	74.8	74.7	74.5	74.4	74.6	74.7	74.7	74.9	75.1	75.0	74.9	75.0	74.8	74.8	74.9	75.0	74.9	75.0	75.0	74.8	74.7	74.8
5	74.8	74.6	74.0	73.8	73.6	73.1	72.6	72.4	72.3	72.4	71.9	72.1	72.2	72.6	72.7	73.0	73.0	72.6	72.6	72.6	72.6	72.7	72.7	72.7	72.6
6	72.7	72.7	72.6	72.6	72.6	72.6	72.7	72.6	72.6	72.6	72.9	72.7	72.7	72.7	73.1	73.1	73.0	72.9	72.9	72.8	72.6	72.7	72.9	72.7	72.7
7	72.6	72.1	72.0	71.9	72.0	72.1	72.3	72.2	72.5	72.6	72.7	72.7	72.7	73.1	73.1	73.1	73.1	73.1	73.1	73.3	73.2	73.3	73.3	73.2	72.7
8	73.2	73.3	73.3	73.1	73.2	73.3	73.1	73.3	73.5	73.7	74.0	74.2	74.7	74.8	74.7	73.8	73.0	73.5	73.3	73.6	73.6	73.7	73.7	73.7	73.7
9	73.9	74.2	74.2	73.9	73.8	73.9	73.6	73.7	73.7	73.9	74.1	74.1	74.3	74.6	74.5	74.6	74.4	74.2	73.9	73.6	74.0	73.8	73.5	73.6	74.0
10	73.5	73.6	73.8	74.1	74.3	74.7	74.8	74.8	75.2	75.5	76.0	75.9	75.6	75.5	75.4	75.4	75.4	75.5	75.2	75.1	75.5	75.5	75.3	75.0	75.0
11	74.8	75.2	75.1	75.4	74.8	74.5	74.1	74.0	74.2	74.0	73.8	73.4	73.3	73.2	73.2	73.1	73.1	72.8	72.6	72.6	72.8	72.9	72.7	72.6	73.7
12	72.5	72.5	72.5	72.5	72.6	72.7	72.6	72.6	72.9	73.0	73.3	73.5	73.8	74.0	74.1	73.7	73.3	73.3	73.0	72.6	72.6	72.9	72.9	72.9	72.9
13	71.1	70.8	70.5	69.7	70.0	70.1	70.7	70.9	71.5	72.4	73.5	74.6	75.6	75.9	76.1	75.8	75.6	75.3	75.1	75.1	75.1	75.1	74.8	75.2	73.3
14	75.2	75.4	76.0	75.8	75.8	75.9	75.8	75.7	75.8	76.2	76.5	76.7	76.8	76.9	77.0	76.5	76.0	75.1	74.8	74.5	74.7	74.8	74.8	74.9	75.7
15	74.7	74.6	74.3	74.2	74.0	74.2	74.3	74.5	74.7	74.5	75.0	75.2	76.3	76.6	77.0	77.0	77.0	76.2	76.2	75.7	75.1	74.2	73.7	74.1	75.2
16	74.2	73.0	72.4	72.1	71.8	71.6	71.9	72.1	71.6	71.9	72.8	73.3	73.7	74.0	74.0	73.6	72.5	72.0	71.6	71.2	71.3	71.2	71.1	70.7	72.4
17	71.1	70.6	71.0	70.7	70.4	69.9	69.7	69.9	70.7	72.2	73.2	74.2	74.8	74.7	74.7	74.3	73.7	73.4	72.9	73.1	72.9	72.6	72.2	72.1	72.3
18	72.1	72.1	72.0	71.9	71.8	72.2	72.6	73.1	73.4	74.2	75.1	76.2	77.6	78.1	78.6	78.7	78.2	77.9	77.7	77.3	77.7	78.0	77.7	77.0	75.4
19	76.4	75.5	74.7	73.9	75.5	75.5	75.6	74.9	75.3	76.1	77.5	78.8	79.5	79.8	79.7	78.9	77.8	76.8	75.9	75.3	75.1	74.1	71.4	71.2	76.2
20	70.3	70.5	70.6	70.1	69.9	69.5	70.0	70.5	71.7	71.7	71.3	72.1	77.0	80.3	80.4	78.9	77.3	76.5	74.9	74.2	74.2	73.7	73.2	73.1	73.4
21	73.0	72.9	72.0	72.2	72.5	72.3	72.1	72.6	73.6	74.5	75.2	75.5	76.0	76.6	76.9	77.0	77.0	77.2	77.0	76.7	76.9	76.9	76.8	76.8	74.9
22	76.3	76.3	76.1	75.7	75.6	75.5	75.4	75.5	75.4	75.2	75.2	75.2	75.6	75.7	76.0	76.2	75.9	75.7	75.2	75.1	75.4	75.2	75.0	75.0	75.6
23	75.2	75.1	75.5	75.6	75.5	75.6	75.7	75.6	75.7	75.7	76.4	76.7	76.9	76.5	76.4	76.4	76.2	76.1	75.8	75.8	76.0	75.7	75.6	75.4	75.9
24	75.1	75.1	74.8	74.9	75.0	74.6	74.6	74.6	74.7	75.0	75.3	75.5	75.8	76.2	76.7	76.9	76.7	76.4	76.0	75.9	75.7	75.5	75.3	74.4	75.5
25	73.8	73.5	73.2	73.0	72.6	72.5	72.2	72.6	73.1	73.8	74.3	75.1	75.6	75.8	75.3	75.1	75.1	74.7	74.6	74.1	74.1	74.2	74.2	74.1	74.0
26	73.5	74.1	73.6	73.3	73.8	74.1	74.0	73.7	73.7	74.2	74.9	75.2	75.2	75.3	75.4	75.0	73.6	72.7	72.3	72.1	71.5	71.0	70.5	70.2	73.5
27	70.1	69.8	69.8	69.5	69.5	69.5	69.8	69.7	70.1	70.5	71.5	72.9	74.2	74.4	74.9	74.5	73.5	73.5	73.1	73.2	72.8	72.5	72.8	72.8	71.8
28	73.4	73.5	73.5	73.4	73.0	72.8	72.1	72.0	72.0	72.5	74.0	75.1	76.7	77.6	77.6	76.6	76.6	76.6	76.7	77.0	77.0	77.2	77.2	76.6	74.9
29	75.5	75.4	75.0	74.6	75.0	75.6	76.0	76.1	76.3	76.7	77.1	77.4	77.8	78.0	78.0	78.0	78.2	78.5	78.6	79.2	79.6	80.0	80.4	80.9	77.3
30	81.5	81.7	82.0	82.0	82.0	82.0	81.9	81.4	81.4	81.2	81.7	82.2	82.4	82.6	83.1	82.1	81.7	81.1	82.0	81.5	80.8	80.8	80.5	80.2	81.7
31	80.1	79.8	79.8	79.6	79.6	79.7	79.7	80.1	80.1	80.3	80.8	80.8	81.5	82.6	83.3	82.6	81.9	81.3	80.9	80.9	80.5	80.1	80.4	80.9	80.7
Mean ...	74.3	74.2	74.1	73.9	73.9	73.9	73.8	73.9	74.1	74.5	74.9	75.3	75.9	76.3	76.3	76.1	75.7	75.4	75.2	75.0	75.0	74.9	74.7	74.5	74.8

456. Richmond (Kew Observatory) : North Wall Screen : h_t = 3.0 metres.

February, 1929.

1	81.1	81.6	82.1	82.1	81.8	81.7	81.8	82.5	82.7	83.0	83.1	83.2	83.8	84.1	83.9	83.5	83.2	83.0	82.9	82.7	81.7	80.5	80.8	82.5
2	81.1	81.3	81.3	81.0	80.6	80.0	79.1	79.2	79.3	79.7	80.4	80.7	80.6	80.4	80.2	80.1	80.1	80.1	80.1	80.0	80.0	79.7	79.0	80.2
3	78.1	77.3	76.9	76.7	76.1	75.6	75.4	75.4	75.3	75.5	76.0	76.6	77.0	76.3	76.1	75.4	74.5	73.8	73.1	72.6	72.2	71.9	71.9	75.2
4	71.6	70.9	71.0	70.6	70.1	70.0	69.8	69.4	70.1	70.5	71.9	74.1	76.1	77.0	77.7	76.9	75.6	74.1	73.3	72.7	71.5	71.2	72.6	72.6
5	73.1	73.3	73.4	73.5	73.7	73.7	73.9	74.0	74.6	75.3	76.2	77.1	78.1	78.9	79.5	79.0	78.3	78.0	77.6	77.4	77.1	76.6	76.5	76.0
6	76.1	76.1	75.9	75.7	75.7	75.5	75.4	75.9	76.3	76.8	77.5	77.6	77.6	77.6	78.7	78.4	78.0	77.9	77.5	77.2	76.9	76.6	76.5	76.1
7	75.8	75.5	75.3	74.8	74.5	73.6	73.1	73.4	73.9	74.2	75.2	75.5	75.9	76.3	75.9	75.3	74.7	74.1	73.4	73.0	73.0	73.5	73.7	74.0
8	74.3	74.8	74.6	74.6	74.9	75.1	75.2	75.2	75.5	76.0	76.5	77.2	77.5	78.0	77.9	77.0	76.3	75.7	74.4	74.0	73.9	73.0	72.0	70.9
9	71.6	70.9	70.2	69.8	69.7	70.6	71.0	71.4	73.0	74.4	76.3	77.8	78.1	78.5	78.6	78.1	77.9	78.0	78.1	78.2	78.4	78.3	77.9	77.1
10	76.8	76.0	75.7	75.5	75.6	75.6	75.7	76.2	77.0	77.6	76.1	76.4	76.6	76.3	76.4	76.5	76.2	76.2	76.2	76.1	74.8	74.2	74.1	74.0
11	73.7	73.7	73.1	72.7	72.1	71.9	71.5	71.0	70.0	69.1	69.1	70.0	70.1	70.2	69.9	69.5	68.8	68.4	68.2	68.2	68.3	67.9	67.6	67.2
12	66.6	66.3	66.4	66.8	67.0	67.2	67.3	67.7	68.1	68.2	68.8	69.5	69.6	69.7	69.8	69.5	68.9	68.3	67.8	67.5	67.3	67.3	67.0	66.7
13	67.1	67.1	66.5	65.6																				

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

457. Richmond (Kew Observatory): North Wall Screen: h_t (height of thermometer bulb above the ground) = 3.0 metres.

March, 1929.

Table with 25 columns (1-24) and 31 rows (Day 1-31). Columns 1-11 are labeled 'Hour. G.M.T.', column 12 is 'Noon', and column 25 is 'Mean'. Each cell contains a temperature reading in degrees absolute.

458. Richmond (Kew Observatory): North Wall Screen: h_t = 3.0 metres.

April, 1929.

Table with 25 columns (1-24) and 31 rows (Day 1-31). Columns 1-11 are labeled 'Hour. G.M.T.', column 12 is 'Noon', and column 25 is 'Mean'. Each cell contains a temperature reading in degrees absolute.

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

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

459. Richmond (Kew Observatory) : North Wall Screen : h, (height of thermometer bulb above the ground) = 3.0 metres.

May, 1929.

Table with 25 columns (1-24) and 31 rows (1-31) for May 1929. Columns 1-11 are labeled 1-11, Noon, 13-24. Columns 12-24 are labeled a. through a. Mean is column 25. Each cell contains a temperature reading.

460. Richmond (Kew Observatory) : North Wall Screen : h, = 3.0 metres.

June, 1929.

Table with 25 columns (1-24) and 31 rows (1-31) for June 1929. Columns 1-11 are labeled 1-11, Noon, 13-24. Columns 12-24 are labeled a. through a. Mean is column 25. Each cell contains a temperature reading.

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.

461. Richmond (Kew Observatory) : North Wall Screen : h_t (height of thermometer bulb above the ground) = 3.0 metres.

July, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	83.5	83.3	83.0	83.0	83.2	83.5	83.5	84.0	84.9	85.3	86.5	87.2	88.1	88.7	88.9	89.0	89.0	88.7	87.8	86.6	86.1	85.5	85.2	85.4	85.8
2	85.1	85.0	85.0	84.6	84.6	85.1	86.0	87.0	88.5	89.0	90.1	90.5	90.2	90.0	89.7	90.3	89.8	89.0	87.4	86.6	86.3	86.1	85.9	85.8	87.4
3	85.6	85.5	85.4	85.4	85.3	85.8	87.2	88.3	90.0	90.9	91.8	93.5	93.1	94.8	94.8	94.9	95.7	95.4	95.0	91.7	90.1	89.5	89.5	88.9	90.2
4	89.2	89.0	87.6	87.4	87.1	87.2	87.4	87.8	88.1	88.3	88.6	90.6	92.2	93.0	93.0	91.3	92.2	93.0	92.5	90.1	88.4	87.2	86.3	85.9	89.4
5	85.4	85.0	85.0	84.9	86.2	87.3	88.2	88.8	89.7	89.6	90.1	91.1	91.1	91.4	91.1	91.2	90.6	90.1	90.3	88.1	87.2	87.0	86.8	85.4	88.4
6	85.2	85.5	85.6	85.6	85.8	86.1	86.5	87.5	87.9	88.8	89.7	90.4	87.9	87.7	88.8	87.3	88.1	88.2	87.8	87.2	86.3	86.2	85.3	84.4	87.1
7	83.5	82.7	81.7	81.5	81.6	82.7	83.5	84.7	86.0	87.0	88.0	88.6	88.9	88.6	89.7	89.4	88.1	88.2	88.5	86.9	86.3	85.8	84.9	83.2	85.9
8	82.4	82.1	81.6	81.2	81.9	82.4	83.5	84.8	85.6	87.0	88.0	88.3	88.7	90.7	89.7	90.1	90.8	91.4	90.7	89.1	87.8	86.6	85.6	84.5	86.4
9	83.8	83.4	83.5	83.0	83.1	84.9	85.9	87.4	89.6	90.7	90.8	93.0	93.6	93.6	94.0	93.2	93.1	94.0	92.1	90.0	88.6	87.6	86.6	86.3	88.8
10	85.5	85.0	85.3	85.3	85.9	88.0	89.6	91.5	92.7	93.2	95.0	96.1	97.0	96.9	97.6	96.2	96.4	95.6	94.0	91.4	90.2	89.6	89.1	88.8	91.4
11	88.5	87.4	86.6	86.5	87.0	89.0	90.2	92.5	94.0	95.4	97.6	98.6	99.0	99.9	99.5	99.9	00.7	01.4	00.8	06.9	03.9	01.4	00.4	89.5	94.0
12	87.5	87.0	85.9	85.1	86.4	88.5	90.0	92.7	95.0	96.8	97.7	98.7	99.9	00.6	04.8	05.1	05.5	04.2	02.7	88.8	87.7	87.1	86.3	85.7	91.7
13	85.2	84.6	84.1	83.7	84.4	85.5	87.1	89.1	90.2	91.7	93.0	93.7	95.0	96.0	96.5	96.4	97.0	96.7	94.7	92.4	90.6	89.0	87.3	86.0	90.4
14	85.0	84.2	84.0	83.1	83.7	85.3	87.5	89.7	92.1	94.0	95.5	96.5	97.2	98.0	98.8	98.7	98.6	97.3	96.2	93.8	92.1	90.8	89.6	88.2	91.6
15	87.0	85.4	84.7	85.3	86.2	87.9	89.4	91.5	93.6	94.9	95.9	97.1	97.9	98.0	97.9	97.5	96.9	96.3	94.4	92.3	91.1	90.4	90.0	89.5	92.1
16	89.3	89.2	89.0	88.7	89.0	90.0	91.3	92.9	95.3	97.3	98.6	01.8	03.0	02.2	02.2	03.1	02.4	01.9	00.7	97.9	96.3	94.9	94.2	93.7	95.9
17	93.0	92.2	91.3	90.6	89.9	90.1	90.9	92.1	93.7	95.1	96.2	97.0	97.6	98.6	98.4	98.8	98.3	98.0	96.3	94.5	92.8	91.5	90.6	89.4	94.1
18	89.0	88.2	88.0	87.6	87.5	87.9	88.7	90.3	91.0	93.0	94.4	94.6	96.8	96.7	96.9	97.4	97.1	97.4	96.0	93.9	92.0	90.5	89.5	88.4	92.2
19	87.2	86.0	85.6	85.5	85.0	87.0	88.8	90.4	92.1	93.8	94.6	95.7	97.8	98.5	00.2	00.5	00.9	01.6	00.5	97.1	94.7	93.2	91.8	89.1	93.2
20	88.3	87.8	87.6	86.7	87.4	89.4	91.3	93.1	94.9	97.2	99.5	99.7	01.8	01.7	01.9	02.0	02.8	02.1	04.7	92.7	92.1	92.2	92.1	92.0	94.5
21	91.8	91.8	91.5	91.0	90.8	91.1	92.6	93.6	94.8	96.0	97.1	98.0	97.8	99.5	99.0	98.5	98.0	97.2	96.4	94.1	92.9	92.1	91.3	90.5	94.5
22	90.7	90.1	90.2	90.1	90.3	90.5	92.0	92.5	93.6	94.1	95.1	93.5	95.4	96.5	97.3	96.6	96.7	96.4	95.8	93.3	92.1	91.1	90.3	90.1	93.1
23	89.7	89.3	89.0	88.8	89.1	89.9	90.9	92.2	92.8	93.9	92.1	93.6	96.1	97.3	97.7	97.5	97.2	96.2	95.6	93.6	92.1	91.1	90.0	89.0	92.7
24	88.5	87.9	87.6	87.1	86.8	87.2	88.6	90.5	92.1	93.2	93.6	94.9	95.9	96.8	96.0	96.0	96.5	96.3	95.3	92.7	90.9	89.7	88.3	87.0	91.7
25	88.4	88.6	88.0	87.4	86.2	86.1	87.7	89.1	90.7	91.3	92.1	92.2	93.1	93.4	93.1	92.7	92.9	92.3	91.0	89.2	87.8	87.4	87.0	86.6	89.8
26	86.2	84.7	84.0	83.2	83.1	84.6	86.6	88.1	88.9	90.8	92.1	93.5	93.8	94.7	94.8	94.9	94.1	94.4	93.1	92.1	90.5	89.0	87.8	87.1	89.7
27	85.2	85.6	85.6	85.5	85.2	85.6	86.2	87.7	89.3	90.5	91.0	91.2	91.1	91.1	92.1	92.0	92.5	92.2	91.0	89.1	89.2	89.0	89.0	88.0	88.9
28	86.5	86.0	86.0	85.5	86.0	86.5	87.1	89.1	90.4	92.3	92.0	92.0	92.0	90.9	90.0	89.6	88.6	87.9	87.5	87.3	87.3	87.2	87.6	87.8	88.5
29	88.0	88.5	89.0	89.3	89.4	89.5	90.0	90.6	91.6	91.8	93.1	93.6	94.2	95.1	95.1	95.0	95.1	95.1	94.3	92.7	92.3	91.6	90.1	88.6	91.8
30	87.6	86.9	85.7	85.7	85.5	86.7	87.3	88.9	90.5	90.5	91.6	92.4	92.7	93.0	94.1	93.1	92.4	91.6	90.9	90.0	89.2	88.7	88.2	88.1	89.7
31	87.9	87.6	87.6	87.6	87.6	87.8	88.3	88.1	88.6	88.7	89.5	90.2	91.2	92.2	91.3	90.7	87.9	90.5	90.0	89.0	88.2	87.8	87.9	88.1	88.9
Mean ...	87.1	86.6	86.3	86.0	86.2	87.1	88.2	89.6	90.9	92.0	92.9	93.8	94.5	95.0	95.0	94.8	94.7	94.5	93.3	91.3	90.1	89.3	88.5	87.8	90.6

462. Richmond (Kew Observatory) : North Wall Screen : h_t = 3.0 metres.

August, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	87.4	87.1	87.4	87.4	87.7	87.7	87.5	88.2	88.0	87.1	89.1	89.0	89.8	91.0	91.4	92.0	90.0	88.9	86.9	87.0	86.9	86.4	86.1	86.1	88.2
2	86.1	85.5	85.5	85.6	85.3	85.4	85.5	85.9	86.3	86.9	87.3	88.5	89.0	89.8	90.2	90.0	90.6	90.0	88.9	87.0	85.8	84.6	84.2	83.7	87.0
3	82.8	82.2	81.5	81.2	82.3	83.9	85.7	87.3	88.3	88.9	89.8	89.7	90.4	91.7	91.0	90.6	90.5	89.6	89.6	88.7	88.0	87.8	87.8	87.8	87.4
4	86.6	86.8	87.0	86.9	87.7	88.5	89.0	89.6	89.2	89.8	92.2	93.0	93.6	94.4	94.6	93.7	93.9	92.0	91.0	89.1	88.1	87.7	87.1	86.8	89.9
5	86.7	85.7	84.8	84.5	84.2	84.5	85.0	86.2	87.5	88.0	89.0	90.0	90.2	91.1	91.0	91.1	90.3	89.8	89.4	88.0	87.5	87.0	86.7	86.9	87.7
6	86.7	86.1	86.1	85.7	85.7	86.0	87.0	88.1	88.9	89.1	89.9	90.7	91.4	90.6	90.4	90.1	89.9	89.5	89.0	88.4	87.6	87.2	86.9	86.5	88.2
7	86.4	86.6	86.3	86.5	85.8	86.5	87.4	89.0	89.9	89.1	90.1	90.1	91.1	90.1	88.4	88.9	88.4	88.4	88.0	86.9	86.2	86.3	86.0	85.4	87.8
8	85.1	85.4	84.9	83.1	83.2	84.1	85.6	87.3	88.6	89.7	91.0	91.0	91.5	92.2	91.6	92.3	92.1	91.3	91.2	88.9	87.2	86.1	85.3	85.1	87.8
9	85.3	85.2	85.1	85.1	85.1	85.6	86.4	87.1	88.8	89.6	90.6	90.7	90.5	90.2	91.8	91.4	91.4	91.1	90.6	89.3	88.5	88.0	87.6	87.5	88.4
10	87.1	87.2	87.0	86.6	86.6	86.9	87.5	88.7	89.5	91.1	92.2	92.8	94.3	94.4	96.0	94.5	93.9	93.5	93.2	91.8	90.4	89.1	88.0	88.1	90.4
11	88.3	88.6	88.6	89.0	89.1	89.3	89.8	90.3	91.3	91.5	93.3	93.7	94.4	94.0	94.4	95.4	94.2	94.9	93.8	91.9	91.2	89.0	88.6		

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

463. Richmond (Kew Observatory): North Wall Screen: h_t (height of thermometer bulb above the ground) = 3.0 metres.

September, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Columns 1-12 are labeled I., 2., 3., 4., 5., 6., 7., 8., 9., 10., 11., Noon. Columns 13-24 are labeled 13., 14., 15., 16., 17., 18., 19., 20., 21., 22., 23., 24. The Mean column is labeled Mean. Data values are in degrees absolute.

464. Richmond (Kew Observatory): North Wall Screen: h_t = 3.0 metres.

October, 1929.

Table with 25 columns (1-24 hours + Mean) and 31 rows (Day 1-30 + Mean). Columns 1-12 are labeled 1., 2., 3., 4., 5., 6., 7., 8., 9., 10., 11., Noon. Columns 13-24 are labeled 13., 14., 15., 16., 17., 18., 19., 20., 21., 22., 23., 24. The Mean column is labeled Mean. Data values are in degrees absolute.

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

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

465. Richmond (Kew Observatory) : North Wall Screen : h_t (height of thermometer bulb above the ground) = 3.0 metres.

November, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	
Day.	a.																									
1	76.3	76.0	75.8	75.1	74.2	73.2	73.8	73.9	74.7	75.0	76.5	78.1	79.1	79.1	79.1	78.4	78.5	78.5	78.7	77.6	75.1	74.9	76.0	76.7	76.4	
2	77.1	77.1	77.4	76.2	74.6	73.8	73.1	73.6	74.1	74.9	76.5	79.1	80.7	81.4	81.5	81.6	81.0	81.0	81.3	81.4	81.2	81.4	81.4	81.4	81.5	78.4
3	81.7	81.9	82.0	81.4	80.5	79.4	78.3	78.4	79.7	81.5	82.8	83.4	83.6	83.8	83.0	82.4	81.4	80.7	79.9	79.1	78.9	77.7	76.9	76.9	80.7	
4	76.0	75.6	75.3	75.0	74.8	73.6	73.4	74.0	76.5	78.2	79.9	80.7	81.7	82.2	82.3	82.3	81.9	81.6	81.8	81.9	81.9	81.9	81.9	81.9	81.8	78.9
5	81.5	81.6	81.9	82.3	82.5	82.1	82.6	83.0	83.3	83.8	84.4	84.7	85.2	84.9	84.3	83.7	83.5	83.2	82.9	82.9	82.9	82.9	82.9	82.5	82.3	83.1
6	82.0	81.9	81.9	81.8	81.7	81.5	81.4	81.4	81.6	81.7	82.0	82.3	82.5	82.5	82.7	82.5	82.4	82.2	82.3	82.1	80.9	79.8	79.1	78.5	81.7	
7	78.0	77.3	77.0	76.1	75.9	75.9	75.5	76.9	78.1	79.1	81.0	82.5	83.3	84.2	83.9	83.7	83.3	83.2	83.2	83.2	83.4	83.4	83.7	84.0	80.5	
8	84.4	84.8	85.0	85.3	85.5	85.7	85.8	85.9	85.9	86.7	87.8	88.1	86.0	86.0	86.0	84.9	83.6	82.9	82.1	81.1	80.5	80.0	78.9	78.0	84.3	
9	76.9	76.7	75.6	75.5	75.4	76.1	75.7	76.2	77.9	79.9	81.1	82.9	83.9	84.5	84.1	83.0	81.9	81.0	81.2	81.2	81.2	81.8	82.1	83.0	79.8	
10	82.5	82.5	82.5	82.5	82.1	82.1	82.2	82.5	82.5	80.0	80.4	81.3	82.0	82.1	82.1	81.4	80.0	79.2	78.3	77.6	77.9	77.8	77.8	77.7	80.8	
11	78.0	78.0	77.5	77.4	77.2	77.3	77.8	79.2	81.1	82.4	83.7	83.3	83.7	83.2	83.0	83.1	83.3	83.9	84.6	85.4	85.7	86.1	86.2	86.6	81.8	
12	86.7	86.6	80.5	79.4	78.8	79.0	78.5	78.5	79.2	79.9	80.4	80.7	80.8	81.1	81.1	80.2	79.1	78.3	77.9	77.2	77.0	76.3	75.5	74.5	79.7	
13	74.0	73.5	73.0	72.5	72.6	72.9	73.0	74.0	74.5	74.9	75.5	76.8	77.9	78.5	78.4	77.9	77.3	76.8	76.2	75.3	75.0	74.4	73.7	73.3	75.1	
14	73.3	73.1	73.6	73.9	74.5	74.5	74.6	74.6	74.6	74.9	75.9	77.0	78.0	78.5	78.7	77.9	75.9	74.4	73.6	72.3	72.4	72.8	72.5	72.2	74.8	
15	71.2	72.0	71.6	70.9	70.9	70.8	71.2	72.5	72.0	72.0	72.4	72.5	72.8	72.4	72.9	73.4	74.7	75.2	75.9	76.5	77.9	77.9	78.0	77.3	78.4	
16	76.9	77.0	77.3	77.5	78.0	77.8	77.9	78.0	78.3	78.5	78.2	77.2	76.0	74.9	76.0	76.8	77.2	77.4	77.5	77.8	78.1	77.6	77.5	77.5	77.4	
17	77.5	77.0	76.6	76.4	75.9	75.4	75.0	74.9	75.1	75.9	77.7	78.9	80.1	79.6	79.1	78.5	77.6	76.9	76.1	75.7	75.5	75.3	74.0	74.0	76.7	
18	73.1	72.4	72.5	72.6	72.7	72.8	72.7	73.1	73.0	73.3	73.5	73.5	74.0	73.9	74.0	74.0	74.4	74.3	76.8	78.3	78.3	78.4	78.4	78.7	74.3	
19	79.0	80.2	81.0	81.4	81.5	81.8	82.1	82.5	83.0	83.0	83.2	83.6	84.0	83.6	83.7	83.5	84.0	84.4	84.6	84.7	84.6	84.0	82.7	82.3	82.7	
20	82.4	82.3	82.5	82.5	82.4	82.4	82.5	82.5	83.1	84.1	84.6	85.3	85.8	85.6	84.8	83.6	82.7	80.6	81.3	80.0	79.4	80.9	81.1	81.0	82.7	
21	80.8	80.1	80.3	80.5	80.9	80.7	80.3	79.4	81.0	82.5	83.7	84.2	85.3	84.9	84.5	83.8	82.8	82.4	82.9	82.4	83.3	83.5	84.1	84.2	82.4	
22	84.2	83.7	84.1	83.9	83.3	83.9	84.0	84.4	84.9	85.8	86.3	86.7	86.7	86.3	86.2	85.7	85.0	84.0	84.0	84.0	84.2	84.5	84.5	84.0	84.8	
23	83.6	83.0	83.1	83.2	82.9	83.0	82.9	83.5	83.8	84.4	85.0	85.1	84.1	84.7	82.9	83.4	82.6	82.3	82.0	81.4	80.8	80.8	81.4	82.2	83.0	
24	82.0	81.9	81.8	82.5	81.0	80.6	80.7	80.0	80.4	81.1	81.7	82.5	83.1	83.5	83.3	82.2	81.6	81.3	81.8	82.8	83.2	83.4	83.6	83.6	82.1	
25	83.5	83.8	84.0	84.6	84.7	85.0	85.1	85.3	85.7	85.5	85.8	86.1	86.1	86.1	86.7	85.9	85.1	84.5	83.2	82.7	82.9	83.5	84.1	83.7	84.7	
26	84.0	84.0	83.5	82.5	81.9	81.3	81.4	81.4	82.1	81.9	82.1	81.9	82.4	82.5	82.7	82.0	81.7	81.5	81.5	80.9	80.1	80.0	79.8	79.4	81.9	
27	79.1	78.9	78.3	78.1	77.9	77.2	77.5	77.4	77.5	78.9	79.9	81.1	81.6	81.9	81.3	80.7	80.7	81.3	81.6	81.4	81.6	81.5	81.5	81.6	79.9	
28	81.8	81.7	82.1	82.4	82.6	83.0	83.3	83.9	83.9	83.9	84.2	84.2	84.4	84.9	85.4	85.7	85.5	85.5	85.1	85.0	84.5	83.2	83.5	84.4	83.9	
29	84.4	83.1	82.8	82.9	82.5	82.9	83.5	83.9	83.5	84.2	84.8	84.8	84.9	85.4	85.4	84.5	83.8	82.9	82.8	83.1	84.1	84.3	84.3	84.0	84.2	
30	84.3	83.9	83.7	83.5	83.7	84.0	83.8	83.5	83.8	84.4	84.0	84.4	84.5	84.4	83.9	82.5	81.8	82.2	81.8	82.2	82.0	82.1	81.2	81.3	83.3	
Mean ...	79.9	79.7	79.5	79.3	79.1	79.0	79.0	79.3	79.8	80.4	81.2	81.8	82.1	82.2	82.1	81.6	81.1	80.8	80.7	80.5	80.5	80.4	80.3	80.2	80.4	

466. Richmond (Kew Observatory) : North Wall Screen : h_t = 3.0 metres.

December, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean
1	81.8	82.0	82.2	82.0	81.9	81.9	81.9	81.5	81.5	81.8	82.0	82.5	82.8	82.9	83.0	82.6	82.1	81.6	81.3	80.8	80.1	79.4	79.0	78.0	81.6
2	77.8	77.9	78.2	80.3	81.3	82.1	82.6	82.8	83.2	83.6	83.6	83.9	84.1	84.5	84.8	85.0	84.1	83.5	82.7	82.4	81.5	81.1	80.7	80.2	82.1
3	79.5	79.4	79.4	78.4	77.7	76.9	76.3	75.9	77.2	79.2	81.2	82.0	82.6	83.1	81.2	81.0	81.1	80.7	80.5	79.4	80.7	81.1	81.5	81.5	79.9
4	81.9	82.3	82.7	83.1	83.6	84.0	84.0	84.1	84.1	84.2	84.0	83.9	84.0	84.2	83.9	83.4	82.9	82.4	82.0	82.1	82.3	82.7	83.0	83.6	83.2
5	83.6	83.8	83.8	83.5	83.0	82.6	82.4	82.6	82.8	82.7	83.1	83.5	83.0	82.6	82.5	82.1	82.3	82.1	82.3	82.0	82.1	82.0	82.0	81.9	82.7
6	81.5	81.1	81.2	81.1	80.5	80.0	79.8	79.2	79.6	80.5	81.3	82.1	82.1	82.2	81.9	81.8	82.0	81.3	81.1	82.1	82.1	81.9	81.6	81.6	81.3
7	81.4	82.9	82.9	82.6	82.4	82.2	82.0	82.1	82.1	82.0	81.9	82.2	81.8	81.6	81.7	80.9	80.6	79.9	79.8	79.4	78.6	79.0	79.4	80.1	81.3
8	81.0	80.9	81.4	82.4	82.9	83.2	83.0	83.1	82.3	82.8	82.7	83.1	83.8	82.6	81.1	80.9	80.7	80.8	80.3	80.8	80.9	80.4	80.6	79.5	81.7
9	79.3	79.0	77.9	77.0	78.3	79.5	80.4	80.3	80.6	81.4	81.7	82.1	83.1	84.1	83.6	82.9	81.7	80.9	79.9	79.1	77.7	78.3	78.0	78.1	80.2
10	78.2	78.4	77.9	77.1	76.9	76.2	76.0	76.1	77.0	78.0	78.1	79.5	79.9	80.0	79.5	79.2	79.2	79.4	78.9	79.1	79.7	79.2	79.2	80.4	78.4
11	82.0	82.5	83.1	84.0	84.5	84.0	82.9	83.0	83.7	83.4	83.2	84.1	84.5	84.7	84.6	84.0	83.6	83.4	82.9	83.0	82.9	83.0	83.0	82.7	83.4
12	83.6	82.2	82.2	82.3	81.8	81.2	81.0	81.0	77.4	80.2	79.9	81.2	82.8	83.0	83.5	83.7	84.0	84.3	84.5	84.4					

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

467. Richmond (Kew Observatory): North Wall Screen: h_t = 3.0 metres.

1929.

Table with 26 columns (Hour, G.M.T., 1-24, Mean) and 2 rows of data for 1929.

TEMPERATURE: MONTHLY MEANS AND DIURNAL INEQUALITIES.

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

468. Richmond (Kew Observatory): North Wall Screen: h_t = 3.0 metres.

1929.

Table with 26 columns (Month, Mean, Hour, GMT, 1-24) and 12 rows of data for 1929.

ABSOLUTE EXTREMES OF TEMPERATURE FOR EACH DAY.

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

469. Richmond (Kew Observatory): North Wall Screen: h_t = 3.0 metres.

Large table with 26 columns (Month, Jan-Dec, Day, Max, Min) and 31 rows of data for 1929.

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

Year .. 87.0 78.8

Percentages at exact hours, Greenwich Mean Time.

470. Richmond (Kew Observatory) : North Wall Screen : h_t (height of thermometer bulbs above the ground) = 3.0 metres.

January, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Pressure*
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	69	69	79	80	82	73	77	80	80	76	78	78	75	70	70	76	76	78	82	84	87	85	83	83	77.6	6.0
2	78	76	80	82	88	85	82	85	85	80	75	74	71	58	51	54	55	55	56	57	61	64	66	66	70.5	5.2
3	65	64	63	66	68	68	66	64	69	66	65	64	62	55	55	55	60	60	60	60	63	63	63	67	62.9	4.5
4	70	72	70	68	68	71	73	75	75	73	72	69	69	69	68	65	68	74	75	73	71	70	69	69	70.6	4.9
5	70	74	81	82	83	82	74	74	71	71	76	83	88	87	82	72	72	73	73	74	76	76	75	76	76.7	4.6
6	74	72	72	72	73	73	74	77	80	81	81	81	84	85	80	79	72	72	72	71	77	78	71	73	76.0	4.5
7	73	78	81	82	82	83	84	84	86	91	91	91	88	88	88	88	88	87	87	85	86	89	89	89	85.4	5.1
8	89	89	89	89	89	90	90	91	91	90	89	85	85	85	88	90	92	94	92	94	92	92	94	94	89.8	5.7
9	90	92	92	94	94	94	96	96	98	94	96	96	94	94	94	94	94	96	98	98	96	96	98	98	95.0	6.2
10	96	96	94	96	96	98	96	98	94	94	91	93	94	93	93	91	93	94	94	93	91	89	87	89	93.7	6.6
11	90	89	94	84	80	76	79	81	68	72	67	66	69	70	70	71	71	71	72	72	74	73	71	70	75.4	4.8
12	70	68	69	69	68	68	69	71	71	73	73	73	72	71	71	72	74	78	79	80	82	86	86	87	73.8	4.5
13	87	87	88	88	88	88	89	91	91	92	94	93	89	88	85	88	89	87	85	80	82	84	88	89	87.9	5.5
14	94	93	90	91	88	85	86	85	86	81	80	78	77	77	77	78	83	89	88	89	88	88	88	86	85.3	6.3
15	85	82	83	83	81	78	76	74	75	83	84	87	85	87	85	84	67	68	68	67	68	70	71	75	78.0	5.6
16	76	84	86	87	87	87	88	87	94	78	60	47	45	41	40	42	48	56	59	66	72	73	74	76	68.8	4.0
17	77	78	79	79	80	82	85	86	87	84	80	77	75	77	80	85	88	91	94	95	96	96	96	96	84.7	4.9
18	96	97	97	97	97	96	96	96	96	96	96	88	86	88	91	91	95	94	97	97	97	98	97	100	94.9	6.9
19	97	98	98	98	98	94	98	95	94	91	84	78	75	71	70	72	76	78	88	93	96	96	96	96	88.8	6.8
20	96	96	96	96	96	96	96	96	97	97	97	95	93	60	59	63	71	65	77	79	80	84	87	87	86.0	5.4
21	89	90	93	95	93	95	95	95	97	95	91	93	91	90	90	92	95	97	98	100	100	100	98	100	94.4	6.6
22	98	98	98	98	98	100	100	100	98	98	96	96	93	94	91	90	91	91	96	98	96	96	98	98	96.2	7.1
23	96	96	93	94	96	94	96	94	94	94	83	72	72	80	78	76	80	81	84	84	81	84	82	85	86.6	6.5
24	89	89	85	82	82	85	89	89	88	85	84	82	82	80	80	77	78	76	79	79	80	77	77	82	82.4	6.0
25	84	86	86	87	88	89	91	91	92	90	89	80	72	72	77	84	80	77	75	78	78	76	74	82.4	5.4	
26	75	76	76	77	78	79	84	84	72	72	70	66	65	61	57	67	76	84	83	79	83	84	85	87	75.5	4.8
27	87	87	88	90	91	91	93	93	93	89	88	79	73	67	68	67	70	73	73	74	74	76	80	85	81.3	4.6
28	96	94	94	94	95	95	95	96	96	95	93	88	80	82	84	87	90	92	92	97	93	92	84	78	91.0	6.4
29	85	85	89	91	93	91	90	90	90	90	92	93	94	94	95	95	97	96	99	97	99	100	100	100	93.1	7.7
30	100	100	100	100	100	100	99	100	99	99	99	98	95	92	89	93	93	96	87	88	90	93	94	95.7	10.8	
31	94	96	96	96	94	98	96	96	98	96	94	92	91	91	86	88	91	92	92	92	94	94	96	94	93.6	9.8
Mean ...	85.0	85.5	86.4	86.7	86.9	86.6	87.2	87.6	87.3	86.0	84.1	81.8	80.1	78.0	77.2	78.3	79.7	81.1	82.5	82.9	84.0	84.5	84.3	85.3	83.7	†5.9
Vapour Pressure* ...	mb. 5.7	mb. 5.6	mb. 5.6	mb. 5.7	mb. 5.8	mb. 5.9	mb. 5.9	mb. 5.9	mb. 6.0	mb. 6.0	mb. 6.0	mb. 6.0	mb. 5.9	mb. 5.8	mb. 5.8	mb. 15.8	—									

471. Richmond (Kew Observatory) : North Wall Screen : h_t = 3.0 metres.

February, 1929.

1	% 94	% 95	% 95	% 95	% 96	% 99	% 98	% 96	% 98	% 95	% 95	% 93	% 89	% 86	% 85	% 90	% 87	% 87	% 88	% 87	% 87	% 92	% 96	% 98	% 92.5	mb. 11.0
2	% 98	% 96	% 96	% 94	% 96	% 90	% 94	% 94	% 94	% 90	% 90	% 90	% 90	% 93	% 93	% 93	% 91	% 91	% 91	% 91	% 91	% 91	% 91	% 88	% 92.7	9.4
3	% 83	% 84	% 85	% 77	% 73	% 74	% 74	% 68	% 61	% 58	% 53	% 49	% 44	% 47	% 50	% 49	% 49	% 47	% 53	% 57	% 58	% 62	% 65	% 67	% 62.3	4.5
4	% 70	% 80	% 85	% 87	% 89	% 91	% 93	% 95	% 94	% 88	% 81	% 81	% 71	% 70	% 65	% 75	% 84	% 87	% 92	% 95	% 95	% 95	% 95	% 95	% 85.5	5.0
5	% 95	% 95	% 95	% 95	% 95	% 94	% 94	% 94	% 93	% 93	% 90	% 88	% 83	% 84	% 74	% 74	% 80	% 81	% 82	% 82	% 87	% 90	% 90	% 90	% 88.4	6.7
6	% 95	% 91	% 93	% 94	% 94	% 93	% 94	% 93	% 93	% 92	% 92	% 90	% 89	% 90	% 77	% 80	% 81	% 86	% 90	% 90	% 88	% 90	% 90	% 87	% 89.7	7.2
7	% 84	% 84	% 84	% 80	% 82	% 89	% 87	% 84	% 77	% 78	% 74	% 75	% 71	% 73	% 76	% 77	% 77	% 81	% 85	% 90	% 88	% 90	% 89	% 89	% 81.8	5.6
8	% 87	% 85	% 87	% 89	% 84	% 82	% 82	% 82	% 82	% 78	% 78	% 77	% 76	% 75	% 73	% 77	% 80	% 84	% 87	% 87	% 92	% 93	% 95	% 96	% 83.5	6.0
9	% 97	% 98	% 98	% 98	% 98	% 98	% 98	% 98	% 98	% 95	% 90	% 90	% 90	% 89	% 91	% 97	% 97	% 97	% 100	% 98	% 99	% 99	% 98	% 98	% 96.5	6.8
10	% 98	% 98	% 100	% 100	% 100	% 100	% 98	% 96	% 92	% 90	% 87	% 83	% 83	% 87	% 87	% 85	% 88	% 88	% 88	% 90	% 88	% 80	% 80	% 75	% 90.5	6.8
11	% 75	% 76	% 69	% 68	% 68	% 72	% 76	% 78	% 78	% 76	% 74	% 64	% 54	% 46	% 43	% 44	% 47	% 58	% 58	% 57	% 55	% 55	% 54	% 53	% 62.9	3.1
12	% 54	% 56	% 57	% 62	% 75	% 77	% 78	% 79	% 73	% 69	% 65	% 62	% 55	% 54	% 55	% 57	% 63	% 67	% 70	% 72	% 75	% 77	% 81	% 83	% 67.0	2.7
13	% 84	% 84	% 88	% 92	% 92	% 93	% 94	% 97	% 87	% 83	% 72	% 68	% 62	% 58	% 59	% 58	% 61	% 67	% 68	% 71	% 77	% 80	% 82	% 83	% 77.5	2.9
14	% 84	% 84	% 84	% 86	% 88	% 89	% 89	% 89	% 89	% 89	% 87	% 84	% 56	% 46	% 47	% 46	% 47	% 50	% 58	% 65	% 77	% 83	% 82	% 84	% 73.0	2.7
15	% 85	% 86	% 87	% 88	% 89	% 90	% 92	% 93	% 91	% 86	% 78	% 75	% 73	% 71	% 73	% 79	% 83	% 86	% 86	% 88	% 93	% 93	% 93	% 92	% 85.3	3.1
16	% 91	% 82	% 81	% 82	% 84	% 87	% 92	% 92	% 90	% 87	% 84	% 83	% 82	% 80	% 79	% 65	% 57	% 59	% 61	% 64	% 67	% 68	% 70	% 73	% 77.9	3.9
17	% 76	% 77	% 76	% 75	% 73	% 72	% 78	% 79	% 81	% 75	% 69	% 62	% 58	% 57	% 56	% 57	% 58	% 67	% 73	% 76	% 86	% 88	% 89	% 91	% 72.5	3.8
18	% 92	% 93	% 94	% 95	% 96	% 97	% 97	% 97	% 97	% 97	% 82	% 69	% 62	% 60	% 59	% 60	% 65	% 73	% 78	% 82	% 88	% 88	% 87	% 85	% 83.2	4.0
19	% 84	% 83	% 82	% 80	% 76	% 76	% 77	% 77	% 78	% 80	% 80	% 79	% 78	% 77	% 77	% 79	% 83	% 86	% 87	% 88	% 89	% 89	% 89	% 90	% 81.7	4.5
20	% 91	% 92	% 93	% 93	% 92	% 91	% 92	% 93	% 90	% 81	% 72	% 62	% 57	% 55	% 54	% 70	% 73	% 74	% 78	% 82	% 83	% 83	% 82	% 83	% 80.0	5.1
21	% 84	% 85	% 87	% 89	% 91	% 93	% 96	% 96	% 93	% 80	% 46	% 44	% 45	% 38	% 35	% 38	% 45	% 43	% 57	% 58	% 70	% 73	% 76	%		

Percentages at exact hours, Greenwich Mean Time.

472. Richmond (Kew Observatory) : North Wall Screen : h_t (height of thermometer bulbs above the ground) = 3.0 metres.

March, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	78	80	81	82	83	85	87	88	88	90	90	90	53	46	43	49	52	58	58	69	72	73	76	78	78	72.8	4.3
2	79	81	82	83	83	84	84	84	73	69	63	58	49	46	51	52	52	53	59	65	71	76	80	84	69.1	4.2	
3	89	91	93	94	94	94	94	94	90	86	59	57	51	39	41	63	69	73	52	65	72	80	73	84	76.1	4.8	
4	87	92	95	97	92	92	93	83	75	78	70	70	62	58	60	67	66	55	74	71	75	82	85	87	77.7	5.9	
5	88	90	91	92	93	94	94	94	94	94	93	75	37	52	50	56	62	66	81	82	79	77	77	77	78.9	5.2	
6	77	78	82	83	82	80	74	78	77	65	69	63	63	65	58	62	68	75	70	75	77	82	94	90	74.2	6.8	
7	96	94	94	91	91	94	91	90	89	85	84	85	78	64	59	61	64	83	87	85	92	90	90	90	90	84.3	6.5
8	92	93	94	94	95	96	95	94	92	70	64	57	39	37	35	33	40	56	61	67	60	63	68	78	81	64.5	6.9
9	82	83	88	83	83	93	94	91	80	69	60	47	46	25	28	25	31	44	47	60	63	68	78	81	64.5	6.9	
10	91	92	89	93	94	95	95	96	94	83	48	35	37	30	34	39	49	58	64	74	83	82	87	84	71.9	6.6	
11	89	92	94	95	95	95	94	93	84	74	69	58	31	29	30	33	39	47	44	55	72	69	69	79	68.0	6.7	
12	80	79	87	89	90	89	92	77	75	68	62	59	63	64	67	73	77	88	89	89	87	86	87	90	79.3	7.1	
13	89	88	91	92	90	89	89	90	87	84	83	83	83	83	83	80	78	77	87	87	83	84	88	87	88	85.5	7.6
14	91	89	89	91	91	90	92	90	93	91	87	83	82	80	79	84	83	85	87	87	87	87	88	88	88	87.2	6.3
15	87	89	91	92	92	92	96	94	91	87	89	90	90	92	90	91	91	96	95	96	94	91	90	90	90	91.5	6.5
16	88	87	82	83	80	82	80	80	81	76	73	74	71	68	68	68	70	76	76	82	84	83	83	90	78.5	6.0	
17	90	94	94	98	98	98	96	96	94	96	93	89	87	85	85	81	84	93	98	73	79	83	93	94	90.4	6.6	
18	96	96	96	96	96	96	96	96	96	96	94	52	43	38	33	30	32	36	48	58	69	76	85	88	88	72.7	6.2
19	90	92	93	95	95	95	95	96	92	89	83	83	77	72	69	68	69	78	84	92	96	96	96	96	96	87.5	6.7
20	96	98	96	96	96	96	98	96	96	92	88	75	67	50	46	48	47	54	68	73	76	86	86	89	79.8	7.9	
21	86	91	93	93	96	99	96	95	96	93	88	83	83	74	75	80	85	89	91	90	89	87	87	89	88.7	11.1	
22	91	92	92	93	96	96	98	95	92	85	78	68	64	54	48	51	52	58	66	74	78	78	83	81	77.8	10.5	
23	84	87	91	96	93	97	94	90	88	83	72	61	53	53	43	42	42	48	58	65	72	85	84	87	73.5	7.9	
24	90	95	95	91	94	98	96	95	88	81	68	51	50	50	49	55	64	69	78	86	90	90	89	90	79.2	8.4	
25	90	90	91	93	93	94	96	96	92	87	79	75	68	61	61	64	81	86	86	85	90	94	96	99	85.1	10.7	
26	99	100	100	100	100	100	99	79	71	67	59	51	51	47	44	47	46	51	48	81	87	94	96	96	75.6	9.7	
27	98	98	100	100	100	96	100	100	97	91	75	75	68	59	43	46	43	45	55	72	78	84	90	91	79.5	8.9	
28	95	93	95	94	98	98	98	98	88	58	47	38	32	25	30	42	46	47	50	58	69	71	84	87	68.5	8.5	
29	94	96	93	95	98	93	98	100	73	58	49	41	43	40	34	34	35	46	59	64	76	83	90	91	70.0	9.0	
30	94	94	96	92	95	94	100	92	86	73	64	42	32	30	30	30	31	34	50	63	67	73	79	76	67.7	8.8	
31	83	79	86	89	89	87	81	69	63	52	52	49	42	43	39	42	41	42	49	54	58	64	68	67	62.2	7.2	
Mean ...	89.0	90.1	91.4	92.1	92.4	92.9	93.1	90.6	86.4	79.8	72.8	65.1	57.9	53.5	51.8	54.7	57.7	63.4	69.2	73.9	78.3	81.6	84.8	86.5	77.1	77.3	
Vapour Pressure* ...	mb. 6.8	mb. 6.7	mb. 6.6	mb. 6.5	mb. 6.5	mb. 6.4	mb. 6.4	mb. 6.7	mb. 7.0	mb. 7.3	mb. 7.4	mb. 7.4	mb. 7.2	mb. 7.1	mb. 7.0	mb. 7.3	mb. 7.2	mb. 7.2	mb. 7.0	mb. 7.2	—						

473. Richmond (Kew Observatory) : North Wall Screen : h_t = 3.0 metres.

April, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
1	% 66	% 65	% 64	% 64	% 72	% 74	% 72	% 72	% 56	% 57	% 72	% 72	% 72	% 62	% 33	% 25	% 30	% 35	% 41	% 48	% 53	% 60	% 64	% 67	% 67	% 58.2	mb. 6.4
2	70	72	88	85	87	82	82	78	71	72	58	56	46	36	38	37	38	46	51	52	79	76	82	83	83	64.9	6.0
3	79	75	74	74	74	75	70	61	51	51	43	51	43	46	47	45	49	55	59	65	75	77	84	87	84	62.8	5.7
4	89	93	93	94	93	93	93	87	87	87	76	76	66	54	42	42	44	50	64	86	89	96	96	94	94	78.5	7.0
5	97	96	96	97	97	98	96	90	86	81	66	69	76	81	60	52	49	55	63	66	68	63	68	70	77.2	7.1	
6	73	79	85	90	92	94	95	72	64	49	43	39	43	35	38	39	40	41	48	53	55	60	67	73	61.1	5.0	
7	75	77	78	80	82	84	75	72	69	61	59	51	49	44	41	38	38	43	45	53	57	64	65	68	61.3	6.2	
8	70	79	80	85	89	89	90	87	77	63	55	53	49	51	46	59	54	56	64	72	73	78	81	85	69.8	7.9	
9	89	85	89	90	89	88	88	90	76	73	73	74	66	56	50	51	49	67	66	72	72	77	87	87	75.1	8.3	
10	87	87	85	87	85	85	75	61	54	58	93	70	61	56	52	54	62	70	72	79	82	80	84	88	73.6	6.9	
11	88	87	82	85	85	80	77	72	69	64	60	63	56	62	59	73	82	87	85	87	83	87	96	90	77.4	6.3	
12	89	93	91	93	94	93	94	94	91	88	88	85	87	83	82	88	93	96	91	87	93	94	96	95	90.6	6.6	
13	95	97	98	97	96	94	90	96	90	91	92	89	91	88	90	91	91	93	94	95	95	95	100	100	93.5	8.1	
14	98	98	97	100	98	100	100	100	97	86	83	79	75	77	73	71	71	77	78	84	85	83	85	89	89	86.9	8.1
15	87	81	84	90	92	94	92	85	73	62	64	57	59	60	52	53	53	58	67	74	75	78	79	83	73.1	7.5	
16	88	93	93	92	93	93	92	90	89	84	78	74	70	67	63	63	65	69	77	83	86	91	94	9			

Percentages at exact hours, Greenwich Mean Time.

474. Richmond (Kew Observatory) : North Wall Screen : h_t (height of thermometer bulbs above the ground) = 3.0 metres.

May, 1929.

Table for Richmond (Kew Observatory) in May 1929. Columns include Hour G.M.T., Day, and relative humidity percentages (1-24), Mean, and Vapour Pressure* (mb.).

475. Richmond (Kew Observatory) : North Wall Screen : h_t = 3.0 metres.

June, 1929.

Table for Richmond (Kew Observatory) in June 1929. Columns include Hour G.M.T., Day, and relative humidity percentages (1-24), Mean, and Vapour Pressure* (mb.).

* Computed from the mean temperatures and mean relative humidities.

† Mean of the column.

‡ Mean of the row.

Percentages at exact hours, Greenwich Mean Time.

476. Richmond (Kew Observatory) : North Wall Screen : h_1 (height of thermometer bulbs above the ground) = 3.0 metres.

July, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*	
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	72	72	75	74	74	73	81	77	73	70	64	60	60	59	60	60	61	60	68	74	76	79	86	86	70.3	10.4	
2	87	88	86	88	88	85	77	68	59	53	51	53	55	62	63	62	64	70	85	88	91	89	90	91	74.6	12.2	
3	93	94	95	95	94	91	87	82	71	63	56	52	55	51	52	54	51	56	54	64	71	76	82	80	71.8	14.1	
4	77	84	93	96	97	98	96	97	97	96	92	84	79	72	68	74	64	51	52	61	69	78	85	83	80.9	15.1	
5	85	89	88	86	81	73	66	63	57	56	52	49	47	46	45	47	47	53	55	61	71	74	78	87	64.7	11.3	
6	89	88	89	90	90	88	82	73	70	63	63	56	64	70	64	81	70	68	64	66	72	69	75	82	74.5	12.0	
7	82	87	92	92	92	84	81	75	69	66	59	54	52	53	49	51	59	59	60	65	66	69	67	78	69.3	10.3	
8	86	87	87	87	83	72	65	56	53	51	48	46	45	38	43	41	40	40	40	58	68	74	78	82	61.3	9.4	
9	85	87	84	86	87	77	77	70	56	51	49	47	47	48	47	53	52	47	52	59	61	65	69	72	63.9	11.5	
10	76	82	83	82	77	67	63	64	57	55	54	48	39	39	37	36	42	40	47	59	66	69	73	74	59.5	12.6	
11	77	84	88	89	87	79	73	58	55	44	36	33	39	41	38	36	37	31	37	50	61	71	74	76	58.0	14.4	
12	86	91	94	93	89	81	76	67	51	48	51	42	29	30	60	58	56	57	64	80	78	80	87	90	68.0	14.7	
13	89	89	89	90	87	78	69	57	51	49	45	41	35	35	35	35	33	42	48	52	54	59	73	80	59.2	11.8	
14	82	88	87	89	81	86	74	67	53	47	43	41	41	40	40	42	41	38	42	44	43	40	52	60	57.5	12.3	
15	74	83	86	86	82	73	68	60	45	42	35	37	35	34	36	37	35	34	45	62	71	74	78	82	57.6	12.7	
16	84	85	85	84	84	80	76	67	58	51	50	29	28	28	27	30	33	37	42	60	65	75	73	74	58.7	16.4	
17	73	79	82	83	81	74	69	67	67	51	51	50	48	47	45	43	40	41	44	54	61	69	73	80	61.2	15.3	
18	83	89	91	91	90	83	83	75	70	61	56	54	48	43	43	44	43	45	47	57	64	71	76	81	66.1	14.7	
19	86	89	90	90	90	84	75	68	55	52	45	40	38	39	36	33	34	31	36	51	62	69	66	78	59.9	14.2	
20	79	84	86	87	87	77	66	59	52	52	49	51	49	51	48	50	48	51	85	86	87	90	85	89	68.5	17.6	
21	88	88	89	91	93	91	85	80	75	70	67	59	61	59	61	64	62	59	58	66	70	73	78	80	73.8	18.9	
22	79	79	79	78	77	83	72	67	67	65	65	77	59	54	53	54	55	58	57	66	71	75	80	80	68.7	16.2	
23	83	86	88	87	82	78	72	73	65	75	72	72	59	51	49	49	51	54	54	61	69	74	80	83	70.0	16.1	
24	87	90	91	93	92	90	83	73	63	62	59	52	48	46	45	45	42	43	46	50	58	70	75	71	65.8	14.2	
25	70	68	72	76	82	83	76	70	60	55	52	55	52	54	48	47	41	31	42	55	62	63	63	67	60.3	11.5	
26	71	79	85	87	87	82	75	69	61	41	45	42	36	34	37	41	42	43	49	55	58	62	70	73	59.2	11.3	
27	84	83	82	85	84	83	78	77	72	63	57	58	61	61	55	56	52	56	62	72	72	74	74	80	69.9	12.6	
28	86	89	90	94	94	91	91	79	75	67	63	61	61	63	75	81	84	87	88	88	91	93	93	94	82.3	14.5	
29	96	94	95	94	92	91	90	87	82	81	74	71	69	63	61	56	54	55	60	68	66	67	71	76	75.9	16.5	
30	81	86	90	89	90	83	84	79	68	58	49	46	49	53	55	52	50	51	52	57	62	67	73	73	66.6	12.7	
31	75	78	78	78	78	82	82	87	88	89	92	90	83	72	76	82	87	75	78	69	82	80	80	76	80.7	14.6	
Mean ...	82.1	85.1	86.7	87.4	86.7	82.2	77.3	71.3	64.6	59.3	56.3	53.2	50.7	49.5	50.0	51.4	50.7	50.4	55.5	63.2	68.3	72.2	76.0	79.3	67.1	†13.6	
Vapour Pressure* ...	mb. 13.2	mb. 13.3	mb. 13.3	mb. 13.1	mb. 13.2	mb. 13.2	mb. 13.4	mb. 13.5	mb. 13.3	mb. 13.0	mb. 13.1	mb. 13.1	mb. 13.0	mb. 13.1	mb. 13.2	mb. 13.4	mb. 13.2	mb. 12.9	mb. 13.2	mb. 13.3	mb. 13.3	mb. 13.4	mb. 13.4	mb. 13.3	mb. 13.3	†13.5	—

477. Richmond (Kew Observatory) : North Wall Screen : h_1 = 3.0 metres.

August, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*
1	83	83	81	81	74	76	80	77	81	91	77	77	76	66	60	58	70	80	93	97	96	95	97	95	80.6	13.9
2	88	87	87	88	93	88	89	87	83	78	75	74	69	59	58	58	56	60	70	80	87	92	98	94	79.1	12.6
3	96	98	93	96	90	90	83	78	70	64	63	62	63	60	59	62	66	73	72	74	77	80	82	87	77.0	12.6
4	88	86	86	88	83	79	78	77	84	81	65	66	63	58	55	55	53	61	67	83	92	91	95	93	76.0	14.6
5	93	91	90	88	85	85	83	74	62	58	49	49	45	43	43	43	47	47	52	74	80	84	85	85	68.3	11.4
6	83	90	93	94	94	94	95	92	90	90	89	85	85	88	90	90	90	92	90	91	93	94	93	95	90.6	15.7
7	95	94	95	91	95	91	87	81	87	83	70	69	71	76	88	88	91	92	84	86	89	87	86	87	86.1	14.5
8	88	83	86	90	89	89	86	77	65	57	54	53	46	45	49	45	43	48	49	60	74	78	85	84	67.7	11.4
9	82	83	84	85	87	86	83	79	76	69	74	74	75	80	73	73	76	75	79	86	89	91	93	94	80.9	14.2
10	95	95	95	95	94	92	88	84	77	74	66	65	64	54	49	52	61	63	69	78	85	87	90	90	77.7	15.4
11	88	89	91	89	89	87	87	87	80	76	70	57	54	60	63	62	63	48	51	63	65	78	78	78	73.3	15.5
12	80	81	80	86	87	82	80	72	68	65	52	50	47	45	41	44	42	45	55	66	77	83	81	87	66.3	12.5
13	91	93	95	91	98	96	90	84	77	62	54	55	53	51	55	52	54	53	54	63	69	77	80	80	72.1	12.9
14	83	85	84	87	88	90	88	78	64	56	51	49	47	42	40	41	41	47	48	57	75	80	82	76	65.9	12.8
15	83	87	88	91	87	86	80	71	58	52	52	51	51	45	44	38	44	51	59	70	71	79	80	87	66.7	11.8
16	89	93	92	92	95	95	82	74	60	53	46	48	51	53	53	69	79	90	93	96	96	96	94	94	78.3	14.1
17	93	95	93	94																						

Percentages at exact hours, Greenwich Mean Time.

478. Richmond (Kew Observatory) : North Wall Screen : h_t (height of thermometer bulbs above the ground) = 3.0 metres.

September, 1929.

Table for Richmond (Kew Observatory) in September 1929. Columns include Hour G.M.T., Day, and relative humidity percentages (1-24, Mean, Vapour Pressure*). Rows are numbered 1 to 30.

479. Richmond (Kew Observatory) : North Wall Screen : h_t = 3.0 metres.

October, 1929.

Table for Richmond (Kew Observatory) in October 1929. Columns include Hour G.M.T., Day, and relative humidity percentages (1-24, Mean, Vapour Pressure*). Rows are numbered 1 to 31.

* Computed from the mean temperature and mean relative humidity.

† Mean of the column.

‡ Mean of the row.

Percentages at exact hours, Greenwich Mean Time.

480. Richmond (Kew Observatory) : North Wall Screen : h_1 (height of thermometer bulbs above the ground) = 3.0 metres. November, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*
Day.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	mb.
1	93	88	93	98	94	98	94	92	96	93	95	97	94	96	96	97	96	96	97	98	100	100	100	98	95.7	7.5
2	100	100	97	100	100	98	98	100	100	96	92	84	71	67	73	71	76	79	78	82	92	92	93	94	89.0	8.0
3	95	95	93	88	88	93	96	94	83	71	64	63	61	56	63	65	67	69	73	79	81	89	88	92	79.5	8.4
4	95	93	94	96	96	96	100	98	95	90	86	82	78	79	76	80	83	84	83	84	86	84	83	84	87.9	8.2
5	86	86	83	78	78	81	80	75	73	73	72	69	66	65	73	76	72	73	74	74	75	75	82	83	76.0	9.4
6	84	83	84	87	89	92	92	93	92	92	95	98	96	98	94	95	93	92	91	88	90	94	93	94	91.4	10.3
7	95	97	95	98	98	98	98	97	97	93	88	82	79	78	82	80	85	84	89	94	93	96	98	100	91.3	9.5
8	98	99	100	98	98	100	99	99	100	96	87	82	67	68	68	64	65	63	68	71	73	71	79	86	83.6	11.2
9	90	90	94	94	93	91	93	95	89	83	85	75	67	64	63	74	76	81	85	89	89	87	89	80	83.9	8.3
10	87	82	80	79	79	79	84	82	88	84	82	75	65	52	58	56	70	74	74	81	79	81	81	82	76.4	8.1
11	84	84	89	89	92	92	90	88	82	80	77	83	83	83	87	88	92	92	94	91	92	93	94	93	87.8	9.9
12	93	94	90	83	87	85	93	93	82	73	70	62	60	57	58	64	76	82	86	89	90	93	91	100	81.2	8.0
13	98	100	100	100	100	100	100	96	94	93	91	85	78	68	72	76	80	87	87	94	91	91	96	94	90.6	6.4
14	94	96	90	92	85	89	89	89	89	91	85	80	71	70	61	70	85	93	92	94	96	97	97	96	87.1	6.1
15	96	96	96	96	97	97	98	98	98	98	98	98	98	98	98	97	95	89	88	88	92	92	86	87	94.9	6.0
16	92	95	96	96	95	96	96	92	96	94	92	89	87	93	91	87	87	87	87	86	80	84	82	84	90.2	7.5
17	81	82	85	87	88	91	93	93	94	88	74	74	64	67	71	77	81	85	88	87	91	91	98	92	84.1	6.7
18	98	97	98	98	98	98	98	98	98	98	99	99	99	98	100	100	94	93	94	90	82	82	85	90	95.2	6.4
19	85	77	86	87	92	92	93	94	91	92	93	91	93	93	92	94	90	87	85	83	80	79	79	78	88.0	10.6
20	74	70	67	69	70	72	72	75	74	73	73	71	69	71	75	81	83	88	86	88	93	88	86	88	77.0	9.3
21	89	91	91	90	88	90	90	94	92	86	82	79	77	77	80	81	84	86	86	88	85	82	80	80	85.5	10.1
22	80	82	80	83	88	85	84	79	77	70	66	64	66	68	68	73	80	81	83	81	79	78	78	83	77.3	10.7
23	87	91	86	84	87	82	80	80	84	81	79	79	90	79	87	75	79	78	83	84	83	86	84	83	83.0	10.2
24	84	83	86	87	90	94	90	94	96	91	87	80	70	69	71	75	77	84	89	86	84	83	87	92	84.3	9.7
25	92	92	92	86	91	91	93	93	90	91	86	85	87	87	80	80	74	75	73	76	75	76	76	84	84.5	11.6
26	81	84	72	74	76	82	82	87	86	88	92	88	84	82	79	80	78	79	74	78	83	79	77	79	81.1	9.2
27	83	83	85	85	84	87	86	85	90	81	83	79	76	74	75	76	77	82	87	94	92	93	93	89	83.9	8.3
28	93	93	93	95	95	96	97	97	98	94	95	95	97	97	95	91	91	83	85	84	82	84	83	84	92.1	12.0
29	83	88	91	92	95	94	94	95	99	97	93	91	96	91	85	89	90	91	95	98	96	95	95	95	92.7	12.1
30	92	94	92	95	95	94	92	95	93	93	89	88	85	84	89	89	93	93	95	98	96	99	99	98	92.7	11.6
Mean ...	89.4	89.5	89.3	89.5	90.2	91.0	91.5	91.3	90.5	87.4	85.0	82.2	79.1	77.6	78.7	80.0	82.3	83.7	85.0	86.7	86.7	86.9	88.0	88.7	86.3	19.0
Vapour Pressure* ...	mb. 8.9	mb. 8.8	mb. 8.6	mb. 8.5	mb. 8.5	mb. 8.6	mb. 8.7	mb. 8.9	mb. 9.0	mb. 9.2	mb. 9.3	mb. 9.1	mb. 9.0	mb. 9.0	mb. 9.1	mb. 8.9	mb. 8.9	mb. 8.9	mb. 9.0	mb. 18.9	—					

481. Richmond (Kew Observatory) : North Wall Screen : h_1 = 3.0 metres. December, 1929.

Hour. G.M.T.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Mean	Vapour Pressure*
1	% 98	% 99	% 98	% 96	% 96	% 96	% 93	% 94	% 94	% 95	% 89	% 84	% 84	% 86	% 83	% 89	% 92	% 93	% 92	% 93	% 96	% 96	% 99	% 100	% 93.1	mb. 10.4
2	97	97	96	96	93	92	88	88	86	85	90	89	90	93	93	97	93	94	92	87	87	85	83	84	91.0	10.5
3	90	87	84	86	89	93	95	94	92	84	82	86	91	87	93	93	92	91	94	98	96	89	87	88	90.0	9.0
4	89	92	95	95	97	98	99	98	97	92	87	84	83	78	76	78	82	84	87	87	87	84	82	80	88.1	11.0
5	74	76	81	82	86	86	86	86	87	91	87	84	91	88	82	87	79	75	75	80	80	81	83	83	82.9	10.0
6	83	82	81	79	82	85	83	86	83	80	75	68	72	72	74	77	72	84	88	88	88	83	79	77	80.2	8.8
7	79	69	69	75	82	75	74	73	68	68	68	58	56	56	50	48	50	57	60	65	70	74	75	77	68.5	7.3
8	73	89	92	82	89	87	89	86	89	80	79	79	68	54	66	69	71	67	68	62	60	64	61	70	75.7	8.5
9	68	70	86	88	83	80	83	90	91	84	91	89	92	74	73	76	70	65	72	71	81	72	75	75	79.4	8.1
10	72	71	76	80	80	85	87	85	80	80	80	65	67	69	72	78	76	78	87	91	90	93	93	94	80.0	7.2
11	93	94	95	87	75	69	76	73	65	68	73	64	60	58	58	62	67	68	74	73	74	74	76	82	73.5	9.3
12	80	84	81	65	67	70	71	72	92	83	86	71	60	54	55	58	60	66	68	69	76	79	83	83	72.2	7.8
13	86	86	85	84	84	81	81	86	89	82	79	84	85	83	83	88	88	89	88	88	88	88	89	89	89.4	10.5
14	95	94	93	94	93	93	94	95	94	93	88	87	85	83	83	88	88	89	88	88	88	88	89	89	90.1	18.2
15	93	97	93	94	96	96	96	96	95	86	88	89	83	81	76	74	79	80	87	86	88	86	87	88	88.1	9.8
16	89	85	85	86	90	88	95	90	91	85	85	76	68	69	69	74	90	82	85	91	87	89	92	96	84.7	6.8
17	94	96	94	97	97	98	96	95	95	89	88	85	80	82	79	82	85	93	94	96	93	93	91	92	91.1	6.2
18	96	96	96	97	97	98	98	98	97	97	94	88	76	70	70											

RAINFALL.

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

488. Richmond (Kew Observatory) : H, (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h, (height of receiving surface above ground) = 5.5 metres + 0.53 metres. March, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24	
Day.	mm. (L)	mm. (L)	mm. (I)	mm. (*)	mm. (*)	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.	
1																										0.1	...
2																											...
3																											...
4																											...
5																											...
6																											...
7																											...
8																											...
9																											...
10																											...
11																											...
12																											...
13																											...
14																											...
15																											...
16																											...
17																											...
18																											...
19																											...
20																											...
21																										0.1	0.1
22					.1																					0.1	0.2
23																											...
24																											...
25							.2	.2																		0.4	0.6
26																											...
27																											...
28																											...
29																											...
30																											...
31																											...
Sum.	...	...	0.1	...	0.1	...	0.2	0.2	...	...	...	...	...	...	...	...	...	0.1	...	...	...	...	...	...	0.7	0.9	
Total Duration.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	—

489. Richmond (Kew Observatory) : H, = 5.5 metres + 0.53 metres.

April, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
1	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.		
2	...	...	.6	...	...	...	...	...	...	...	...	...	...	.7	...	...	...	...	...	...	...	...	...	...	...	0.7	0.2
3	0.7	0.4
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	.7	...	...	...	...	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	4.1
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	1.6
7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6	0.4
11	.2	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	.5	.3	.1	...	...	...	...	...	...	...	5.1	5.7
12	...	.2	.1	...	...	.6	...	...	...	...	...	...	...	...	...	.2	1.2	1.2	.4	...	...	...	...	...	...	3.9	4.0
13	.1	...	...	...	...	(...)	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	1.1
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	1.0
28	...	...	.6	.5	.3	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.7	3.4
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.3	.4	.2	1.0	1.1	.4	.7	.6	.2	...	5.1	8.9
30	.7	.3	.8	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	3.1
Sum.	1.7	0.9	2.1	1.1	0.5	0.9	0.2	0.1	0.1	0.1	2.1	...	...	0.7	...	0.5	2.1	1.7	1.6	2.9	1.3	1.8	3.4	1.4	27.2	34.0	
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.	—	
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	—		

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

496. Richmond (Kew Observatory) : H_r (height of receiving surface above M.S.L.) = H (height of station above M.S.L.) + h_r (height of receiving surface above ground) = 5.5 metres + 0.53 metres. November, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration. 0-24		
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.	
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.4
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	1.5
7	...	...	...	...	(...)	(.1)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	1.7
8	.6	.6	.8	.1	.1	7.2	2.0	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.7	4.9
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	1.1
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.7	8.6
12	.6	1.2	2.5	1.3	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.0	4.6
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.3	2.3
16	.5	.4	1.5	1.4	.4	...	...	...	.9	2.5	3.4	3.5	1.3	5.4	2.8	.3	.5	.8	.9	.2	...	...	...	...	26.7	14.3	
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	.6	...	...	...	1.2	.5	.1	.3	...	.1	.2	.1	.8	.2	...	...	...	...	...	...	...	...	...	...	...	3.2	2.3
20	4.1	4.6
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8	0.7
23	...	.8	...	...	.3	...	...	...	.1	...	...	...	2.6	.9	1.0	...	...	...	...	...	...	...	...	...	...	6.3	2.4
24	...	...	...	...	2.6	.6	1.3	.1	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.8	3.8
25	1.4	.6	.6	.1	.2	...	.2	.6	...	.5	.3	...	...	...	...	.1	.2	...	.3	...	...	...	...	...	...	5.3	6.4
26	...	...	...	...	...	...	...	...	...	1.3	.2	1.2	...	...	...	...	...	...	...	...	...	...	...	...	...	2.7	1.0
27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	3.6
28	2.2	2.2	1.6	.5	2.2	1.8	1.6	1.5	1.4	1.1	1.7	2.5	.2	(...)	(.1)	...	...	...	...	...	...	...	...	...	...	20.8	12.5
29	2.4	2.8
30	...	1.5	.1	1.1	6.2	3.3
Sum.	5.9	7.3	7.1	4.6	7.4	10.2	5.2	2.8	4.3	6.9	5.8	7.9	5.8	8.5	5.1	0.5	1.2	2.7	3.7	4.2	3.2	2.8	1.8	7.7	122.6	82.8		
Total Duration.	5.0	4.4	5.1	4.4	5.0	3.3	3.1	2.7	3.2	5.5	2.7	3.3	3.9	3.2	2.5	1.1	1.8	2.5	2.3	3.6	3.2	3.2	2.7	5.1	82.8	—		

497. Richmond (Kew Observatory) : H_r = 5.5 metres + 0.53 metres.

December, 1929.

Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	Duration.				
Day.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	hr.			
1	...	...	...	...	1.4	.8	.1	...	...	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.5	2.0	
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.9	4.8
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.6
4	...	.1	1.6	.1	...	.2	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1	1.8
5	...	...	.1	.6	1.8	1.6	2.8	3.0	1.1	.7	.8	.3	.2	1.4	...	...	...	...	...	...	...	...	...	...	...	...	14.4	9.1
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.2	1.2	2.2	1.7	1.5	...	.8	...	7.6	4.0	
7	1.1	...	...	...	.2	...	.2	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.8	1.1
8	...	1.7	.7	.8	.4	.3	1.0	.9	2.5	1.2	.3	...	...	...	.2	.4	...	.1	.2	.3	...	...	...	...	...	...	11.0	9.6
9	...	...	.1	...	...	...	...	...	.9	1.8	3.1	1.3	.8	.4	...	.2	.1	...	.1	...	.2	...	...	...	...	...	10.8	7.0
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.2	...	.3	.8	.7	.4	...	...	2.4	3.9
11	.4	.1	.4	...	...	...	.1	.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.1	2.4
12	...	3.5	...	...	...	...	...	...	3.1	.2	1.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.7	1.5
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.5
14	...	...	...	...	...	...	...	...	(...)	(.1)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	0.1
15	...	.2	1.6	1.8	.2	.2	.3	.1	.4	.2	.2	.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.5	7.7
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	(...)	(...)	(...)	(...)	(.1)	...	0.1	...
17	(...)	(...)	(...)	(...)	(.1)	(...)	(...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	...
18	
19	
20	
21	...	...	.2	...	...	...	.3	...	2.0	1.0	1.2	1.4	.6	...	...	...	...	...	...	...	...	...	...	...	...	...	6.7	5.6
22	...	...	...	.3	...	...	.3	.5	.4	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	4.3
23	...	...	...	...	...	...	...	...	...	...	...	...	...	(...)	...	(.1)	...	...	...	...	...	...	...	...	...	...	1.2	1.2
24	2.0	1.9	.8	.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.3	5.7
25	.4	.5	...	.2	1.8	.7	.2	...	...	.2	.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.6	2.9
26	
27	...	.2	.2	.5	.5	.5	.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0	3.2
28	2.5	3.8	
297	1.3	1.7	.1	.2	.1	4.4	3.0	
302	1.2	1.9	.2	1.3	.2	5.7	3.6	
31
Sum.	3.9	8.2	5.7	5.4	7.7	6.0	5.7	6.2	12.7	7.8	8.4	3.6	2.3	5.1	4.5	2.0	2.9	0.4	2.6	2.6	2.2	3.3	1.4	1.9	112.5	89.4				
Total Duration.	3.2	4.2	5.9	5.5	5.3	5.2	4.8	5.6	7.8	6.8	4.6	3.8	3.3	3.0	2.5	2.1	2.0	0.9	2.7	1.7	1.8	2.5	2.4	2.3	89.4	—				
Hour. G.M.T.	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-24	—				

NOTE.—For Annual Totals, see table 184.

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

498. Richmond (Kew Observatory) : h_s (Height of recorder above ground) = 13.3 metres.

January, 1929.

Hour. L.A.T.	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	11 to	Noon to 13	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.				
	4.	5.	6.	7.	8.	9.	10.	11.	14.		15.	16.	17.	18.	19.	20.	21.	hr.			%	Sky.	Total. mw/cm ²	Vertical. mw/cm ²	
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%											
1	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.6	3.3	...	...	...
2	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.9	37	...	...	...
3	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...
15	—	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	2	...	...	...
16	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	71	Clear	48	15
17	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...
18	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	2	...	...	...
19	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.8	78	Clear	57	18
20	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.9	46	...	...	...
21	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	5	...	...	...
25	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.4	50	...	...	...
27	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.4	38	...	...	...
28	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	6	...	...	...
31	—	—	—	—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	7	...	...	...
Sum.	—	—	—	—	...	0.5	2.8	4.4	4.4	6.0	5.9	5.9	1.9	...	—	—	—	—	—	31.8	—	—	—	—	
Mean	—	—	—	—	...	.02	.09	.14	.14	.19	.19	.19	.06	...	—	—	—	—	—	1.03	12	—	—	—	

499. Richmond (Kew Observatory) : h_s = 13.3 metres.

February, 1929.

Hour. L.A.T.	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	11 to	Noon to 13	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.				
	4.	5.	6.	7.	8.	9.	10.	11.	14.		15.	16.	17.	18.	19.	20.	21.	hr.			%	Sky.	Total. mw/cm ²	Vertical. mw/cm ²	
1	—	—	—	—
2	—	—	—	—
3	—	—	—	—	7.5	82	...	...	...
4	—	—	—	—	5.5	59	...	...	...
5	—	—	—	—	0.2	2	...	...	...
6	—	—	—	—
7	—	—	—	—	0.4	4	...	...	...
8	—	—	—	—	2.5	26	...	...	...
9	—	—	—	—
10	—	—	—	—
11	—	—	—	—
12	—	—	—	—	4.2	43	...	...	...
13	—	—	—	—	4.1	42	Clear	37	15
14	—	—	—	—	2.7	27	...	...	...
15	—	—	—	—	1.8	18	...	...	...
16	—	—	—	—
17	—	—	—	—	6.0	60	...	...	...
18	—	—	—	—	3.6	36	Misty	26	12
19	—	—	—	—	1.6	16	...	...	...
20	—	—	—	—	0.7	7	...	...	...
21	—	—	—	—	3.7	36	...	...	...
22	—	—	—	—	1.2	12	Misty	18	8
23	—	—	—	—	0.1	1	...	...	...
24	—	—	—	—
25	—	—	—	—
26	—	—	—	—
27	—	—	—	—	3.5	33	...	...	...
28	—	—	—	—	2.0	19	...	...	...
Sum.	—	—	—	—	...	0.1	1.8	3.8	5.0	7.4	10.0	10.6	8.6	3.7	0.3	...	—	—	—	51.3	—	—	—	—	
Mean	—	—	—	—00	.06	.14	.18	.26	.36	.38	.31	.13	.01	...	—	—	—	1.83	19	—	—	—	
Hour. L.A.T.	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	11 to	Noon to 13	13 to	14 to	15 to	16 to	17 to	18 to	19 to	20 to	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.				
4.	5.	6.	7.	8.	9.	10.	11.	14.	15.		16.	17.	18.	19.	20.	21.	hr.	%			Sky.	Total. mw/cm ²	Vertical. mw/cm ²		

DURATION OF BRIGHT SUNSHINE.

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

500. Richmond (Kew Observatory) : h_s (Height of recorder above ground) = 13.3 metres.

March, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.		
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	Sky.						
1	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	4.5	42	...	...	...
2	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	5.8	53	Misty	21	11
3	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	3.8	35	...	...	...
4	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	0.7	6	...	...	...
5	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	5.7	51	Clear	78	42
6	—	—	—	2.3	21	...	...	...
7	—	—	—	3.6	32	...	...	...
8	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	8.2	73	Hazy	28	16
9	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	8.0	70	Hazy	28	16
10	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	6.1	53	...	...	...
11	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	9.0	78	Hazy	39	22
12	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	6.3	55	...	...	...
13	—	—	—
14	—	—	—
15	—	—	—
16	—	—	—	1.7	14	...	...	...
17	—	—	—
18	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	6.5	54	...	...	...
19	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	4.1	34	...	...	...
20	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	2.6	22	...	...	...
21	—	—	—
22	—	—	—	3.5	29	...	...	...
23	—	—	—	5.5	45	...	...	...
24	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	6.4	52	...	...	...
25	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	2.4	19	Clear	76	49
26	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	5.4	43	Cirrus	55	36
27	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	6.1	49	Clear	71	46
28	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	10.5	83	...	...	...
29	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	10.4	82	...	...	...
30	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	10.5	82	...	...	...
31	—	—	—	1.0	1.0	1.0	1.0	...	...	...	...	...	6.7	52	...	...	...
Sum.	—	—	...	0.5	3.9	8.2	13.6	17.4	17.7	18.9	20.1	19.0	15.8	9.8	1.4	...	...	...	146.3	—	—	—	—
Mean	—	—02	.13	.26	.44	.56	.57	.61	.65	.61	.51	.32	.05	...	...	...	4.72	40	—	—	—

501. Richmond (Kew Observatory) : h_s = 13.3 metres.

April, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.		
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	Sky.						
1	—	—	6.5	51	...	...	...
2	—	—	5.4	42	...	...	...
3	—	—	6.1	47	...	...	...
4	—	—	0.8	6	...	...	...
5	—	—	4.7	36	...	...	...
6	—	—	12.0	91	Clear	72	51
7	—	—	11.2	84	...	...	...
8	—	—	4.7	35	...	...	...
9	—	—	3.5	26	...	...	...
10	—	—	6.4	48	...	...	...
11	—	—	2.5	18	...	...	...
12	—	—
13	—	—
14	—	—	2.0	15	...	...	...
15	—	—	8.2	59	...	...	...
16	—	—	1.6	12	...	...	...
17	—	—	6.9	50	Clear	50	37
18	—	—	1.6	11	...	...	...
19	—	—	11.4	81	Clear	83	63
20	—	—	3.2	23	...	...	...
21	—	—	11.8	83	...	...	...
22	—	—	12.5	88	Haze	44	34
23	—	—	0.3	2	...	...	...
24	—	—	6.9	48	Clear	86	67
25	—	—	5.0	35	...	...	...
26	—	—	2.8	19	...	...	...
27	—	—	5.2	36	...	...	...
28	—	—	1.2	8	...	...	...
29	—	—
30	—	—	1.7	12	...	...	...
Sum.	—	...	1.3	6.0	10.2	12.3	13.9	13.6	13.4	14.7	12.6	14.0	12.7	11.5	9.0	0.9	...	...	146.1	—	—	—	—
Mean	—04	.20	.34	.41	.46	.45	.45	.49	.42	.47	.42	.38	.30	.03	...	...	4.87	35	—	—	—
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.		
hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	Sky.	Total.	Vertical.

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

506. Richmond (Kew Observatory) : h_s (Height of recorder above ground) = 13.3 metres.

September, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Angström Pyrheliometer.		
																					Sky.	Total.	Vertical.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	mw/cm ²	mw/cm ²							
1	—	—	...	1	9	5	2	2	1	8	10	8	10	10	9	1	—	—	7.6	56	...	...	...
2	—	—	5	10	10	10	10	10	10	10	10	6	...	—	—	9.1	67	...	...	...
3	—	—	7	4	3	8	10	10	7	10	10	10	8	...	—	—	8.7	65	...	...	...
4	—	—	2	10	10	10	10	10	10	10	10	7	...	—	—	8.9	67	...	...	...
5	—	—	5	4	7	9	10	10	10	10	10	10	4	...	—	—	8.9	67	...	...	...
6	—	—	...	3	10	10	10	10	9	10	8	10	9	10	5	...	—	—	10.4	78	...	...	...
7	—	—	6	10	10	10	10	10	10	10	10	10	7	...	—	—	10.3	78	Haze	61	43
8	—	—	...	3	10	10	10	10	10	10	10	10	10	10	9	...	—	—	11.2	85	...	...	...
9	—	—	...	3	10	10	10	10	10	10	10	7	...	...	...	—	—	9.0	69	Clear	82	57	
10	—	—	1	10	10	10	4	...	...	...	—	—	3.5	27	Haze	42	29	
11	—	—	...	3	10	10	10	8	10	10	8	9	10	10	2	...	—	—	10.0	78	Haze	41	28
12	—	—	1	7	7	9	10	10	10	10	5	2	...	—	—	7.1	55	...	...	...
13	—	—	5	10	10	10	10	10	10	10	10	5	2	...	—	—	10.0	78	Haze	59	40
14	—	—	1	6	...	...	4	10	10	10	5	10	2	...	—	—	5.8	46	...	...	...
15	—	—	7	...	2	6	...	...	...	6	3	3	...	...	—	—	2.7	21	...	...	...
16	—	—	4	8	10	7	1	...	...	...	—	—	3.0	24	...	...	...
17	—	—	1	...	2	...	3	1	...	...	...	—	—	0.7	6	...	...	...
18	—	—	—	—
19	—	—	5	3	1	2	...	6	8	7	6	6	2	...	—	—	4.6	37	...	...	...
20	—	—	3	8	9	9	4	...	5	9	1	...	—	—	4.8	39	...	...	...
21	—	—	5	5	9	6	7	3	...	—	—	3.5	29	...	...	...
22	—	—	...	5	10	10	10	10	9	2	8	3	1	...	...	...	—	—	6.8	56	...	...	...
23	—	—	6	7	3	7	3	...	...	...	...	...	—	—	2.6	21	...	...	...
24	—	—	7	3	7	9	1	9	10	5	...	—	—	4.1	34	...	...	...
25	—	—	9	10	10	10	10	10	10	10	2	...	—	—	8.1	67	...	...	...
26	—	—	4	10	10	10	10	10	10	10	10	10	5	...	—	—	9.9	83	...	...	...
27	—	—	8	10	10	10	10	10	10	7	9	2	...	—	—	8.6	73	...	...	...
28	—	—	...	3	10	10	10	10	10	10	10	10	9	9	...	...	—	—	10.1	88	...	...	...
29	—	—	...	2	4	8	7	4	7	1	7	...	...	...	...	...	—	—	4.0	34	...	...	...
30	—	—	8	9	5	...	1	...	...	...	...	...	...	—	—	2.3	20	...	...	...
Sum.	—	—	...	2.3	11.3	14.4	17.7	18.7	20.2	22.8	21.9	21.5	19.0	18.3	8.1	0.1	—	—	196.3	—	—	—	—
Mean	—	—08	.38	.48	.59	.62	.67	.76	.73	.72	.63	.61	.27	...	—	—	6.54	52	—	—	—

507. Richmond (Kew Observatory) : h_s = 13.3 metres.

October, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Angström Pyrheliometer.		
																					Sky.	Total.	Vertical.
Day.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	%	mw/cm ²	mw/cm ²							
1	—	—	8	10	10	10	9	8	3	...	...	...	...	...	...	...	5.8	50	...	...	...
2	—	—	7	9	8	9	7	...	...	...	...	...	...	4.2	36	...	...	...
3	—	—	3	1	1	...	...	...	...	...	...	...	0.7	6	...	...	...
4	—	—	1	2	1	...	...	...	...	...	...	...	0.4	4	...	...	...
5	—	—	7	10	10	10	9	7	8	2	...	...	...	...	...	6.3	56	...	...	...
6	—	—	3	9	7	6	2	1	2	...	...	...	...	...	3.0	27	...	...	...
7	—	—	10	10	10	10	8	7	10	4	9	...	...	...	...	...	7.8	70	...	...	...
8	—	—	1	10	5	...	4	...	1	...	...	...	...	...	...	...	2.1	19	...	...	...
9	—	—	8	10	10	7	3	1	...	7	9	4	...	...	...	...	5.9	53	...	...	...
10	—	—	6	8	4	3	...	2	...	...	...	...	...	...	2.3	21	...	...	...
11	—	—	3	10	9	3	...	...	...	...	2.5	23	...	...	...
12	—	—	1	...	...	...	...	...	...	6	...	...	...	...	0.7	6	...	...	...
13	—	—
14	—	—	4	3	1	...	...	...	...	...	...	...	...	...	...	0.8	7	...	...	...
15	—	—	1	...	...	...	...	...	...	0.1	1	...	...	...
16	—	—	3	5	9	8	10	9	8	8	7	...	...	...	...	6.7	63	...	...	...
17	—	—	2	9	10	10	9	7	...	3	2	2	...	...	...	...	5.4	51	Clear	63	31
18	—	—	5	10	2	...	...	...	1	6	9	4	...	...	...	...	3.7	35	...	...	...
19	—	—	8	10	10	7	6	10	10	5	...	...	...	...	...	6.6	63	...	...	...
20	—	—	1	...	...	...	...	...	...	...	...	...	...	...	0.1	1	...	...	...
21	—	—	9	10	10	9	10	9	8	3	...	...	...	...	...	6.8	66	Clear	55	26
22	—	—	2	10	7	2	...	...	...	...	...	...	...	...	2.1	20	...	...	...
23	—	—	1	5	...	...	...	2	2	...	...	...	...	...	...	...	1.0	10	...	...	...
24	—	—	1	...	3	...	...	...	...	...	...	...	...	...	...	...	0.4	4	...	...	...
25	—	—	4	10	10	10	8	9	5	1	4	...	...	...	...	...	6.1	61	Clear	68	30
26	—	—	4	10	10	10	10	7	8	8	4	...	...	...	...	6.1	61	Hazy	39	17
27	—	—	5	10	10	10	10	10	10	10	2	...	...	...	...	7.7	77	...	...	...
28	—	—
29	—	—	2	10	10	10	10	8	6	3	4	...	...	...	...	...	6.3	64	Clear	71	30
30	—	—	2	...	2	10	10	9	4	...	...	...	...	...	3.7	38	Clear	53	22
31	—	—	2	7	9	2	1	8	5	...	...	...	...	...	3.4	35	...	...	...
Sum.	—	—	...	4.2	11.2	13.8	16.0	15.0	13.0	10.2	11.4	10.2	3.7	...	—	—	—	—	108.7	—	—	—	—
Mean	—	—14	.36	.45	.52	.48	.42	.33	.37	.33	.12	...	—	—	—	—	3.51	33	—	—	—
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Sky.	Total.	Vertical.

DURATION OF BRIGHT SUNSHINE.

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

508. Richmond (Kew Observatory) : h_s (Height of recorder above ground) = 13.3 metres.

November, 1929.

Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.		
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			hr.	%	Sky.						
1	—	—	—	—	—	—	—	—	·1	·6	·1	—	—	—	—	—	—	—	1·7	18	...	...	...
2	—	—	—	—	—	—	—	—	1·0	1·0	·1	—	—	—	—	—	—	—	3·1	32	Misty	17	7
3	—	—	—	—	—	·5	1·0	1·0	1·0	1·0	·9	·7	·5	—	—	—	—	—	6·6	69	...	...	...
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	·1	—	—	—	—	—	—	—	—	0·1	1	...	...	...
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	·2	—	—	—	—	—	—	—	0·4	4	...	...	...
8	—	—	—	—	—	·2	—	—	—	—	—	·1	·2	—	—	—	—	—	0·3	3	...	...	...
9	—	—	—	—	—	·6	1·0	1·0	1·0	1·0	1·0	1·0	·9	—	—	—	—	—	7·5	82	Clear	58	22
10	—	—	—	—	—	—	—	—	·3	·9	1·0	·9	·4	—	—	—	—	—	3·5	38	...	...	...
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	·8	·9	·9	1·0	·7	·8	1·0	·2	—	—	—	—	—	6·3	70	...	...	...
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	—	—	—	—	—	—	·1	1·0	1·0	1·0	·9	1·0	·6	—	—	—	—	—	5·6	63	...	...	...
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
17	—	—	—	—	—	—	·6	1·0	1·0	1·0	·9	·4	—	—	—	—	—	—	4·9	56	...	...	...
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	—	—	—	—	—	—	·3	·4	·8	1·0	1·0	·9	·1	—	—	—	—	—	4·5	52	...	...	...
21	—	—	—	—	—	·6	1·0	1·0	1·0	1·0	1·0	·3	—	—	—	—	—	—	5·9	69	...	53	17
22	—	—	—	—	—	·3	·9	·8	·4	·8	—	—	—	—	—	—	—	—	3·2	38	...	...	...
23	—	—	—	—	—	—	—	—	—	—	·1	·3	·1	—	—	—	—	—	0·5	6	...	...	...
24	—	—	—	—	—	—	—	·5	·9	1·0	·9	·7	—	—	—	—	—	—	4·0	48	...	...	...
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	—	—	—	—	—	—	—	—	·4	—	·1	·3	·1	—	—	—	—	—	0·9	11	...	...	...
27	—	—	—	—	—	·2	1·0	1·0	1·0	·8	·6	·2	—	—	—	—	—	—	4·8	58	Clear	53	16
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	—	—	—	—	—	—	—	—	—	—	·2	·1	·1	—	—	—	—	—	0·4	5	...	...	...
30	—	—	—	—	—	—	—	·2	·6	·1	·3	—	·5	—	—	—	—	—	1·7	21	...	...	...
Sum.	—	—	—	—	—	3·2	6·8	8·9	12·3	12·0	11·0	8·0	3·7	—	—	—	—	—	65·9	—	—	—	—
Mean	—	—	—	—	—	·11	·23	·30	·41	·40	·37	·27	·12	—	—	—	—	—	2·20	25	—	—	—

509. Richmond (Kew Observatory) : h_s = 13.3 metres.

December and Year, 1929.

Hour. L.A.T.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.								
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.			%	Sky.	Total. mw/cm ²						
1	—	—	—	—	—	—	—	·1	—	—	—	—	—	—	—	—	—	—	0·1	1	...	...	...
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...	...
3	—	—	—	—	—	—	·1	·3	—	—	—	—	—	—	—	—	—	—	0·4	5	...	...	...
4	—	—	—	—	—	—	—	—	—	·2	·5	·8	—	—	—	—	—	—	1·5	19	...	...	...
5	—	—	—	—	—	—	—	—	—	—	—	·5	—	—	—	—	—	—	0·5	6	...	...	...
6	—	—	—	—	—	—	1·0	1·0	1·0	·6	·5	—	—	—	—	—	—	—	4·1	51	Clear	45	13	
7	—	—	—	—	—	—	·1	—	—	—	—	—	—	—	—	—	—	—	0·1	1	...	...	...
8	—	—	—	—	—	—	—	—	—	—	·7	—	—	—	—	—	—	—	0·7	9	...	...	...
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...	...	...
10	—	—	—	—	—	·2	1·0	·1	·8	1·0	1·0	·1	—	—	—	—	—	—	4·2	53	Clear	59	16	
11	—	—	—	—	—	—	—	·2	·1	—	—	—	—	—	—	—	—	—	0·3	4	...	...	...
12	—	—	—	—	—	—	—	·5	·6	—	·2	·7	·1	—	—	—	—	—	2·1	27	...	...	...
13	—	—	—	—	—	—	·7	·7	—	—	—	—	—	—	—	—	—	—	1·4	18	...	...	...
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...	...	...
15	—	—	—	—	—	—	—	—	—	—	·3	·3	—	—	—	—	—	—	0·6	8	...	...	...
16	—	—	—	—	—	—	·3	1·0	1·0	1·0	1·0	1·0	—	—	—	—	—	—	5·3	68	Misty	31	8	
17	—	—	—	—	—	—	—	—	1·0	1·0	1·0	·6	—	—	—	—	—	—	4·5	58	Misty	33	9	
18	—	—	—	—	—	—	·6	·8	—	1·0	1·0	·9	—	—	—	—	—	—	4·3	55	Foggy	19	5	
19	—	—	—	—	—	·2	1·0	1·0	1·0	1·0	1·0	1·0	·2	—	—	—	—	—	6·4	82	...	...	...
20	—	—	—	—	—	—	·1	·4	·6	·2	·5	·2	—	—	—	—	—	—	2·0	26	...	...	...
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...	...	...
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...	...	...
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...	...	...
24	—	—	—	—	—	·1	1·0	1·0	1·0	1·0	1·0	·7	—	—	—	—	—	—	5·8	75	Clear	52	13	
25	—	—	—	—	—	—	·4	·6	·9	·6	·2	—	—	—	—	—	—	—	2·7	35	...	...	...
26	—	—	—	—	—	—	·9	1·0	1·0	1·0	1·0	·9	—	—	—	—	—	—	5·8	75	Clear	51	13	
27	—	—	—	—	—	—	·1	·5	·3	1·0	·3	—	—	—	—	—	—	—	2·2	28	...	...	...
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...	...	...	...
29	—	—	—	—	—	—	·1	·5	1·0	·6	·3	·8	·1	—	—	—	—	—	3·4	44	...	...	...
30	—	—	—	—	—	—	—	—	—	·1	—	·2	—	—	—	—	—	—	0·3	4	...	...	...
31	—	—	—	—	—	—	·6	·9	·6	·7	1·0	·7	—	—	—	—	—	—	4·5	57	Ci-haze.	39	10	
Sum.	—	—	—	—	—	0·5	7·4	10·8	11·6	11·6	11·5	9·4	0·4	—	—	—	—	—	63·2	—	—	—	—	
Mean	—	—	—	—	—	·02	·24	·35	·37	·37	·37	·30	·01	—	—	—	—	—	2·04	26	—	—	—	
Annual Total	...	3·6	31·4	64·8	95·8	120·6	150·6	168·1	172·6	184·8	173·7	161·9	129·6	105·4	81·2	52·2	11·1	...	1706·9	—	—	—	—	
Annual Mean	...	·01	·09	·18	·26	·33	·41	·46	·47	·50	·48	·44	·36	·29	·22	·14	·03	...	4·68	38	—	—	—	
Hour. L.A.T.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to Noon	Noon to 13.	13 to 14.	14 to 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	Total for Day.	Per cent. of Possible.	Radiation at Noon. Ångström Pyrheliometer.			

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

510. Richmond (Kew Observatory) :

H_a (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.			
	°	m/s.	°	m/s.																						
Day.																										
1	25	6.1	30	6.0	25	5.3	15	5.5	10	4.7	360	3.0	355	2.9	355	2.8	360	2.4	360	3.6	360	4.1	5	4.5		
2	15	4.8	15	4.1	15	4.0	10	3.4	360	3.2	360	4.0	10	3.5	5	4.6	10	3.8	10	4.6	30	6.3	40	7.1		
3	40	5.9	40	6.2	40	6.3	35	5.4	30	5.4	30	6.0	35	6.7	35	6.7	20	6.3	35	7.9	45	7.9	50	6.7		
4	30	4.5	40	4.7	45	4.7	50	4.5	50	4.6	35	3.9	35	4.0	30	4.3	30	4.6	30	4.6	45	5.0	45	5.8		
5	30	5.7	35	6.3	40	5.5	80	5.0	95	5.0	100	7.0	100	6.1	105	5.9	100	5.3	110	4.7	110	3.9	110	4.0		
6	110	4.3	110	3.9	120	3.5	130	3.4	115	2.8	105	2.5	105	2.8	105	2.9	85	3.2	95	2.8	105	3.1	120	3.5		
7	—	1.2	25	2.3	30	2.7	30	2.5	—	1.4	—	1.0	—	0.3	—	0.3	—	0.0	—	0.1	—	0.1	—	0.1		
8	—	0.5	—	0.4	—	0.3	—	0.0	—	0.0	—	0.4	—	0.4	—	1.2	—	0.6	—	0.5	—	0.6	—	0.7		
9	—	0.4	—	1.0	—	0.9	—	0.0	—	0.0	—	0.5	—	0.6	—	0.6	—	0.0	—	0.0	—	0.2	—	0.3		
10	—	0.5	—	0.6	—	0.1	—	0.4	—	1.5	200	2.6	200	2.6	195	2.0	190	2.9	185	2.5	190	3.5	175	4.0		
11	75	3.0	55	3.0	50	3.6	60	4.6	55	5.3	45	4.7	40	5.1	45	5.4	50	6.1	50	6.1	45	6.3	40	5.9		
12	70	6.3	70	7.3	65	6.5	65	6.1	65	6.4	65	6.6	60	5.7	60	5.6	60	6.1	65	6.0	80	5.5	80	4.6		
13	—	0.7	—	0.6	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.9	—	0.4		
14	—	1.1	—	1.5	5	3.2	355	2.2	360	2.8	10	3.5	5	3.5	360	3.6	360	3.5	360	4.6	360	4.8	360	4.7		
15	295	2.3	280	2.0	275	2.4	265	2.4	250	2.5	250	3.5	250	3.6	265	3.4	255	3.7	260	4.8	275	5.1	275	4.0		
16	360	4.1	340	2.0	—	1.0	—	1.3	315	2.5	310	2.8	310	2.4	320	2.5	350	4.5	360	3.3	15	3.9	10	3.3		
17	250	3.4	240	2.3	255	2.7	250	2.5	245	3.1	230	2.4	—	0.5	—	1.1	230	2.1	245	2.6	250	2.0	245	2.5		
18	—	1.1	—	1.5	—	1.5	—	0.6	—	0.1	—	0.0	—	1.1	—	1.1	—	1.1	—	225	1.7	225	2.0	240	3.1	
19	225	1.9	—	1.5	—	1.5	—	1.5	210	1.9	205	2.9	195	3.0	220	2.0	—	1.4	—	0.5	—	0.5	220	3.1	200	4.3
20	—	1.0	—	0.5	—	0.3	—	0.0	—	0.4	—	0.6	—	1.5	—	0.0	—	0.0	—	0.0	—	0.0	—	—	1.5	
21	75	2.1	70	1.6	80	2.0	80	2.4	80	2.0	80	1.7	70	1.7	80	1.9	75	2.5	75	2.5	80	3.3	—	1.3		
22	—	1.1	—	1.4	—	1.1	—	1.5	—	1.1	—	1.0	—	1.2	—	1.5	—	0.5	—	0.2	15	1.8	30	2.6		
23	50	2.8	45	2.9	50	2.7	45	2.5	50	2.2	55	1.6	45	3.1	45	3.3	45	3.6	45	3.0	50	2.3	35	3.5		
24	—	1.1	—	1.3	—	1.5	335	1.8	355	2.7	5	3.4	—	1.5	355	1.9	345	1.7	—	1.5	10	3.0	10	3.6		
25	345	2.9	355	2.6	360	3.2	360	3.1	345	2.4	345	2.6	5	1.9	—	1.4	—	0.3	—	0.6	—	1.5	300	2.4		
26	270	1.6	305	2.6	320	3.5	325	3.0	320	2.4	340	3.0	350	2.7	10	2.8	15	3.3	5	3.8	15	4.5	20	5.0		
27	—	1.0	—	1.1	—	0.0	—	0.0	—	0.0	—	0.1	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	220	1.6	230	2.0
28	215	2.5	210	2.9	205	1.8	230	2.4	240	1.8	225	2.2	220	2.4	—	1.0	—	0.1	—	0.0	—	0.0	—	180	0.9	
29	180	5.6	170	6.5	170	7.5	175	6.0	175	6.1	180	6.6	180	6.8	180	5.4	180	5.5	180	5.4	185	5.3	185	5.2		
30	180	2.2	180	2.6	175	3.0	180	3.5	190	2.4	190	2.5	170	3.1	170	2.7	175	2.9	185	3.5	185	2.6	185	1.5		
31	170	2.7	160	2.0	155	1.8	130	1.1	110	1.4	110	1.5	100	2.0	145	2.1	—	1.0	125	2.5	160	3.0	130	2.7		
Mean ...	—	2.7	—	2.7	—	2.7	—	2.5	—	2.6	—	2.7	—	2.6	—	2.6	—	2.5	—	2.7	—	3.1	—	3.3		

511. Richmond (Kew Observatory) : H_a = 5 metres + 20 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.			
	°	m/s.	°	m/s.																						
1	155	5.7	155	7.0	160	6.9	165	7.1	165	7.4	160	7.0	160	6.2	175	6.5	190	6.4	205	7.3	200	6.0	205	6.3		
2	185	2.5	185	3.0	170	2.8	145	2.9	130	3.7	150	4.4	125	3.9	135	3.6	145	4.7	140	5.6	145	5.8	145	5.9		
3	140	5.5	130	4.5	125	3.9	130	5.6	125	3.9	115	3.4	120	4.0	120	3.7	115	4.1	110	4.5	115	5.5	120	5.5		
4	110	2.1	—	0.9	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	—	0.0	—	0.1	—	0.1	—	0.2		
5	—	1.2	—	1.3	—	0.6	—	1.3	—	0.8	—	0.7	—	0.6	—	0.7	—	1.2	—	1.3	—	1.0	—	1.2		
6	—	0.4	—	0.4	—	0.4	—	0.0	—	0.0	—	0.0	—	1.0	—	0.3	—	0.0	—	0.1	—	0.1	—	0.1		
7	80	3.7	80	4.0	90	4.5	95	5.1	90	4.5	105	3.7	100	3.1	130	3.0	135	3.0	150	2.0	150	3.0	145	2.3		
8	140	2.3	145	2.0	170	3.2	170	2.1	165	2.5	175	2.9	180	3.4	190	3.5	200	4.2	205	4.4	195	4.1	200	4.3		
9	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.3	—	0.2	—	0.3	—	0.3	185	2.8	185	2.7
10	—	1.0	290	1.9	—	1.4	—	1.0	—	0.8	—	0.7	—	1.1	—	0.9	325	1.8	330	3.7	330	4.2	330	4.5		
11	25	3.5	50	4.0	70	5.4	65	4.6	70	5.5	75	6.5	80	7.5	95	7.9	105	7.6	105	8.4	100	7.4	100	7.5		
12	100	10.5	100	10.6	95	9.9	100	8.4	95	8.1	95	6.7	100	5.7	100	5.9	75	7.5	75	7.5	80	9.8	85	9.6		
13	60	2.6	45	1.6	—	0.6	—	0.0	—	0.0	—	0.0	—	0.1	—	0.1	—	3.5	105	5.5	100	7.6	90	7.1		
14	—	0.2	—	0.0	—	0.1	—	0.3	—	0.1	—	0.1	—	0.0	—	0.5	—	1.3	60	4.5	65	2.3	45	2.9		
15	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.3		
16	55	2.6	85	3.9	100	4.2	95	4.8	95	4.6	90	4.6	95	4.3	100	3.9	100	4.0	100	3.6	90	3.5	90	3.0		
17	50	2.5	55	3.6	60	3.1	55	2.6	65	3.8	—	1.5	—	0.3	—	0.1	—	0.1	—	0.4	285	1.9	—	1.1		
18	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	—	1.0	—	1.5	—	80	2.3	95	1.9	115	2.5	100	3.1	
19	115	4.5	120	4.0	115	2.9	95	5.8	115	5.5	120	5.2	110	4.5	110	4.3	120	4.5	100	6.2	110	5.1	105	6.0		
20	115	3.9	115	3.5	120	3.4	115	3.1	105	4.4	110	3.4	105	2.8	90	2.0	95	3.0	100	2.9	100	3.1	95	2.1		
21	90	3.1	90	2.9	95	2.5	80	2.4	85	2.6	100	2.7	90	2.4	90	3.0	90	2.1	95	1.7	155	4.0	155	3.6		
22	—	0.5	—	0.8	—	0.4	—	0.1	—	0.4	—	1.1	—	1.4	—	0.3	—	0.5	—	0.5	—	0.8	—	1.5		
23	—	0.1	—	0.0	—	0.5	—	0.2	—	0.5	—	0.0	—	0.0	—	0.1	—	1.0	—	1.4	—	235	2.5	230	2.1	
24	—	0.8	—	1.0	—	0.1	—	0.3	—	0.0	—	0.1	—	0.4	—	0.3	—	0.2	—	1.0	—	0.3	—	0.0		
25	50	5.3	55	5.4	60	5.5	50	5.1	50	4.8	50	4.5	45	5.0	50	6.0	45	5.0	60	5.5	55	5.1	60	5.0		
26	80	7.8	80	7.3	80	7.5	80	8.6	80	8.1	80	7.0	80	7.0	80	7.5	80	6.5	85	5.5	80	7.5	8			

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

M.S.L. + h_a (height of anemograph above ground) = 5 metres + 20 metres.

January, 1929.

13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		Mean	Day	
°	m/s.	m/s.																								
5	4.5	360	4.9	355	3.6	360	4.8	360	4.9	5	5.1	10	5.0	10	5.6	15	5.1	10	4.6	10	4.1	5	4.6	4.5	1	
45	7.0	50	8.7	50	8.6	50	8.0	40	7.0	40	6.5	40	6.6	45	6.0	40	5.3	45	5.4	30	5.5	45	5.8	5.5	2	
55	8.1	50	8.4	55	8.0	55	6.5	50	5.2	40	6.0	40	6.0	40	6.9	40	6.6	35	6.6	40	6.3	30	5.7	6.6	3	
45	5.4	45	5.9	50	6.1	60	6.5	40	4.7	35	4.7	40	4.4	40	4.5	35	5.1	40	5.2	40	5.3	35	5.3	4.9	4	
100	4.0	95	4.9	110	4.2	115	4.1	125	2.8	115	3.4	110	4.3	130	4.3	130	4.3	115	3.8	115	3.3	110	4.0	4.7	5	
115	2.6	110	3.5	120	3.9	120	5.1	110	5.0	110	3.5	130	3.0	105	2.5	100	2.1	110	3.0	—	1.1	—	0.4	3.2	6	
—	0.3	—	0.5	—	0.8	345	1.9	350	1.6	—	0.7	335	1.6	10	2.1	20	2.0	—	0.5	—	0.5	—	0.4	1.0	7	
—	0.8	—	0.7	—	0.8	—	0.3	—	0.2	—	0.5	—	0.6	—	0.6	—	0.4	—	0.5	—	0.3	—	0.4	0.5	8	
—	0.1	—	0.1	—	0.5	—	0.3	—	0.4	—	0.5	—	0.1	—	0.1	—	0.5	—	0.1	—	0.1	—	0.0	0.3	9	
165	3.4	155	3.8	145	3.3	125	2.5	110	1.9	110	2.9	115	3.2	110	2.9	100	2.9	95	2.9	90	4.1	90	3.6	2.5	10	
35	5.2	45	5.1	50	5.4	60	4.9	60	5.7	60	6.2	60	5.9	65	6.3	60	6.0	70	6.7	70	7.4	75	7.3	5.4	11	
70	4.9	65	5.5	60	4.2	50	3.9	45	3.4	45	3.4	50	3.0	30	2.5	20	1.8	25	2.4	—	1.5	—	1.0	4.7	12	
10	2.8	10	3.1	5	2.5	—	1.4	—	1.0	—	1.2	—	1.2	—	1.4	—	1.1	—	1.1	—	1.4	—	1.0	0.9	13	
360	5.0	360	4.3	360	4.0	360	3.1	350	1.9	—	1.5	—	1.5	—	1.0	—	0.8	—	0.9	—	1.3	295	2.0	2.7	14	
280	4.2	270	3.0	280	2.6	320	2.4	340	3.4	325	3.2	325	3.9	330	3.5	320	3.5	320	3.7	320	3.8	335	4.4	3.3	15	
350	2.9	320	2.2	300	3.0	285	2.8	270	2.5	260	2.7	260	2.6	250	2.4	260	2.8	255	2.4	255	1.9	235	2.3	2.7	16	
255	3.5	245	3.3	240	2.1	230	1.9	—	1.0	—	0.8	—	0.7	—	1.1	—	0.9	—	0.9	—	1.0	—	0.7	1.9	17	
230	3.5	225	2.6	240	2.3	240	2.4	210	2.1	210	2.5	230	2.3	225	2.1	235	2.5	225	3.0	225	3.0	230	2.5	1.9	18	
205	4.5	200	4.8	200	4.2	195	3.5	205	3.0	180	2.1	185	2.3	185	2.5	—	1.1	—	0.2	—	0.6	—	0.9	2.3	19	
100	1.6	125	3.0	115	3.5	110	3.5	100	4.1	110	4.2	120	2.9	115	1.7	100	2.6	80	1.6	100	2.1	85	2.2	1.6	20	
80	2.2	—	1.5	80	1.6	80	1.9	—	1.5	85	1.8	85	2.3	80	2.1	—	1.5	—	1.2	85	1.9	—	0.5	1.9	21	
—	1.5	—	1.5	25	1.9	50	2.8	50	1.9	40	2.0	—	1.4	—	0.8	85	1.8	50	2.6	50	2.7	45	2.0	1.5	22	
30	3.0	10	2.9	355	2.0	360	2.1	—	1.2	355	1.6	340	1.9	350	1.9	360	2.5	5	1.7	10	1.7	15	1.6	2.4	23	
355	3.0	350	3.1	335	2.6	345	3.6	340	2.3	340	3.1	340	3.3	330	3.9	355	4.8	355	4.4	360	4.7	360	4.1	2.8	24	
290	1.9	310	2.9	335	2.3	—	0.2	270	1.6	260	2.1	265	2.4	265	2.2	265	2.0	275	1.9	290	2.4	280	1.7	2.1	25	
15	5.4	25	5.6	20	5.2	15	4.4	10	1.9	—	1.0	—	1.4	—	1.1	—	0.4	—	0.8	—	1.1	—	1.1	2.8	26	
245	2.5	230	2.1	250	1.7	240	1.2	220	1.4	220	1.7	230	1.5	210	2.0	220	2.5	195	1.9	195	1.9	190	2.6	1.2	27	
—	1.1	185	3.0	185	2.5	180	2.0	170	2.1	170	2.4	170	2.4	170	3.0	185	4.0	185	4.2	180	4.7	190	6.9	2.3	28	
185	5.6	185	4.9	180	3.8	180	3.8	180	3.1	180	3.5	180	3.4	180	3.0	180	2.9	185	3.0	185	3.1	180	2.9	4.9	29	
175	2.1	175	2.8	155	3.0	150	2.0	155	2.4	—	0.1	155	2.2	145	2.4	150	2.6	160	2.5	165	2.8	170	2.5	2.5	30	
—	0.5	160	1.5	165	2.7	170	2.8	160	3.3	140	3.5	135	2.9	135	3.2	125	5.3	125	4.9	150	4.5	160	5.2	2.6	31	
—	3.3	—	8.6	—	3.3	—	3.1	—	2.7	—	2.7	—	2.8	—	2.8	—	2.8	—	2.7	—	2.8	—	2.8	2.8	—	

February, 1929.

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.	
210	7.1	225	5.5	215	5.6	210	5.4	210	5.1	205	4.9	210	4.7	210	4.0	205	3.9	200	3.5	200	3.5	185	2.8	5.7	1
150	5.9	150	6.0	155	5.9	150	5.9	150	5.6	150	6.0	145	5.0	145	5.4	150	5.4	145	5.2	140	4.8	140	5.7	4.8	2
110	5.4	120	5.4	115	4.2	100	4.5	120	3.8	120	4.0	110	3.5	110	4.0	110	3.1	110	2.2	110	1.7	110	1.7	4.1	3
235	1.7	—	1.5	—	1.4	—	0.5	—	0.6	—	0.7	—	0.6	—	0.7	—	0.5	—	0.6	—	1.4	—	1.5	0.6	4
—	1.4	—	1.5	—	1.2	—	1.2	—	0.5	—	0.5	—	0.3	245	1.6	—	0.5	—	0.5	—	0.2	—	0.2	0.9	5
—	0.0	—	0.0	65	2.8	90	4.0	85	3.6	85	4.3	90	3.8	105	4.3	100	4.4	105	3.5	105	3.6	90	4.5	1.6	6
145	3.0	180	3.0	170	2.4	150	3.0	130	1.9	125	1.9	115	1.6	125	2.5	155	2.3	165	2.1	150	2.5	140	1.8	3.0	7
195	4.2	205	3.9	220	4.3	210	3.5	205	3.3	195	3.2	205	1.8	—	1.0	—	0.5	—	0.5	—	1.0	—	0.5	2.8	8
190	2.3	185	2.4	—	1.4	225	2.4	—	1.4	—	1.4	—	1.4	200	2.5	210	3.2	220	3.5	230	2.4	280	2.1	1.4	9
340	4.3	340	4.7	335	4.2	335	4.8	335	4.4	325	3.3	345	4.0	360	4.0	40	5.5	50	4.5	50	4.5	30	3.7	3.1	10
105	8.7	110	8.9	115	9.0	120	9.5	120	8.8	120	9.4	120	8.4	115	8.2	115	8.8	115	9.6	110	9.3	105	9.5	7.5	11
75	7.9	60	7.0	70	7.6	70	6.4	70	6.0	60	6.2	55	5.3	50	4.9	45	4.1	45	2.9	40	2.9	40	2.8	7.0	12
90	6.7	105	5.9	75	5.5	90	4.0	85	2.0	—	0.4	—	0.6	—	0.9	—	0.5	—	0.3	—	0.1	—	0.1	2.4	13
45	2.8	50	4.4	45	4.1	40	3.5	50	2.7	50	1.8	—	0.5	—	0.3	—	0.1	—	0.1	—	0.1	—	0.1	1.4	14
—	0.3	—	0.1	85	3.2	85	6.0	85	5.9	85	5.4	85	4.8	65	3.9	60	3.7	70	2.9	65	2.9	50	2.5	1.7	15
85	3.7	85	4.5	85	4.2	95	4.1	90	4.0	95	4.6	95	4.9	100	4.0	95	3.5	90	5.0	90	4.0	80	2.2	4.0	16
—	0.5	—	1.2	—	1.0	—	1.3	—	0.6	—	1.4	—	1.2	—	1.1	—	0.1	—	0.0	—	0.0	—	0.0	1.3	17
105	3.4	95	3.9	85	3.7	80	3.6	100	4.5	100	4.6	115	2.8	—	1.1	105	1.9	105	2.0	115	2.5	110	3.5	2.0	18
100	5.4	90	6.6	95	6.4	85	6.4	90	5.7	100	6.6	100	7.1	100	5.9	105	5.2	110	3.9	110	4.2	120	3.8	5.2	19
135	4.0	145	4.0	125	4.5	90	4.6	95	4.3	95	4.0	90	4.2	90	4.3	90	2.4	90	2.1	90	2.3	100	2.3	3.4	20
160	3.1	160	4.1	175	3.9	170	3.0	150	2.1	130	3.3	125	3.3	125	1.7	—	1.5	—	1.2	—	1.3	—	1.1	2.6	21
160	2.1	120	2.7	105	2.5	85	2.6	130	2.0	185	3.1	170	3.0	—	0.5	—	0.2	—	0.0	—	0.0	—	0.9	1.2	22
—	0.9	—	0.8	—	0.5	—	0.5	—	0.2	—	0.2	—	1.2	—	1.0	—	0.5	—	1.3	—	0.8	—	0.7	0.7	23
—	0.1	—	0.2	—	0.8	55	1.9	40	4.4	30	4.0	25	3.3	35	3.9	45	4.3	45	3.8	40	4.0	50	4.8	1.6	24
65</																									

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

512. Richmond (Kew Observatory) :

H_a (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
Day.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	360	1.8	355	1.6	30	1.6	—	1.0	—	0.4	—	0.6	—	1.2	—	1.1	—	1.0	—	1.5	—	1.0	—	0.9
2	80	1.9	80	1.7	—	0.3	—	0.6	—	0.5	—	0.4	—	0.7	15	1.6	60	4.3	80	6.1	75	5.8	65	5.0
3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	1.1	—	1.3	—	1.3
4	—	0.2	—	1.1	345	1.7	15	2.9	25	3.3	15	2.0	360	2.5	30	4.4	45	5.0	30	4.1	40	4.2	30	5.0
5	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.1	—	0.2	—	0.2	—	1.3	215	2.8	260	2.0
6	315	1.9	335	1.8	—	1.1	310	1.8	330	1.9	330	2.0	335	2.9	325	2.7	330	2.4	335	3.8	325	4.1	330	3.8
7	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	—	1.2	—	0.4	—	0.1	—	0.0	—	0.6	—	0.4
8	—	1.2	—	1.1	—	1.4	—	1.3	—	0.0	—	0.8	—	0.8	—	0.9	—	1.5	90	2.9	85	3.4	80	3.1
9	—	1.2	—	1.0	—	0.5	65	2.2	—	1.5	—	1.1	—	0.7	—	1.5	—	0.4	—	1.4	—	1.4	85	3.1
10	—	0.4	—	0.2	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	1.3
11	—	0.6	—	0.7	—	0.8	—	1.0	—	0.8	—	1.1	—	1.1	—	1.0	—	0.7	—	0.5	—	1.4	—	0.7
12	—	1.4	—	1.4	—	0.5	—	0.3	—	0.5	—	0.2	—	0.5	—	1.5	15	2.8	40	4.0	55	4.1	60	4.0
13	50	5.5	60	5.2	70	4.5	60	3.3	60	3.6	55	4.1	65	4.1	55	4.2	65	4.4	70	4.8	65	3.9	60	3.5
14	100	3.8	85	4.1	85	4.5	90	4.0	75	3.4	55	3.5	60	3.0	50	3.1	50	2.9	50	2.1	55	2.4	70	2.6
15	55	4.9	75	5.3	70	4.6	60	4.8	50	4.1	60	4.5	50	4.0	60	5.0	75	6.3	80	5.8	80	5.5	80	5.7
16	95	5.9	100	5.1	105	5.6	100	5.0	105	5.0	105	4.0	100	5.6	105	4.6	100	5.5	110	4.7	105	4.5	95	5.4
17	—	0.7	—	0.9	90	1.9	—	1.4	—	0.4	—	0.5	—	1.0	—	0.9	—	0.2	—	0.2	—	0.5	—	1.0
18	—	0.5	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	—	0.6	—	0.5	—	0.0	—	0.1	70	2.9
19	—	1.5	80	3.3	75	3.4	65	2.5	55	1.9	85	3.8	80	4.4	75	3.5	80	2.9	85	3.7	90	4.1	80	4.7
20	80	2.5	85	1.8	—	0.7	—	0.5	—	0.9	—	0.9	—	1.1	—	1.5	—	0.5	—	0.2	—	0.0	—	0.0
21	230	2.8	220	1.9	—	1.3	210	1.9	205	3.3	210	4.3	205	4.8	210	4.9	210	4.8	215	4.4	220	6.2	225	6.4
22	195	4.7	195	4.0	190	4.5	190	3.6	205	3.2	205	3.0	205	2.5	220	2.6	240	2.4	255	2.5	240	3.4	250	3.2
23	240	2.4	240	2.9	240	2.5	—	1.5	—	1.5	235	2.3	235	1.9	250	3.0	250	3.2	245	3.0	255	2.5	270	3.6
24	—	0.9	—	0.7	—	1.1	—	1.2	—	0.4	—	0.5	—	0.2	—	0.8	215	1.7	—	1.5	220	1.8	230	3.0
25	200	4.0	200	3.8	200	4.0	195	3.3	210	4.6	210	4.2	210	4.0	210	3.5	215	3.5	230	4.0	230	4.1	235	4.2
26	—	0.7	—	0.1	—	0.0	—	0.1	—	0.0	—	0.0	—	0.5	360	2.5	35	1.8	355	2.4	10	1.9	20	2.1
27	—	0.2	—	0.6	—	0.3	—	0.3	—	0.1	—	0.2	—	0.4	—	0.1	—	0.5	—	0.5	—	1.0	—	0.5
28	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.4	—	0.0	—	0.3	50	3.0	40	3.9	50	4.5
29	—	0.0	—	0.0	—	0.5	—	0.1	—	0.3	—	0.1	—	0.0	—	0.0	—	0.5	55	2.5	55	2.1	60	2.7
30	—	0.1	—	0.0	—	0.8	—	0.9	—	0.2	—	0.1	—	0.1	—	0.1	—	0.1	—	0.5	—	0.6	350	1.9
31	210	1.7	—	1.4	215	1.7	—	1.0	—	1.0	—	0.5	—	1.1	265	2.0	325	6.2	325	7.0	325	6.3	320	6.3
Mean ...	—	1.7	—	1.7	—	1.6	—	1.5	—	1.4	—	1.5	—	1.6	—	1.9	—	2.2	—	2.6	—	2.7	—	3.1

513. Richmond (Kew Observatory) : H_a = 5 metres + 20 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
Day.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	250	2.0	250	2.5	270	4.2	270	3.4	250	1.9	250	2.2	250	3.4	250	3.7	245	5.3	260	7.7	260	6.9	255	6.5
2	315	3.8	330	4.2	320	2.5	330	3.0	345	2.9	335	2.5	325	2.5	345	4.4	355	4.6	350	5.2	355	4.7	345	3.9
3	320	3.2	330	3.0	330	2.5	340	2.8	335	2.7	330	2.4	330	2.8	350	5.0	360	5.7	340	4.6	335	4.4	305	5.6
4	—	1.4	—	0.4	—	0.3	—	0.4	—	0.6	—	0.5	—	0.8	—	1.0	—	1.1	230	1.8	225	2.3	240	1.6
5	280	3.3	260	2.4	270	3.0	270	2.4	275	2.0	270	1.9	275	2.0	315	3.2	320	4.2	330	5.6	355	7.9	360	9.5
6	55	2.5	—	1.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	1.1	190	2.5	185	2.7	200	2.4	235	2.4
7	225	2.7	225	2.4	225	2.4	225	2.4	225	2.4	225	2.5	225	2.0	240	2.0	240	2.5	255	3.3	265	3.4	260	3.5
8	—	0.8	—	0.7	—	1.1	—	0.7	—	0.6	—	0.6	—	0.5	—	0.6	—	0.6	275	2.2	265	2.7	255	1.7
9	—	1.5	210	1.6	—	1.5	—	1.5	210	1.7	—	1.5	—	1.2	265	1.9	300	3.6	360	4.6	355	4.4	360	7.0
10	—	0.2	230	1.7	260	1.9	275	3.2	300	3.2	350	3.7	330	2.4	330	5.0	330	7.6	330	7.7	350	7.6	345	8.4
11	15	5.4	20	7.4	25	7.4	30	7.5	35	6.5	35	6.4	30	6.3	35	7.6	35	8.2	35	9.0	40	8.2	35	8.9
12	35	7.5	30	6.7	35	6.4	35	6.4	30	7.0	35	6.9	40	6.6	40	7.0	45	7.8	50	7.4	50	6.9	50	7.5
13	25	2.1	15	3.0	20	2.6	20	2.6	20	3.1	45	3.1	45	3.4	45	3.1	40	3.2	45	3.7	45	2.9	45	2.7
14	—	0.1	—	0.1	—	0.1	—	0.1	—	0.1	—	0.0	—	0.3	—	0.5	—	0.4	—	0.9	—	0.5	50	2.3
15	105	2.0	85	2.0	80	2.3	50	2.5	55	3.3	80	3.2	75	5.5	50	4.9	60	5.2	70	7.1	70	7.0	90	9.0
16	20	4.5	20	3.3	20	4.5	15	4.5	15	4.0	15	4.5	10	4.3	20	4.0	20	3.8	15	3.6	25	4.3	40	5.0
17	—	0.2	—	0.2	—	0.1	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	—	0.3	—	0.4	220	1.7	210	4.0
18	225	2.5	230	1.7	—	1.4	215	3.0	220	4.2	225	3.5	215	4.0	220	3.5	235	3.5	240	4.3	235	5.6	245	4.8
19	—	0.5	—	0.7	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.2	—	0.5	200	3.5	220	6.1	210	4.6
20	30	6.0	30	6.0	30	7.4	35	7.5	30	7.5	35	6.7	35	6.9	30	6.7	25	7.5	40	7.3	45	7.6	40	7.0
21	30	2.5	25	2.5	—	1.5	20	1.8	—	1.0	30	1.9	20	3.7	30	4.0	30	5.3	35	4.8	35	5.2	40	5.2
22	60	3.0	40	2.5	20	2.1	20	2.5	20	2.5	20	2.8	35	3.5	55	4.8	45	4.0	60	3.8	45	3.4	50	3.4
23	230	2.0	—	1.2	—	1.3	—	0.8	—	1.2	—	0.8	—	0.5	45	4.2	50	4.1	45	3.9	25	3.5	20	3.7
24	—	0.3	—	0.1	—	0.0	—	0.5	—	1.3	—	1.4	230	1.8	260	2.4	280	5.0	280	7.7	280	8.3	280	7.7
25	—	1.4	275	1.9	270	1.7	—	1.0	—	1.0	—	0.9	—	0.4	—	0.6	—	1.0	240	1.8	220	3.5	250	3.0
26	—	0.8	—	0.5	—	0.7	—	0.8	—	0.7	—	0.3	—	1.2	—	0.2	—	0.8	245	1.6	235	1.8	230	1.7
27	230	5.5	240	5.4	250	4.0	255	3.8	270	3.2	250	3.5	270	3.8	300	5.7	305	5.1	290	4.4	5	2.5	345	1.8
28	165	3.3	150	2.9	150																			

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

514. Richmond (Kew Observatory) :

H_a (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
1	—	0·7	—	0·1	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·2	—	0·6	360	2·8	10	3·1	30	2·7	
2	—	1·4	—	1·1	—	0·7	75	2·8	80	2·0	75	2·0	80	4·0	95	4·7	95	5·9	95	6·5	95	7·0	80	7·2	
3	40	4·2	45	3·5	50	3·7	40	2·6	25	2·5	15	2·5	30	3·4	40	4·1	45	4·1	60	5·6	60	4·7	55	4·1	
4	—	1·5	—	0·7	—	0·8	165	2·5	170	3·7	165	3·2	180	4·7	180	6·1	190	5·8	200	6·9	200	6·5	210	7·2	
5	205	8·0	200	7·5	200	8·6	205	9·0	200	8·8	205	8·8	205	8·5	205	7·6	210	7·5	210	7·1	210	6·0	215	6·6	
6	190	4·9	180	4·5	170	6·1	165	6·1	160	7·1	150	6·6	165	7·1	170	9·5	185	11·8	190	12·5	195	14·9	200	14·8	
7	170	2·0	195	2·2	190	2·1	195	2·2	210	3·0	225	3·8	215	5·2	215	6·2	210	6·5	205	7·8	190	8·0	195	8·4	
8	195	5·2	195	5·5	205	4·8	215	4·5	200	4·3	205	4·7	210	7·5	230	6·1	215	8·8	230	7·5	240	6·0	240	5·3	
9	—	1·1	—	1·2	—	0·5	—	0·6	—	1·1	—	0·9	—	1·0	—	0·9	340	3·2	310	3·7	305	4·4	315	4·2	
10	—	0·2	—	0·6	—	0·9	—	0·6	—	0·0	—	0·0	—	0·0	—	0·1	210	2·0	220	4·8	225	5·3	215	6·7	
11	200	4·7	205	4·1	200	4·0	200	4·7	210	5·4	210	5·3	215	6·2	215	6·1	220	5·7	220	6·4	215	7·6	215	7·0	
12	195	3·8	205	4·8	205	4·5	200	5·2	200	5·1	190	4·9	180	4·6	180	4·5	185	3·5	190	3·4	200	3·8	220	4·8	
13	230	1·7	220	1·7	220	1·6	—	1·4	—	0·6	—	0·8	—	0·3	190	1·8	210	5·2	215	5·6	205	5·5	205	6·6	
14	220	4·7	215	4·6	205	4·1	200	4·0	195	3·6	205	6·2	215	8·0	220	9·4	220	9·7	230	10·0	220	10·7	220	11·2	
15	220	5·0	220	4·1	220	4·5	215	4·4	215	3·9	215	3·8	205	4·0	225	3·7	255	3·5	265	3·0	275	5·3	275	6·1	
16	225	1·8	235	1·8	—	1·4	—	1·2	—	1·5	—	0·8	—	0·5	315	3·2	315	3·2	340	3·8	330	3·2	325	3·2	
17	—	1·5	—	1·5	—	0·5	—	0·5	—	1·0	—	55	2·2	60	3·8	60	3·0	40	4·7	40	3·9	25	3·7	25	3·7
18	60	4·0	60	3·6	50	3·1	50	3·4	30	2·9	30	3·1	40	3·1	20	3·0	35	3·1	30	3·1	25	3·0	40	3·6	
19	20	1·8	15	1·6	—	1·3	350	1·9	360	2·9	50	3·0	65	4·8	55	4·7	60	6·1	70	7·1	70	7·3	80	8·6	
20	35	3·0	15	2·2	20	1·8	15	2·0	—	1·5	25	1·6	60	2·4	70	2·9	60	2·7	—	1·5	—	1·2	—	1·5	
21	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·0	—	0·4	150	1·8	140	1·9	200	2·1	
22	—	0·5	—	1·1	—	0·5	—	0·1	—	0·1	—	0·4	190	1·8	180	2·6	180	3·3	180	4·7	190	6·0	200	6·1	
23	180	2·6	170	3·0	170	3·0	—	1·4	—	0·1	—	0·2	—	0·5	—	0·3	—	0·3	110	3·0	120	3·5	140	5·0	
24	—	1·5	—	1·1	70	2·0	70	2·3	—	1·2	90	1·6	—	1·3	—	0·8	—	0·9	—	0·5	—	0·4	180	1·6	
25	—	0·6	—	1·0	—	0·7	—	1·0	—	1·3	270	2·3	260	1·6	—	1·4	—	1·3	260	1·9	245	2·7	270	2·3	
26	—	1·5	—	0·6	—	0·3	—	0·5	—	1·3	—	0·2	—	0·1	—	0·3	—	0·1	130	1·6	145	2·0	125	3·4	
27	35	1·9	30	2·5	30	2·1	—	1·1	10	3·3	25	4·6	20	5·0	30	5·1	40	5·4	50	5·4	55	5·3	60	6·1	
28	45	5·5	40	3·1	45	4·3	45	4·2	40	4·5	40	4·5	50	5·5	35	5·3	30	5·0	30	5·7	30	5·8	30	5·8	
29	40	7·1	30	6·5	40	6·6	40	6·2	40	6·3	40	6·3	40	6·8	40	6·2	50	5·6	40	5·3	45	5·8	50	6·4	
30	50	5·2	45	4·9	50	4·0	55	4·5	50	5·2	55	5·6	60	5·3	60	5·2	65	5·5	85	7·0	80	7·5	80	8·3	
31	50	4·5	60	4·2	50	3·8	45	3·4	40	3·5	40	4·0	40	4·0	40	4·0	40	4·4	45	4·3	45	4·8	35	4·3	
Mean ...	—	3·0	—	2·7	—	2·7	—	2·7	—	2·8	—	3·0	—	3·6	—	3·8	—	4·4	—	5·0	—	5·3	—	5·6	

515. Richmond (Kew Observatory) : H_a = 5 metres + 20 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	45	2·7	45	3·5	35	2·6	30	2·0	—	1·5	30	1·8	50	1·8	—	0·8	—	0·1	—	0·5	—	1·2	235	2·1
2	220	3·8	205	2·7	220	3·0	220	3·5	215	4·2	215	3·9	210	4·5	210	4·7	210	6·7	230	5·9	230	5·9	230	6·0
3	220	6·7	230	2·5	230	5·0	230	4·3	225	4·8	220	6·0	220	5·4	220	5·6	230	5·8	230	5·7	245	5·5	260	5·0
4	245	2·9	240	2·9	245	3·4	240	2·6	240	3·6	250	3·6	260	3·4	270	5·0	275	5·3	260	5·1	250	4·9	270	6·2
5	—	0·9	—	0·8	—	0·6	—	0·4	—	1·3	—	1·3	—	0·9	—	0·6	—	1·5	230	1·6	230	2·7	215	4·3
6	—	1·5	235	1·8	220	1·7	210	2·4	210	2·9	200	2·9	195	3·0	210	3·9	200	3·8	200	5·1	210	5·1	200	5·5
7	235	3·5	230	3·5	225	3·5	230	2·8	220	2·8	240	3·5	240	4·1	245	5·2	245	4·3	270	4·4	265	4·0	260	3·5
8	—	0·7	—	0·7	—	1·0	—	0·2	—	0·3	—	0·4	—	1·3	—	1·0	180	2·6	170	2·4	—	1·0	—	0·3
9	—	1·5	225	2·0	225	2·0	—	1·5	—	1·2	245	1·7	270	3·2	260	2·9	260	2·5	280	3·2	295	2·5	295	3·3
10	—	1·0	—	0·1	—	0·2	—	0·1	—	0·1	—	0·3	20	2·0	15	2·0	30	2·1	20	1·7	—	1·3	320	1·9
11	—	0·2	—	0·0	—	0·0	—	0·2	—	0·0	—	0·0	—	0·4	130	2·0	130	3·5	145	5·2	140	4·8	160	4·3
12	60	2·7	50	2·2	60	2·3	45	2·2	50	2·9	55	2·8	55	2·5	50	2·1	50	3·4	60	3·6	75	4·7	80	6·8
13	170	2·6	185	3·8	220	5·0	220	4·6	220	4·0	230	4·7	220	5·7	225	6·1	235	6·5	225	7·0	220	7·1	220	7·4
14	170	3·0	165	2·6	175	3·0	175	2·8	185	4·6	185	5·0	185	5·5	185	7·3	190	7·5	205	9·0	195	7·5	200	7·5
15	225	4·4	230	3·5	230	1·6	230	2·5	230	2·5	235	3·4	250	3·9	235	5·0	235	5·3	230	5·0	225	5·5	225	5·8
16	200	7·8	200	6·8	200	5·5	205	5·2	215	4·9	250	4·5	250	4·3	245	5·3	240	5·5	240	4·8	240	4·7	235	5·2
17	—	0·7	—	0·3	—	0·5	—	0·3	—	0·5	—	0·9	—	0·4	—	0·3	—	0·3	—	0·6	—	1·5	—	1·0
18	—	0·5	—	0·5	—	0·1	—	0·0	—	0·0	—	0·0	—	0·0	—	0·7	—	1·0	220	2·0	240	2·0	240	2·5
19	—	1·2	—	0·5	—	0·2	—	0·2	—	0·0	—	0·0	—	0·0	—	0·3	215	1·8	210	3·1	210	3·5	210	3·3
20	—	1·4	—	1·3	—	1·1	—	1·2	—	1·2	260	1·8	270	2·4	285	1·9	275	2·5	275	1·9	285	3·2	300	3·2
21	—	0·6	—	0·4	—	0·4	—	0·5	—	0·6	325	2·7	320	3·8	345	5·2	330	4·3	325	4·2	320	4·6	325	4·4
22	—	0·9	—	1·3	—	1·3	225	2·4	240	1·9	245	2·4	230	3·0	245	3·0	260	3·5	250	4·5	240	4·6	240	4·0
23	240	2·5	250	2·9	260	3·0	255	3·6	270	4·8	260	4·5	255	4·3	270	3·9	275	4·4	300	5·7	320	6·1	310	7·6
24	—	0·9	250	1·8	250	2·0	240	1·7	240	1·9	270	2·9	295	3·2	320	4·3	315	5·0	305	5·6	305	4·8	330	5·0
25	—	0·6	—	0·9	—	0·5	—	0·6	—	0·5	—	1·5	340	4·4	340	5·1	340	6·1	350	5·8	355	5·8	350	6·0
26	—	1·1	—	1·2	360	1·6	—	1·5	—	0·9	—	1·5	—	1·3	—	1·2	—	1·5	350	1·9	350	2·1	320	2·1

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

M.S.L. + h_a (height of anemograph above ground) = 5 metres + 20 metres.

May, 1929.

Table with columns for days 13-24, Mean, and Day. Each day column contains two columns of wind speed data (m/s) for two different heights. The 'Mean' column shows the average wind speed for each day, and the 'Day' column shows the day number.

June, 1929.

Table with columns for days 13-24, Mean, and Day. Each day column contains two columns of wind speed data (m/s) for two different heights. The 'Mean' column shows the average wind speed for each day, and the 'Day' column shows the day number.

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

516. Richmond (Kew Observatory):

H_a (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
1	40	4.0	45	3.5	30	1.6	—	1.8	15	2.0	35	2.9	20	2.4	50	2.8	40	3.0	45	3.5	60	2.5	50	2.0	
2	—	0.8	—	0.3	—	0.1	—	0.0	—	0.0	—	0.2	110	1.7	100	2.6	95	3.5	95	3.8	140	3.0	150	2.3	
3	—	0.7	—	0.5	—	0.6	—	0.3	—	0.1	—	0.8	—	1.0	—	0.5	—	0.9	215	1.9	230	3.0	240	2.5	
4	—	1.5	—	0.4	—	0.1	—	1.0	—	0.5	—	0.8	—	0.1	—	0.4	—	1.5	240	2.2	255	2.2	235	3.2	
5	215	5.3	205	4.5	210	4.9	210	5.3	210	6.2	210	7.5	215	8.0	220	9.5	210	9.4	220	10.5	215	10.6	215	10.9	
6	225	3.5	230	3.5	230	2.7	235	2.8	235	2.8	250	3.2	260	3.7	270	4.7	280	3.9	300	3.5	290	4.0	275	5.0	
7	280	1.8	—	1.2	—	0.8	—	1.0	—	1.0	—	1.0	—	1.5	285	2.0	300	2.1	290	2.5	280	3.0	310	3.0	
8	—	0.8	—	0.9	—	1.0	—	1.0	—	0.9	—	1.5	350	3.0	360	3.5	350	3.5	350	4.0	355	3.7	340	2.8	
9	—	1.1	225	1.9	225	1.6	—	1.4	220	1.8	—	1.4	—	1.0	235	1.6	230	4.2	240	4.9	230	4.9	230	5.4	
10	190	1.6	200	1.8	205	3.0	200	2.6	205	2.7	200	2.5	200	2.8	205	3.9	200	4.8	210	5.6	215	5.7	210	6.7	
11	215	2.3	—	0.8	—	0.3	—	0.3	—	0.5	220	1.8	230	3.0	225	3.1	230	4.0	230	4.6	215	5.1	220	4.7	
12	—	0.2	—	0.4	—	0.0	—	0.0	—	0.3	—	0.5	—	0.5	—	0.1	—	1.0	—	1.5	—	1.2	260	2.0	
13	20	2.6	40	2.3	20	2.1	—	1.0	—	0.6	40	2.3	20	2.5	40	4.5	40	4.5	40	5.0	45	4.7	35	4.2	
14	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.3	65	1.8	90	2.2	95	2.9	
15	—	0.8	—	0.0	—	0.4	70	2.0	75	2.5	80	2.5	85	4.6	80	4.5	90	6.0	90	7.0	80	8.5	85	8.3	
16	85	6.5	90	5.6	85	4.9	90	4.3	90	3.6	90	4.6	90	4.9	95	5.0	90	5.5	95	5.5	90	5.3	135	6.5	
17	250	1.6	235	2.0	230	2.0	230	2.1	230	2.0	250	1.8	270	2.3	275	2.3	260	2.8	250	4.0	250	5.0	235	5.7	
18	230	3.0	230	3.1	235	1.6	245	1.6	240	1.8	250	2.0	250	2.1	—	1.5	—	1.5	235	2.4	230	2.8	240	3.5	
19	—	0.9	—	0.5	—	0.8	—	0.9	—	0.5	—	0.5	—	0.0	—	0.1	—	0.3	—	1.0	—	1.5	220	2.0	
20	—	0.9	—	1.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.7	—	0.1	—	0.4	—	0.7	—	1.0	—	1.2	
21	—	1.0	—	0.7	—	0.1	—	0.6	—	0.2	—	0.1	—	1.1	—	1.5	—	1.5	190	2.8	200	3.0	240	2.5	
22	225	2.6	225	2.5	205	3.0	205	3.3	200	3.6	215	4.9	220	5.5	230	5.8	220	5.1	220	6.5	210	7.3	220	7.2	
23	220	4.3	205	3.6	205	3.5	215	3.5	215	4.1	215	4.5	220	5.0	220	5.0	220	5.2	235	4.3	255	3.4	230	3.0	
24	—	1.5	—	0.7	—	0.8	—	0.3	—	0.2	—	0.1	—	0.0	—	1.2	—	1.8	—	1.1	—	335	1.7	325	1.8
25	70	3.5	40	2.6	60	2.0	40	2.2	20	2.1	25	2.3	40	3.5	55	3.4	65	4.7	70	5.6	80	6.0	80	5.5	
26	40	1.6	—	1.3	—	0.8	—	0.5	—	1.1	—	0.5	—	0.5	—	0.3	—	0.5	—	1.1	—	0.9	—	0.7	
27	—	0.4	—	0.8	—	1.0	—	0.7	—	1.0	—	1.2	—	1.3	—	1.3	320	2.5	350	3.0	350	3.5	350	2.8	
28	—	0.5	—	0.3	—	0.0	—	0.4	—	1.0	—	1.3	—	1.5	180	1.6	210	1.9	270	2.5	240	3.2	240	4.2	
29	195	3.9	205	3.7	220	3.7	240	3.5	250	3.3	250	2.8	250	2.6	260	3.5	275	4.0	275	3.9	275	4.0	275	5.0	
30	270	1.9	—	1.0	—	1.2	220	2.2	230	2.4	—	1.5	240	1.6	260	3.3	270	4.0	270	4.2	280	4.3	270	5.7	
31	230	3.8	220	4.1	215	4.7	220	4.6	215	5.5	205	5.1	200	5.4	200	5.0	200	5.7	200	5.6	205	6.2	210	8.0	
Mean ...	—	2.1	—	1.8	—	1.6	—	1.7	—	1.8	—	2.0	—	2.4	—	2.7	—	3.2	—	3.8	—	4.0	—	4.2	

517. Richmond (Kew Observatory): H_a = 5 metres + 20 metres.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	225	7.0	225	7.8	230	8.0	240	7.5	250	6.3	240	5.7	240	5.6	235	7.0	235	6.2	270	5.0	255	6.4	270	6.5
2	10	1.7	—	1.0	—	0.1	—	0.0	—	0.0	—	0.8	—	1.0	245	2.0	230	1.6	—	1.0	—	1.1	—	0.6
3	—	0.0	—	0.0	—	0.5	—	0.7	—	0.4	—	1.4	210	2.1	200	3.5	210	5.8	210	7.0	210	7.3	210	7.0
4	170	2.2	175	2.7	170	3.0	165	2.9	180	3.1	185	4.4	195	4.9	190	5.6	195	6.1	200	5.5	210	7.0	210	6.3
5	—	1.1	270	1.9	265	2.5	260	2.4	260	2.7	270	2.0	270	2.8	290	3.0	305	3.5	290	4.1	280	3.5	280	4.0
6	200	4.2	190	4.0	185	5.2	180	5.8	180	5.9	180	5.2	180	4.2	190	4.5	200	5.5	195	5.5	200	6.0	200	5.8
7	220	1.6	215	3.5	210	3.8	220	2.0	—	1.5	215	3.0	220	3.2	220	3.1	250	2.0	245	1.9	—	1.5	—	1.0
8	—	0.5	—	0.8	—	0.3	—	0.3	—	0.5	—	0.6	—	0.4	—	1.4	10	2.0	350	2.1	350	1.6	—	1.0
9	—	1.5	—	1.0	—	0.5	—	0.9	—	0.6	210	1.9	220	2.0	230	2.5	220	3.2	230	4.3	220	4.0	225	3.5
10	—	1.1	220	1.7	220	1.6	—	0.1	—	1.5	—	1.0	—	1.0	—	0.5	—	0.8	—	1.1	240	1.6	—	1.5
11	235	3.9	230	2.3	220	2.1	210	2.3	225	3.9	225	4.4	220	4.4	220	5.1	225	5.1	220	4.5	215	5.5	235	5.4
12	—	0.0	—	0.5	—	0.5	—	0.4	—	0.5	—	0.3	—	0.7	—	1.0	—	1.4	260	2.2	265	3.2	265	2.7
13	—	0.1	—	0.0	—	0.0	—	0.0	—	0.1	—	0.0	—	0.0	—	0.2	—	1.1	220	2.3	215	3.2	215	4.0
14	220	2.8	220	2.9	215	2.8	215	2.6	210	2.3	215	2.1	230	2.9	255	2.7	260	2.7	300	3.4	305	3.5	300	3.0
15	—	0.2	—	0.1	—	0.1	—	0.1	—	0.5	—	0.2	—	0.4	—	0.5	—	1.1	—	1.0	275	1.8	—	1.2
16	—	0.1	—	0.0	—	0.1	—	0.1	—	0.0	—	0.0	—	0.0	—	0.6	180	1.8	160	1.6	160	2.0	180	2.4
17	220	1.9	220	2.5	220	1.8	220	1.7	210	2.0	205	2.8	215	4.5	215	5.3	220	6.4	210	7.3	210	8.1	210	7.1
18	210	4.5	205	5.2	205	4.6	210	3.5	210	3.0	215	2.9	230	3.3	240	4.7	245	5.0	270	5.0	270	4.5	270	3.5
19	—	0.6	—	0.6	—	0.5	—	0.0	—	0.5	—	0.5	—	0.7	—	1.2	—	1.3	—	1.0	—	1.0	—	1.0
20	—	1.0	—	0.7	—	0.4	—	0.5	—	0.5	—	0.1	—	0.3	—	0.6	—	1.0	210	2.0	225	1.6	225	2.4
21	—	1.0	—	0.5	—	1.0	—	1.2	185	2.1	185	1.8	195	2.1	195	2.8	215	3.1	—	1.2	260	1.7	220	2.2
22	215	2.5	215	2.6	210	2.8	220	2.9	220	3.5	220	3.5	235	3.2	230	3.2	240	3.2	250	2.9	245	3.5	235	3.3
23	205	4.0	205	4.4	205	4.4	200	4.5	205	3.5	205	4.4	210	5.0	215	4.9	220	6.0	220	5.5	215	5.9	220	6.4
24	210	4.0	205	3.3	210	3.5	215	4.0	210	4.1	205	5.0	205	5.0	215	4.0	220	5.4	230	6.2	235	5.2	240	5.4
25	—	0.7	—	0.6	—	0.3	—	0.6	—	0.1	—	0.0	—	0.0	—	0.5	—	0.2	—	0.9	260	1.7	235	2.5
26	—	1.0	—	0.2	—	0.1	—	0.0	—	0.0	—	0.0	—	0.2	—	0.5	—	1.2	190	1.8	180	3.0	175	3.0
27	—	1.3	—	1.0	—	1.5	—	1.4	—															

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

518. Richmond (Kew Observatory) :

H_a (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.		
	°	m/s.	°	m/s.																					
1	215	2.3	200	2.8	210	3.1	220	3.6	215	3.5	205	2.0	200	1.9	215	5.3	220	5.4	230	5.3	225	5.2	225	6.3	
2	—	1.3	230	2.1	240	1.6	—	1.2	—	0.6	—	0.8	—	0.5	—	0.2	—	0.0	—	0.0	—	0.5	—	0.6	
3	80	3.0	80	4.0	80	4.3	90	3.5	95	3.7	90	4.0	90	6.0	80	6.2	85	6.4	95	7.0	90	7.5	95	5.9	
4	—	1.1	—	0.9	—	0.6	—	0.6	—	0.5	—	0.6	—	0.7	—	0.3	—	0.1	—	0.2	—	0.8	—	1.1	
5	—	0.0	—	0.1	—	0.5	—	0.2	—	0.1	—	0.1	—	0.4	—	0.3	—	0.1	—	0.4	—	0.2	—	0.2	
6	330	1.6	—	0.5	—	0.1	—	0.5	—	0.9	—	0.3	—	0.3	—	0.8	30	3.0	25	3.2	25	3.4	30	3.5	
7	—	0.9	—	0.3	—	0.0	—	0.0	—	0.2	—	0.5	—	0.5	—	1.0	240	2.0	220	2.1	240	2.1	245	2.6	
8	—	0.6	—	0.8	—	0.3	—	0.3	—	0.8	—	0.5	—	0.1	—	0.7	—	0.2	—	0.9	—	0.9	—	1.2	
9	—	0.5	—	0.5	—	0.1	—	0.2	—	1.0	—	1.0	—	0.5	—	0.3	—	0.1	—	1.9	290	2.0	310	2.8	
10	65	3.5	60	2.1	40	2.8	55	3.0	65	2.6	70	2.2	80	3.0	80	2.7	90	3.5	85	3.5	70	3.8	70	5.0	
11	80	3.0	80	1.7	80	2.6	60	1.6	75	1.8	90	3.6	85	3.5	95	3.7	110	5.2	100	6.0	100	5.6	105	6.1	
12	—	1.5	65	2.2	70	2.7	70	2.2	—	1.2	—	1.5	—	1.3	80	3.0	80	2.6	85	3.5	110	4.0	135	4.5	
13	—	0.4	—	1.4	—	1.5	—	0.3	—	0.6	—	1.0	—	0.5	—	0.9	360	3.0	10	2.4	335	2.5	320	2.5	
14	—	0.0	—	0.1	—	0.2	—	0.2	—	0.3	—	0.2	—	0.4	—	0.9	—	1.2	—	1.4	—	1.1	—	0.9	
15	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.5	—	0.2	—	0.1	—	0.2	—	0.7	30	1.6	—	1.3	
16	35	2.5	50	3.0	50	2.7	55	3.5	40	3.2	30	3.9	20	3.1	20	4.5	30	3.5	40	3.7	55	4.1	50	5.5	
17	20	3.1	10	2.4	360	2.4	360	2.9	15	3.0	20	2.5	30	2.8	25	3.5	20	3.5	20	4.3	30	4.5	35	3.0	
18	—	1.4	20	2.3	20	2.5	20	3.0	20	2.0	25	2.4	350	1.9	350	2.5	20	2.9	10	2.2	360	1.7	—	1.5	
19	—	1.8	—	0.8	—	0.2	—	0.3	—	1.0	—	1.0	—	0.7	—	1.5	—	1.5	—	1.1	—	1.5	260	2.9	
20	230	5.6	220	5.8	220	5.7	230	5.0	225	5.7	220	6.0	230	5.2	240	5.4	265	6.4	290	9.1	295	8.5	295	9.0	
21	250	2.0	240	2.9	230	2.0	235	2.5	230	2.7	220	3.7	235	4.0	240	4.6	220	6.5	240	6.6	235	5.9	245	6.4	
22	230	2.5	230	2.0	230	2.6	225	2.5	215	2.2	220	3.0	220	2.0	250	2.5	270	3.1	280	3.6	290	4.1	280	3.8	
23	—	1.1	—	0.9	—	0.5	—	1.0	—	0.6	—	1.2	—	1.5	—	1.3	—	1.0	—	0.6	—	1.1	260	2.4	
24	—	1.0	—	1.0	—	0.1	—	0.0	—	0.2	—	0.1	—	0.0	—	0.0	—	0.2	—	1.3	—	1.5	—	1.0	
25	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.1	—	0.0	—	110	3.6	105	5.0	105	5.8
26	—	0.0	—	0.0	—	0.0	—	0.3	—	0.3	—	0.0	—	0.2	—	0.0	—	1.0	—	100	3.3	140	4.8	165	4.5
27	—	0.0	—	0.0	—	0.1	—	0.2	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.5	—	210	3.2	230	3.4
28	—	0.0	—	0.1	—	0.3	180	1.7	190	2.7	185	2.4	220	2.2	220	1.6	205	3.0	240	3.2	230	3.5	230	4.3	
29	195	2.6	200	3.7	200	3.6	200	4.0	200	3.6	215	3.3	205	4.5	210	5.8	210	7.6	210	8.8	215	9.0	215	7.6	
30	—	1.2	—	1.1	—	1.0	—	1.0	—	1.0	—	1.2	—	0.8	—	3.2	210	4.2	210	5.6	200	5.9	200	5.6	
Mean...	—	1.5	—	1.5	—	1.5	—	1.5	—	1.5	—	1.7	—	1.6	—	2.1	—	2.6	—	3.2	—	3.5	—	3.7	

519. Richmond (Kew Observatory) : H_a = 5 metres + 20 metres.

Hour G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	290	3.5	305	3.0	300	2.0	290	1.7	—	1.2	—	1.3	—	1.0	280	2.0	—	1.3	—	1.5	270	2.4	260	2.0
2	205	7.0	220	7.5	225	6.7	250	4.6	245	4.7	230	3.9	225	5.0	280	4.1	250	2.5	225	3.6	250	4.9	260	6.1
3	210	6.0	210	6.7	215	5.1	200	5.0	205	5.6	210	5.8	210	5.0	215	4.0	210	3.5	210	3.8	220	4.0	230	3.5
4	210	1.9	200	1.8	200	1.8	200	1.8	210	1.6	—	1.1	—	0.5	—	0.2	—	0.4	—	0.8	—	1.5	—	1.0
5	—	0.6	—	0.9	—	1.0	200	1.7	—	1.5	—	1.3	—	1.4	195	1.6	180	2.0	195	4.3	200	6.2	200	7.8
6	160	10.2	160	8.0	160	9.9	155	8.6	190	7.2	220	3.0	200	2.4	155	3.1	165	3.8	215	5.5	200	6.3	210	7.5
7	215	4.5	210	3.5	200	3.7	200	3.9	200	3.8	200	3.8	200	3.8	215	3.7	220	3.2	220	4.5	220	4.5	215	5.5
8	170	4.6	170	5.5	160	5.3	165	6.2	155	6.0	160	5.2	175	3.5	180	3.5	195	4.7	190	4.9	185	3.9	190	5.1
9	270	5.3	260	4.4	260	4.0	260	3.5	240	2.8	220	2.2	230	2.0	260	4.3	265	4.6	285	6.6	300	5.8	295	4.9
10	245	3.5	230	2.5	240	2.4	240	3.4	240	3.1	235	2.6	250	3.5	250	3.9	245	4.6	245	5.6	245	5.8	250	5.5
11	220	5.0	220	4.6	225	3.9	230	5.1	230	5.0	230	4.8	225	4.7	220	5.0	220	4.6	230	4.5	230	4.5	250	5.0
12	—	0.2	—	0.4	—	0.3	—	0.9	—	0.5	—	0.6	—	0.5	—	1.2	235	2.3	235	2.7	270	2.7	255	2.5
13	—	0.9	—	0.3	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	0.0	—	1.5	200	3.6	180	2.3	230	4.7
14	—	1.0	—	1.5	—	0.9	—	0.2	—	0.3	—	0.5	—	1.2	—	1.4	205	2.6	210	3.0	230	3.3	240	3.2
15	—	1.0	—	0.5	—	0.0	—	0.1	—	0.0	—	0.2	—	0.1	—	0.0	—	0.0	—	0.0	—	0.5	—	1.2
16	—	1.0	—	1.0	—	1.2	—	1.4	170	2.0	170	2.5	185	2.2	195	2.0	210	3.6	215	5.2	240	5.7	260	5.6
17	230	3.2	225	3.5	220	2.9	210	2.9	220	2.5	215	2.8	220	3.8	220	4.3	220	4.5	225	5.6	230	5.1	240	4.6
18	275	1.7	—	0.1	—	0.6	—	1.4	270	2.5	270	2.2	270	2.3	275	2.3	290	2.5	295	2.8	285	2.5	—	1.4
19	—	0.5	—	0.4	—	0.5	—	0.7	—	0.2	—	0.3	—	0.9	—	1.0	—	0.6	—	0.5	—	0.2	—	1.0
20	—	0.0	—	0.1	—	0.2	—	0.2	—	1.3	—	1.5	—	1.3	220	3.1	220	4.5	220	5.4	210	6.1	210	5.5
21	105	5.8	100	6.6	90	7.1	90	6.0	80	5.8	70	5.0	60	3.8	50	3.8	60	3.0	75	4.1	70	5.5	90	6.5
22	—	0.5	—	0.2	—	0.1	—	0.1	—	0.4	—	0.0	—	0.1	—	0.0	—	0.0	—	0.6	—	1.3	—	1.5
23	—	1.0	—	1.3	245	1.9	230	1.9	—	1.5	220	1.7	220	1.6	225	2.1	230	2.9	230	2.6	230	4.0	230	5.5
24	205	6.5	205	7.3	205	6.4	205	5.6	205	6.9	205	7.5	210	7.7	210	7.8	210	8.8	200	8.8	200	8.8	200	9.5
25	230	2.4	225	2.4	220	2.3	—	0.6	—	0.5	—	1.2	—	1.1	230	1.8	230	2.2	230	3.3	230	4.6	225	4.8
26	—	0.5	—	0.3	—	0.0	—	1.1	—	0.6	—	0.9	—	1.0	—	0.8	—	0.3	305	1.7	305	3.2	310	3.6
27	—	1.0	—	0.7	—	0.3	—	0.8	—	0.8	—	0.5	—	0.5	—	0.6	—	0.3	330	2.0	340	3.0	320	3.9
28	—	1.5	—	1.4	—	1.0	—	0.4	—	0.3	—	0.4	—	0.4	210	2.6	175	4.8	180					

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

520. Richmond (Kew Observatory) :

H_a (height of vane of anemograph above M.S.L.) = Height of ground above

Dines Anemograph from Jan., 1926.

Hour. G.M.T.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.3	—	0.5	—	0.0	—	0.1	—	0.0	—	0.0	—	0.0	—	0.1	—	0.3	—	0.1	—	0.5	—	0.6
2	—	0.3	—	0.3	—	0.0	—	0.0	—	0.4	—	1.1	—	1.0	—	1.0	—	0.3	—	0.2	—	0.4	—	1.3
3	230	2.7	250	1.8	290	2.1	—	1.4	300	1.7	—	1.3	—	1.0	265	1.9	—	1.5	310	3.7	315	5.0	335	4.5
4	220	2.1	215	2.1	210	2.2	220	2.3	—	1.0	—	0.5	—	0.7	—	0.8	—	1.0	220	1.7	230	1.7	230	2.5
5	210	3.2	205	2.4	205	3.6	205	4.5	205	5.2	205	4.9	210	5.6	205	5.6	205	5.9	210	6.6	210	6.9	210	7.4
6	185	4.6	180	4.5	180	3.5	180	2.8	165	3.0	160	3.7	150	3.3	150	3.0	145	3.5	140	3.5	135	3.6	140	3.4
7	—	1.4	—	0.5	—	1.2	—	1.4	—	1.5	—	1.5	—	1.5	205	2.1	215	1.7	220	2.0	—	1.0	220	4.0
8	190	5.6	200	6.0	200	6.2	200	5.8	210	5.6	210	4.3	215	3.7	220	3.5	235	2.1	260	2.1	285	3.3	295	4.5
9	—	1.0	—	1.1	215	1.6	210	2.1	220	1.9	220	3.0	210	2.1	225	2.0	235	2.6	230	3.0	225	3.9	230	5.1
10	200	6.0	200	6.2	200	6.7	200	7.5	195	7.0	195	6.0	190	6.7	190	6.2	215	6.1	305	4.5	280	4.0	290	5.2
11	215	3.6	215	4.5	210	4.6	210	3.9	210	3.8	210	3.5	195	4.5	195	4.9	195	6.6	190	8.0	200	9.0	200	10.4
12	215	12.6	240	10.9	310	5.7	305	6.0	290	3.5	255	3.4	235	3.0	230	3.5	235	4.7	245	6.1	255	6.2	255	6.5
13	—	0.7	—	0.0	—	0.0	—	0.1	—	0.0	—	0.0	—	0.2	—	0.1	—	0.1	—	0.2	—	0.4	—	1.0
14	—	1.2	240	1.9	—	1.2	275	1.6	—	1.5	—	1.0	—	0.8	—	1.5	—	—	1.2	—	0.5	240	1.7	1.2
15	—	0.0	—	0.3	—	0.1	—	0.1	—	0.4	—	0.7	—	0.2	—	0.5	—	1.2	—	0.2	—	0.4	—	0.0
16	110	6.0	95	6.0	85	6.8	85	7.6	80	8.0	75	7.5	70	8.5	50	8.0	40	7.6	20	7.4	5	7.7	355	8.3
17	310	4.0	310	3.5	305	2.4	—	1.0	—	0.8	—	1.0	—	1.5	—	1.4	—	0.9	—	0.5	—	1.4	—	1.3
18	—	0.0	—	0.0	—	0.0	—	0.0	—	1.5	—	1.3	—	0.5	—	0.4	—	0.6	230	1.6	240	1.9	—	1.2
19	180	6.0	180	7.0	185	7.5	195	8.5	195	8.0	195	7.3	195	7.5	195	7.9	195	8.5	195	8.0	195	8.3	200	8.3
20	175	3.6	170	3.5	175	3.5	170	4.8	175	4.6	175	3.6	175	3.8	170	2.8	170	4.0	175	4.5	160	4.1	165	3.1
21	170	2.5	165	2.0	170	2.4	160	3.0	160	3.0	165	3.0	155	2.3	—	1.0	170	2.5	170	4.6	170	5.7	180	5.1
22	155	4.6	150	5.0	150	5.3	140	5.2	140	5.0	145	6.0	145	6.0	160	7.0	160	8.0	150	8.3	160	8.1	170	9.0
23	180	6.4	185	4.9	190	5.2	190	6.4	190	5.4	190	6.4	180	6.0	170	8.0	170	9.0	170	9.8	175	10.8	180	10.9
24	185	6.3	185	5.8	180	4.9	185	5.0	230	3.9	185	2.3	230	2.6	—	1.5	195	1.9	245	3.7	240	4.1	245	5.3
25	170	9.5	175	9.0	180	8.4	185	8.5	185	7.0	190	8.5	190	8.0	195	8.4	200	9.1	190	8.5	190	9.8	195	10.0
26	200	7.8	210	7.9	235	6.5	220	5.4	215	6.0	200	4.5	210	5.1	200	5.4	190	4.4	215	6.6	210	4.8	225	5.1
27	230	4.0	230	3.2	220	3.2	225	3.0	230	2.0	225	2.8	225	3.3	230	2.4	220	2.5	230	3.4	225	3.7	225	4.0
28	160	5.4	165	5.6	160	5.7	165	6.0	165	5.5	165	5.2	175	4.7	185	5.2	180	5.1	180	5.8	180	6.1	180	6.8
29	230	6.2	230	5.5	240	3.6	225	3.2	210	3.0	190	1.6	290	2.8	180	3.5	175	3.0	180	3.2	180	3.5	200	3.6
30	180	3.5	175	3.0	170	3.2	170	2.5	175	2.6	190	3.5	185	3.9	185	3.0	175	2.9	200	5.4	200	5.5	205	5.4
Mean ...	—	4.0	—	3.8	—	3.6	—	3.7	—	3.4	—	3.3	—	3.4	—	3.4	—	3.6	—	4.1	—	4.5	—	4.8

521. Richmond (Kew Observatory) : H_a = 5 metres + 20 metres.

Hour.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		Noon.	
	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.	°	m/s.
1	—	0.4	—	0.1	—	0.0	—	1.1	—	1.5	340	1.9	—	1.1	280	2.0	280	2.6	260	2.6	290	2.8	300	2.1
2	195	2.0	—	1.3	175	2.5	190	4.6	185	5.0	190	6.4	190	7.0	190	7.8	190	8.3	190	8.5	190	8.1	190	9.1
3	215	2.6	210	3.4	210	4.3	190	2.0	—	1.1	—	0.5	—	0.0	—	0.5	170	2.0	140	1.9	155	1.8	—	1.0
4	130	5.5	140	5.2	140	5.3	170	3.7	160	4.1	170	3.6	190	3.5	200	4.5	210	4.6	230	5.5	235	5.0	220	4.7
5	190	9.7	185	9.5	180	9.1	175	11.0	170	12.0	170	12.2	170	13.5	175	13.6	180	12.6	180	12.1	185	11.1	190	9.7
6	220	6.8	215	6.5	220	6.5	215	5.3	220	5.9	215	5.2	210	5.1	210	4.3	210	4.6	220	6.5	215	5.5	215	6.1
7	205	13.5	210	14.3	210	16.0	210	15.5	220	13.2	230	10.5	230	10.8	235	10.5	235	11.4	240	10.4	245	11.0	260	11.6
8	195	7.5	200	9.6	205	10.7	210	11.5	210	12.0	210	12.6	205	11.6	215	12.8	210	9.6	210	11.5	220	9.9	215	10.0
9	240	8.5	240	9.6	235	6.0	220	4.0	225	5.0	220	6.6	200	6.2	190	5.3	200	6.3	200	9.4	200	10.8	200	13.0
10	245	7.2	250	7.0	250	5.6	260	5.0	250	4.2	230	3.6	230	3.8	240	4.1	250	4.3	240	5.4	240	6.5	250	7.0
11	205	8.6	210	9.5	220	8.8	220	9.7	240	10.1	240	8.0	245	9.2	250	7.5	250	8.8	255	9.5	250	9.0	255	9.5
12	240	8.4	260	8.5	260	7.6	260	8.6	255	7.3	250	6.7	240	6.8	240	8.2	275	7.1	260	7.7	265	5.6	265	8.2
13	225	6.2	225	7.2	230	5.5	230	5.8	235	5.6	240	6.0	240	5.4	230	4.5	230	4.2	220	5.1	230	5.2	220	5.1
14	215	6.3	220	7.0	220	7.5	220	7.5	225	7.3	225	7.6	225	6.3	225	6.1	220	6.5	230	6.3	240	6.6	240	6.3
15	240	4.5	245	3.1	5	2.4	35	1.8	—	0.0	—	0.0	—	0.0	—	0.0	—	0.5	—	0.9	270	2.0	260	1.6
16	—	0.6	—	1.0	—	1.2	—	0.7	—	1.3	—	1.5	—	1.0	—	0.5	340	2.0	330	2.0	340	2.6	345	2.8
17	260	1.9	—	1.0	—	1.4	—	0.6	—	1.2	—	1.2	270	1.8	—	1.5	—	1.0	—	1.2	—	0.9	265	1.9
18	—	1.1	—	0.2	—	0.6	—	1.0	—	0.1	—	0.2	—	0.0	—	0.2	—	0.5	—	0.1	—	0.0	—	0.1
19	—	0.5	—	0.5	—	0.2	170	2.0	170	2.0	—	1.5	165	2.2	170	2.0	165	1.6	—	1.1	170	2.5	170	4.0
20	130	2.9	140	3.2	125	3.5	120	2.0	125	2.2	140	2.6	135	1.9	—	1.5	130	2.2	145	2.8	160	3.5	165	4.2
21	165	7.5	165	7.5	155	6.9	155	7.6	155	7.6	160	7.0	160	7.9	160	8.7	160	8.0	160	7.0	170	6.5	170	6.6
22	90	3.0	105	3.0	125	3.3	110	3.1	105	3.5	105	2.7	105	2.8	105	2.8	110	2.0	—	1.5	105	1.6	120	1.9
23	—	0.6	—	0.2	—	0.4	—	0.2	—	0.0	—	0.0	—	0.5	120	2.5	125	2.5	140	3.5	145	6.0	160	6.2
24	60	3.8	300	4.2	275	5.6	275	4.9	260	5.5	265	6.0	260	5.4	260	5.0	255	4.8	250	4.2	255	5.2	265	5.0
25	170	8.5	180	7.7	195	8.2	200	8.9	215	7.0	220	7.2	225	7.5	215	7.5	215	9.5	220	9.8	220	11.5	220	12.5
26	225	6.9	225	7.0	225	6.1	230	5.0	225	5.5	225	5.5	225	5.0	225	5.2	230	4.7	230	4.3	230	5.0	2	

522. Richmond (Kew Observatory) : H_a = 5 metres + 20 metres.

1929.

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.	Max. in a Gust.	Time of Gust.
Day.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.	m/s.	h. m.
1	10	0 25	12	10 10	11	16 15	20	14 15	7	15 55	9	14 30	7	1 25	15	3 5	11	13 35	11	23 55	2	12 05	6	14 00
2	14	14 40	11	10 25	10	9 40	15	20 25	13	15 50	13	13 30	7	9 55	5	19 5	6	24 0	13	13 40	7	16 50	17	14 15
3	14	13 50	10	1 10	4	13 5	11	13 10	9	10 10	15	15 15	7	15 40	14	14 0	12	13 5	13	2 30	9	11 20	10	22 20
4	12	16 0	3	14 15	10	15 55	12	18 55	16	18 30	12	17 10	12	17 40	13	16 25	5	13 10	3	0 00	7	19 45	15	24 00
5	11	5 55	3	13 50	9	14 5	19	12 55	16	4 30	8	16 10	20	15 25	9	19 10	4	16 25	17	21 55	16	13 50	27	8 00
6	9	16 30	7	19 15	9	11 0	11	17 30	25	11 5	15	18 20	12	12 50	12	4 15	7	11 30	19	17 25	9	0 40	27	23 40
7	5	2 40	7	3 55	6	15 10	9	14 10	16	14 5	11	16 35	7	22 50	7	3 20	5	13 0	13	12 25	11	20 45	28	0 40
8	3	8 20	8	8 30	8	14 0	6	10 45	16	8 50	6	19 20	7	10 15	6	14 5	4	11 25	15	12 15	11	12 20	25	17 45
9	3	2 5	5	11 10	10	14 10	10	17 40	9	12 50	8	7 35	10	14 35	9	15 40	7	19 0	13	15 35	11	23 55	23	12 05
10	8	11 55	9	21 0	3	13 55	24	13 10	13	14 10	7	14 20	12	14 20	7	14 50	10	19 0	12	11 10	13	4 00	16	0 05
11	11	22 55	16	16 55	6	13 20	17	15 45	13	13 15	10	16 55	9	10 10	10	12 20	10	12 40	11	12 40	23	13 40	20	6 45
12	13	5 25	16	1 45	11	19 50	13	12 15	10	3 35	10	12 30	16	14 45	7	14 40	10	13 50	6	14 25	19	0 45	20	10 20
13	5	14 15	13	11 20	9	1 25	7	10 00	13	17 40	15	16 5	8	10 55	9	18 0	5	12 20	8	12 20	6	14 00	11	20 05
14	8	12 35	7	14 10	8	20 50	7	18 40	19	12 30	17	14 45	7	17 25	7	11 25	5	14 5	7	14 20	5	4 25	13	5 50
15	9	11 0		8	16 50	12	23 30	13	12 00	12	17 5	17	23 25	14	20 40	5	14 0	6	23 0	5	20 35	15	23 35	9	0 00
16	15	9 10	7	19 25	11	1 20	10	13 15	8	9 45	15	0 20	12	13 45	6	16 40	9	13 35	13	17 20	13	12 25	5	10 50
17	7	12 40	5	4 55	5	20 55	9	16 40	9	18 55	9	19 0	11	12 55	16	14 5	7	8 15	9	14 40	8	0 30	4	12 40
18	7	12 40	7	17 15	6	20 40	9	11 20	8	15 5	7	19 5	9	14 25	10	14 20	5	8 50	6	9 20	16	21 50	4	13 30
19	7	14 10	10	19 15	6	6 35	11	14 10	15	14 10	7	10 35	6	19 50	4	13 10	9	23 35	4	14 35	16	18 50	7	14 35
20	7	17 45	7	13 5	7	14 10	12	12 45	6	11 40	9	15 55	22	19 10	5	12 15	17	10 30	15	14 55	9	9 40	13	23 55
21	4	11 20	8	14 5	11	11 20	11	16 55	9	17 0	11	13 25	9	18 10	7	19 20	17	14 10	11	2 45	10	11 40	15	7 35
22	5	15 35	6	18 10	7	3 15	9	07 55	12	13 25	9	14 5	17	13 10	7	18 55	10	10 55	4	15 30	15	11 45	7	2 40
23	7	12 15	5	11 45	7	17 0	7	07 40	12	15 30	14	13 20	11	13 10	12	13 0	6	14 55	12	24 00	19	12 55	13	11 35
24	10	21 20	7	17 55	8	15 0	15	15 40	8	14 40	10	9 20	10	19 40	11	10 0	3	11 15	18	12 40	12	24 00	17	23 00
25	6	0 5	11	23 50	10	14 50	9	10 55	7	12 30	12	10 55	10	18 20	7	13 25	9	11 25	10	15 25	21	16 45	25	13 40
26	9	14 55	16	23 35	7	15 5	9	20 40	9	13 0	7	19 50	6	16 45	7	15 10	8	11 50	4	15 05	16	9 40	12	1 50
27	5	13 5	19	8 35	5	14 45	11	07 50	14	16 20	9	13 50	7	15 20	7	16 40	7	13 10	9	12 50	9	24 00	12	4 05
28	11	23 55	8	0 20	9	14 15	10	12 30	12	23 10	9	24 0	10	20 10	14	17 40	9	14 0	13	11 55	15	16 30	16	23 55
29	14	2 25	—	—	5	14 55	11	17 15	12	2 45	13	18 5	11	12 15	11	11 30	16	10 5	15	11 30	11	14 35	30	5 25
30	6	9 45		—	—	5	14 35	11	14 35	13	14 5	11	0 25	12	11 30	6	14 20	15	16 30	14	15 10	10	12 00	16	16 10
31	9	20 55	—	—	12	9 50	—	—	8	10 45	—	—	20	13 35	11	13 40	—	—	10	1 00	—	—	6	0 50

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

523. Richmond (Kew Observatory) : H_a = 5 metres + 20 metres.

1929.

Month.	DISTRIBUTION OF WIND.								EXTREME VELOCITIES.				
	More than 17.1 m/s.		10.8 to 17.1 m/s.		5.5 to 10.7 m/s.	1.6 to 5.4 m/s.	Less than 1.6 m/s.	No Record.	Highest Hourly Wind.			Highest Gust.	
	Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid. Time.	Speed.	Date.
Jan. ...	—	hr. 0	0	hr. 0	hr. 82	hr. 454	hr. 208	hr. 0	0	m/s. 9	day. 2 hour. 14	m/s. 15	d. h. m. 16 9 10
Feb. ...	—	0	1	3	145	313	211	0	65	11	27 11	19	27 8 35
Mar. ...	—	0	0	0	50	375	319	0	{ 325 } { 90 }	7	{ 31 10 } { 1 16 }	12	31 9 50
April ...	—	0	1	2	163	422	133	0	360	12	10 14	24	10 13 10
May ...	—	0	2	10	224	365	145	0	195	15	6 11	25	6 11 5
June ...	—	0	0	0	137	427	156	0	215	9	15 16	17	{ 14 14 45 } { 15 23 25 }
July ...	—	0	2	6	112	436	190	0	130	12	5 14	22	20 19 10
Aug. ...	—	0	0	0	78	391	275	0	210	9	{ 17 13 } { 28 16 }	16	17 14 5
Sept. ...	—	0	0	0	81	332	307	0	215	10	29 14	17	20 10 30
Oct. ...	—	0	0	0	147	375	222	0	200	11	24 13	19	6 17 25
Nov. ...	—	0	4	18	182	348	172	0	210	13	11 15	23	11 13 45
Dec. ...	—	0	7	52	269	303	120	0	210	16	7 3	30	29 5 25
Year ...	—	0	17	91	1670	4541	2458	0	210	16	Dec. 7 3	30	Dec. 29 5 25

Month	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.			
	Day.	30 cm	122 cm																							
1	a.	76.8	80.0	a.	77.6	77.9	73.5	77.1	80.6	79.2	80.5	81.1	87.2	84.3	87.4	86.2	89.5	88.4	90.9	88.7	87.5	88.0	80.3	84.7	81.6	82.5
Mean		74.9	78.8	74.7	77.9	75.9	77.3	80.3	80.0	84.4	82.3	88.1	85.4	90.6	87.2	89.8	88.2	89.8	88.7	84.2	86.6	79.9	83.2	79.0	81.7	

The initial 2 or 3 of the readings is omitted; i.e., 275.0 degrees absolute is written 75.0.

Year 82.7 | 83.1

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

Readings in degrees absolute.

525. Richmond (Kew Observatory). 1929.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.
1	73.1	79.3	62.3	72.9	65.0	81.4	80.6	85.1	86.1	76.2	69.0	75.6
Mean	70.5	67.9	69.5	71.7	76.6	79.7	82.1	81.7	81.1	76.2	74.3	73.8

Year 75.5

The initial 2 or 3 of the readings is omitted; i.e., 275.0 degrees absolute is written 75.0.

Note.—The minimum refers to the interval from 18h. the previous day to 7h. on the day to which it is entered.

HEIGHT IN CM. ABOVE M.S.L. OF SURFACE OF UNDERGROUND WATER.

Daily Means and Extremes for Months.

526. Richmond (Kew Observatory). 1929.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.
1	251	219	210	194	181	177	169	165	163	164	155	195
Mean	240	217	199	186	177	174	171	167	169	161	150	290

Annual Mean = 193 cm.

Extremes for the months:—Jan. 263,220; Feb., 223,208; Mar., 210,193; April, 194,181; May, 181,174; June, 182,169; July, 179,165; Aug., 174,163; Sept., 177,161; Oct., 167,155; Nov., 189,154; Dec., 325,189.

527. Richmond (Kew Observatory).

Table for station 527, Richmond (Kew Observatory), January 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

528. Richmond (Kew Observatory).

Table for station 528, Richmond (Kew Observatory), February 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the weather of the Day.

Note.—Observations are not taken at 15h. on Sundays, Good Friday and Christmas Day. * Mean of 27 days. † Mean of 24 days.

529. Richmond (Kew Observatory).

March, 1929.

Table for Richmond (Kew Observatory) in March 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

530. Richmond (Kew Observatory).

April, 1929.

Table for Richmond (Kew Observatory) in April 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day. Includes a Mean Cloud Am't. row at the bottom.

* Mean of 25 days.

† Mean of 26 days.

531. Richmond (Kew Observatory).

Table for Richmond (Kew Observatory) in May 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows are numbered 1 to 31, with a Mean Cloud Am't. row at the bottom.

532. Richmond (Kew Observatory).

Table for Richmond (Kew Observatory) in June 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (All Forms), Visibility (7h-21h), Precipitation (7h-21h), and Remarks on the Weather of the Day. Data rows are numbered 1 to 30, with a Mean Cloud Am't. row at the bottom.

* Mean of 27 days.

† Mean of 25 days.

533. Richmond (Kew Observatory).

July, 1929.

Table for 533. Richmond (Kew Observatory) July, 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

534. Richmond (Kew Observatory).

August, 1929.

Table for 534. Richmond (Kew Observatory) August, 1929. Columns include Day, Cloud Forms (7h, 13h, 18h), Cloud Amount (7h, 9h, 13h, 15h, 18h, 21h), Visibility (7h, 9h, 13h, 15h, 18h, 21h), Precipitation (7h, 9h, 13h, 15h, 18h, 21h), and Remarks on the Weather of the Day.

* Mean of 27 days.

† Mean of 27 days.

Day.	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.						Remarks on the Weather of the Day.	
	7 ^h	13 ^h	18 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h		
1	St-Cu : A-Cu : Ci.	Cu : A-Cu : Ci-St.	Cu : Ci : Ci-Cu.	4	9	6	-	3	0	J	I	I	-	m	K	..	..	..	..	..	..	..	pp a : () p.
2	St.	—	—	10	3	0	0	0	0	D	F	I	-	G	I	..	..	..	..	..	..	..	pp f a.
3	A-Cu : Ci.	Cu : St-Cu : Ci.	Ci.	3	9	8	3	1	0	G	H	I	-	J	G	..	..	..	..	..	..	..	pp f a.
4	St.	—	St-Cu.	10	0	0	1	1	0	D	E	I	-	J	J	..	..	..	..	..	..	..	pp m a.
5	A-Cu : Ci : Ci-Cu.	—	Ci : Ci-St.	3	4	0	3	1	0	F	E	I	-	J	I	..	..	..	..	..	..	..	pp m a.
6	Ci : Ci-St.	Cu : Fr-Cu.	Ci.	3	4	6	5	1	0	G	H	J	J	J	J	..	..	..	..	..	..	..	ppp a.
7	A-Cu.	—	—	1	0	0	0	0	0	F	H	J	J	J	J	..	..	..	..	..	..	..	ppp m a.
8	—	Ci.	—	0	1	6	-	0	0	G	G	J	J	J	J	..	..	..	..	..	..	..	ppp a and n.
9	—	A-Cu : A-St.	A-Cu : Ci : Ci-St.	0	0	1	2	9	2	G	G	K	K	J	J	..	..	..	..	..	..	..	ppp m a.
10	St : A-St.	Cu.	St-Cu.	10	10	1	9	1	0	G	G	H	H	J	J	..	..	..	..	..	..	..	ppp m a.
11	A-Cu.	A-Cu.	—	3	5	1	1	0	0	G	J	J	i	H	J	..	..	..	..	..	..	..	ppp a.
12	St : St-Cu : A-Cu.	Ci-Cu : Ci-St.	St-Cu : Ci.	7	7	1	2	7	1	F	G	J	i	K	J	..	..	..	..	..	..	..	ppp m a.
13	—	—	Ci-St.	0	6	0	0	1	0	G	H	J	i	J	i	..	..	..	..	..	..	..	ppp m a : p n.
14	St-Cu.	—	St-Cu : A-Cu.	8	9	0	3	6	4	G	H	J	i	J	i	..	..	..	..	..	..	..	ppp a.
15	A-Cu : Ci.	A-Cu.	St-Cu : A-Cu : A-St.	3	8	9	-	10	0	G	H	J	-	J	i	..	..	..	..	..	..	..	ppp a.
16	St.	Ci.	A-Cu : Ci : Ci-Cu.	10	10	5	9	4	4	F	G	J	J	J	J	..	..	..	..	..	..	..	m a.
17	Fr-St : A-St.	St : A-Cu.	A-Cu.	10	9	6	9	8	5	G	H	J	J	J	J	..	..	..	..	..	..	..	ppp a.
18	St.	St : St-Cu.	St.	10	10	10	10	10	9	G	G	H	K	J	J	..	..	..	..	..	..	..	ppp a.
19	St-Cu : A-Cu.	St-Cu : Fr-Cu : A-Cu.	A-Cu.	7	9	7	5	1	7	G	K	K	K	J	J	..	..	..	..	..	..	..	pp a.
20	Nb : Fr-St : A-St.	St-Cu : Fr-Cu.	St-Cu : Cu.	10	9	7	7	2	0	J	K	K	K	J	J	..	..	..	..	..	..	..	pp a.
21	A-Cu : A-St.	Cu : Fr-Cu : Ci.	Cu : Fr-Cu : Ci.	9	10	7	6	1	1	K	J	K	i	J	J	..	..	..	..	..	..	..	pp a.
22	Ci.	St-Cu : Ci.	St-Cu : A-Cu.	3	6	9	-	8	3	B	F	K	i	J	J	..	..	..	..	..	..	..	pp a.
23	—	St-Cu.	St-Cu : A-Cu : Ci.	0	0	9	10	9	1	B	F	K	i	J	J	..	..	..	..	..	..	..	pp a and n.
24	St-Cu.	St-Cu : Cu.	Ci.	9	10	7	2	2	0	G	G	J	J	J	J	..	..	..	..	..	..	..	pp a and n.
25	St.	—	—	10	0	0	0	0	0	D	D	J	J	J	J	..	..	..	..	..	..	..	pp f a and n.
26	—	—	—	0	0	0	0	0	0	A	E	K	K	J	J	..	..	..	..	..	..	..	pp a.
27	St.	Cu : Ci.	Ci.	10	1	2	7	1	0	B	E	K	K	J	J	..	..	..	..	..	..	..	pp a.
28	A-Cu : Ci : Ci-Cu.	Ci.	St-Cu : Cu : Ci.	5	1	<1	1	1	0	i	J	K	K	J	J	..	..	..	..	..	..	..	pp a.
29	St-Cu : A-Cu : Ci.	St-Cu.	St-Cu : Nb : A-St.	6	7	8	-	10	10	J	J	K	K	J	J	..	..	..	..	..	..	..	pp a : ●° and ●° : 14 ^h 30 ^m -17 ^h 10 ^m .
30	St-Cu : Ci.	St-Cu : Ci-St.	St-Cu : A-St.	5	3	9	9	9	10	J	J	K	K	J	J	..	..	..	..	..	..	..	pp a : ●° p.
Mean Cloud Am't.				5.6	5.3	4.2	4.2	3.6	1.9														

536. Richmond (Kew Observatory).

1	St-Cu : A-Cu.	Cu : Ci-St : Ci.	Nb : A-St.	2	0	9	9	10	10	G	H	K	K	J	i	..	..	..	..	..	..	..	●° 17 ^h 40 ^m .
2	Nb : St-Cu : A-St.	Cu : Ci.	A-Cu : Ci.	9	9	7	8	6	10	J	H	K	K	J	H	..	..	..	..	..	..	..	●° early a.
3	Nb : A-St.	St-Cu : A-Cu : Ci-Cu.	Cu : Ci : Ci-Cu.	10	10	9	10	6	2	J	H	K	K	J	H	..	..	..	..	..	..	..	●° early a.
4	St-Cu : Ci-Cu : Ci-St.	A-St.	A-St.	8	9	10	10	10	2	J	H	J	J	J	J	..	..	..	..	..	..	..	pp a and n.
5	A-Cu : Ci-St.	Cu : Ci.	Nb.	6	4	6	7	10	7	i	H	J	J	J	J	..	..	..	..	..	..	..	pp early a : ⊕ a : ●° 18 ^h 5 ^m -18 ^h 55 ^m .
6	St.	St-Cu : Ci-St : A-Cu.	Cu-Nb : St-Cu : A-Cu.	10	8	9	-	7	0	J	i	J	-	K	K	..	..	..	..	..	..	..	●° early a : p ●° 12 ^h 3 ^m : q in p.
7	Cu-Nb : A-Cu.	St-Cu : Cu : Ci-Cu.	St-Cu : A-Cu : Ci-St.	<1	1	3	5	8	9	J	J	K	K	J	J	..	..	..	..	..	..	..	pp a : ⊕ 14 ^h 45 ^m .
8	St-Cu : Nb : Ci.	Nb : A-St.	St-Cu.	4	4	10	9	10	10	J	J	J	J	J	J	..	..	..	..	..	..	..	pp ●° KQ mid-day : P ●° 15 ^h 57 ^m .
9	A-Cu : Ci.	St-Cu : Nb.	St-Cu : Ci.	2	1	9	4	5	6	J	J	J	J	J	J	..	..	..	..	..	..	..	pp a p ●° 12 ^h 55 ^m . [KQ 18 ^h 45 ^m .
10	St-Cu : Nb : A-St.	St-Cu : Cu : A-Cu.	St-Cu : A-Cu : A-St.	10	9	9	8	10	10	J	J	J	J	J	J	..	..	..	..	..	..	..	●° n.
11	St : Nb : A-St.	St-Cu.	Ci-Cu.	10	10	9	7	7	4	K	G	J	J	G	G	..	..	..	..	..	..	..	●° early a : p n.
12	A-Cu.	St-Cu : A-St.	St-Cu.	9	9	10	7	<1	1	G	H	K	K	J	J	..	..	..	..	..	..	..	pp ●° 13 ^h 30 ^m : p a and n.
13	St-Cu.	St-Cu.	St-Cu.	9	9	9	-	10	9	G	G	K	K	J	J	..	..	..	..	..	..	..	pp a and n.
14	St-Cu : A-Cu : Ci-St.	St-Cu.	St-Cu.	2	9	10	10	10	4	G	G	J	J	J	J	..	..	..	..	..	..	..	pp a and n.
15	St-Cu.	St-Cu : St.	St.	9	10	10	10	10	10	D	E	J	J	J	J	..	..	..	..	..	..	..	f a.
16	St-Cu : A-Cu.	Cu.	Cu.	8	8	4	8	<1	0	G	G	K	K	J	J	..	..	..	..	..	..	..	pp a.
17	St-Cu : Ci-Cu : A-Cu.	St-Cu : Cu.	St-Cu : A-Cu.	7	2	8	7	2	9	J	J	K	K	J	J	..	..	..	..	..	..	..	ppp a.
18	Cu : Ci : A-Cu.	Cu : Ci-St.	Cu : Ci.	3	8	9	7	5	2	J	H	J	J	J	J	..	..	..	..	..	..	..	pp ●° early a : ⊕ 13 ^h : f n.
19	St-Cu : A-Cu.	Cu.	St-Cu.	2	0	3	1	1	0	D	D	J	J	J	J	..	..	..	..	..	..	..	f a and n : L a.
20	St-Cu : Ci-St.	Nb : A-St.	St-Cu : St : A-Cu.	9	9	10	-	10	7	i	G	J	J	J	J	..	..	..	..	..	..	..	pp a : p ●° 21 ^h -24 ^h .
21	St-Cu.	Cu.	A-Cu.	1	0	2	2	2	0	G	E	H	G	F	B	..	..	..	..	..	..	..	ppp f n.
22	St.	St-Cu.	A-Cu.	10	10	9	9	8	9	B	C	H	J	J	J	..	..	..	..	..	..	..	ppp a : f a and n.
23	A-Cu : Ci : Ci-St.	St-Cu : A-Cu.	St-Cu.	7	9	8	10	10	2	G	i	J	J	J	J	..	..	..	..	..	..	..	pp a.
24	St-Cu : A-Cu : Ci-Cu.	St-Cu : A-St.	Nb.	8	8	10	10	10	10	K	J	K	J	J	J	..	..	..	..	..	..	..	pp (gusts) 11 ^h -13 ^h : KQ 16 ^h 35 ^m .
25	St : A-Cu.	Cu : Ci : Ci-Cu.	St : A-St.	2	1	5	8	7	7	G	G	K	J	J	J	..	..	..	..	..	..	..	pp a.
26	St.	Cu.	St-Cu.	10	8	3	7	1	0	B	E	H	i	G	G	..	..	..	..	..	..	..	f a : p a and n.
27	A-Cu.	—	—	<1	0	0	-	0	0	G	F	J	J	J	J	..	..	..	..	..	..	..	pp a and n.
28	St.	Nb : A-St.	St-Cu : A-St.	10	10	10	10	8	8	G	G	J	J	J	J	..	..	..	..	..	..	..	pp a.
29	St-Cu : A-Cu.	Cu : A-Cu.	St-Cu.	3	2	4	6	6	7	J	J	J	J	J	J	..	..	..	..	..	..	..	pp ●° 15 ^h 25 ^m .
30	Nb : St.	Cu.	St-Cu.	10	8	5	4	5	2	G	J	H	J	J	J	..	..	..	..	..	..	..	pp a.
31	St-Cu : A-Cu.	Cu : A-Cu.	A-Cu.	4	8	9	3	6	0	G	G	H	J	J	J	..	..	..	..	..	..	..	pp a.
Mean Cloud Am't.				6.3	6.2	7.4	7.3	6.5	5.1														
Day.	7 ^h	13 ^h	18 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	7 ^h	9 ^h	13 ^h	15 ^h	18 ^h	21 ^h	Remarks on the Weather of the Day.	
	Cloud Forms.			Cloud Amount (All Forms).						Visibility.						Precipitation.							

* Mean of 25 days.

† Mean of 27 days.

537. Richmond (Kew Observatory).

November, 1929.

Table for November 1929 with columns for Day, Cloud Forms, Cloud Amount, Visibility, Precipitation, and Remarks. Includes data for days 1-30 and mean values.

538. Richmond (Kew Observatory).

December, 1929.

Table for December 1929 with columns for Day, Cloud Forms, Cloud Amount, Visibility, Precipitation, and Remarks. Includes data for days 1-31 and mean values.

* Mean of 26 days.

† Mean of 25 days.

539. Richmond (Kew Observatory).

Month.	JANUARY.				FEBRUARY.				MARCH.				APRIL.				MAY.				JUNE.				
Day.	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	
	Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		
1	12	59	38	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	8	60	43	38	11	79	63	...	31	49	54	34	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	23	78	31	31	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	16	46	38	31	9	45	29	...	...	...	...	...	51	111	113	132	51	56	126	104	
8	...	...	...	...	21	84	40	27	20	92	58	...	58	102	75	52	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29	18	...	...	...	41	...	...	...	...	...
10	...	...	...	...	...	...	...	...	5	13	47	...	...	...	...	...	81	89	151	137	76	92	118	95	
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	8	51	70	78	7	60	49	54	...	...	...	...	...	...	...	...	19	61	61	...	...
13	...	...	...	...	11	63	5	45	9	47	35	29	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	14	78	61	54	...	...	...	...	...	...	39	13	...	...	...	...	66	165	...	...	...
15	4	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	71	121	103	87	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36	18	55	75	33	16	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13	9	...	...	...	...	27	30	...	...	...
18	7	44	38	35	...	...	...	...	12	89	...	47	54	85	64	27	33	71	70	66	66	93	59	38	
19	...	...	...	...	9	77	90	80	4	25	125	...	43	67	87	56	...	...	...	...	...	...	...	...	...
20	7	47	61	40	...	...	...	...	30	80	47	14	...	...	...	...	...	...	...	...	111	206	116	68	
21	4	21	94	109	...	...	...	...	25	87	36	13	...	...	...	...	43	48	90	70	73	102	64	36	
22	7	44	85	76	...	...	...	...	33	79	83	54	...	...	...	...	78	105	74	59	...	...	...	...	...
23	8	47	36	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	41	72	92	68	...
25	...	...	...	...	...	...	...	...	...	...	...	...	53	74	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	31	104	52	27	43	61	34	24	...	...	...	...	71	78	77	21	
27	...	...	...	...	...	...	...	...	15	81	38	35	...	...	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	13	80	57	43	22	120	68	59	...	...	...	...	49	186	101	78	35	98	106	72	
29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30	111	...	75	...	...	...	...	...
30	13	59	40	29	...	...	...	...	43	83	52	12	...	...	...	...	28	76	...	...	...	...	...	...	...
31	18	85	45	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	50	36	...	...	...	...	...
Mean ...	9	47	55	47	13	67	57	49	19	73	54	34	47	73	48	28	47	98	78	65	59	92	100	71	...
No. of Days used.	9	9	8	8	8	8	8	8	16	16	15	11	6	6	9	9	12	12	11	13	12	12	10	9	...
Month.	JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER.				DECEMBER.				
Day.	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	λ_+ $\times 10^{18}$	i $\times 10^{18}$	E_+ $\times 10^{18}$	E_- $\times 10^{18}$	
	Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		Ohm ⁻¹ cm ⁻¹	Amp cm ⁻³	Coulomb cm ⁻³		
1	26	85	54	32	...	...	...	...	...	...	...	...	51	101	89	63	...	...	...	...	...	...	...	...	...
2	51	91	85	54	37	77	65	50	32	64	...	13	...	...	...	...	...	...	...	...	...	...	...	...	...
3	110	127	64	52	...	...	...	...	36	104	27	46	45	103	82	56	...	...	...	...	...	...	...	...	...
4	...	...	117	99	...	...	...	...	...	...	...	...	27	50	42	17	14	59	31	19	17	86	48	22	
5	...	...	...	...	...	...	...	...	76	99	46	20	...	...	...	...	...	...	...	...	20	104	42	31	
6	...	...	...	...	...	...	...	...	...	...	40	...	...	...	...	...	...	...	...	...	13	67	41	38	
7	...	...	...	...	...	...	...	...	...	...	...	...	47	114	87	75	...	...	...	...	...	...	...	...	...
8	51	81	92	70	43	62	38	29	...	...	...	...	...	...	...	...	21	71	44	33	...	...	...	...	...
9	...	...	68	66	36	100	43	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	40	69	130	103	...	...	...	...	30	129	80	41	39	72	47	41	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	65	104	60	...	44	77	44	33	...	...	...	...	...	...	...	...	...
12	...	...	...	...	67	98	40	50	115	149	124	101	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	69	107	38	14	41	78	65	...	...	...	...	...	14	90	44	29	...	...	...	...	...
14	...	...	...	...	54	79	83	83	...	...	...	...	...	...	...	...	15	87	22	20	...	...	...	...	...
15	34	138	99	...	58	78	61	...	...	...	...	...	23	60	22	17	3	14	60	68	...	...	...	...	...
16	72	97	90	47	56	95	19	18	42	140	92	70	36	76	101	84	...	...	...	...	...	...	47	34	
17	83	83	...	43	...	...	...	...	43	137	53	13	63	117	...	58	...	...	...	...	...	...	70	51	
18	84	97	83	66	...	...	...	...	35	45	40	27	...	...	...	...	...	...	...	...	...	...	33	34	
19	...	...	...	...	43	72	43	61	71	107	80	40	...	...	...	...	...	...	...	...	...	...	36	33	
20	...	...	...	...	70	94	71	36	...	...	...	...	...	...	...	...	22	88	41	24	...	...	...	...	...
21	...	...	...	...	70	109	90	66	...	...	...	...	20	112	...	...	23	95	33	39	...	...	...	...	...
22	...	...	...	...	47	73	78	29	...	...	...	...	21	60	27	18	...	...	...	...	...	...	...	...	...
23	76	137	...	77	52	99	79	59	85	111	60	41	29	69	51	39	...	...	...	...	...	...	...	...	...
24	53	72	68	38	...	...	...	...	37	63	48	16	...	...	...	...	...	...	...	...	...	...	33	31	
25	39	104	92	50	...	...	...	...	29	113	62	43	23	108	55	48	...	...	...	...	...	...	...	...	...
26	35	35	56	97	58	90	63	45	85	162	161	102	...	...	...	...	15	77	46	22	...	...	...	...	...
27	...	...	...	...	63	91	59	29	77	115	60	19	...	...	...	...	14	59	...	31	...	...	...	...	...
28	...	...	...	...	45	69	172	110	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	67	151	28	34	37	53	101	93	...	...	...	...	...	...	38	31	...	...	...	...	...	...	...	...	...
30	57	98	121	120	70	80	106	82	63	126	106	69	...	...	...	...	...	...	...	...	...	...	48	16	
31	...	...	...	...	...	...	...	...	...	...	...	...	16	72	36	29	...	...	...	...	...	...	...	...	...
Mean ...	59	98	83	65	54	85	69	52	57	109	71	44	35	85	55	4									

ELECTRICAL CHARACTER OF EACH DAY, AND APPROXIMATE DURATION OF
 540. Richmond (Kew Observatory). NEGATIVE POTENTIAL GRADIENT.

413
 1929.

Month.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	Character	Duration Negative Pot. Grad.										
		hours.										
1	I	0.1	I	1.8	0	...	I	0.4	0	...	0	...
2	0	...	I	2.0	0	...	I	0.5	0	...	0	...
3	0	...	I	0.9	0	...	0	...	0	...	I	0.7
4	0	...	I	0.1	0	...	2	3.6	I	1.8	2	4.1
5	I	0.1	0	...	I	0.1	I	1.7	2	7.1	I	1.7
6	I	1.5	0	...	0	...	0	...	I	2.0	0	...
7	I	1.3	0	...	0	...	0	...	I	2.7	I	1.3
8	0	...	0	...	0	...	0	...	I	0.9	0	...
9	0	...	2	3.5	0	...	I	0.2	0	...	0	...
10	2	11.0	I	0.7	0	...	I	1.9	0	...	0	...
11	0	...	0	...	I	0.7	2	6.0	I	0.1	0	...
12	0	...	0	...	0	...	I	2.1	2	5.0	I	0.2
13	I	0.8	0	...	0	...	0	...	I	0.9	I	1.8
14	I	0.2	0	...	0	...	0	...	I	2.7	I	2.4
15	0	...	0	...	0	...	0	...	0	...	0	...
16	I	1.1	0	...	0	...	0	...	0	...	I	0.2
17	0	...	0	...	0	...	0	...	0	...	0	...
18	0	...	0	...	0	...	0	...	0	...	0	...
19	0	...	0	...	0	...	0	...	0	...	0	...
20	0	...	0	...	0	...	0	...	0	...	0	...
21	I	2.8	0	...	0	...	0	...	0	...	0	...
22	0	...	0	...	I	0.1	0	...	0	...	I	0.1
23	0	...	I	1.2	0	...	0	...	0	...	0	...
24	0	...	I	1.0	0	...	I	0.1	I	2.5	0	...
25	0	...	0	...	I	0.7	0	...	0	...	0	...
26	0	...	0	...	0	...	0	...	0	...	0	...
27	0	...	0	...	0	...	I	0.4	0	...	I	0.3
28	I	0.6	0	...	0	...	2	5.0	0	...	0	...
29	2	3.6	—	—	0	...	2	7.0	0	...	0	...
30	0	...	—	—	I	1.1	I	2.9	0	...	I	1.7
31	I	0.3	—	—	0	...	—	—	0	...	—	—
Total ...	—	23.4	—	11.2	—	2.7	—	31.8	—	25.7	—	14.5
No. of days used	—	31	—	28	—	31	—	30	—	31	—	30
Mean ...	—	0.8	—	0.4	—	0.1	—	1.1	—	0.8	—	0.5

Month.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.	Character	Duration Negative Pot. Grad.
		hours,		hours.		hours.		hours.		hours.		hours.
1	0	...	I	2.0	0	...	I	0.4	I	0.1	I	2.0
2	0	...	I	1.2	0	...	I	(1.7)	0	...	I	2.5
3	0	...	I	0.1	I	0.4	I	0.4	0	...	I	1.1
4	2	4.6	I	0.2	I	0.2	0	...	0	...	I	1.3
5	I	0.5	0	...	0	...	I	0.7	0	...	2	9.4
6	I	1.4	I	2.9	0	...	2	4.0	I	1.2	2	3.2
7	0	...	I	0.5	0	...	I	1.5	0	...	I	1.4
8	0	...	0	...	0	...	2	5.8	I	2.0	2	7.5
9	0	...	0	...	0	...	I	0.2	0	...	2	7.6
10	0	...	0	...	0	...	0	...	I	1.9	I	1.5
11	0	...	I	0.1	0	...	0	...	2	5.9	I	0.8
12	I	0.5	0	...	0	...	0	...	2	3.8	I	0.9
13	I	0.1	0	...	I	0.1	I	0.1	0	...	0	...
14	I	0.1	0	...	I	0.1	0	...	I	1.7	0	...
15	0	...	0	...	I	0.1	0	...	2	3.6	I	0.5
16	I	0.4	I	2.4	0	...	0	...	2	14.3	0	...
17	I	0.1	I	0.5	0	...	0	...	0	...	0	...
18	0	...	I	1.7	0	...	I	0.3	I	2.5	0	...
19	0	...	0	...	0	...	I	0.3	I	2.4	0	...
20	2	3.2	0	...	2	3.9	2	7.3	0	...	0	...
21	I	1.5	0	...	I	0.9	I	0.7	0	...	2	9.3
22	0	...	0	...	0	...	0	...	I	0.9	2	5.5
23	0	...	0	...	0	...	0	...	2	4.1	2	4.1
24	0	...	0	...	I	0.1	2	5.6	2	3.2	2	5.4
25	0	...	0	...	0	...	I	0.1	2	4.2	I	2.0
26	0	...	I	0.1	0	...	0	...	I	1.3	0	...
27	0	...	I	0.2	0	...	0	...	I	2.9	I	1.4
28	I	0.1	0	...	0	...	I	2.4	2	10.8	I	2.4
29	0	...	0	...	I	0.7	I	0.4	I	1.1	I	2.2
30	0	...	0	...	I	0.7	I	0.3	2	4.2	2	(3.7)
31	I	1.0	I	0.1	—	—	0	...	—	—	0	...
Total ...	—	13.5	—	12.0	—	7.2	—	32.2	—	72.0	—	75.7
No. of days used	—	31	—	31	—	30	—	31	—	30	—	31
Mean ...	—	0.4	—	0.4	—	0.2	—	1.0	—	2.4	—	2.4

Annual Values:— Character frequency... 0 I 2 Duration ... Total No. of days. Mean.
 211 119 35 321.9 hrs. 365 0.88 hrs.

Mean Values for periods of sixty minutes, centered at the exact hours, Greenwich Mean Time.

541. Richmond (Kew Observatory).

1929.

Month. Hour. G.M.T.	January. Factor 2.06.				February. Factor 2.07.				March. Factor 2.10.			
	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
Day. 1	335	310	500	270	20	190	380	480	590	565	590	690
2	290	555	480	660	135	470	190	200	680	745	690	750
3	255	525	515	535	55	390	625	715	770	315	430	—
4	280	680	570	690	690	545	760	525	—	—	750	785
5	225	325	335	110	400	555	660	635	535	1215	320	410
6	110	135	245	345	445	500	845	490	410	475	340	420
7	110	535	470	690	400	515	280	535	180	430	490	625
8	490	515	690	660	225	355	400	625	375	635	455	955
9	600	525	545	455	680	635	445	-355	555	660	305	865
10	325	-65	-435	225	245	190	200	210	500	350	250	295
11	270	580	715	515	190	425	440	315	225	445	225	270
12	235	600	645	760	485	665	635	895	350	500	885	410
13	470	680	445	645	565	680	505	860	240	455	490	465
14	225	370	425	445	635	510	555	815	365	465	580	520
15	335	345	435	290	680	735	845	590	330	455	510	520
16	290	±	445	515	360	555	745	725	330	430	500	490
17	370	535	445	500	430	285	305	405	465	565	520	660
18	635	525	600	555	350	690	665	—	680	840	750	850
19	480	660	390	555	—	—	880	690	385	365	590	535
20	725	870	715	570	330	860	—	905	580	520	270	645
21	625	660	590	-300	845	940	450	1005	190	160	340	260
22	335	570	680	415	735	700	780	625	55	295	240	240
23	535	725	570	700	500	670	280	325	240	305	170	410
24	555	635	480	455	325	-235	760	500	250	295	135	285
25	310	760	445	625	580	535	515	490	160	250	205	270
26	390	735	625	980	245	420	620	510	240	590	340	320
27	835	545	345	635	330	665	600	530	—	295	545	260
28	300	845	735	345	350	735	620	845	305	—	545	565
29	-470	180	210	310	—	—	—	—	100	445	295	330
30	90	380	455	535	—	—	—	—	45	365	195	215
31	270	345	470	270	—	—	—	—	135	160	180	270
Means { (a)	377	540	507	509	416	554	557	594	354	469	424	486
(b)	351	519	478	481	422	505	540	540	340	481	402	481
Mean for day	(a) 483 (b) 457				(a) 530 (b) 502				(a) 433 (b) 426			
Month. Hour. G.M.T.	April. Factor 2.02.				May. Factor 2.07.				June. Factor 2.19.			
Day.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
1	175	240	120	230	450	515	125	180	90	250	140	175
2	±	325	175	260	315	540	435	425	140	90	75	110
3	185	295	175	435	225	670	325	270	100	130	75	165
4	370	325	155	±	65	180	180	155	110	220	±	220
5	130	195	390	555	-45	-20	55	35	185	265	155	470
6	370	435	175	405	0	180	110	450	175	240	165	175
7	175	165	155	260	0	245	215	280	110	175	110	175
8	140	370	175	390	90	335	180	300	165	220	220	250
9	195	240	205	480	245	270	125	345	155	110	90	110
10	—	175	250	350	170	—	110	280	45	250	120	155
11	130	460	500	205	155	155	155	190	130	220	155	305
12	220	305	380	390	45	-65	90	225	240	230	320	285
13	185	285	775	610	260	315	170	90	-10	140	140	230
14	445	240	285	305	170	270	20	180	220	130	250	-120
15	390	580	655	535	135	180	170	270	220	155	140	230
16	130	435	435	545	135	190	135	200	20	130	130	175
17	305	470	185	435	155	525	290	300	140	230	110	90
18	195	230	155	350	90	335	215	345	185	240	140	155
19	220	370	155	315	180	290	215	260	195	330	140	140
20	130	405	340	765	180	290	155	225	130	220	185	155
21	350	360	165	380	200	325	110	225	195	240	140	140
22	425	460	230	275	110	135	135	110	185	195	90	195
23	85	555	325	480	110	190	90	360	110	45	130	195
24	130	240	120	315	235	450	±	225	140	210	175	175
25	260	250	140	260	155	245	125	135	265	265	185	285
26	185	315	140	220	100	245	225	270	195	250	110	100
27	65	205	175	165	225	435	415	270	185	230	195	265
28	-460	20	325	435	225	450	380	335	220	370	275	340
29	185	175	45	-130	225	425	370	315	275	385	415	330
30	10	305	305	415	315	405	460	405	65	-120	165	370
31	200	435	270	300	—	—	—	—	—	—	—	—
Means { (a)	207	314	260	385	172	329	202	257	158	213	163	213
(b)	184	319	268	371	163	300	205	257	154	201	163	201
Mean for day.	(a) 291 (b) 285				(a) 240 (b) 231				(a) 187 (b) 189			

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

(a) Mean from all positive readings.

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

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

541. Richmond (Kew Observatory).

1929.

Month.	July. Factor 2.09.				August. Factor 1.95.				September. Factor 1.98				
	Hour. G.M.T.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
Day.													
1	205	315	330	405	85	115	155	-20	130	130	95	290	
2	70	430	180	225	190	75	210	135	180	405	200	225	
3	115	225	115	315	230	250	190	335	215	340	290	360	
4	190	115	z+	270	230	155	145	220	115	255	130	170	
5	115	190	80	205	125	240	95	250	75	320	130	85	
6	125	135	0	225	-95	135	170	55	160	405	-	-	
7	135	190	100	135	135	230	z±	190	-	-	180	255	
8	205	260	160	135	210	345	145	250	105	255	140	255	
9	190	-	-	215	155	220	275	190	160	320	130	160	
10	170	215	170	260	155	265	145	335	140	360	425	245	
11	135	340	190	315	115	230	125	305	290	235	160	320	
12	260	360	-125	285	125	410	145	305	225	385	130	190	
13	295	530	225	295	190	295	155	315	75	235	190	150	
14	80	270	180	260	170	240	145	210	95	190	150	190	
15	90	635	405	420	125	430	135	155	105	265	190	160	
16	350	485	135	260	95	265	170	355	180	385	330	415	
17	170	225	100	250	250	250	180	355	115	310	320	170	
18	135	190	115	235	105	145	z±	230	115	215	130	170	
19	170	340	160	225	210	250	170	220	95	300	150	340	
20	125	295	100	360	190	240	135	230	75	105	75	235	
21	-250	180	55	160	135	220	155	145	170	45	30	350	
22	145	180	135	205	85	190	155	85	160	215	105	265	
23	-	205	180	225	85	210	190	295	245	445	190	265	
24	260	375	135	295	200	125	115	115	85	360	170	255	
25	225	465	270	340	85	250	95	210	115	215	395	320	
26	180	385	100	125	95	285	155	285	180	375	190	395	
27	70	215	215	180	155	450	145	180	290	435	150	255	
28	55	135	115	100	200	220	155	250	200	235	115	265	
29	115	215	225	180	180	200	145	200	115	180	180	20	
30	190	270	170	205	220	275	115	220	75	255	200	75	
31	100	180	135	285	220	475	85	250					
Means { (a)	161	285	160	245	158	248	152	229	148	282	180	236	
(b)	144	294	149	246	152	252	152	222	147	277	180	236	
Mean for day.	(a) 213 (b) 208				(a) 197 (b) 195				(a) 211 (b) 210				

Month.	October. Factor 2.04				November. Factor 2.14.				December. Factor 2.10.				
	Hour. G.M.T.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.	3h.	9h.	15h.	21h.
Day.													
1	200	450	200	-20	450	670	460	520	475	55	385	455	
2	-	-	220	285	220	785	370	345	465	260	90	455	
3	90	240	230	295	245	530	230	345	260	375	z±	445	
4	265	530	185	395	125	415	415	510	-195	375	510	385	
5	310	440	175	165	220	370	265	265	0	-330	520	410	
6	z-	275	75	240	125	310	230	575	195	660	510	z±	
7	175	395	240	450	440	705	345	185	225	180	250	500	
8	-10	330	310	120	45	325	345	575	-70	-830	z±	125	
9	130	330	210	340	450	625	335	510	135	z-	100	z±	
10	220	265	185	185	150	-600	345	705	135	580	510	-125	
11	75	65	175	255	-	415	-10	45	70	225	225	320	
12	200	240	210	285	-345	495	360	740	135	z±	305	545	
13	230	275	220	350	545	300	625	555	180	385	320	225	
14	175	375	210	340	450	440	575	80	90	305	270	305	
15	375	395	255	310	290	715	545	z-	125	285	465	455	
16	175	255	210	265	-160	-510	-680	220	375	625	670	500	
17	175	265	185	320	395	590	415	460	410	625	760	475	
18	65	310	220	240	440	670	660	345	420	410	840	625	
19	330	530	175	210	150	90	60	175	500	635	580	865	
20	350	240	-460	-75	185	335	395	530	365	660	445	420	
21	155	505	570	110	220	415	405	370	z-	-475	115	725	
22	825	530	285	255	210	230	275	300	z-	45	500	500	
23	275	385	240	285	90	10	z±	380	690	830	215	-350	
24	90	220	65	z-	185	520	405	290	z-	475	590	420	
25	295	585	460	240	0	25	160	300	25	225	225	375	
26	265	475	350	715	160	610	495	415	215	445	475	770	
27	350	530	320	530	185	575	415	-245	195	490	475	500	
28	550	-320	395	430	-10	-255	210	245	225	705	-125	240	
29	145	330	z+	440	115	10	230	115	45	115	285	340	
30	210	310	320	450	-70	105	z-	z±	-	-	205	500	
31	295	615	440	550					340	715	430	670	
Means { (a)	250	369	253	323	260	418	368	374	252	427	403	465	
(b)	250	354	241	296	215	334	321	363	244	400	401	401	
Mean for day	(a) 299 (b) 285				(a) 355 (b) 308				(a) 387 (b) 361				

Annual Means { (a)				(b)			
243	371	302	370	231	363	292	340
(a) 321				(b) 307			

(a) Mean from all positive readings.

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

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.

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.
SELECTED QUIET DAYS.

1929.

542. Richmond (Kew Observatory).

Table with 25 columns (Hour 1-24, Midt., Non-cyclic change, Mean values) and 13 rows (Jan-Dec, Year, Winter, Eqnx., Sumr.).

AIR POLLUTION: HOURLY MEANS FOR EACH MONTH (milligrams per cubic metre)
COMPLETE DAYS ONLY.

543. Richmond (Kew Observatory).

1929.

Table with 25 columns (Hour 1-24, Midt., Mean, No. of days used) and 13 rows (Jan-Dec, Year, Winter, Eqnx. Spring Autm., Sumr.).

AIR POLLUTION: DIURNAL INEQUALITIES (milligrams per cubic metre).
The departures from the mean of the day are adjusted for non-cyclic change.

544. Richmond (Kew Observatory).

1929.

Table with 25 columns (Hour 1-24, Midt., Non-cyclic change, Range) and 13 rows (Jan-Dec, Year, Winter, Eqnx., Sumr.).

SEISMOLOGICAL DIARY: *Instruments*.—Two horizontal and one vertical Galitzin Seismographs with galvanometric registration.

Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

545. Richmond (Kew Observatory).

1929.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.	
				A _N .	A _E .	A _Z .							A _N .	A _E .	A _Z .			
Jan. 2	eL F	h. m. s. 3 21 30	s.	μ	μ	μ	km.		Jan. 19	eL F	h. m. s. 3 55 4 25	s.	μ	μ	μ	km.		
4	e(L) ^E e(L) ^{NZ} F	21 10 2 10 10-8	...	...	...	...	...	Very small. Felt at Fez, Morocco. (Strasbourg).	20	ePR _{1,2} (PS) ^E (SR) ₁ ^N L ^{NE} F	15 13 31 22 59 34 41 58 16 15	...	...	...	...	(13000)	Disturbed by micro- seisms.
6	eL F	0 10 25	...	...	...	...	...		21	eL F	6 12 7 10	...	...	...	...	...
8	eL F	8 15 9 0	...	...	...	...	...		21	P _{NZ} iS _{NZ} SR ₁ ^N eE L F	10 41 18 49 45 54 18 56-8 11 1 12 0	...	...	...	...	6960	Felt in Fairbanks, Alaska. 64° N, 152° W. (U.S.C. & G.S.)
11	eL F	2 1 5	...	...	...	...	...	Very small. Felt at Oran, Algeria. (Strasbourg).	22	—	—	—	...	...	...	...	9 ^h 27 ^m to 10 ^h 28 ^m . No records.
13	iP i PR ₁ i PR ₂ PR _{1,2} iS _{NE} iPS iN iSR _{1,2} L ^E M ₁ L M ₂ M ₃ M ₄ M ₅ M ₆ M ₇ M ₈ F	0 14 48 15 39 17 44 18 36 19 37 21 33 24 21 25 25 27 10 30 18 35 59 37 5 40-6 41 13 41 47 46 4 47 14 49 24 50 31 58 28 4 30	8260	Dilatation. Amplitudes of iP as read in mm.— N-S. E-W. Z. +9.4 +3.0 -1.4 Azimuth=19°±1°. Sea of Okhotsk, 53° N, 149° E. (Strasbourg).	22	—	—	—	
								Note very prominent maxima with long periods.	22	eL F	15 7 40	...	...	...	...	...
									23	iP ₂ iS ₂ iS ₂ L ₂ L ₂ M _{2,2} F	11 19 40 24 6 24 10 26 29-8 31-0 35	...	...	...	...	2770	N-S. record defective. Epicentre west of Crete (Strasbourg).
									24	P _{EZ} i PR _{1,2} S iN SR _{1,2} SR _{1,2} eN L M ₁ M ₂ M ₃ M ₄ M ₅ F	20 48 50 49 1 52 2 58 57 21 3 34 4 12 7 48 10-8 14-0 16 56 23 10 24 14 26 9 26 13 23 30	8930	Compression. Pacific ocean, near Guatemala. 12.3° N, 90.3° W. (J.S.A.).
13	eL F	16 34 17 0	...	...	...	...	...					...	...	...	...	...
13	eL F	19 21 45	...	...	...	...	...					...	...	...	...	...
14	eL F	3 3 20	...	...	...	...	...					...	...	...	...	...
14	eL ₂ F	5 43 55	...	...	...	...	...	Traces on N-S and E-W components.	25	e F	2 9 45	...	...	...	...	...
16	e(P) e(ScPcS) i(PS) L M F	8 19 36 30 11 32 8 53 57 34 9 45	(10800)	Philippine Islands. 16.5° N, 120.7° (J.S.A.).	27	iS _{NE} L _{NE} L ₂ M ₁ M ₂ M ₃ F	16 24 2 29-8 31-8 32 47 33 10 17 20	(6700)	Pacific Ocean near Guatemala. 12.3° N, 90° W. (J.S.A.)
17	e F	0 16 25	...	...	...	...	...	Very small. Ionian Sea near 38° N, 19.5° E. (Strasbourg).	30	—	—	—	...	...	...	...	9 ^h 50 ^m to 10 ^h 34 ^m . No records.
17	eP ₂ eS ₂ PS ₂ eE SR _{1,2} SR _{1,2} L _N L _{EZ} M ₁ M ₂ M ₃ M ₄ F	11 56-6 12 5-3 5 47 8 24 9 30 12 56 13-4 16 17 19 17 30 19 5 19 17 14 (15)	...	...	...	...	(7500)	Destructive at Cumana, Venezuela. 11° N, 64° W. (U.S.C. and G.S.).	30	L F	17 50 18 20	...	...	...	...	...	Pacific Ocean south of Mexico (Strasbourg).
17	eL F	23 26 0 0	...	...	...	...	...		31	eL F	18 47 19 10	...	...	...	...	...
18	e(S) _N L _N L _{EZ} F	21 44 40 53 56 22 25		Feb. 1	iP _{EZ} i ie ₂ ie ₂ ePR ₁ iPR ₁ eE iS _{NE} ie iN ₂ iN ₂ iN ₂ SR _{1,2} SR _{1,2} iL _N M ₁ iL ₂ eL ₂	17 23 10 23 16 24 2 24 25 25 19 25 55 28 27 30 11 31 34 31 38 32 36 34 19 35 0 35 24 36 6 37 33 37 53	5350	Compression. Amplitudes of iP as read in mm.— N-S. E-W. Z. -0.2 -1.9 +6.2 Azimuth=85°±5°. Destructive at Kuliab, Turkestan. Epicentre 37.5° N, 69.5° E. (Strasbourg).

SEISMOLOGICAL DIARY:—continued. Instruments.—Two horizontal and one vertical Galitzin Seismographs with galvanometric registration.

Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

545. Richmond (Kew Observatory).

1929.

Date.	Phase.	Time. G.M.T.		Period	Amplitudes.			△	Remarks.	Date.	Phase.	Time. G.M.T.		Period	Amplitudes.			△	Remarks.
					A _N .	A _E .	A _Z .								A _N .	A _E .	A _Z .		
		h. m. s.	s.		μ	μ	μ	km.			h. m. s.	s.		μ	μ	μ	km.		
Feb. 1 cont.	M ₁	17 38 19	17		...	...	-45	...		Feb. 20	—	—	—	...	...	...	...	4 ^h 30 ^m to 7 ^h 30 ^m . No records.
	M ₂	42 19	17		+47	...	...	...		20	ez	21 23 3	...	...	...	...	...	Traces on N-S record.
	M ₃	42 44	14		...	+40	...	...			iz	24 7	...	...	...	...	...
	F	19 20	...		...	...	...	...			ee	45 3	...	...	...	...	...
2	iPz	0 9 59	...		...	...	...	6290	Compression. Atlantic Ocean, 2° S, 23° W. (U.S.C. and G.S.).		ee	46 57	...	...	...	...	...
	iz	11 1	...		...	...	...	...			F	22 30	...	...	...	...	...
	(eSe)	17 47	...		...	...	...	...		22	ePz	20 51 4	...	...	...	...	5900	Compression. Amplitudes of iP as read in mm.—
	iSNE	17 51	...		...	...	...	...			iP	51 9	...	...	...	...	...	N. E. Z.
	iLNE	23 47	(30)		...	...	...	...			iz	53 57	...	...	...	...	...	+1.15 +1.8 +3.4
	M ₁	24 3	(30)		+60	-65	...	...			iS _E	55 29	...	...	...	...	...	Azimuth = 240° ± 2°.
	M ₂	34 25	14		-29	...	...	...			iS _Z	58 35	...	...	...	...	...	Atlantic Ocean, 10° N, 40° W.
	M ₃	0 36 42	11		...	...	+25	...			SR ₁	58 37	...	...	...	...	...	(Strasbourg).
	M ₄	41 5	19		...	+32	...	...			iSz	58 40	...	...	...	...	...
	F	4 0	...		...	...	...	...			SR ₂	21 2 3	...	...	...	...	...
3	LNE	3 31 9	...		...	...	...	...			L	3 35	(35)	...	...	...	...
	MN	42 4	16		-8	...	...	...			L	6 8	(28)	...	...	...	...
	F	4 0	...		...	...	...	...			M ₁	6 28	(25)	-120	...	...	...
3	e	8 1	...		...	...	...	...			M ₂	7 11	24	...	+150	...	...
	F	6	...		...	...	...	...			M ₃	8 25	13	...	+87	...	...
3	eLNE	18 43	...		...	...	...	...	17 ^h 15 ^m to 21 ^h . z record defective.		M ₄	9 44	18	...	...	+110	...	
	F	55	...		...	...	...	...			M ₅	9 48	19	...	-110	...	...
4	eL	11 1	...		...	...	...	...			M ₆	14 48	15	...	...	-90	...	
	F	15	...		...	...	...	...			M ₇	14 50	17	...	+61	...	...
5	eL	4 27	...		...	...	...	...			M ₈	15 25	16	...	+95	...	...
	F	40	...		...	...	...	...		26	iPz	9 12 20	...	...	...	...	8160	Compression.
6	eL	3 45	...		...	...	...	...			iSNE	21 48	...	...	...	...	...	South of Alaskan Peninsula. 54.8° N, 162.4° W. (J.S.A.).
	F	55	...		...	...	...	...			SR ₁	26 45	...	...	...	...	...
6	iPz	7 0 55	...		...	...	...	8400	Dilatation. Azimuth about NNE. Probably a repetition of 1929 Jan. 13 ^d 0 ^h . (Sea of Okhotsk). A very small disturbance with exceptionally sharp P phase.		LNE	33	...	...	...	...	...
	iz	0 56	...		...	...	...	...			MN	43 42	25	+18	...	...	...
	iPNE	0 57	...		...	...	...	...		27	F	10 40	...	...	...	...	...
	Se	10 35	...		...	...	...	...			eL	20 2	...	...	...	...	...	Disturbed by large microseisms.
	PS _E	11 41	...		...	...	...	...			F	10	...	...	...	...	...
	LNE	25	...		...	...	...	...		Mar. 1	SR ₁	7 55 7	...	...	...	...	...	Epicentre near Vancouver Straits; 54.1° N, 130.7° W. (J.S.A.).
	Me	35	20		...	...	...	...			ee	59 4	...	...	...	...	...
	F	8 0	...		...	...	...	...			L	8 4	...	...	...	...	...
8	eL	2 44	...		...	...	...	...			M	11 56	17	+13	...	...	...
	F	3 10	...		...	...	...	...			F	9 30	...	...	...	...	...
10	eL	4 20	...		...	...	...	...		1	e	10 35 44	...	...	...	...	...
	F	30	...		...	...	...	...			e	36 9	...	...	...	...	...
10	ePz	15 51 23	...		...	...	...	(9540)	Compression. Pacific Ocean, south of Mexico. 13.1° N, 99.2° W. (J.S.A.).		F	39	...	...	...	...	...
	e(S) _E	16 2 0	...		...	...	...	...		3	iPeZ	16 56 51	...	...	...	...	2420	
	e(SR ₁) _N	5 8	...		...	...	...	...			e(S) _E	17 0 50	...	...	...	...	...
	e(SR ₂) _N	10 2	...		...	...	...	...			iL _E	1 54	...	...	...	...	...
	L	16	...		...	...	...	...			M	3 12	20	...	+11	...	...
	M ₁	24 54	19		...	+27	...	...			F	30	...	...	...	...	...
	M ₂	24 58	19		...	...	+25	...		3	eL	18 45 9	...	...	...	...	...	Probably a repetition of the preceding shock.
	F	17 45	...		...	...	...	...			Me	47 4	20	...	...	...	...
13	eL	22 50	...		...	...	...	...	Disturbed by large microseisms.		F	55	...	...	...	...	...
	F	23 10	...		...	...	...	...		5	eL	16 49	...	...	...	...	...
14	eLNE	15 26	...		...	...	...	...	Traces on Z record.		F	17 0	...	...	...	...	...
	MNE	30 8	18		...	...	...	...		7	iPNE	1 46 36	...	...	...	...	8630	Dilatation. Amplitudes of iP as read in mm.—
	F	16 10	...		...	...	...	...			iSNE	56 28	...	...	...	...	...	N. E. Z.
15	eLNE	6 22	...		...	...	...	...			iSR ₁ _N	2 1 54	...	...	...	...	...	+9.0 -1.05 -
	F	7 0	...		...	...	...	...			iSR ₂ _N	5 16	...	...	...	...	...	Azimuth: 353° ± 0.5°, giving epicentre near 50.5° N, 169.5° W; Aleutian Islands. Z record defective.
15	eL	8 40	...		...	...	...	...	Pacific Ocean, near Central America. 11° N, 91° W. (U.S.C. and G.S.).		ie	7 36	(35)	...	...	...	...
	Me	47	22		...	...	...	...			iL _N	11 50	45	...	...	...	...
	F	9 30	...		...	...	...	...			M ₁	13 16	35	-470	...	...	...
16	ene	20 37	...		...	...	...	...	Traces on Z record.		M ₂	16 32	26	...	-230	...	...
	F	22 0	...		...	...	...	...			M ₃	19 4	24	+220	...	...	...
18	ene	19 3 24	...		...	...	...	...	Z record disturbed by microseisms. Felt at St. Sebastian, Spain. Epicentre—42.1° N, 2.1° W (Cortuja).		M ₄	20 52	20	+175	...	...	...
	Le	4 46	...		...	...	...	...			M ₅	23 12	19	...	+220	...	...
	Me	4 53	(13)		...	-9	...	...			M ₆	2 24 19	20	+210	...	...	...
	F	7	...		...	...	...	...			eLz	5 15	...	...	...	...	...	Via the Antipodes.
					...	...	...	...			M ₇	30 7	23	+5	-4	...	...
					...	...	...	...		8	F	6 50	...	...	...	...	...	10 ^h to 11 ^h . No records.

SEISMOLOGICAL DIARY :—continued. Instruments.—Two horizontal and one vertical Galitzin Seismographs with galvanometric registration.

Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

545. Richmond (Kew Observatory).

1929.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.
				A _N .	A _E .	A _Z .							A _N .	A _E .	A _Z .		
		h. m. s.	s.	μ	μ	μ	km.			h. m. s.	s.	μ	μ	μ	km.		
Mar. 9	e(S) _{NE} L M _N F	2 36 41 3 1.6 8.7 4 10	...	...	...	...	...	No Z record.	Mar. 21	P e(S) _E SR ₁ L _{NE} L _Z M _E F	2 49 9 59 31 3 8.1 14.4 18 25 51 4 30	...	...	...	(9230)	Compression. Pacific Ocean, near Central America. 11° N, 90.6° W. (J.S.A.).
9	e _Z e _{NZ} e _{NE} L _{NE} L _Z M ₁ M ₂ M ₃ M ₄ M ₅ F	11 13.2 29 37.0 12 3 12 40 25 2 26 50 28 0 34 22 34 50 35 18 14 0	...	...	...	...	...	New Zealand. 43° S., 171.5° E. (Wellington).	21	eL F	5 12 25	...	...	...	...
10	eL F	1 9 35	...	...	...	...	...	9 ^d 17 ^h to 10 ^d 9 ^h and 10 ^d 14 ^h to 11 ^d 12 ^h . No Z record.	21	eL F	3 45 4 10	...	...	...	...
10	eL (L) F	14 58.9 15 25 16 0	...	...	...	...	...	Very distant.	22	eL F	20 56 21 35	...	...	...	...
10	eL F	23 29 50	...	...	...	...	...		23	eL F	5 34 33 45	...	...	...	...	Traces on N-S and Z records.
11	eL _Z F	14 5 10	...	...	...	...	...		26	e F	21 18 30	...	...	...	...
12	—	—	...	...	...	...	...	10 ^h 30 ^m to 11 ^h 40 ^m . No records.	27	e F	22 23 35	...	...	...	...
13	e _Z e _{NE} F	11 10 32 17 44 40	...	...	...	...	...		27	eL F	3 52 4 20	...	...	...	...
14	eL F	15 0 10	...	...	...	...	...		28	eL F	20 44 5 21 7 18 22 10	...	...	...	...	Algeria.
14	eL F	19 30 45	...	...	...	...	...		31	e _{NE} L _{NE} M _{NZ} F	3 26 55 36 4 0 6 20 38 7 10	...	...	...	...
15	eL F	2 42 3 0	...	...	...	...	...		31	eL _{NE} M _N F	20 30 (5) 40 34 58 21 7 40	...	...	...	(9370)	
15	eL F	14 3 30	...	...	...	...	...		April 2	e F	4 8 15	...	...	...	...
15	eL F	18 15 40	...	...	...	...	...		2/4	—	—	...	...	...	...	2 ^d 10 ^h to 4 ^d 12 ^h . No Z record.
18	eL F	2 45 3 10	...	...	...	...	...		5	eL F	9 25 30	...	...	...	...
18	eL F	15 48 55	...	...	...	...	...		5/6	e _Z L F	23 47 57 51 0 5	...	...	...	...
18/19	e(P) _Z e(S) _{NE} L _{NE} L _Z M _E F	23 33 40 44.0 0 2.4 10 10.5 45	...	...	...	...	(9200)	Miyagi, Japan (Kobe).	7	eP _{ZZ} eS _E L M F	19 44 31 54 39 20 12 17 50	...	...	...	8950	Pacific Ocean. 13.7° N, 92.7° W. (J.S.A.).
19	eL _Z F	10 15 20	...	...	...	...	...		8	eP _Z e _Z e L F	10 30 1 34 32 43 33 11 (17) 45	...	...	...	...	Lanao, Mindanao. (Manila).
19	eP _Z eS _{NE} eSR ₁ L _N L _{EZ} M _E F	21 5 59 6 (30) 25.0 27.9 31.5 36 23 45	...	...	...	...	(9400)	Z record defective be- fore 21 ^h 4 ^m . Pacific Ocean, near Central America. 13° N, 91° W. (J.S.A.)	9	eP _Z e _Z L F	4 6 34 10 41 47 5 20	...	...	...	...
20	—	—	...	...	...	...	...	12 ^h 0 ^m to 16 ^h 44 ^m . No records. Standardisa- tion of Z instrument.	10	e _Z L M _Z F	5 47 13 49 7 50 43 57	...	...	...	...	Felt near Bologna, Italy.
20	e(L) M F	21 56 22 10.1 23 45	...	...	...	...	...					...	...	...	...

SEISMOLOGICAL DIARY :—continued. Instruments.—Two horizontal and one vertical Galitzin Seismographs with galvanometric registration.

Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

545. Richmond (Kew Observatory).

1929.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△ km.	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△ km.	Remarks.																					
				A _N .	A _E .	A _Z .							A _N .	A _E .	A _Z .																							
April 10 cont.	ez F	16 37 45	...	...	...	...	...	N-S and E-W records disturbed by wind.	May. 1 cont.	PR _{1,2z} iS SR _{1,2z} L _N L _E M ₁ L _Z M ₂ M ₃ M ₄ M ₅ M ₆ M ₇ L ₁ F	15 47 9 51 49 54 51 59-9 16 1 41 1 54 2 3 5 22 6 36 7 1 8 48 9 46 11 40 11 44 18 20 19 45	...	...	...	...	...	Amplitudes of iP as read in mm.— N. E. Z. +0.1 +2.0 -4.6 Azimuth = 87° ± 3° giving epicentre near 38° N, 56° E. Destructive near the Persian-Turkestan frontier.																					
11	ez F	1 2 6	...	...	...	...	Felt near Bologna.		1	e F	21 18 21	...	...	...	...	...		Long waves via the Antipodes.																				
11	ez F	1 45 55	...	...	...	...			Felt near Bologna.	1	eL F	22 46 23 25	...	...	...	...			...	N-S and E-W records disturbed by wind.																		
12	ez F	0 38 45	...	...	...	...				Felt near Bologna.	2	iP _Z L F	14 38 12 15 12 50	...	...	...			...		...	N-S and E-W records disturbed by wind. Epicentre approx. 5° S, 135° E. (Manila).																
12	ez F	5 28 31	...	...	...	...					Felt near Bologna.	3	eL F	16 46 17 0	...	...			...		...		...	Felt near Bologna.														
12	ez F	5 28 31	...	...	...	...						Felt near Bologna.	6	ez L F	5 28 6 12 40	...			...		...		...		...	Felt near Bologna.												
13	eL F	7 35 55	...	...	...	...							Felt near Bologna.	7	ez ez L _E L _Z M ₁ M ₂ M ₃ M ₄ F	16 55-6 17 5 19 32 39-1 49 26 50 37 50 43 ?			...		...		...		...		...	Felt near Bologna.										
13	e eL _E eL _{NZ} F	21 31 51 22 2 30	...	...	...	...								Felt near Bologna.	7	eL F			18 40 19 15		...		...		...		...		...	Felt near Bologna.								
16	eL _E F	1 35 2 0	...	...	...	...									Felt near Bologna.	10			eL F		11 56 12 3		...		...		...		...		...	Felt near Bologna.						
16	eL F	15 0 20	...	...	...	...										Felt near Bologna.			11		eP eS _E iz i(L) _E M ₁ M ₂ M ₃ M ₄ F		19 25-7 27 41 28 25 28 33 29 39 29 56 29 58 35		...		...		...		...		...	Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).				
17	eL F	3 28 40	...	...	...	...													Felt near Bologna.		12		eL F		10 17 45		...		...		...		...		...	Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).		
17	eL F	19 27 35	...	...	...	...															Felt near Bologna.		12		eL F		17 11 20		...		...		...		...		...	Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).
19	e eN ez eE M _{1,2z} F	4 19-4 21 16 21 46 22 6 22 56 30																	Felt near Bologna.		12		eL F		17 11 20		
20	e iz ie M _{1,2z} F	1 12-6 15 33 15 41 17 15 25		Felt near Bologna.									13								ez e(L) _E F		13 44 35 52 14 25		
21	e F	12 52 13 15	...	...	...	...	Felt near Bologna.										18	P _Z L _{NZ} F							1 11 26 30 2 0		...		...		...		...		...		Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).	
22	e M F	8 30-7 33-0 35	...	...	...	...			Felt near Bologna.								18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F		6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0					...		...		...		...		...		Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).			
23	eL _{NZ} F	1 6 15	...	...	...	...				Felt near Bologna.							18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F		6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0		...			...		...		...		...		Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).					
27	eL F	12 22 50	...	...	...	...					Felt near Bologna.						18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F		6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0		...		...	...		...		...		Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).							
27	eL F	22 0 40	...	...	...	...						Felt near Bologna.					18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F		6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0		...		...	...	...	...		Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).									
28	ez F	5 16 17	...	...	...	...							Felt near Bologna.				18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F		6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0		...		...	...	...	...	Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).										
28	e F	19 45 49	...	...	...	...								Felt near Bologna.			18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F		6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0		...		...	...	...	...			Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).								
29	e M F	18 40 43 48	...	...	...	...									Felt near Bologna.		18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F		6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0		...		...	...	...	...					Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).						
30	eL F	19 41 51	...	...	...	...										Felt near Bologna.	18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F		6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0		...		...	...	...	...							Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).				
May 1	ez eL F	7 57 8 38 9 15	...	...	...	...											Felt near Bologna.	18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F	6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0		...		...	...	...	...									Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).		
1	iP	15 45 28	...	...	...	4610												Dilatation.	18	P _{1,2z} iS _N L _N L _Z L _Z M ₁ M ₂ M ₃ M ₄ F	6 43 48 48 40 50 16 52 12 53 54 29 56 3 58 46 8 0	...		...	...	...	...											Near Bologna, 44° 28' N., 11° 71' E (Strasbourg).

SEISMOLOGICAL DIARY:—continued. Instruments.—Two horizontal and one vertical Galitzin Seismographs with galvanometric registration.

Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

545. Richmond (Kew Observatory).

1929.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.	
				A _N .	A _E .	A _Z .							A _N .	A _E .	A _Z .			
May 20	Pz	5 4 49	...	μ	μ	μ	km.	8570	Near Aleutian Islands. 53° N, 178° W (U.S.C. and G.S.).	June 2	e(P)z	21 50 44	...	μ	μ	μ	km.	(8900) Japan. 40° N, 140° E, (J.S.A.).
	eS _{NE}	14 38	...	...	...	...	...	...			iz	52 4	...	...	...	...	...	...
	e _N	15 34	...	...	...	...	...	...			iS	22 0 49	...	...	...	...	...	...
	SR _{1N}	20 14	...	...	...	...	...	...			L	?	...	...	...	...	...	...
	L	32	...	...	...	...	...	...			M _E	29	20	...	6	...	...	Probably more than one shock.
	M _E	47	18	...	...	...	...	...			F	23 10	...	...	...	...	...	...
	F	7 45	...	...	...	...	...	...						...	...	...	...	...
21	ePz	16 48 16	...	...	...	...	...	9210	Hiuga Sea off Mizazaki (Kobe).	3	Pz	20 38 6	...	...	...	...	5080	Turkestan, near Tashkent.
	eS _{NE}	58 37	...	...	...	...	...	...			eS _{NE}	44 53	...	...	...	...	...	...
	SR _{1NE}	17 5·7	...	...	...	...	...	...			SR _{1NE}	48 I	...	...	...	...	...	...
	L _{NE}	18	40	...	...	...	...	...			L _N	52·4	36	...	...	...	...	N-S and E-W records disturbed by wind.
	Lz	23	30	...	...	...	...	...			LEZ	54·7	26	...	...	...	...	...
	M ₁	23 36	26	...	-80	...	...	...			M _N	56 39	16	-48	...	...	...	...
	M ₂	24 42	26	-62	...	...	...	...			F	21 30	...	...	...	...	...	...
	M ₃	33 37	18	...	...	+42	...	...					...	...	...	...	...	...
	F	19 30	...	...	...	...	...	...					...	...	...	...	...	...
22	eLEZ	21 26	...	...	...	...	...	...	No N-S record.	4	ez	7 24	...	...	...	...	...	...
	F	22 20	...	...	...	...	...	...	...	4	F	45	...	...	...	...	...	...
24	eL	19 16	...	...	...	...	...	...	...	4	ez	15 33·8	...	...	...	...	...	...
	F	30	...	...	...	...	...	...	...	4	ez	39 28	...	...	...	...	...	...
25	iPz	12 12 11	...	...	...	...	...	(9010)	Northern Peru. May be ScPcS.	5	e	9 30	...	...	...	...	...	...
	i(S) _E	22 22	...	...	...	...	...	...	...	5	F	45	...	...	...	...	...	...
	i(S) _{NE}	22 32	...	...	...	...	...	...	...	6	ePz	10 59 41	...	...	...	...	5940	Atlantic Ocean, near St. Paul's Rock. (Strasbourg).
	L	36	...	...	...	...	...	...	...	6	iS _N	11 7 14	...	...	...	...	...	...
	F	13 10	...	...	...	...	...	...	...	6	L _{NE}	14	...	...	...	...	...	...
26	—	—	...	...	...	...	...	...	1 ^h to 5 ^h 30 ^m . No records.	6	Lz	16·5	...	...	...	...	...	...
			...	...	...	...	...	...	...	6	M _{NE}	22	...	...	...	...	...	...
26	eL	9 43	...	...	...	...	...	...	...	6	F	12 30	...	...	...	...	...	...
	F	10 15	...	...	...	...	...	...	...	6	e	14 45	...	...	...	...	...	...
26/27	ePz	22 51 19	...	...	...	...	...	7710	Pacific Ocean, near Alaska. 54·5° N, 137° W (U.S.C. and G.S.).	6	eL	16 45	...	...	...	...	...	...
	eS _{NE}	23 0 25	...	...	...	...	...	...	...	6	F	17 15	...	...	...	...	...	...
	L _{NE}	8·5	50	...	...	...	...	...	...	6	ez	17 37	...	...	...	...	...	...
	M ₁	11 6	(50)	...	(-490)	...	...	...	...	6	F	18 40	...	...	...	...	...	...
	Lz	23 13 3	(39)	...	...	...	...	...	...	9	iPz	9 20 5	...	...	...	...	8830	Compression. Kurile Isles. 47·1° N, 153·7° E, (J.S.A.).
	M	13 15	(39)	(+350)	...	...	...	...	...		S _{NE}	30 7	...	...	...	...	...	...
	M ₂	20 10	16	...	+185	...	...	...	...		SR _{1NE}	35·8	...	...	...	...	...	...
	M ₃	21 18	18	-300	...	...	...	...	...		Lz	44	50	...	...	...	...	...
	M ₄	21 22	18	...	...	+260	...	...	...		M ₁	51 40	26	...	-33	...	...	...
	M ₅	23 53	16	-260	...	...	...	...	...		M ₂	57 48	19	+27	...	...	...	...
	M ₆	23 56	16	...	...	+250	...	...	...		M ₃	10 4 38	14	...	...	+18	...	...
	M ₇	26 13	16	...	(-220)	...	...	...	...		F	12 30	...	...	...	...	...	...
	M ₈	1 18	20	7	...	...	...	...	...				...	...	...	...	...	...
	F	3 20	...	...	...	...	...	...	Via the Antipodes.	10	eL	0 2	...	...	...	...	...	...
27	eL	5 46	...	...	...	...	...	...	...	10	F	30	...	...	...	...	...	...
	F	6 15	...	...	...	...	...	...	...	10	eL	1 0	...	...	...	...	...	...
28	ez	0 8 24	...	...	...	...	...	...	N-S and E-W records disturbed by wind.	10/11	iP	23 7 51	...	...	...	...	2210	Dilatation. Amplitudes of iP as read in mm.— N. E. Z. +2·85 +0·4 -3·0 Azimuth = 9° ± 1° giving epicentre near 71° N, 9° E. Arctic Ocean, between Norway and Jan Mayen.
	L	38	...	...	...	...	...	...	...		iS	11 32	...	...	...	...	...	...
	F	1 35	...	...	...	...	...	...	...		L	13·0	(35)	...	...	...	...	...
28	eL	5 52	...	...	...	...	...	...	...		M ₁	15 41	17	...	+13	...	...	...
	F	6 10	...	...	...	...	...	...	...		M ₂	16 40	15	-15	...	...	...	...
28	ez	7 20	...	...	...	...	...	...	...		M ₃	19 17	12	...	...	+14	...	...
	F	22	...	...	...	...	...	...	...		F	0 35	...	...	...	...	...	...
30	ePz	9 57 31	...	...	...	...	...	(11500)	Destructive in province of Mendoza, Argen- tine. 54·5° N, 137° W. (U.S.C. and G.S.). N-S and E-W records disturbed by wind.	12	ez	12 1 55	...	...	...	...	...	...
	PR _{1z}	10 1 47	...	...	...	...	...	...	...		ez	3 41	...	...	...	...	...	...
	L _{NE}	29	...	...	...	...	...	...	...		ez	6 21	...	...	...	...	...	...
	Lz	36	...	...	...	...	...	...	...		eNE	14 18	...	...	...	...	...	...
	M ₁	41 34	20	+20	...	...	...	...	...		L	(44)	...	...	...	...	...	...
	M ₂	41 47	20	...	...	+31	...	...	...		M	13 (0)	19	...	...	...	...	...
	M ₃	42 2	20	...	...	...	...	...	...		F	14 10	...	...	...	...	...	...
	F	13 0	...	...	...	...	...	...	...				...	...	...	...	...	...
30	Lz	13 3	...	...	...	...	...	...	...				...	...	...	...	...	...
	F	55	...	...	...	...	...	...	...				...	...	...	...	...	...
30/31	—	—	...	...	...	...	...	...	19 ^h to 11 ^h . No records.	13	iP	0 24 26	...	...	...	...	8830	Compression. Kurile Isles. 47·1° N, 153·7° E, (J.S.A.). Repetition of June 9 th .
June 1	ePz	18 11 38	...	...	...	...	...	(9770)	S. E. of Okinawa Islands. (Kobe).		iz	26 25	...	...	...	...	...	...
	eS _{EN}	22 (26)	...	...	...	...	...	...	...		S _N	34 28	...	...	...	...	...	...
	L _{NE}	41	...	...	...	...	...	...	...		eSR _{1N}	40 16	...	...	...	...	...	...
	F	19 25	...	...	...	...	...	...	...		L	?	...	...	...	...	...	...
			...	...	...	...	...	...	...		M ₁	1 1 33	20	...	-39	...	...	...
			...	...	...	...	...	...	...		M ₂	1 51	20	...	...	-33	...	...

SEISMOLOGICAL DIARY :—continued. Instruments.—Two horizontal and one vertical Galitzin Seismographs with galvanometric registration.

Lat. 51° 28' N. Long. 0° 19' W. Height above M.S.L. 5 metres.

545. Richmond (Kew Observatory).

1929.

Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.	Date.	Phase.	Time. G.M.T.	Period	Amplitudes.			△	Remarks.	
				A _N .	A _E .	A _Z .							A _N .	A _E .	A _Z .			
Aug. 28	ePz PR _{1,2} eSE SR _{1,E} SR _{2,E} L _E L _N L _Z M _E F	h. m. s. 19 4 4 7 21 14 29 19 51 23 22 32 35 38 40 5 21 30	s. 21 ...	μ +32 ...	μ	μ	km. 9300	Compression.	Sept. 26	—	h. m. s. — — —	s. ...	μ	μ	μ	km.	2 ^h 40 ^m to 9 ^h 8 ^m . No records.	
29	eL F	20 35 21 5	... ...	... ...	... ...	... ...	... ...		26	eL F	16 24 35	... ...	... ...	... ...	... ...	... ...
31	eL F	19 45 20 10	... ...	... ...	... ...	... ...	... ...		27/28	ePz e(S) _{NE} L _{NE} L _Z F	23 28 27 38·7 53 57 1 10	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	(9080)	Lower California. 24°N, 111°W. (U.S.C. and G.S.).
Sept. 1	eLz F	16 14 50	... ...	... ...	... ...	... ...	... ...		Oct. 2/3	—	— — —	... ...	... ...	... ...	... ...	... ...	22 ^h 21 ^m to 9 ^h 34 ^m . No records.
1	L F	17 22 18 20	... ...	... ...	... ...	... ...	... ...		5	eL F	3 20 4 30	... ...	... ...	... ...	... ...	... ...
2	ez eE eNE LNE Lz F	11 35 37·5 38·6 12 8 16 13 40	... ... ... ... ... ...	... ... ... ... ... ...	... ... ... ... ... ...	... ... ... ... ... ...	... ... ... ... ... ...		5	iPz L _E L _Z F	17 11 31 33 44 19 0	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	Compression. Kamtchatka. 55° N, 160° E. (J.S.A.). N-S and E-W records disturbed by wind. Hawaii Islands, North Pacific Ocean. 19·5° N, 156° W. (J.S.A.).
3	iPz PcPz iS (PS) _{NE} LNE Lz F	12 16 49 17 3 24 9 24 33 36 38 13 20	... ... ... ... ... ... ...	... ... ... ... ... ... ...	... ... ... ... ... ... ...	... ... ... ... ... ... ...	5700	Compression. Afganistan. (Strasbourg).	6	(PR) (PS) SR ₁ LNE Lz F	8 10 16 19·5 25·4 36 45 10 35	... ... ... ... ... ...	... ... ... ... ... ...	... ... ... ... ... ...	... ... ... ... ... ...	... ... ... ... ... ...
4	e LNE Lz F	22 43·3 51 53 23 30	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...		6	eL F	14 20 15 45	... ...	... ...	... ...	... ...	... ...
5	eLNE eLz F	14 33 36 15 0	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...		7	ez L F	15 27·6 16 24 17 30	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...
8	Lz F	18 8 20	... ...	... ...	... ...	... ...	... ...		8	ez PR ₁ LNE Lz F	17 35 53 39 49 18 32 38 19 45	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...
9/10	—	— — —	...	...	...	...	...		14	ez Lz F	10 21 37 46 12 0	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	9 ^h 57 ^m to 11 ^h 27 ^m . No N-S record.
10	ez ez eL F	20 36·5 40·6 21 18 22 5	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...		15	eL F	19 9 30	... ...	... ...	... ...	... ...	... ...
11	ez LNE Lz F	22 42 5 23 6 12 45	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...		16	eL F	1 14 30	... ...	... ...	... ...	... ...	... ...	16 ^h 9 ^m 53 ^m to 18 ^h 10 ^m 15 ^m . No N-S record. (8400)
14	eL F	3 19 50	... ...	... ...	... ...	... ...	... ...		16/18	—	— — —	... ...	... ...	... ...	... ...	... ...	16 ^h 9 ^m 53 ^m to 18 ^h 10 ^m 15 ^m . No N-S record. (8400)
15	eSE e LNE Lz F	13 21·2 21·6 23 29 50	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...		16	ePz eSE SR _{1,E} SR _{2,E} L _E Lz F	20 39 18 48 58 54·0 57·6 21 6 10 22 10	... ... ... ... ... ... ...	... ... ... ... ... ... ...	... ... ... ... ... ... ...	... ... ... ... ... ... ...	... ... ... ... ... ... ...	16 ^h 9 ^m 53 ^m to 18 ^h 10 ^m 15 ^m . No N-S record. (8400)
17	eL F	6 20 30		19	ePz iz PR _{1,2} ScPcS _{NE} PS ₂ SR _{1,E} LNE M ₁ Lz M ₂ M ₃ F	10 26 9 26 40 29 56 36 35 38·5 43·8 47 56 52 58 11 3 36 3 41 13 40	(10500)	Dilatation.
17	Pz eSN LNE Lz M ₁ M ₂ M ₃ L ₂ F	19 28 49 37 58 47·5 50 57 45 20 1 30 1 46 21 41 23 30	... ... ... ... ... ... ... ... ...	... ... ... ... ... ... ... ... ...	... ... ... ... ... ... ... ... ...	... ... ... ... ... ... ... ... ...	7780	Compression. North Pacific Ocean, off British Columbia. 52° N, 133° W. (U.S.C. and G.S.).	19	eL F	20 45 21 35	... ...	... ...	... ...	... ...	... ...
									20	eL F	0 53 1 0	... ...	... ...	... ...	... ...	... ...
									21	ez LNE Lz F	11 2·1 25 30 12 10	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...

Derived from readings for the period of thirty minutes centering at the exact hour, Greenwich Mean Time.

546. Richmond (Kew Observatory).

1929.

Month	January.								February.								March.							
	o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.	
	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.
Day.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.
1	1.9	5.0	1.8	5.2	2.2	5.4	2.7	4.7	2.1	5.8	2.1	6.0	1.8	6.0	...	...	1.6	6.5	1.9	5.8	2.1	6.0	1.9	6.5
2	2.2	5.4	1.9	5.8	1.6	6.5	1.7	6.7	1.5	5.6	2.1	5.8	1.6	6.5	1.4	6.0	1.9	6.5	1.6	6.5	1.6	6.3	1.2	6.3
3	1.7	6.7	1.9	6.5	1.7	6.7	1.4	7.3	1.5	5.8	1.9	5.0	1.3	5.6	2.1	6.0	0.8	6.0	1.6	6.5	1.9	6.5	1.9	6.7
4	1.6	7.3	1.8	7.0	1.4	7.5	1.3	6.7	1.7	5.8	1.3	5.8	1.1	5.6	1.0	4.8	3.4	7.3	6.1	7.5	6.3	7.7	5.3	7.0
5	1.5	7.0	1.5	6.7	1.9	6.7	1.8	7.3	0.8	6.0	0.5	4.7	0.5	4.7	0.5	4.8	3.4	7.3	1.8	7.3	2.1	5.6	1.5	7.0
6	1.9	7.3	1.4	7.5	1.7	7.5	1.8	7.3	0.6	6.0	0.7	7.5	1.5	7.0	0.9	7.0	1.5	7.0	0.8	6.0	1.2	6.3	1.2	6.5
7	1.7	7.5	1.8	7.0	1.5	7.0	1.3	7.0	1.5	7.0	1.3	7.0	1.3	5.4	1.6	5.2	0.9	5.0	...	...	2.9	5.0	1.1	5.4
8	1.8	7.0	1.8	7.0	1.8	7.0	1.4	6.5	1.6	7.3	1.5	7.0	1.2	4.8	0.8	4.0	1.1	5.2	1.5	5.8	2.2	4.1	1.6	5.2
9	1.5	6.7	1.4	6.5	1.4	6.3	1.2	4.8	1.7	5.8	1.4	6.0	1.4	6.0	1.6	6.5	1.5	5.8	0.7	5.0	...	...	0.5	4.7
10	0.9	5.6	0.6	6.3	0.4	6.3	1.0	6.0	1.6	7.3	1.9	7.3	1.9	6.7	1.8	5.4	0.4	5.4	0.4	5.6	0.5	5.0	0.5	4.8
11	0.4	5.6	0.3	4.3	0.7	3.0	0.6	3.7	2.1	5.8	2.1	5.8	1.9	6.5	2.4	5.6	0.4	5.6	0.6	6.5	0.4	5.4	0.6	6.7
12	1.3	4.3	0.7	4.7	0.8	4.3	0.8	4.3	3.0	6.3	5.4	4.7	3.1	6.0	4.9	4.7	0.5	7.3	0.6	6.7	...	...	0.6	6.5
13	1.0	4.7	1.0	4.7	0.8	8.0	0.4	5.4	2.9	5.4	4.2	5.4	6.0	5.4	6.9	5.4	0.4	6.0	0.6	6.3	0.8	6.5	0.3	7.5
14	0.6	6.0	0.4	5.4	0.6	6.0	0.6	5.8	5.9	5.2	4.1	5.6	3.0	5.2	2.5	4.7	0.9	6.7	0.4	6.0	0.4	5.4	0.4	6.7
15	0.6	6.3	0.8	4.5	0.9	5.2	1.6	5.2	2.3	5.2	2.4	4.3	2.9	4.3	2.2	5.4	0.4	6.3	0.2	5.6	0.6	6.3	0.4	6.5
16	1.2	6.3	1.8	6.3	1.8	6.0	1.5	5.8	1.8	6.0	1.6	6.0	2.1	5.6	2.1	6.7	0.4	6.3	0.4	6.5	0.4	6.7	0.4	6.0
17	2.0	5.4	1.6	5.2	1.4	6.3	1.6	7.5	1.8	5.4	1.4	6.5	1.4	6.3	1.4	5.0	0.4	5.8	0.6	6.7	0.4	5.6	0.5	4.8
18	1.6	7.5	1.4	6.3	1.3	7.0	1.5	7.0	1.8	5.4	1.4	5.0	1.6	5.2	1.9	4.8	0.4	5.6	0.4	6.0	0.6	6.0	0.4	5.6
19	1.7	8.0	2.6	7.5	1.7	8.0	1.7	7.5	1.9	5.0	1.9	5.8	2.2	4.8	1.6	5.0	...	...	0.4	5.6	0.4	5.4	0.4	6.0
20	1.8	7.3	1.8	7.3	1.9	6.7	1.8	7.0	1.7	5.6	...	...	2.2	5.4	1.8	6.0	0.2	6.0	0.4	5.6	0.3	4.5	0.2	5.0
21	1.5	6.7	1.6	6.0	0.6	6.0	1.0	6.3	2.1	5.6	1.8	7.3	1.7	6.5	1.4	6.5	0.2	5.0	0.4	6.0	0.5	4.3	1.1	7.0
22	0.7	5.2	1.2	7.3	1.2	6.5	1.0	6.0	1.4	7.3	1.5	6.7	1.8	5.4	1.3	4.5	1.3	6.7	1.7	6.5	1.9	6.7	1.9	7.3
23	0.8	6.0	1.4	7.3	1.4	7.0	1.1	6.7	0.7	7.5	1.3	5.8	0.5	7.0	0.9	7.0	1.8	7.3	1.6	7.0	1.8	7.0	1.7	6.7
24	1.5	7.0	1.3	7.0	1.3	6.7	1.3	6.7	1.3	7.0	0.9	7.0	1.2	6.5	1.5	5.6	0.9	6.7	0.8	6.5	0.6	5.6	0.8	6.0
25	1.1	7.3	0.7	7.0	0.9	7.5	0.6	6.0	1.5	6.7	1.3	7.0	1.3	7.0	0.8	6.0	1.0	6.3	1.6	6.5	1.2	6.0	1.6	6.0
26	1.7	6.7	1.9	5.0	1.6	6.5	1.6	6.3	1.8	4.5	1.5	6.7	1.8	7.0	2.2	7.7	1.2	6.0	1.6	6.0	1.6	6.5	1.7	6.7
27	1.6	6.5	1.6	6.0	1.8	6.0	2.0	7.0	2.6	9.0	3.2	4.7	5.2	4.7	5.1	5.4	1.7	6.7	1.9	6.7	1.8	7.3	1.6	7.3
28	2.9	6.5	3.7	7.0	2.8	6.7	2.2	7.0	4.7	5.0	3.1	4.8	2.0	4.7	1.6	5.2	1.7	6.7	1.6	7.0	1.4	6.0	0.6	6.0
29	2.3	5.0	1.9	6.5	2.3	5.2	2.1	5.8	0.6	6.0	0.7	5.2	0.4	6.0	0.5	5.2	0.6	6.0	0.7	5.2	0.4	6.0	0.5	5.2
30	2.2	5.4	2.7	5.4	2.7	6.5	3.1	6.0	0.6	6.0	0.7	5.2	0.4	6.0	0.5	5.2	0.6	5.6	0.6	5.6	0.5	7.0	0.8	6.0
31	2.5	6.0	3.4	5.6	1.9	6.5	2.9	6.0	0.6	6.0	0.7	5.2	0.4	6.0	0.5	5.2	0.6	5.8	0.6	6.0	0.8	6.0	1.3	5.6
Mean ...	1.5	6.3	1.6	6.2	1.5	6.4	1.5	6.2	2.0	6.1	2.0	6.0	2.0	5.8	2.0	5.6	1.1	6.2	1.1	6.2	1.2	6.0	1.1	6.2
Mean for day ...	A = 1.5 μ ; Tp = 6.3 s.								A = 2.0 μ ; Tp = 5.9 s.								A = 1.1 μ ; Tp = 6.1 s.							

Month	April.								May.								June.							
	o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.	
	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.
Day.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.
1	1.3	5.4	0.8	5.8	0.6	5.6	0.4	2.7	0.3	3.9	0.3	3.9	0.4	6.0	...	...	0.3	3.2	0.3	4.3	0.3	3.5	0.6	4.0
2	0.5	4.1	0.5	4.1	1.1	5.2	1.0	4.7	0.5	5.2	0.5	4.7	0.7	3.3	0.6	3.5	0.6	5.6	0.9	5.6	1.0	6.0	1.5	5.4
3	0.8	6.0	0.7	7.5	0.5	4.3	0.4	5.4	0.6	3.6	0.9	3.9	0.9	3.5	0.7	3.3	1.7	5.8	1.4	6.0	1.0	4.8	0.7	5.0
4	0.7	5.0	0.6	6.0	0.7	5.4	0.6	6.0	0.7	3.3	0.3	3.9	0.5	4.1	0.6	4.0	0.7	4.7	0.7	4.7	1.0	4.7	0.7	5.2
5	0.4	5.4	0.5	5.2	0.2	4.8	0.7	3.3	0.5	5.0	0.6	4.0	0.6	3.7	0.5	4.3	1.1	5.2	1.1	5.4	0.9	5.0	0.7	4.8
6	0.3	3.1	0.5	4.3	0.9	5.6	0.7	5.2	0.7	4.7	1.4	4.1	1.3	4.3	1.3	4.3	0.6	3.7	0.7	4.7	0.8	4.3	0.8	4.1
7	0.9	5.6	0.9	5.4	0.5	5.2	0.2	4.8	1.4	6.0	1.6	5.0	0.8	4.3	...	...	0.8	4.1	0.8	4.3	0.9	3.9	0.5	4.5
8	0.5	4.7	0.7	5.2	0.5	5.0	0.5	4.8	0.8	4.3	0.9	3.7	0.6	5.6	0.5	5.0	1.1	4.3	0.9	5.2	0.7	4.7	0.5	4.7
9	0.5	4.1	0.5	4.3	0.8	5.8	0.5	4.7	0.2	4.7	0.5	4.7	0.2	4.7	0.5	5.0	0.5	4.8	0.3	4.5	0.2	4.7	0.3	4.3
10	0.4	6.3	0.6	6.0	0.7	5.0	0.5	4.1	0.8	4.3	1.1	5.2	1.5	5.4	1.7	5.6	0.3	4.5	0.3	4.0	0.5	5.0	0.9	5.6
11	0.5	4.7	0.6	3.7	0.5	4.3	0.3	4.1	2.1	5.0	1.6	6.0	1.8	5.4	1.3	5.8	1.0	6.0	0.7	4.7	...	...	1.0	4.8
12	0.6	3.5	0.5	4.1	0.6	5.6	0.8	4.0	1.0	5.8	0.7	5.4	1.0	4.8	0.7	5.4	0.7	4.8	0.7	4.8	...	...	0.7	4.8
13	0.9	5.4	0.9	5.6	0.8	6.7	1.1	5.6	0.7	5.2	1.0	4.7	0.8	4.3	0.7	4.7	...	...	0.9	5.6	0.9	3.9	0.8	4.5
14	1.6	5.0	1.6	5.0	1.8	6.0	1.7	5.6	1.7	7.5	1.8	6.0	2.1	5.0	1.6	6.5	0.8	4.3	0.4	5.8	0.8	4.3	0.5	4.3
15	1.6	6.0	1.5	5.8	2.1	5.0	0.9	5.4	1.6	5.0	1.4	5.0	1.9	5.0	0.9	5.0	0.8	4.5	1.1	4.1	0.5	4.5	0.8	4.3
16	0.																							

Derived from readings for the period of thirty minutes centering at the exact hour, Greenwich Mean Time.

546. Richmond (Kew Observatory).

1929.

Month	July.								August.								September.							
	o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.	
	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.
Day.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.
1.	1.1	4.0	0.8	4.0	0.3	3.6	...	...	2.1	5.0	1.4	4.1	1.6	4.3	1.9	4.1	0.3	4.0	0.6	3.7	0.3	3.7	0.6	4.0
2.	0.4	3.0	0.0	...	0.0	...	...	...	2.1	3.7	0.8	4.0	0.8	4.1	1.0	4.7	0.5	4.1	0.6	5.6	...	...	0.9	3.9
3.	0.0	...	0.0	...	0.3	3.5	0.3	4.3	0.8	4.5	0.8	4.1	0.6	4.3	1.5	4.1	1.3	4.3	0.8	4.1	0.8	4.1	0.8	4.1
4.	0.2	5.0	0.3	3.7	0.3	3.3	0.4	2.5	0.9	4.3	0.9	4.1	1.3	4.5	1.2	3.7	0.3	4.3	0.3	3.9	0.3	3.9	0.3	3.7
5.	0.4	2.5	0.8	4.3	...	...	0.6	3.5	1.4	3.2	0.9	3.7	0.9	3.7	0.5	4.3	0.3	3.9	0.2	4.8	0.3	4.5	0.3	4.0
6.	...	...	0.9	3.5	1.0	3.2	0.7	3.0	0.6	3.6	0.4	2.9	0.7	3.2	1.1	4.1	0.6	4.0	0.7	4.8	0.9	5.0	0.5	4.7
7.	0.7	3.0	0.6	3.7	0.4	3.0	0.3	3.1	0.9	3.7	0.8	2.6	0.7	3.2	0.7	3.2	0.8	5.8	0.7	5.0	0.5	5.0	0.4	6.0
8.	...	...	0.5	4.7	0.3	3.3	0.3	4.3	0.6	3.9	0.3	4.5	0.5	4.3	0.6	4.0	0.5	5.0	0.4	5.4	0.5	4.5	0.3	4.0
9.	0.3	3.7	0.3	3.3	0.3	4.3	0.3	3.7	0.5	4.1	0.3	3.7	0.3	4.5	0.3	4.3	0.5	5.2	0.2	4.7	0.3	4.5	0.2	5.0
10.	0.7	4.8	0.5	4.3	0.6	4.0	0.5	4.5	0.3	4.3	0.3	4.5	0.3	4.5	0.3	4.3	0.3	4.5	0.3	4.3	0.3	4.3	0.3	4.1
11.	0.6	4.0	0.5	4.5	0.5	4.5	0.5	4.8	0.3	4.5	0.3	4.3	0.3	4.3	0.3	4.1	0.3	4.5	0.2	4.7	0.3	3.7	0.3	3.9
12.	0.3	4.3	0.2	4.7	0.3	4.0	0.3	4.1	0.3	4.3	0.3	4.0	0.3	4.0	0.3	3.9	0.3	3.7	0.3	4.5	0.3	4.0	0.3	4.5
13.	0.3	4.0	0.2	4.7	0.3	4.0	0.3	4.1	0.3	4.1	0.3	4.0	0.3	4.3	0.3	4.5	0.5	4.7	0.3	3.9	0.5	4.3	0.8	4.1
14.	0.2	5.2	0.5	4.5	0.5	5.0	0.5	4.3	0.3	4.3	0.3	3.6	0.4	2.9	0.3	3.2	1.2	5.8	1.5	5.6	1.2	6.0	1.2	6.5
15.	0.2	5.2	0.3	4.3	0.3	4.3	0.0	...	0.3	3.7	0.3	4.0	0.3	4.1	0.3	4.3	1.2	6.5	1.5	6.7	1.4	6.0	1.0	6.5
16.	0.3	3.6	0.3	3.1	0.4	3.0	0.4	3.0	0.3	4.3	0.3	4.3	0.3	4.5	0.3	4.3	1.2	6.5	1.0	6.0	1.4	6.5	1.3	7.0
17.	0.3	3.3	0.3	3.3	0.3	4.0	0.3	3.3	0.6	4.0	0.8	4.0	0.5	4.1	0.6	3.7	0.9	6.7	0.7	5.4	0.7	5.4	1.0	6.0
18.	0.3	3.3	0.3	4.0	0.3	4.1	0.3	3.9	...	...	0.6	3.5	1.0	3.2	0.6	3.5	0.9	5.6	1.1	5.6	0.9	5.6	1.3	6.7
19.	0.3	4.5	0.3	4.3	0.3	3.7	0.3	3.5	0.3	3.2	0.3	3.5	0.3	3.5	0.3	3.7	1.4	6.3	1.1	5.4	1.7	5.8	1.4	6.3
20.	0.3	4.1	0.3	4.3	0.3	4.0	0.3	4.3	0.3	4.3	0.3	4.1	0.3	4.3	...	...	1.0	6.3	0.9	5.0	1.6	5.0	2.2	4.8
21.	0.2	4.7	0.3	4.1	0.6	4.0	0.5	4.3	0.2	4.7	0.3	4.5	0.2	4.8	0.3	4.3	1.6	5.0	1.9	4.8	1.7	5.6	2.1	5.8
22.	0.4	5.6	0.2	5.2	0.3	4.3	0.8	4.3	0.3	3.9	0.3	3.9	0.4	5.6	0.7	5.2	1.9	5.8	1.8	5.0	1.1	5.4	0.7	5.0
23.	0.8	4.3	1.0	4.5	0.9	3.7	0.6	4.0	0.6	6.0	0.9	5.0	0.9	5.0	1.0	4.7	0.8	4.5	0.5	5.0	0.5	4.7	0.7	5.0
24.	0.7	3.3	0.3	4.3	0.3	4.1	0.5	5.0	0.6	5.8	0.5	4.1	0.7	3.3	0.8	4.3	0.9	5.6	1.4	6.3	1.7	5.6	1.4	6.0
25.	0.3	4.0	0.3	3.7	0.4	2.7	0.3	3.3	0.5	4.1	0.5	4.5	0.3	3.5	0.5	5.0	1.3	6.7	0.8	6.0	0.7	5.4	0.6	5.6
26.	0.4	3.0	0.4	3.0	0.4	2.9	0.3	3.2	0.3	4.0	0.3	4.0	0.3	3.6	0.3	3.5	0.6	5.8	...	...	0.6	5.6	0.2	5.4
27.	...	...	0.3	3.9	0.3	3.7	0.3	3.7	0.3	3.6	0.3	3.3	0.3	3.5	0.3	3.7	0.5	4.7	0.2	5.0	0.2	4.8	0.2	5.0
28.	0.3	4.3	0.3	3.5	0.3	4.0	0.3	3.7	0.3	3.7	0.6	4.0	0.3	3.9	0.5	4.3	...	...	0.7	5.0	1.7	5.6	3.5	7.3
29.	0.4	2.8	0.6	3.7	0.4	2.6	0.5	4.3	0.6	4.0	0.5	4.5	0.6	3.9	0.5	4.3	2.1	7.3	1.8	7.0	1.7	6.5	1.5	5.6
30.	0.3	3.7	0.5	4.3	0.3	3.5	0.5	4.7	0.3	3.7	0.6	3.9	0.5	4.3	0.8	4.0	0.6	6.3	1.2	6.0	0.9	5.0	1.1	5.4
31.	0.5	4.3	0.8	4.5	1.3	4.3	1.4	5.2	2.0	4.5	1.6	4.3	0.8	4.0	0.8	4.3	0.9	5.3	0.8	5.1	0.9	5.0	0.9	5.2
Mean ...	0.4	4.0	0.4	4.1	0.4	3.7	0.4	3.9	0.6	4.2	0.5	4.0	0.5	4.0	0.6	4.1	0.9	5.3	0.8	5.1	0.9	5.0	0.9	5.2
Mean for day ...	A = 0.4 μ ; Tp = 3.9s.								A = 0.5 μ ; Tp = 4.1s.								A = 0.9 μ ; Tp = 5.1s.							

Month	October.								November.								December.							
	o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.		o h.		6 h.		12 h.		18 h.	
	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.	A.	Tp.
Day.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.	μ	s.
1.	1.0	6.0	1.7	4.7	0.7	5.0	1.4	5.0	0.8	4.1	0.5	4.8	1.2	7.5	1.1	7.0	0.9	5.6	0.7	7.5	1.6	8.3	1.3	8.0
2.	1.5	4.7	2.2	4.7	1.9	6.5	1.7	5.8	1.3	7.0	1.5	6.7	1.7	6.7	1.7	6.7	2.0	7.7	1.8	7.0	3.8	5.6	3.5	6.5
3.	1.7	5.8	2.0	4.7	0.8	4.5	0.7	5.4	2.2	7.0	1.7	7.5	2.3	7.3	1.8	7.0	4.1	8.0	3.7	9.0	4.9	8.7	4.8	8.3
4.	2.0	4.5	2.9	4.7	1.9	6.7	1.7	5.8	1.5	6.7	1.5	6.7	0.7	5.0	0.8	5.8	4.2	8.7	3.7	8.3	4.5	7.0	3.5	7.3
5.	1.4	6.0	1.7	5.6	0.9	5.2	0.8	4.3	1.8	5.4	1.5	4.5	1.5	5.4	1.9	5.8	5.4	7.5	5.0	9.3	5.5	7.0	5.4	7.5
6.	2.5	4.5	2.9	4.8	4.2	5.0	2.3	5.0	2.1	5.6	1.8	6.0	1.9	5.6	1.7	6.5	7.0	7.7	4.8	7.7	5.2	7.5	6.1	7.5
7.	2.4	4.7	2.0	4.7	2.4	4.7	1.7	4.8	2.0	6.3	1.9	6.5	1.9	6.7	1.6	6.3	5.2	7.5	4.3	7.5	7.3	6.0	3.1	7.5
8.	1.2	4.7	2.4	4.7	2.8	4.0	2.4	4.3	1.5	5.8	1.4	6.0	2.0	6.0	2.1	6.5	3.9	6.3	3.7	7.3	4.4	7.7	4.5	7.0
9.	2.0	4.7	1.8	5.2	1.2	5.0	0.8	4.5	2.1	6.7	2.1	6.5	2.4	6.0	2.4	8.3	5.8	8.3	4.8	8.0	4.8	7.5	4.9	6.3
10.	1.6	4.3	1.9	6.7	2.1	5.8	1.9	6.7	3.5	7.5	2.6	7.5	3.5	7.5	3.1	7.5	3.2	5.6	2.0	6.0	2.6	5.6	1.7	7.5
11.	1.7	5.6	0.7	5.4	1.0	4.7	1.0	4.7	3.5	7.5	3.2	7.3	3.4	7.7	2.9	6.3	1.9	6.5	2.2	6.3	2.5	9.3	2.7	8.0
12.	0.7	5.2	0.5	5.0	0.9	5.0	1.0	4.7	3.7	6.0	4.2	5.0	3.1	6.0	3.2	6.7	2.2	7.5	3.3	7.0	2.1	7.3	3.0	8.0
13.	0.7	5.0	0.5	4.7	0.7	4.7	0.7	5.4	2.4	6.3	2.2	5.4	3.0	6.7	2.5	6.3	2.7	7.7	3.6	7.0	2.0	7.0	1.9	6.7
14.	0.5	5.0	0.5	4.7	0.5	4.7	0.5	4.8	1.7	6.5	2.0	6.0	1.8	6.0	1.8	6.0	1.0	6.3	2.1	6.5	2.2	7.0	1.7	6.5
15.	0.5	4.8	0.7	5.2	0.8	4.5	0.7	5.0	1.5	5.6	1.7	4.7	1.5	4.7	2.1	5.6	1.3	5.6	1.1	5.4	0.8	6.3	0.8	6.3
16.	0.5	5.0	0.5																					

M.O. 330

Aerological

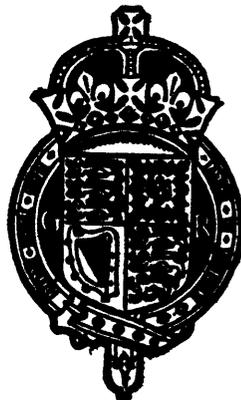
Air Ministry
METEOROLOGICAL OFFICE

THE
OBSERVATORIES' YEAR BOOK
1929

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.

AEROLOGICAL SECTION

Published by the authority of the
METEOROLOGICAL COMMITTEE



LONDON :
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

1931

AEROLOGICAL SECTION.

Station.		Latitude.		Longitude.		Height above Sea Level.
Kew Observatory	..	51° 28' N.	..	0° 19' W.	..	7 metres.
Sealand	..	53° 14' N.	..	3° 0' W.	..	5 metres.

INTRODUCTION.

Notes on the tables of Upper Air Temperatures obtained from soundings with registering balloons at Richmond and Sealand, 1929.

The tables are presented in the same form as those appearing in the Observatories' Year Book for 1928. The Dines pattern meteorograph was employed solely as before. About 37% of the instruments used had been constructed in the Observatory workshop, the rest being purchased from outside contractors.

The method of operation remained the same as in recent years. A full description will be found in "The Dines Balloon Meteorograph and the method of using it."* In the computation of pressure-heights the graphical method was employed, checked as to its main features by an arithmetical process. A value of gravity constant with height was assumed, and equal to 981.2; the effect of humidity on the density of the air was neglected.

A total of 48 soundings were made during the year, 32 from the Aviation Service Station of the Meteorological Office at Sealand Aerodrome and 16 from Kew Observatory. In the cases of 36 of these soundings the instruments were found and returned, the rest being lost. The choice of station from which a sounding was made was generally determined in view of the probable direction and length of the run of the balloon.

The ventilation of the Dines meteorograph is effected solely by the natural draught produced by its vertical velocity. The vertical velocity of the rising balloon was of the order of 220 metres per minute in about 40% of the successful soundings and of the order of 310 metres per minute in the remaining 60%. After the balloon had burst the meteorograph normally fell at the rate of about 700 metres per minute.

As regards temperature, unless stated to the contrary the mean of the records on the ascent and descent was employed entirely in computing the published figures. Except in one or two cases of daylight soundings in which a small vertical velocity of the balloon was employed, and in a limited region near the top of another daylight sounding, the difference between the two records did not in general exceed 4a., with a mean of about half that value. Whenever direct evidence is available it is almost always found that in the troposphere the descending record is the colder of the two. An analysis of a large number of British soundings has led to the conclusion that as far as the troposphere is concerned this effect is mainly due to a temperature lag of the thermograph member, and that the mean of the two records gives in general a close approximation to the true air temperature.† Occasionally in exceptional circumstances it is deemed best to give greater weight to one record than to the other, or to publish the data from one record only. All such occasions are mentioned in the notes, they generally refer either to occasions of strong solar radiation when the less vigorous ventilation of the meteorograph on the ascent makes that record less reliable than that of the descent, or to the lowest layers of the troposphere only.

* M.O. 321, H.M. Stationery Office.

† See also :—Memoirs of the Indian Meteorological Department. Vol. XXIV. Part V. By J. H. Field.

In the case of high soundings made during the day-time a pronounced rise of temperature is sometimes observed over about a kilometre at the extreme top. There is good evidence that this is a fictitious effect due to solar radiation and that the ascent is a great deal more affected by it than the descent. The rise of temperature in such cases is therefore usually ignored, and in addition greater weight is given to the descent than to the ascent in the upper parts of such records as show an unusually large difference between them. All occasions on which such selection has been made are specifically mentioned in the notes. An account of this phenomenon is to be found in "Memoirs of the Royal Meteorological Society," Vol. 2, No. 18. By L. H. G. Dines.

In most cases during 1929 the meteorograph was fitted with a hair hygograph. Only one record of relative humidity in each case has been published, which unless specifically mentioned to the contrary in the notes is that of the ascent. The record of the descent appears to be the less reliable for two reasons, first that the previous exposure of the hair to extreme cold and dryness makes it more sluggish in response to changes in the relative humidity, second that the higher velocity at which the meteorograph falls increases the lag in its response reckoned in terms of height. The hygrometer readily shows changes in the relative humidity in the lower part of the troposphere, but the absolute value of its readings may be subject to an uncertain error of five or more on the percentage scale. Below a temperature of 250 a. it seems very doubtful if in the ordinary way the record has any meaning, and the figures for the higher parts of the atmosphere have not therefore been published.

In order to ensure as far as possible that the hygograph works under standard conditions, it is normally exposed to a saturated atmosphere for ten minutes about an hour before the sounding is made.

The method employed in calibrating the hygograph is as follows:—It is first immersed in either water or a saturated atmosphere for at least ten minutes, and a mark made by the scribe on the record plate which is taken as corresponding with steady saturated conditions. It is then taken out, roughly dried to remove superfluous water, and placed as soon as possible in a testing chamber through which a current of air flows continually. The relative humidity of the air stream is next reduced in two or more stages to a minimum value of about 20%, plenty of time being allowed at each stage for the conditions to become steady. When in each case steady conditions have been attained a mark is made by the scribe. The object of the test is to obtain two marks at relative humidities near 25%, and in such case the total time taken is about 25 to 30 minutes from the instant when the hygograph is removed from the water in the first place. If the relative humidity is reduced in more than two stages the total time taken is greater, allowing about ten minutes per stage.

When the contraction of the hair corresponding with a relative humidity of 25% has been determined in the manner described, the contraction throughout the scale under the conditions met with in the sounding is assumed to follow an empirical law, which has been determined from the average behaviour of a number of hairs. This law is expressed in the following table, in which the quantity k is defined as the contraction of the hair at 25% from its saturated length expressed as a fraction of the saturated length.

Relative humidity %	25	30	40	50	60	70	80	90	96
Contraction of hair. Saturated length.	·97k	·88k	·73k	·59k	·45k	·32k	·20k	·08k	·00

The calibration is carried out at temperatures above 288 a. and it is assumed that the thermal expansion of hair is the same as that of brass. No allowance has been made in computing the published figures for the fact that the results of the calibration are not considered to be valid at low temperatures below the freezing point.

Data of well marked inversions and regions of zero lapse rate in the troposphere are included in the notes on the soundings. They are set out in a uniform manner on the principle that corresponding values of height, temperature and relative humidity are given for the salient points in each special case, the sequence being always from lesser heights to greater.

The figures given in the table of lapse rates do not in every case agree with the temperatures appearing in the table of temperature-heights. The reason for this is that both were determined independently from the original data, which can sometimes profitably be read to the nearest half degree, but are rounded off to whole degrees for publication.

The lapse rates given between ground level and 0.5 Km. are determined from the reading in the thermometer screen at the station and that of the meteorograph at 0.5 Km. A source of error arises here in that the two standards are independent and are not exposed in the same manner. A small difference is capable of making an appreciable error in the lapse rate, and it is possible that lapse rates apparently greater than 10a. per Km. in this layer are sometimes due to this cause.

Whenever possible the meteorograph was calibrated again after return before the record plate had been disturbed, in order to discover whether any shift of zero had taken place since the previous calibration. Some disturbance is almost inevitable considering the rough treatment experienced, more especially in the shock of the fall. It is satisfactory to note that for the year 1929, omitting one case in which very large shifts of zero had taken place, the mean values of the shifts taken without regard to sign were small, being 2.7 mb. for the pressure and 1.0 a. for the temperature.

All new meteorographs, and all old ones used again after repair, were seasoned in a vacuum chamber before use by being subjected to several slow reductions of pressure. This process has been found greatly to reduce the chance of a systematic difference occurring between the results of a fast and slow calibration. More detail is given in the Introduction to the tables for 1923, and within the limits of accuracy at present attainable in the measurement of upper air pressures, the results of the fast reduction of pressure in the calibration test may be taken as applying to the slow reduction in the actual sounding.

The lag, or difference in pressure reading as between a falling and a rising pressure, is of the order 3 or 4 millibars on the average in the middle region of a high sounding, falling off to lesser values on either side. If a correction be applied to the recorded temperature-pressures to allow for this error, it results, for an average sounding in the troposphere, in an increase in the difference between the temperatures recorded at any pressure on the ascent and descent. The effect is to make the recorded temperatures on the descent too high by about half a degree at a 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.

In Table 547 occur the entries "Type 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 the Remarks on the Soundings 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. 22of, London, 1920.

Some statistical results of the soundings made in England during the nine years 1921-29 are set out below. The data include that which was employed in the formation of the results given on Page 364 of the *Observatories' Year Book, 1925*.

Means and correlation coefficients are given based on 223 soundings, of which about 60% were made from Sealand Aerodrome, 20% from Benson and 20% from Kew Observatory. Mean temperatures are given for each season, winter indicating the three months Dec.-Jan.-Feb. and so on. In the determination of the correlation coefficients the seasonal variations have been ignored and all departures taken from the annual means.

MEAN TEMPERATURE AT EACH HEIGHT. 1921-1929.																			
Degrees absolute above 200A.																			
	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.	18 Km.
Winter	77.9	74.0	70.1	64.5	58.4	51.6	44.5	37.2	30.1	23.7	18.6	15.6	15.2	16.4	17.6	18.0	18.0	18.1	17.9
Spring	81.4	74.7	68.9	63.5	57.6	51.6	44.8	37.7	31.0	25.0	20.6	18.0	19.1	20.4	20.7	21.1	20.4	20.7	20.6
Summer	89.2	82.6	77.6	73.1	67.5	61.7	55.0	48.0	40.7	33.6	27.2	22.7	21.2	22.0	22.9	23.1	24.0	24.9	25.8
Autumn	83.6	77.7	73.1	68.7	63.0	56.5	49.9	42.6	35.5	28.6	23.4	19.5	18.1	17.6	16.6	15.9	16.1	16.4	17.8

	Suffix used in correlation coefficients.	1921-1929		
		Mean Value.	Standard Deviation.	Symbol.
Surface Pressure at M.S.L.	1	1014.8 mb.	12.7 mb.	P_s
Mean Temperature from 1 to 9 Km. . .	2	253.9 A.	6.3 A.	T_m
Pressure at 9 Km.	3	304.7 mb.	10.9 mb.	P_9
Height of Tropopause	4	10.68 Km.	1.4 Km.	H_c
Temperature at Tropopause	5	216.3 A.	7.0 A.	T_c

CORRELATION COEFFICIENTS.									
r_{12}	r_{13}	r_{14}	r_{15}	r_{23}	r_{24}	r_{25}	r_{34}	r_{35}	r_{45}
.38	.65	.61	-.44	.94	.73	-.20	.80	-.30	-.71

PARTIAL CORRELATION COEFFICIENTS.		
$r_{23.4} = .87$	$r_{34.2} = .46$	$r_{42.3} = -.08$

PARTIAL REGRESSION EQUATIONS.		
$\delta H_c = .93 \delta P_9 - .14 \delta T_m + .60 \text{ Ca.}$ $\delta P_9 = .22 \delta H_c + .78 \delta T_m + .30 \text{ Ca.}$ $\delta T_m = .98 \delta P_9 - .04 \delta H_c + .33 \text{ Ca.}$	}	Standard deviations as units.

T. = Temperature in Degrees absolute.
H. = Height in kilometres above M.S.L.

P. = Pressure in millibars.
RH. = Relative Humidity as percentage.

547.

1929.

No. of Ascent.	722.	725.	726.	727.	728.	729.	730.	731.	733.
Date.	Mar. 5.	April 16.	April 17.	April 18.	April 19.	April 20.	June 26.	June 27.	July 11.
Station.	Sealand.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.	Kew.	Kew.	Kew.
Start G.M.T.	12h. 20m.	7h. 15m.	7h. 20m.	7h. 15m.	7h. 25m.	7h. 25m.	14h. 53m.	15h. 49m.	15h. 46m.
H_t = Greatest Height ... (Km.)	16.42	6.51	15.00	7.47	1.92	17.81	6.37	16.32	14.28
T_t = Corresponding Temperature (a.)	217	243	219	244	276	218	248	224	217
P_t = Corresponding Pressure ... (mb.)	93	432	119	390	805	76	451	102	146
Place of Fall	Cwm-dawdder, Radnorshire.	Ashampstead, Berkshire.	Abbots Bromley, Staffordshire.	Babworth, Retford, Notts.	Comberbach, Cheshire.	Moulton Chapel, Lincolnshire.	Walton, Surrey.	Upper Bewbush, Horsham, Sussex.	Great Canfield, Essex.
Distance (Km.)		109	61	88	135	33	202	10	42	59
Bearing. Degrees from N.	199	272	121	85	74	104	220	172	47
Geostrophic Wind— Speed (m/s.)	7	10	16	16	11	9	?	5	8
Degrees from N.	355	50	175	260	265	30	?	50	245
Wind (Anemograph)— Speed (m/s.)	5	4	7	7	2	6	2	2	2
Degrees from N.	315	22	145	225	180	10	315	360	200
Humidity at surface (%)	64	88	95	83	64	70	45	68	33
Type of Tropopause	I.	—	I.	—	—	I.	—	I.	II.?
H_c = Height of ,, ... (Km.)	11.87	—	11.02	—	—	11.03	—	11.32	13.11
T_c = Temp. at ,, ... (a.)	207	—	211	—	—	211	—	215	218
P_c = Pressure at ,, ... (mb.)	193	—	223	—	—	220	—	220	175
Mean Temp. in Stratosphere	(H_c+2) to (H_c+5) (a.)	216	—	—	—	219	—	—	—
	(H_c+5) to (H_c+8) (a.)	—	—	—	—	—	—	—	—
	(H_c+8) to (H_c+11) (a.)	—	—	—	—	—	—	—	—
T_m (Mean Temp. 1 to 9 Km.) (a.)	253	—	253	—	—	251	—	259	267
P_s (Pressure at M.S.L.) ... (mb.)	1021	1016	1025	1023	1017	1022	1019	1021	1025

548.

1929.

REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1929.

No. of Ascent.

722. Weather fair. Clouds St-Cu. 7/10 from N. at about 1.3 Km. Inversion on ascending record from 1.3 Km. to 1.55 Km., temperature 268a. to 271.5a., relative humidity 92% to 83%. Inversion on descending record from 1.19 Km. to 1.28 Km., temperature 270a. to 272a., isothermal layer from 2.14 Km. to 2.77 Km., temperature 270a., relative humidity 76% to 36%. Pressure distribution:—Ridge of high pressure extending across the British Isles from an anticyclone over Greenland to Central Europe, low pressure areas over Scandinavia and in mid Atlantic. Type I.
725. Weather overcast. Clouds St. 10/10 at about 0.3 Km. The balloon did not burst and floated at the greatest height with a rise of temperature of 12A., which was ignored. Many small oscillations of temperature appear on both records near the top, especially on the ascent with amplitudes up to $\pm 1a$. Inversions from 0.39 Km. to 0.68 Km., temperature 275a. to 277.5a., relative humidity 100% to 77%. Pressure distribution:—Pressure high over Greenland, Scandinavia, and The Azores. Small depressions NE. of Iceland, over France and in advance of a large depression to the west of Ireland. Type VIIb.
726. Weather overcast with fog. Clouds St. 10/10 from SE. at about 0.1 Km. Inversions from 0.26 Km. to 0.44 Km., temperature 275a. to 279a., relative humidity — to 62%, and from 2.76 Km. to 3.03 Km., temperature 267a. to 268a., relative humidity 77% to 44%. Pressure distribution:—Large anticyclone covering Europe and Eastern England moving SE. Large depression moving NE. from the Atlantic. Small lows developing over Scandinavia. Type VIa.
727. Weather cloudy with slight rain. Clouds St. and St-Cu. 10/10 from SW. at about 0.3 Km. The balloon floated at the highest point with rise of temperature due to insolation, the results from this region have therefore not been tabulated. Inversion on descending record from 1.37 Km. to 1.53 Km., temperature 278a. to 279.5a. Pressure distribution:—Depression to the north of the British Isles, passing NE., high pressure over Central Europe and over Greenland. Shallow trough of low pressure north of the Azores. Type VI.
728. Weather fine. Clouds Ci. 3/10 from W. by S. Balloon did not burst and floated at the highest point, causing a rise of temperature of 3a. which has been ignored. Small inversion on ascending record from 0.56 Km. to 0.85 Km., temperature 281a. to 282a., relative humidity 51% to 28%. Pressure distribution:—Deep depression over Scandinavia with a secondary moving across Scotland. A further depression moving NE. from The Azores, continental anticyclone withdrawing slowly. Type IVa.
729. Weather fine. Clouds Ci. 3/10 from W. The large lapse rate near the surface appears to be genuine as it is also shown on the record itself between 0.24 Km. and 0.50 Km. Inversion from 2.48 Km. to 2.85 Km., temperature 261a. to 262a., relative humidity 34% to 29%. Isothermal layer from 4.13 Km. to 4.91 Km., temperature 255a., relative humidity 17% to 14%. Pressure distribution:—A large anticyclone moving in over the British Isles from the Atlantic, depressions over Scandinavia and the Bay of Biscay. Type XIa.
730. Weather fair. Clouds Cu. and Fr-Cu. 5/10 at about 1 Km. An automatic release was employed to limit the sounding. The large lapse rate near the surface was confirmed by the fog balloon sent up about an hour previously. Pressure distribution:—A belt of high pressure moving slowly eastwards over the British Isles. A depression west of the Azores moving very slowly NE. Pressure low generally over Scandinavia and Central Europe. Type IX.
731. Weather cloudy. Clouds St-Cu. 10/10 from N. by E. at about 0.7 Km. Inversion from 1.46 Km. to 1.66 Km., temperature 275.5a. to 280.5a. Pressure distribution:—A large anticyclone centred to the north of the British Isles. Low pressure areas over Scandinavia and the Mediterranean. Type IX.
733. Weather fair. Clouds A-Cu. 1/10, Ci-Cu. 5/10. Ci-Cu. travelling slowly from S. Small lapse rate of 1.6a. per Km. below base of stratosphere from 11.5 Km. to 12.3 Km. Pressure distribution:—High over France, large depression to the north east of Iceland, a secondary depression moving NE. across Scotland. Type XIa.

T. = Temperature in Degrees absolute.
H. = Height in kilometres above M.S.L.

P. = Pressure in millibars.
RH. = Relative Humidity as percentage.

547.

1929.

No. of Ascent.	734.	735.	737.	738.	739.	740.	743.	744.	745.
Date.	July 15.	July 19.	Aug. 12.	Aug. 13.	Aug. 14.	Aug. 15.	Aug. 24.	Sept. 12.	Sept. 17.
Station.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.	Kew.	Kew.	Kew.
Start G.M.T.	17h. 54m.	17h. 00m.	6h. 30m.	6h. 35m.	6h. 40m.	6h. 40m.	16h. 50m.	15h. 45m.	15h. 42m.
H ₁ =Greatest Height ... (Km.)	8.74	3.37	15.01	17.30	13.53	17.22	3.30	10.22	22.84
T ₁ =Corresponding Temperature (a.)	241	275	223	225	226	227	278	226	223
P ₁ =Corresponding Pressure (mb.)	337	678	126	88	156	89	685	265	36
Place of Fall	Chell's Green, Stevenage, Herts.	Whitby, Birkenhead, Cheshire.	Flintham, Notts.	Bryant Broughton, Lincs.	Thorne, Doncaster, Yorks.	South Carlton, Worksop, Notts.	Blackheath, Kent.	Streatham Hill, Surrey.	Child's Hill, Middlesex.
Distance (Km.)	50	8	143	158	147	126	23	14	14
Bearing. Degrees from N.	8	40	100	96	73	84	89	112	42
Geostrophic Wind— Speed (m/s.)	9	5	9	7	9	8	9	?	10
Degrees from N.	115	205	290	240	295	260	270	?	50
Wind (Anemograph)— Speed (m/s.)	4	3	4	3	5	0	7	4	2
Degrees from N.	90	250	260	135	270	—	270	200	20
Humidity at surface (%)	39	53	79	92	80	93	63	49	62
Type of Tropopause	—	—	I.	I.	I.	I.	—	—	I.
H _e =Height of „ ... (Km.)	—	—	10.66	11.48	11.53	10.86	—	—	11.45
T _e =Temp. at „ ... (a.)	—	—	222	215	217	217	—	—	213
P _e =Pressure at „ ... (mb.)	—	—	242	215	212	234	—	—	217
Mean Temp. in Stratosphere									
{ (H _e +2) to (H _e +5) (a.)	—	—	—	224	—	226	—	—	218
{ (H _e +5) to (H _e +8) (a.)	—	—	—	—	—	—	—	—	219
{ (H _e +8) to (H _e +11) (a.)	—	—	—	—	—	—	—	—	220
T _m (Mean Temp. 1 to 9 Km.) (a.)	—	—	257	259	259	257	—	263	261
P _s (Pressure at M.S.L.) ... (mb.)	1023	1018	1021	1022	1018	1020	1018	1015	1017

548.

1929.

REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1929.

No. of Ascent.

734. Weather cloudless. The balloon floated at the highest point, the rise of temperature shown on the record was ignored. Isothermal layer from 0.58 Km. to 1.00 Km., temperature 291a. Pressure distribution:—An anticyclone over the North Sea decreasing before the advance of a depression south-west of Ireland. Type VIIa.
735. Weather fair. Clouds Cu. 4/10 from SW. at about 1.3 Km., A-Cu. 1/10 from SW. by S. In tabulating the temperature a slight bias was made towards the ascending record from 1 Km. downwards. The tabulated lapse rate near the surface is probably slightly too large owing to the fact that the temperature at 0.5 Km. was deduced from both the ascending and descending records. The visible part of the ascending record itself, however, shows a lapse rate of 10.5a. per Km. from 0.16 Km. upwards. Isothermal layer from 1.44 Km. to 1.77 Km., temperature 282a., relative humidity 83% to 62%. Pressure distribution:—A depression moving north-east over Scotland and Northern England, pressure, high over the Channel and Central Europe. Type IV.
737. Weather fair. Clouds Cu. and Ci. 6/10, Cu. from WNW. at about 0.8 Km., Ci. from WNW. Pressure distribution:—An anticyclone situated to the south-west of the British Isles, where pressure is rising slowly. A depression over Scandinavia. Type XIa.
738. Weather cloudy. Clouds St-Cu. 5/10 from SW. at about 1.5 Km., A-Cu. 3/10 from W. A rise in temperature at the highest point was ignored and a bias was made towards the descending record above 15 Km. Inversion from 2.06 Km. to 2.33 Km., temperature 273.5a. to 275.5a., relative humidity 96% to 61%. another on the ascending record only from 4.09 Km. to 4.25 Km., temperature 264.4a. to 267a., relative humidity 96% to 66%, on the descending record from 3.90 Km. to 4.04 Km., temperature 265a. to 267a. Pressure distribution:—A trough of low pressure extending from Iceland to the west of Ireland is moving eastwards, an anticyclone extends over Central Europe, and the English Channel. Type VIa.
739. Weather fair. Clouds St. 2/10 from WNW. at about 0.6 Km., Ci. and Ci-Cu. 5/10 from SW'W. Inversion from 1.56 Km. to 1.96 Km., temperature 274.5a. to 276a., relative humidity 95% to 47%. Pressure distribution:—A trough of low pressure extending from Iceland to the North Sea moving eastwards while a ridge of high pressure follows from the Atlantic. Type XII.
740. Weather fine. Clouds Cu. and St-Cu. 1/10, Ci. and Ci-St. 2/10. Cu. from west at about 0.8 Km., St-Cu. from WSW. at about 2.2 Km., Ci. from WSW. Inversion on the ascending record from 2.17 Km. to 2.39 Km., temperature 271.5a. to 274a., relative humidity 80% to 46%, inversion on the descending record from 2.35 Km. to 2.55 Km., temperature 269a. to 272.5a. Pressure distribution:—A shallow depression lies to the north of the British Isles and an anticyclone to the south-west, a small secondary is indicated to the west of Ireland. Type XIa.
743. Weather cloudy. Clouds St. 5/10, Cu. 5/10. An automatic release was employed to limit the sounding. Pressure distribution:—A large depression situated between Iceland and Scandinavia moving north-east. Pressure high to the south-west of the British Isles. Secondaries over the North Sea. Type II.
744. Weather fair. Clouds Fr-Cu. 2/10 from SSW., Ci. 2/10 nearly stationary. Two meteorographs were sent up together in one frame and the tabulated records are mean results of the two. The large lapse rate below 0.5 Km. may be partly due to the wide separation of the ascending and descending records at 0.5 Km. and possibly also the screen temperature may have read too high on a fine afternoon with light wind. Pressure distribution:—A deep depression situated to the north-east of Iceland is connected with a secondary over the English Channel by a shallow trough. Pressure high to the south-west and over Eastern Europe. Type XII.
745. Weather cloudy. Clouds St-Cu. 8/10, A-Cu. 1/10, A-Cu. nearly stationary. Two meteorographs were employed, the tabulated figures being derived from the mean results of the two. The mean of both ascending and descending records was used in forming the temperature tables, except below 0.9 Km. where the ascending record only was employed. Inversion from 1.02 Km. to 1.25 Km., temperature 285.5a. to 286.5a., relative humidity 93% to 78%, another inversion on descending record from 4.43 Km. to 4.56 Km., temperature 263.5a. to 264.5a. Pressure distribution:—A very deep depression over Iceland with secondaries over the British Isles. Pressure high to the south-west. Type XIa.

547.

T. = Temperature in Degrees Absolute.
H. = Height in kilometres above M.S.L.

P. = Pressure in millibars.
RH. = Relative Humidity as percentage.

1929.

No. of Ascent.	746.	747.	748	749.	750.	751.	753.	754.	756.
Date.	Sept. 19.	Sept. 27.	Oct. 22.	Oct. 22.	Nov. 11.	Dec. 2.	Dec. 7.	Dec. 9.	Dec. 13.
Station.	Sealand.	Sealand.	Kew.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.
Start G.M.T.	17h. 00m.	17h. 05m.	12h. 09m.	15h. 00m.	12h. 31m.	11h. 35m.	17h. 15m.	17h. 38m.	18h. 10m.
<i>H</i> ₁ = Greatest Height (Km.)	14.87	14.24	6.96	8.93	3.92	5.83	17.95	7.02	21.77
<i>T</i> ₁ = Corresponding Temperature (a.)	216	214	243	226	267	256	218	229	215
<i>P</i> ₁ = Corresponding Pressure (mb.)	126	139	412	307	610	469	72	379	40
Place of Fall	Chalfont St. Giles, Bucks.	West Heslerton, E. Yorks.	South Norwood, Surrey.	Milwich, Staffs.	Gowdall, Lincs.	Constable Burton, N.R. Yorkshire.	Scunthorpe, Lincs.	Kelstern, Lincs.	Anthorpe, Louth, Lincs.
Distance (Km.)	242	190	17	74	138	146	162	193	206
Bearing. Degrees from N.	136	55	115	121	67	34	75	84	87
Geostrophic Wind— Speed (m/s.)	15	?	5	9	49	27	27	29	22
Degrees from N.	265	?	295	330	215	205	270	255	250
Wind (Anemograph)— Speed (m/s.)	7	2	1	4	13	10	9	2	8
Degrees from N.	235	315	200	270	190	170	260	290	225
Humidity at surface (%)	75	77	71	70	76	92	66	84	80
Type of Tropopause	I.	I.	—	—	—	—	II.	—	I.
<i>H</i> _c = Height of „ (Km.)	12.24	12.53	—	—	—	—	7.90	—	12.22
<i>T</i> _c = Temp. at „ (a.)	213	211	—	—	—	—	226	—	203
<i>P</i> _c = Pressure at „ (mb.)	191	183	—	—	—	—	335	—	185
Mean Temp. in Stratosphere	(<i>H</i> _c +2) to (<i>H</i> _c +5) (a.)	—	—	—	—	—	226	—	214
	(<i>H</i> _c +5) to (<i>H</i> _c +8) (a.)	—	—	—	—	—	223	—	216
	(<i>H</i> _c +8) to (<i>H</i> _c +11) (a.)	—	—	—	—	—	—	—	—
<i>T</i> _m (Mean Temp. 1 to 9 Km.) (a.)	262	262	—	—	—	—	243	—	257
<i>P</i> _s (Pressure at M.S.L.) ... (mb.)	1009	1021	1010	1008	991	980	991	984	1017

548.

1929.

REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1929.

No. of Ascent.

746. Weather cloudy. Clouds St-Cu. and St. 10/10 at about 0.8 Km. Two Meteorographs were used and their records agreed well, the published figures being in general derived from the mean of the two. Very large lapse rate shown in the stratosphere:—4a. per Km. from 13.2 Km. to 14.1 Km. Inversions on ascending record from 1.66 Km. to 2.10 Km., temperature 278a. to 279a., relative humidity 96% to 94%; from 3.26 Km. to 3.42 Km., temperature 273a. to 274a., relative humidity 95% to 89%; from 4.23 Km. to 4.45 Km., temperature 268.2a. to 269.5a., relative humidity 75% to 50%. Inversions on descending record from 1.00 Km. to 1.20 Km., temperature 279.5a. to 282.0a.; from 4.04 Km. to 4.24 Km., temperature 267.2a. to 269.7a. Isothermal on descending record from 1.75 Km. to 2.10 Km., temperature 279a. Pressure distribution:—A depression between Iceland and Scandinavia, moving east; a large anticyclone situated to the south-west of the British Isles. Type XII.
747. Weather fair and slight mist. Clouds Ci. 6/10 from SW. Isothermal layer from 1.25 Km. to 1.63 Km., temperature 273a., relative humidity 61% to 35%. Pressure distribution:—A secondary depression over the northern half of the British Isles, an anticyclone over Central Europe. Type V.
748. Weather cloudy. Clouds St. 6/10; Fr-Cu. 2/10; A-Cu. 1/10 moving very slowly. Isothermal layer from 1.30 Km. to 1.62 Km., temperature 275.5a. Inversion from 2.00 Km. to 2.30 Km., temperature 272.5a. to 274a. Isothermal layer from 2.88 Km. to 3.5 Km., temperature 269a. Pressure distribution:—An anticyclone centred over the Azores and a large depression moving eastwards along the Arctic Circle. Type Ia.
749. Weather cloudy. Clouds St. and St-Cu. 10/10 at about 1 Km. Two meteorographs were used and the mean of both records was employed throughout. The balloon did not burst, a rise in temperature at the top was assumed to be due to insolation and was ignored. Inversion from 2.0 Km. to 2.1 Km., temperature 268.5a. to 274a., relative humidity 97% to 68%. Pressure distribution:—The same as in the case of No. 748. Type Ia.
750. Weather cloudy. Clouds St. 10/10 from SSW. at about 0.3 Km. Inversion from 1.30 Km. to 1.76 Km., temperature 275.5a. to 276.5a. Pressure distribution:—An intense depression off Northern Ireland is moving rapidly north-east and deepening. Type III.
751. Weather overcast with slight rain. Clouds St. 10/10. from S. at about 0.2 Km. A small rise of temperature at the top was apparently due to insolation and was ignored. Pressure distribution:—A deep and extensive cyclone to the north-west of Ireland moving north-eastwards. Type Va.
753. Weather fair after a shower. Clouds Cu-Nb. and St-Cu. from W. at about 0.6 Km. Large lapse rate in the stratosphere from 223a. at 15.21 Km. to 218a. at 16.38 Km. Pressure distribution:—A deep and extensive cyclone with centres over the North Sea and South East Iceland moving north-eastwards. Type IV.
754. Weather fair after a slight shower. Clouds Cu-Nb. and St-Cu. 4/10 from W. at about 0.6 Km. Small isothermal from 5.91 Km. to 6.05 Km., temperature 233.5a., relative humidity 69% to 65%. Pressure distribution:—A depression centred between Iceland and Norway has a secondary centre over the North Sea and is moving eastwards. Type II.
756. Weather cloudy. Clouds St., St-Cu. and Ci. 8/10; St-Cu. from W. by S. at about 1.5 Km., Ci. from W. Inversion near surface on descending record, upper limit at 0.75 Km., temperature 285a. Small inversion on ascending record from 3.25 Km. to 3.40 Km., temperature 266.5a. to 267a., relative humidity 87% to 53%. Pressure distribution:—A depression with its centre to the north-west of Scotland moving eastward. Pressure high over Europe. Type V.

T. = Temperature in Degrees absolute.
H. = Height in kilometres above M.S.L.

P. = Pressure in millibars.
RH. = Relative Humidity as percentage.

547.

1929.

No. of Ascent.	757.	758.	759.	760.	761.	762.	763.	766.	768.
Date.	Dec. 16.	Dec. 17.	Dec. 18.	Dec. 18.	Dec. 19.	Dec. 19.	Dec. 20.	Dec. 23.	Dec. 31.
Station.	Sealand.	Sealand.	Sealand.	Sealand.	Sealand.	Kew.	Sealand.	Kew.	Sealand.
Start G.M.T.	17h. 50m.	17h. 50m.	7h. 25m.	17h. 48m.	7h. 10m.	18h. 00m.	7h. 20m.	12h. 33m.	7h. 50m.
H_1 = Greatest Height K(m.)	15.95	15.34	16.00	17.93	16.88	17.79	20.00	6.64	16.92
T_1 = Corresponding Temperature (a.)	212	209	209	209	210	212	214	247	217
P_1 = Corresponding Pressure (mb.)	99	110	98	72	85	74	50	420	84
Place of Fall	Lechlade, Gloucester.	Wantage, Berks.	Baschurch, Salop.	Nantwich, Cheshire.	Ribchester, Lancs.	Hatfield, Herts.	Rufforth, Yorks.	East Barnet, Herts.	Grobby Lodge, Leicester.
Distance (Km.)	197	211	49	35	73	34	144	23	134
Bearing. Degrees from N.	153	149	170	120	26	11	55	30	118
Geostrophic Wind— Speed (m/s.)	7	8	10	10	18	13	18	16	13
Degrees from N.	300	210	220	215	205	205	210	175	310
Wind (Anemograph)— Speed (m/s.)	4	2	3	4	4	0	6	7	7
Degrees from N.	280	270	160	160	135	—	160	160	270
Humidity at surface (%)	77	81	94	77	85	80	92	88	84
Type of Tropopause	I.	II.	I.	I.	I.	I.	I.	—	II.
H_0 = Height of ,, (Km.)	10.71	11.33	12.44	12.27	12.13	12.27	11.21	—	7.71
T_0 = Temp. at ,, (a.)	208	207	201	202	203	204	212	—	221
P_0 = Pressure at ,, (mb.)	230	213	178	183	186	181	205	—	350
Mean Temp. in Stratosphere	{ (H_0+2) to (H_0+5) (a.)	213	—	208	—	212	213	—	223
	{ (H_0+5) to (H_0+8) (a.)	—	—	—	—	—	213	—	218
	{ (H_0+8) to (H_0+11) (a.)	—	—	—	—	—	—	—	—
T_m (Mean Temp. 1 to 9 Km.) (a.)	247	252	253	254	253	253	246	—	242
P_s (Pressure at M.S.L.) (mb.)	1038	1038	1036	1034	1028	1028	1013	991	1010

548.

1929.

REMARKS ON THE SOUNDINGS AND THE PREVAILING WEATHER CONDITIONS, 1929.

No. of Ascent.

757. Weather fine. Clouds St-Cu. 1/10 from NW. at about 1.3 Km. Inversion near ground on descending record. Inversion on ascending record from 1.22 Km. to 1.30 Km., temperature 269a. to 272a., relative humidity 25%. Inversion from 3.65 Km. to 3.84 Km., temperature 254a. to 255a., relative humidity 26%. Pressure distribution:—A large anticyclone centred off the south-west coasts of the British Isles, moving slowly eastwards. Type VIIIb.
758. Weather fair. Clouds A-St. 3/10, Ci-St. 2/10 slowly from NW. Inversion near ground. Inversion from 1.20 Km. to 1.50 Km., temperature 270a. to 273a., relative humidity 69% to 54%. Isothermal layer from 1.75 Km. to 2.31 Km., temperature 272a., relative humidity 38% to 21%. Pressure distribution:—An intense anticyclone over the Channel is moving slowly eastwards. Type XI.
759. Weather fine. Clouds St-Cu. 2/10 slowly from SW. at about 1.3 Km. Inversion near ground: inversion from 1.33 Km. to 1.61 Km., temperature 271a. to 273a., relative humidity 83% to 63%. Inversion on descending record from 2.99 Km. to 3.21 Km., temperature 265a. to 265.5a. Pressure distribution:—A large anticyclone with centres over South-east England and over Germany is moving slowly eastwards. Type XI.
760. Weather cloudy. Clouds St-Cu. 9/10 from SW. at about 1.3 Km. Inversions from 1.43 Km. to 1.48 Km., temperature 271a. to 274a., relative humidity 100%; and from 1.97 Km. to 2.25 Km., temperature 272.5a. to 274.0a., relative humidity 80% to 61%. Pressure distribution:—A large anticyclone centred over Germany. Type VIa.
761. Weather cloudless with slight mist. Very small lapse rate between the ground and 2.3 Km. Inversions from 1.00 Km. to 1.19 Km., temperature 274.5a. to 276.0a., relative humidity 43% to 36%; on ascending record only from 5.94 Km. to 6.03 Km., temperature 246a. to 247.5a., relative humidity 36% to 35%. Inversion on descending record from 5.55 Km. to 5.86 Km., temperature 247.5a. to 248a. Pressure distribution:—Anticyclone over Germany, trough of low pressure off the west of Ireland. Type VIa.
762. Weather cloudless. Inversions near ground; from 1.35 Km. to 1.84 Km., temperature 272a. to 273a.; from 4.53 Km. to 4.76 Km., temperature 255.5a. to 258a. Small isothermal layer from 11.33 Km. to 11.67 Km., temperature 206.5a. Pressure distribution:—A trough of low pressure moving eastwards across the British Isles, pressure high over Germany. Type Va.
763. Weather fair. Clouds St-Cu. 2/10, A-Cu. and Ci 4/10; St-Cu from WSW. at about 1.1 Km., Ci. from WSW. Small inversion on descending record from 1.04 Km. to 1.31 Km., temperature 269.5a. to 270a. Isothermal layer on both records 2.54 Km. to 3.00 Km., temperature 262.5a., relative humidity 71% to 46%. Pressure distribution:—Large depression centred to the south of Iceland, secondaries developing off the west and south-west coasts of the British Isles. Type Va.
766. Weather dull. Clouds St. 10/10. Small isothermal layer at about 5.3 Km., temperature 253a. Pressure distribution:—A deep depression centred to the north-west of Ireland, secondaries crossing the British Isles from the west. Type Va.
768. Weather fine. Clouds Cu. 2/10 from NW. by W. at about 0.6 Km. Inversion in stratosphere from 8.36 Km. to 9.27 Km., temperature 220.7a. to 223.3a. Pressure distribution:—Wedge of high pressure moving eastwards across the British Isles. Type IV.

T. = Temperature in Degrees Absolute.
H. = Height in kilometres above M.S.L.

P. = Pressure in millibars.
RH. = Relative Humidity per cent.

No.	722.	725.	726.	727.	728.	729.	730.	731.	733.
Date. Station.	Mar. 5. Sealand.	April 16. Kew.	April 17. Sealand.	April 18. Sealand.	April 19. Sealand.	April 20. Sealand.	June 26. Kew.	June 27. Kew.	July 11. Kew.
Start. (G.M.T.)	12h. 20m.	7h. 15m.	7h. 20m.	7h. 15m.	7h. 25m.	7h. 25m.	14h. 53m.	15h. 49m.	15h. 46m.

549. HEIGHTS, TEMPERATURES AND RELATIVE HUMIDITIES CORRESPONDING WITH ISOBARIC SURFACES, 1929.

Pressure. Millibars.	722.			725.			726.			727.			728.			729.			730.			731.			733.		
	H. Km.	T. a. 200	RH. %	H. Km.	T. a. 200	RH. %	H. Km.	T. a. 200	RH. %	H. Km.	T. a. 200	RH. %	H. Km.	T. a. 200	RH. %	H. Km.	T. a. 200	RH. %	H. Km.	T. a. 200	RH. %	H. Km.	T. a. 200	H. Km.	T. a. 200		
100	15.97	17	...	...	...	...	...	...	...	...	...	...	...	...	...	16.05	19	...	...	...	...	...	...	...	...	...
200	11.65	8	...	...	...	...	...	...	...	...	...	...	...	...	...	11.62	15	...	...	...	...	...	...	11.92	21	12.26	21
300	9.11	23	...	...	...	...	...	...	...	...	...	...	...	...	...	9.05	25	...	...	...	...	...	...	9.32	27	9.59	35
400	7.17	39	20	...	...	...	...	...	...	...	...	...	...	...	...	7.09	40	13	...	...	...	...	...	7.35	43	7.55	50
500	5.57	51	21	5.47	47	26	5.59	50	30	5.67	55	48	...	...	...	5.48	52	14	5.63	52	50	5.72	57	...	...	5.87	61
600	4.20	61	22	4.13	55	31	4.23	61	40	4.29	63	73	...	...	...	4.13	55	17	4.25	62	53	4.32	66	4.45	71	...	...
700	3.00	69	29	2.96	62	36	3.03	67	44	3.09	69	96	...	...	...	2.96	62	28	3.06	67	67	3.11	73	3.21	79	...	...
800	1.95	71	72	1.93	69	75	1.99	70	93	2.02	76	92	...	...	...	1.94	64	46	2.00	73	64	2.01	80	2.11	85	...	...
900	1.01	71	78	0.99	76	63	1.05	77	82	1.06	80	97	1.01	81	28	1.02	69	53	1.05	83	52	1.05	79	1.12	90	...	...
1000	0.17	...	...	0.13	...	...	0.20	...	...	0.19	...	...	0.14	83	56	0.18	77	...	0.16	91	44	0.17	...	...	0.21	...	...

550. PRESSURES, TEMPERATURES AND HUMIDITIES AT GIVEN HEIGHTS. 1929.

Heights. Kilometres.	722.			725.			726.			727.			728.			729.			730.			731.			733.		
	P. mb.	T. a. 200	RH. %	P. mb.	T. a. 200	RH. %	P. mb.	T. a. 200	RH. %	P. mb.	T. a. 200	RH. %	P. mb.	T. a. 200	RH. %	P. mb.	T. a. 200	RH. %	P. mb.	T. a. 200	RH. %	P. mb.	T. a. 200	P. mb.	T. a. 200		
21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	86	19	...	...	...	...	...	...	...	...	...
16	99	17	...	...	...	...	...	...	...	...	...	...	...	...	...	101	19	...	...	...	...	...	...	107	24	...	
15	117	15	...	...	...	...	...	...	...	...	...	...	...	...	...	118	19	...	...	...	...	...	...	125	24	...	
14	137	14	...	...	...	...	...	...	...	...	...	...	...	...	...	137	19	...	...	...	...	...	...	145	23	153	17
13	161	13	...	...	...	...	...	...	...	...	...	...	...	...	...	161	18	...	...	...	...	...	...	169	22	178	18
12	189	7	...	...	...	...	...	...	...	...	...	...	...	...	...	189	15	...	...	...	...	...	...	198	21	208	22
11	223	11	...	...	...	...	...	...	...	...	...	...	...	...	...	221	11	...	...	...	...	...	...	231	16	243	24
10	261	17	...	...	...	...	...	...	...	...	...	...	...	...	...	259	18	...	...	...	...	...	...	270	23	282	32
9	305	24	...	...	...	...	...	...	...	...	...	...	...	...	...	303	26	...	...	...	...	...	...	315	30	326	39
8	355	32	19	...	...	...	...	...	...	...	...	...	...	...	...	351	33	13	...	...	...	...	...	365	37	376	47
7	410	40	20	...	...	...	...	...	...	...	...	...	...	...	...	405	41	13	...	...	...	...	...	420	45	430	53
6	472	48	21	464	45	26	473	47	32	478	52	52	...	...	...	466	48	14	475	50	49	481	54	492	61	...	...
5	540	55	22	533	51	25	542	55	32	546	58	53	...	...	...	533	55	14	544	57	49	549	62	560	67	...	...
4	616	63	22	611	56	33	617	62	37	623	65	74	...	...	...	610	55	18	619	63	52	625	67	635	75	...	...
3	700	69	29	697	62	36	703	67	45	708	70	96	...	...	...	697	62	27	705	68	69	708	73	718	80	...	...
2.5	746	69	42	743	65	57	749	68	93	754	73	96	...	...	...	743	61	34	750	70	68	753	77	763	83	...	...
2	794	71	74	793	68	76	798	70	93	802	76	93	...	...	...	793	63	45	799	73	64	801	80	810	85	...	...
1.5	846	71	89	844	72	72	850	73	92	853	78	96	847	77	41	846	66	50	851	78	57	852	76	860	87	...	...
1	901	71	78	898	76	63	905	77	81	907	81	98	901	81	28	903	69	53	905	83	51	905	79	913	91	...	...
0.5	960	75	69	956	75	100	963	79	62	964	83	96	957	81	56	961	73	61	961	88	45	962	...	968	95	...	...
Ground	1020	79	64	1015	78	88	1024	77	95	1022	86	83	1016	85	64	1022	79	65	1018	93	45	1020	87	1024	100	...	...

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.
Degrees absolute per kilometre.

551. 1929.

Kilometres.	722.	725.	726.	727.	728.	729.	730.	731.	733.
20 to 21	...	...	...	...	...	...	...	...	...
19 to 20	...	...	...	...	...	...	...	...	...
18 to 19	...	...	...	...	...	...	...	...	...
17 to 18	...	...	...	...	...	...	...	...	...
16 to 17	...	...	...	...	...	1	...	...	...
15 to 16	-1	...	...	...	...	-1	...	0	...
14 to 15	-1	...	...	...	...	0	...	-1	...
13 to 14	-2	...	...	...	...	-1	...	-1	...
12 to 13	-5	...	...	...	...	-3	...	-1	4
11 to 12	3	...	...	...	...	-4	...	-5	3
10 to 11	7	...	6	...	...	7	...	7	7
9 to 10	7	...	8	...	...	8	...	7	8
8 to 9	8	...	7	...	...	7	...	7	7
7 to 8	8	...	8	...	...	8	...	8	7
6 to 7	8	...	7	...	...	7	...	9	7
5 to 6	7	6	7	6	...	7	6	8	7
4 to 5	8	5	8	7	...	0	7	5	7
3 to 4	6	6	5	5	...	7	5	6	5
2.5 to 3	1	6	1	6	...	-2	4	8	6
2 to 2.5	2	6	4	6	...	5	7	5	4
1.5 to 2	2	8	7	4	...	4	9	-8	4
1 to 1.5	-1	8	6	5	7	8	10	6	7
0.5 to 1	7	-1	5	5	1	7	10	9	10
Gd. to 0.5	9	5	-5	6	8	12*	9	9	9

Note.—The lapse rates are derived from the original tabulations, which are generally made to the nearest half-degree. * See Remarks.

T. = Temperature in Degrees Absolute.
H. = Height in kilometres above M.S.L.

P. = Pressure in millibars.
RH. = Relative Humidity per cent.

Table with 10 columns: No., Date, Station, Start (G.M.T.), and observations for stations 746 through 756.

HEIGHTS, TEMPERATURES AND RELATIVE HUMIDITIES CORRESPONDING WITH ISOBARIC SURFACES—continued. 1929.

Table showing isobaric surfaces with columns for Pressure (Millibars), Height (Km.), Temperature (a, 200), and Relative Humidity (RH.) for stations 746-756.

550. PRESSURES, TEMPERATURES AND HUMIDITIES AT GIVEN HEIGHTS—continued. 1929.

Table showing pressures, temperatures, and humidities at given heights (Kilometres) for stations 746-756.

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. 1929.

Table showing lapse rates of temperature between given heights (Kilometres) for stations 746-756.

Note.—The lapse rates are derived from the original tabulations, which are generally made to the nearest half-degree.

